



Australian
Competition &
Consumer
Commission

Draft Decision

Revised access arrangement
by APT Petroleum Pipelines Ltd
for the
Roma to Brisbane Pipeline

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Abbreviations and glossary

AA	Access arrangement
AAI	Access arrangement information
ACCC	Australian Competition and Consumer Commission
ACG	Allen Consulting Group
ACIL Tasman	ACIL Tasman Pty Ltd
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
Agility	Agility Management Pty Limited - a subsidiary of Australian Gas Light (AGL)
AGL	The Australian Gas Light Company
APA	APA is the Stock Exchange Code of APT, APTPPL's parent company
APL	Associated Pipelines Limited
APT	Australian Pipeline Trust
APTPPL	APT Petroleum Pipelines Limited
AS	Australian Standard
bppa	Basis points per annum
CAPM	Capital asset pricing model
Code	National Third Party Access Code for Natural Gas Pipeline Systems
CPI	Consumer price index
CRA	CRA International
CSM	Coal seam methane
CWP	Central West Pipeline
DAC	Depreciated actual cost
DBNGP	Dampier to Bunbury Natural Gas Pipeline
DORC	Depreciated optimised replacement cost
EAPL	East Australian Pipeline Limited

Energex	Includes Sun Retail Pty Ltd
ERA	Economic Regulation Authority (Western Australia)
ESC	Essential Services Commission (Victoria)
FRC	Full retail contestability
GJ	Gigajoule (1 000 000 000 joules)
GMLG	Gas Market Leaders Group
ICB	Initial capital base
ICRC	Independent Competition and Regulatory Commission
IOL	IOL Petroleum Limited
IPART	Independent Pricing and Regulatory Tribunal (New South Wales)
IPO	Initial public offer
IRR	Internal rate of return
IRS	Infrastructure and Regulation Services
KPI	Key performance indicators
MAOP	Maximum allowable operating pressure
MCE	Ministerial Council on Energy
MDQ	Maximum daily quantity
MHQ	Maximum hourly quantity
MMA	McLennan Magasanik Associates Pty Ltd
MRP	Market risk premium
MSP	Moomba to Sydney Pipeline
NCC	National Competition Council
NERA	NERA Economic Consulting
NEMMCO	National Electricity Market Management Company
NFI	New facilities investment
NPV	Net present value
Origin	Origin Energy
PJ	Petajoule (equal to 1 000 000 Gigajoules)

PMA	Pipeline Management Agreement
PMSA	Pipeline Management Supplementary Agreement
PNG	Papua New Guinea
QCA	Queensland Competition Authority
QGC	Queensland Gas Corporation
QGP	Queensland Gas Pipeline
RBP	Roma to Brisbane Pipeline
Sleeman	Sleeman Consulting
SRP	Statement of regulatory principles
SWQP	South West Queensland Pipeline
TJ	Terajoules (equal to 1 000 Gigajoules)
TNSP	Transmission network service provider
Venton	Venton and Associates Pty Ltd
WACC	Weighted average cost of capital

Summary

Introduction

On 31 January 2006 APT Petroleum Pipelines Limited (APTPPL) lodged revisions to its access arrangement for the Roma to Brisbane Pipeline (RBP) with the Australian Competition and Consumer Commission (ACCC) for approval. This is the first scheduled review of the access arrangement for the RBP under the National Third Party Access Code for Natural Gas Pipeline Systems (the code).

This assessment is the first full assessment by the ACCC of the access arrangement for the RBP under the code. The previous ACCC assessment, for the period 1 October 2002 to 28 July 2006, covered only non-tariff elements of the access arrangement. Tariffs for the pipeline have been established by the Queensland Minister under a derogation which was scheduled to end on 28 July 2006. However, as the ACCC has extended the period for assessing and approving the revisions, these tariffs will continue until the revised access arrangements comes into effect. The ACCC's task is to determine whether the proposed access arrangement, as revised, satisfies the requirements of the code.

If the ACCC in its draft decision proposes not to approve the revisions submitted by APTPPL, the ACCC must specify the amendments, or the nature of the amendments, that are required in order for approval to be granted. APTPPL can modify its revised access arrangement to incorporate or substantially incorporate the amendments required or seek to otherwise address the matters that caused the ACCC to require the amendments in the draft decision.

In its final decision, the ACCC must decide whether to accept or reject the proposed revisions to the access arrangement whether or not amended by APTPPL, having regard to any submissions received in response to the draft decision.

This summary and the table below entitled 'Draft decision at a glance' are a summary only of the key issues contained in the draft decision and do not constitute part of the ACCC's reasons for its draft decision. The reasons for the ACCC's draft decision are detailed in full in the draft decision document.

Draft decision

After considering APTPPL's proposals and submissions by interested parties, the ACCC proposes not to approve the proposed revisions to APTPPL's access arrangement in their current form. This draft decision sets out the amendments (or nature of the amendments) which the ACCC considers necessary for the proposed access arrangement to be approved.

A summary of the draft decision is outlined in the table below. Following is a brief discussion of the key issues.

Table: Draft decision at a glance

Elements	APTPPL's proposal	ACCC's draft decision
Tariff methodology, tariff path and forecast revenue, depreciation, cost allocation and tariff setting	<p>NPV methodology and a price path approach.</p> <p>Single zone tariff.</p> <p>Constant real tariff for the 5 year AA period. Increasing real tariff post 2011, using CPI-X where X = - 0.8227).</p> <p>Negative depreciation for first 17 years including the AA period and backend loaded over remaining life.</p> <p>Maximum daily capacity charge: \$0.4243/GJ/MDQ/day</p> <p>Throughput charge: \$0.0283/GJ.</p> <p>Total revenue: \$32 m -\$33 m p.a.</p>	<p>Accept NPV approach but rejected the application of the methodology.</p> <p>Accept the single zone tariff.</p> <p>Reject the proposed depreciation schedule as inconsistent with volumes used to set the tariff.</p> <p>The proposed tariff is:</p> <p>Capacity charge: \$0.3819/GJ/MDQ/day</p> <p>Throughput charge: \$0.0255/GJ</p> <p>Starting tariff is 10% lower than proposed starting tariff.</p> <p>The decreasing real tariff (CPI-X where X = +0.87), in part reflects the proposed changes to the ICB, rate of return and operating costs.</p> <p>Total revenue: \$27 m - \$28 m p.a.</p>
Depreciated optimised replacement cost (DORC)	\$342.6 m ('NPV DORC' methodology).	<p>\$295.84 m (straight line methodology)</p> <p>\$171.6 m ('NPV DORC' methodology)</p> <p>The ACCC used straight line DORC. The ACCC has used existing capacity in determining the ORC given that the reference tariff will only apply to existing capacity.</p> <p>Differences in 'NPV DORC' values are due to differences in assumptions regarding the discount rate, asset lives, tax position and cost estimates.</p>
Initial capital base (ICB)	\$342.6 m Equal to APTPPL's DORC calculation.	\$250.63 m Straight line DORC less expansions funded by users through users' contributions.
New facilities investment	<p>Forecast capital expenditure includes items such as 'stay in business' capital, compressor overhauls and pigging, ranging from \$1—\$4 m p.a.</p> <p>No expansions or extensions are included in APTPPL's forecast capital expenditure.</p>	Accept APTPPL's forecast capital expenditure.
Rate of return	<p>Pre-tax real WACC: 6.9%</p> <p>Post-tax nominal return on equity: 9.43%—12.63%</p> <p>(No specific figure provided, only a range)</p>	<p>Pre-tax real WACC: 5.85%</p> <p>Post-tax nominal return on equity: 11.92%</p>
Non-capital costs	\$9.3 m in 2006/07 reducing to \$9.18 m in 2010/11.	<p>\$8.11 m in 2006/07 reducing to \$7.93 m in 2010/11.</p> <p>Certain items such as external legal costs, the Agility management fee and self-insurance are excluded.</p>

Elements	APTPL's proposal	ACCC's draft decision
Forecast volumes	<p>For the reference tariff, 56.5 PJ/pa in 2006/07 rising to 58.4 PJ/pa in 2010/11 and static thereafter, reflecting APTPL's proposal that the reference tariff should only apply to existing pipeline capacity.</p> <p>In calculating its NPV DORC APTPL has taken into account growth in the market and attendant capital costs to meet that growth.</p>	<p>Accept the forecast volumes for the reference tariff.</p> <p>Accept the forecast volumes as input to the NPV DORC.</p>
Incentive structure	<p>APTPL retains any gains from outperforming forecasts and bears the risk of under performance.</p>	<p>Accept incentive mechanism in relation to costs and volumes. Accept proposal that any revenue APTPL receives from negotiated services is additional to that needed to recover the cost of providing services using the existing capacity.</p>
Services policy	<p>For existing capacity (nominal licence capacity is 180 TJ/day): one reference service; firm forward haul. Other services are negotiable. For expansions and extensions: only a negotiated service will apply.</p>	<p>Accept APTPL's proposal. Where prospective users are unable to agree to terms with a service provider on the supply of negotiated services they are able to invoke the dispute resolution provisions of chapter 6 of the code.</p>
Extensions and expansions policy	<p>APTPL will elect after consultation with the ACCC whether an extension will be part of the covered pipeline. Expansions will be covered unless APTPL proposes and the ACCC accepts that an expansion should not be covered. Tariffs for extensions and expansions that are covered will be negotiated.</p>	<p>Accept APTPL's proposal.</p>
Trading policy	<p>Bare transfers do not need APTPL's consent. Other transfers, including changing receipt or delivery points, require consent, which will only be withheld on reasonable commercial and technical grounds.</p>	<p>APTPL must specify what constitutes 'reasonable commercial and technical grounds'. APTPL must specify under what conditions trading of linepack may or may not be permitted. APTPL will establish electronic access to its register of spare and developable capacity and will consider establishing an electronic bulletin board to facilitate capacity trading.</p>
Queuing policy	<p>If capacity is insufficient to meet prospective users' requests for access a queue will be formed. Requests for the reference service have priority. Provision for investigations to determine whether capacity is, or can be made, available. Prospective users bear the costs of the investigation.</p>	<p>APTPL to specify an indicative tariff for new capacity. APTPL to provide a written report containing certain information to prospective users who bear the costs of capacity investigation. Permit prospective users to transfer their right in a queue to other prospective users. Separate queues for existing and new capacity.</p>

Elements	APTPPL's proposal	ACCC's draft decision
Review of access arrangement	Revisions submission date: 30/11/10 Revisions commencement date: 1/7/11. APTPPL has not included any major events trigger.	Accept APTPPL's proposals.

Key issues

Initial capital base

The regulatory value of the pipeline or its initial capital base (ICB) is the most significant determinant of the pipeline's tariff. The code requires the regulator to balance the interests of the pipeline owner and users when approving the ICB. This requires that consideration be given to the actual costs of developing the current pipeline and the efficient replacement costs of the pipeline and to a number of other matters. In view of the history of the RBP (the age of the pipeline, its progressive looping over time) a valuation based on replacement costs rather than historical costs was given greater weight in establishing the ICB. At the same time consideration was given to the role users have played in funding the development of the pipeline in setting the RBP's value under the code.

APTPPL has proposed that the value of the ICB should be set according to the depreciated optimised replacement cost (DORC) methodology, the value generally viewed as the maximum value normally allowed under the code. APTPPL prefers to use the 'NPV DORC' approach (the net present value of the difference in estimated costs of the existing pipeline and a replacement pipeline) over the straight line approach. The ACCC proposes to calculate DORC according to the straight line approach as it is not satisfied that the application of the NPV DORC approach in this instance can produce a reliable estimate of the pipeline's value consistent with code requirements.

The ACCC found that, in some cases, past expansions of the RBP have been fully funded by users through 'users' contributions'. The ACCC does not consider that it is reasonable for users to continue to pay for these expansions. Accordingly, in calculating the value of the ICB the ACCC has deducted the value of these expansions from the DORC.

The ACCC has determined that the ICB should be set at \$250.63 m in July 2006 dollars.

Reference tariff methodology, tariffs and revenue

APTPPL has proposed an initial reference tariff for a firm forward haul service comprising a capacity reservation charge (\$0.4243/GJ/MDQ/day) and a throughput charge (\$0.0283/GJ). The reference tariff is to increase by CPI each year of the access arrangement period. Beyond 2011 the reference tariff will be adjusted annually by more than CPI. The tariff path was proposed to approximate the forecast average tariff at 2011 for existing capacity under current contracts. Underlying APTPPL's proposed tariff path is a back end loaded depreciation schedule, including negative depreciation over and beyond the forthcoming access arrangement period.

Back end loaded depreciation may be appropriate when the market is forecast to grow and a pipeline has the capacity to meet the forecast growth in demand. While APTPPL has forecast that the market for gas in the vicinity of the pipeline will grow over time, it proposed to meet this growth by expanding the capacity of the RBP. APTPPL also proposed that the tariff for this expanded capacity would be established on a negotiated basis rather than the applicable reference tariff. Under these circumstances, a relatively uniform schedule of depreciation charges is appropriate.

The ACCC is proposing a July 2006 starting tariff about ten per cent less than the overall tariff proposed by APTPPL. The proposed tariff includes a capacity reference tariff (\$/GJ of MDQ/day) of \$0.3819 and a throughput reference tariff (\$/GJ) of \$0.0255. The difference between the APTPPL and ACCC starting tariff primarily reflects differences in input parameters such as the value of the ICB, the rate of return and lower non-capital costs. The tariff path also provides for a real reduction in the value of the tariff over time. The real reduction is achieved by the CPI-X formula where X is proposed as 0.87. This real reduction is a position that is more consistent with the operating environment and volume forecasts than APTPPL's proposed tariff path.

APTPPL proposed that the reference tariff only apply to existing capacity of around 180 TJ a day. Tariffs applying to expansions and extensions would be negotiated between APTPPL and prospective users. APTPPL submitted that it has not included possible expansions in the calculation of total revenue and the reference tariff because the timing, capacity and costs of expansions are unknown. APTPPL has also indicated that the pipeline will only be expanded when future capacity is fully contracted.

APTPPL proposed to have the reference tariff apply only to the existing capacity of the pipeline is not explicitly precluded by the code. Since the RBP is almost fully contracted, the reference tariff will only apply to spare capacity and contracted capacity when existing contracts come up for renewal. The reference tariff for existing capacity, while not strictly applicable to expansions, could serve as a guide for prospective users in their negotiations with APTPPL. Moreover, prospective users have access to the arbitration provisions of the code in the event of a dispute in relation to access to expanded capacity of the covered pipeline.

To ensure that users can access the existing capacity of the pipeline at the reference tariff when current contracts expire, APTPPL will be required to maintain a separate queue for this capacity. APTPPL will be able to offer a negotiated tariff for additional firm forward haul services when new capacity has been created by installation of new capacity such as compression or looping.

Services policy

APTPPL proposed only one reference service - firm forward haul. If users require any other services these would be at negotiated tariffs. While firm forward haul is the service most users require there is also demand for other services such as backhaul, interruptible and park and loan. Demand for these services is likely to grow, particularly following the introduction of full retail contestability and greater use of gas-fired power generation. Consideration was given to making these services rebateable but this was considered to be impracticable while most of the capacity of the pipeline is fully contracted and not be subject to the reference tariff until 2012.

Providing backhaul, interruptible and park and loan services as negotiable services will better encourage the development of these services at this time.

Users can negotiate for these other services to the extent they are currently available. These negotiations if unsuccessful can be subject to dispute resolution under the provisions of the code.

Trading policy

Users and prospective users of the RBP are not only interested in the level of the tariff. Users also sought more flexible ways of accessing or trading the contracted and spare capacity of the pipeline. The code requires an access arrangement to have a trading policy. The draft decision proposes a number of amendments to APTPPL's trading policy. One amendment is that the policy should specify the conditions under which linepack trading will or will not be permitted. The ability to trade linepack will facilitate balancing of accounts and the more efficient operation of the pipeline.

APTPL has indicated it will consider the introduction of an electronic bulletin board so long as users agree to participate. The key objective would be to provide up-to-date information about where supply or pipeline constraints exist in real time, or may occur under certain conditions. This would help users (or prospective users) identify potential trading, risk mitigation or investment opportunities. An electronic bulletin board will also offer a facility for the voluntary posting of buy/sell offers for the supply or transportation of capacity.

APTPL has also indicated that it will establish electronic access to its register of spare and developable capacity if the prudent costs are recognised as new facilities investment.

1. Introduction

1.1 Access arrangement revisions

APT Petroleum Pipelines Limited (APTPPL) is currently subject to an access arrangement, approved by the Australian Competition and Consumer Commission (ACCC) in 2002, for the Roma to Brisbane Pipeline (RBP)¹. An access arrangement describes the terms and conditions under which a service provider will make access to the services of the pipeline available to third parties. The current access arrangement period for the RBP will end when the revisions approved by the ACCC come into effect.²

Chapter 2 of the National Third Party Access Code for Natural Gas Pipeline Systems (the code) specifies that the service provider of a gas pipeline covered by the code is required to propose revisions to an access arrangement and submit them to the regulator for approval by the revisions submission date.³

In assessing such proposed revisions to an access arrangement, the code specifies that the regulator must:

- inform interested parties that it has received the proposed revisions to the access arrangement and the associated access arrangement information;
- publish a notice in a national daily paper which at least:
 - describes the covered pipeline to which the access arrangement relates;
 - states how copies of the documents may be obtained;
 - requests submissions by a date specified in the notice;
- after considering submissions received, issue a draft decision that either proposes to approve the revisions or proposes not to approve the revisions and states the amendments (or nature of the amendments) that would have to be made to the revisions for the ACCC to approve them;
- after issuing the draft decision, invite any further submissions;
- after considering additional submissions, issue a final decision that either approves or does not approve the revisions (or amended revisions) and states the amendments (or nature of the amendments) which have to be made to the revisions (or amended revisions) in order for the ACCC to approve them;

¹ The Roma to Brisbane Pipeline (RBP) is the more commonly used name for the Wallumbilla to Brisbane pipeline.

² The current access arrangement period was due to end on 28 July 2006, but the ACCC extended the period for approving the revised access arrangement as permitted by s. 2.44 of the code.

³ In addition, a service provider may submit revisions at any other time. The assessment process for 'voluntary' revisions differs in a number of ways to that described.

- if the amendments are satisfactorily incorporated in a revised access arrangement, issue a further final decision (referred to as a final approval) to approve the revised access arrangement. If not, the ACCC must draft and approve its own access arrangement addressing the specified amendments.

In accordance with the provisions of its access arrangement, APTPPL submitted proposed revisions to its access arrangement with accompanying access arrangement information to the ACCC on 31 January 2006. These documents were made public via the Australian Energy Regulator (AER) website on 22 February 2006 and the public register held by the Code Registrar. After APTPPL provided further supporting information, the ACCC published a notice in the *Australian Financial Review* and *The Courier Mail* and released an issues paper on 18 April 2006. In its advertisement and issues paper the ACCC invited submissions from interested parties. The submissions subsequently received are listed in appendix A to this draft decision.

The central concerns put forward by interested parties in the submissions include:

- expansions policy
- services policy
- the valuation of the initial capital base
- demand forecast
- type of reference tariff.

1.2 Criteria for assessing revisions to access arrangements

The regulator 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 ss. 3.1 to 3.20 of the code, which are summarised below. Revisions to an access arrangement cannot be opposed solely because the access arrangement as revised would not address a matter that s. 3 of the code does not require it to address. Subject to this, the regulator 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 s. 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 and 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
- a date by which the revisions are intended to commence.

In considering whether a revised access arrangement complies with the code, the ACCC must take into account the provisions of the access arrangement as it currently stands and, pursuant to s. 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
- any other matters that the ACCC considers are relevant.

Appendix B to this draft decision sets out the access arrangement information that a service provider must disclose to interested parties (attachment A to the code).

1.3 The initial access arrangement assessment

The initial access arrangement process was conducted in accordance with the requirements set out in the code and was based on information provided by APTPPL and interested parties. However, the scope of the access arrangement assessment was limited by the Queensland Government derogation. This derogation determined the tariff for the pipeline.

The consultation and assessment process undertaken by the ACCC included:

- the release of the draft decision (under s. 2.13 of the code) on the proposed access arrangement on 15 August 2001, in which the ACCC proposed eight amendments to be made for the access arrangement to be approved

- the release of the final decision (under s. 2.16 of the code) on 16 January 2002, with the ACCC requiring seven amendments to be made for the access arrangement to be approved.

APTPPL submitted a revised access arrangement to the ACCC in August 2002. Having received the revised access arrangement, the ACCC was obliged under s. 2.19 of the code to issue a further final decision (the Final Approval).

The ACCC found that APTPPL incorporated the amendments specified in the final decision. Accordingly, the ACCC approved the revised access arrangement submitted by APTPPL on 11 September 2002. The decision documents are available on the AER website.

1.4 Regulatory framework

This assessment of the revised access arrangement for the RBP is not limited by the derogation provided for in the Natural Gas Pipelines Access Agreement.

1.4.1 Relevant legislation

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

- the code, under which transmission service providers are required to submit access arrangements and revised access arrangement to the ACCC for approval
- the *Gas Pipelines Access (Queensland) Act 1998*
- the *Gas Pipelines Access (Queensland) Act 1998—Derogations*
- the *Gas Pipelines Access (South Australia) Act 1997*.

In accordance with the Natural Gas Pipelines Access Agreement, South Australia was the lead legislator in implementing the national gas access legislation.

Regulatory institutions

Code bodies and appeals bodies for transmission pipelines are:

- the ACCC—regulator and arbitrator (other than Western Australia)
- the National Competition Council—code advisory body
- the Commonwealth Minister—coverage decision maker
- the Federal Court—judicial review
- the Australian Competition Tribunal (the Tribunal)—administrative appeal.

1.4.2 Certification of the Queensland Gas Access Regime

Following advice from the National Competition Council (NCC), the Parliamentary Secretary to the Treasurer determined on 17 July 2006 that the Queensland gas access regime is not an effective access regime under the National Access Regime (Part IIIA of the *Trade Practices Act 1974*).

The Commonwealth Minister's decision to not certify the Queensland gas access regime as effective does not affect the ACCC's considerations of the RBP's proposed revised access arrangement. As a consequence of this decision, Queensland pipelines are still subject to potential declaration under part IIIA of the *Trade Practices Act 1974* which provides for dispute resolution by the ACCC.

1.4.3 The role of the Australian Energy Regulator

The ACCC⁴ has prepared this draft decision in consultation with the Australian Energy Regulator (AER). The ACCC is currently the regulator of natural gas transmission pipelines under the code, however, governments have agreed that this function will be undertaken by the AER, along with regulation of natural gas distribution pipelines from July 2007.

1.5 Background

1.5.1 Structure of the Queensland gas market

Matters relevant to the structure of the natural gas industry in Queensland include the following:

- Gas produced in Queensland accounts for 5 per cent of the total Australian gas production and is sourced from the Queensland sector of the Cooper–Eromanga, Bowen–Surat and Adavale basins.⁵ Coal seam methane (CSM) is considered to be a large part of Queensland's proved and probable gas reserves.⁶
- Queensland's gas consumption is about 100 petajoules (PJ) per annum and is expected to grow at about 4.3 per cent per annum, which is higher than the national average growth rate of 3.8 per cent.⁷ Almost half of Queensland gas consumption is transported on the RBP. The sectoral breakdown of annual gas consumption in Queensland is estimated as follows:
 - Manufacturing 47.11 PJ
 - Mining 11.50 PJ

⁴ The relevant regulator of the *National Third Party Access Code for Natural Gas Pipeline Systems* with respect to the RBP is the ACCC. All references in this draft decision to the regulator are to the ACCC. Proposed changes to legislation, once enacted, will result in the AER becoming the relevant regulator.

⁵ ABARE, *Energy in Australia*, 2004; Report prepared for the Dept. of Industry Tourism and Resources, p. 25.

⁶ Queensland Government Dept. of Energy, *Gas in Queensland*, viewed 19 June 2006, <http://www.energy.qld.gov.au/gas_in_queensland.cfm>.

⁷ Queensland Government Dept. of Energy, *Gas in Queensland*.

- Electricity gas and water 39.88 PJ
 - Residential 1.45 PJ
 - Other 1.99 PJ.⁸
- South-east Queensland currently has two main natural gas distribution companies:
 - Allgas Energy Ltd, owned by Energex (providing service to south Brisbane, the Gold Coast, Toowoomba, and Oakey)
 - Envestra (servicing north Brisbane, Gladstone, Ipswich and Rockhampton)
 - Both distribution networks depend on the RBP for transport of their gas supplies.
 - Queensland has committed to introducing full retail contestability (FRC) into the gas market from 1 July 2007.⁹
 - The Queensland Government's 13 per cent gas scheme requires electricity retailers and other liable parties to source at least 13 per cent of their electricity from gas-fired generation. This is expected to increase the use of CSM in electricity generation and will impact on the demand for the services of the RBP.

1.5.2 The Roma to Brisbane Pipeline

The RBP consists of a mainline, which is both compressed and looped, and a lateral pipeline (Peat lateral) connecting it to gas sources near Peat and Scotia. The mainline is about 440 km long with about 30 km of its length running through Brisbane to Gibson Island. The original 410 km section from Wallumbilla to Ellengrove is 273 mm in diameter. This section is looped with a 406 mm diameter pipeline. The looping was carried out in several stages, beginning in 1988, after the original line had been fully compressed. The final section of looping was completed in 2002. The Peat lateral was completed in 2001 (Scotia extension completed in 2003) and is 128 km long with a current capacity of 52 TJ/day. The Peat lateral became part of the covered pipeline on 1 January 2006 after APTPPL elected, following consultation with the ACCC (as permitted by its access arrangement), for it to be covered.

Under the access principles approved by the Queensland Minister which are currently incorporated in the access arrangement for the RBP, the reference service and reference tariff apply only up to a capacity of 101 TJ/day and beyond that are offered as a negotiated service at a negotiated tariff. Although the current nominal licensed capacity of the pipeline is 180 TJ/day, volumes during the proposed access arrangement period are forecast to grow from 196.2 TJ/day in 2006-07 to 202.9 TJ/day in 2010-11 using the existing capacity of the RBP. APTPPL has advised that the capacity of the pipeline as currently configured (including the location of receipt points and loads) is approximately 203 TJ/day. This provides potential users the opportunity to negotiate for the incremental volume increase at the reference tariff.

The pipeline originally supplied the Brisbane area with gas from Surat Basin fields close to Roma. Natural gas is now also being sourced from the Cooper/Eromanga Basin

⁸ Australian Bureau of Agricultural & Resource Economics (ABARE), 2003–04 data.

⁹ Queensland Government, Dept. of Energy, Gas FRC implementation timeframe, viewed 19 June 2006, <http://www.energy.qld.gov.au/zone_files/ECC/frc_gas_timeline.pdf>.

via the Epic Energy owned South West Queensland Pipeline (SWQP). In 2001 and 2002 the RBP was extended via the Peat Lateral to enable CSM from the Peat and Scotia gas fields to be supplied into south-east Queensland. The RBP also connects with the Queensland Gas Pipeline (QGP), which runs from Wallumbilla to Rockhampton (via Gladstone).¹⁰ This allows Wallumbilla to function as a hub for the supply of gas in Queensland. Access to gas from South West Queensland may be affected by possible changes to the flow of the SWQP. This development in part reflects the successful development of CSM producers in the Surat Basin. The future operation of the RBP may be influenced by the introduction of FRC and other initiatives flowing from the gas market leaders group which is considering options to enhance Australia's wholesale gas market.

There are six compressor stations along the length of the pipeline. Those at Yuleba, Kogan and Oakey serve the original pipeline while those at Condamine, Dalby and Gatton serve the looped pipeline. APTPPL is currently discussing with interested parties possible expansion of the pipeline to meet future demand.

The RBP was originally owned and operated by Associated Pipelines Limited (APL). In 1987 a joint venture was established with IOL Petroleum Limited (IOL) owning 15 per cent and APL 85 per cent. In 1988 APL changed its name to CSR Petroleum Pipelines Limited and was acquired by Australian Gas Light Company (AGL) as part of a larger acquisition of CSR's oil and gas production and transportation businesses.

The business was then renamed AGL Petroleum Pipelines Limited. In 1997 IOL changed its name to Interstate Pipelines Limited. AGL's divestment of its pipelines group via the float of Australian Pipeline Trust (APT) resulted in the RBP owning company changing its name to APT Petroleum Pipelines Limited (APTPPL). In 2001 APTPPL purchased the 15 per cent ownership stake of the RBP from Interstate Pipelines Limited resulting in it owning 100 per cent of the RBP.¹¹

The Queensland Minister for Energy, the Hon. John Mickel recently requested the Energy Competition Committee chaired by Mr Darryl Somerville to investigate the possible duplication of the Brisbane section of the RBP as part of a range of strategies to increase competition and investment in the Queensland gas market.¹²

1.6 Draft decision

The draft decision made by the ACCC under s. 2.35(b) of the code proposes not to approve the proposed access arrangement revisions for the RBP in the form lodged by APTPPL.

The remainder of this draft decision sets out the ACCC's analysis of:

- the determination of the reference tariff (chapter 2)

¹⁰ Currently owned by Alinta Infrastructure Holdings Limited.

¹¹ APTPPL, *Access arrangement information*, 31 January 2006, pp. 2–3.

¹² Media release, Minister announces moves to foster gas competition, 14 July 2006.

- the non-tariff elements, including the service provider's proposed access policies, terms and conditions of service and arrangements for review of the access arrangement (chapter 3)
- performance indicators (chapter 4)
- summary of the proposed amendments (chapter 5).

1.6.1 Public consultation

Interested parties are invited to make written submissions on this draft decision by Monday, 25 September 2006. After considering submissions, the ACCC will issue its final decision, which is scheduled for late October.

All public submissions received will be placed on the AER website and the public register held by the code registrar. Any information considered to be confidential should be clearly marked as such and the reasons for seeking confidentiality provided. Under the terms of the code the ACCC must not disclose such information unless it is of the opinion that disclosure would not be unduly harmful to the legitimate business interests of the service provider, a user or prospective user.

Submissions should be supplied in electronic format compatible with Microsoft Word to the email address rbp@acc.gov.au. One original signed document should also be mailed to the postal address:

Mike Buckley
General Manager
Network Regulation North
Australian Competition and Consumer Commission
GPO Box 3648
Sydney NSW 2001

Copies of the revisions applications and associated documents are available from the AER website. Copies of this draft decision may also be obtained by contacting Stacey Breen on (02) 6243 1233; fax (02) 6243 1205; or email rbp@acc.gov.au.

2. Reference tariff elements

The code specifies a set of mandatory elements with which an access arrangement must comply. This chapter examines the basis on which APTPPL's proposed reference tariff has been established and the reasons for the ACCC's proposed amendments to the reference tariff determination. Amongst other things, three critical elements are considered. These are the value of the pipeline in terms of the code, APTPPL's appropriate rate of return on capital and the pipeline's efficient operating costs.

For the reasons set out in this chapter, the ACCC concluded that APTPPL's proposals in relation to the initial capital base and the weighted average cost of capital do not comply with the code principles. The amendments that APTPPL is required to address in its revisions to the access arrangement are specified in this chapter as well as the reasons for seeking those amendments. Chapter 3 considers APTPPL's compliance with the non-tariff elements of the code.

Sections 3.3 to 3.5 of the code require an access arrangement to include a reference tariff for at least one service that is likely to be sought by a significant part of the market and other services for which the regulator considers a reference tariff should be included. An access arrangement must also include a policy describing the principles that are to be used to determine a reference tariff (a reference tariff policy). The reference tariff and reference tariff policy must comply with the reference tariff principles in s. 8 of the code.

2.1 Reference tariff methodology

2.1.1 Code requirements

Section 8.3 of the code states that the manner in which a reference tariff may vary within an access arrangement period is within the discretion of the service provider. This is subject to the regulator being satisfied that the policy is consistent with s. 8.1 and s. 8.3A (reference tariff variation method). Under s. 8.3, a service provider may select from:

- a) the cost of service approach¹³ - where tariffs are adjusted throughout the access arrangement period to account for actual outcomes (such as sales volumes and actual costs) to ensure that the actual costs of the services are recovered;
- b) the price path approach - where tariffs are determined prior to the commencement of the access arrangement period and follow a path which is not adjusted to take account of subsequent events until the start of the next access arrangement period;
- c) the reference tariff control formula approach - where tariffs may vary over the access arrangement period in accordance with a specified formula or process;

¹³ This approach is distinct from the Cost of Service approach detailed in s. 8.4 of the code, which refers to the methodology used to determine total revenue.

- d) the trigger event adjustment approach—where a reference tariff may vary within the access arrangement period following the occurrence of a specified event; or
- e) Any variation or combination of the above.

Section 8.4 of the code outlines the three methodologies available to the service provider to determine total revenue. The methodologies are:

- a) Cost of service: where the total revenue is set to recover costs with those costs to be calculated on the basis of a return (rate of return) on the value of the assets that form the covered pipeline (capital base), depreciation of the capital base (depreciation) and the operating, maintenance and other non-capital costs (non-capital costs) incurred in delivering all services;
- b) Internal rate of return (IRR): where the total revenue is set to provide an acceptable IRR (consistent with ss. 8.30 and 8.31 of the code) for the covered pipeline on the basis of forecast costs and revenue; and
- c) Net present value (NPV): where the total revenue is set to deliver a NPV for the covered pipeline (on the basis of forecast costs and revenue) equal to zero, using an acceptable discount rate (consistent with ss. 8.30 and 8.31 of the code).

These methodologies are different ways of assessing total revenue. However, the outcomes should be consistent (for example, it is possible to express any NPV or IRR calculation in terms of a cost of service calculation by the choice of an appropriate depreciation schedule). In addition, other methodologies that can be translated into one of these forms are acceptable under s. 8.5 of the code.

Section 8.5A of the code allows the above methodologies to be applied on a nominal basis, a real basis or any other basis dealing with the effects of inflation, provided that the basis used is specified in the access arrangement and is applied consistently in determining the total revenue and the reference tariffs.

2.1.2 Current access arrangement provisions

Under the derogation, the tariff arrangements for the RBP to 28 July 2006 were covered by the access principles approved by the Queensland Minister for Mines and Energy in accordance with amendments to the *Petroleum Act 1923* which came into effect on 1 July 1995.

2.1.3 APTPPL proposal

APTPPL proposes that the reference tariff is derived through a price path approach based on an application of the NPV methodology and using a real basis approach. The proposal is intended to permit the recovery of efficient costs of the pipeline's existing capacity over the expected life of the assets.

2.1.4 Submissions in response to the revised access arrangement

No submissions directly discussed the proposed methodology. Instead submissions tended to focus on APTPPL's proposed tariff and the value of the ICB.

2.1.5 ACCC's considerations

APTPPL has chosen to base its proposed tariff on price path approach based on a price path approach based on an application of the NPV methodology on a real basis. This is permitted under the code. Consequently, the ACCC has no objection to the overall methodology adopted by APTPPL.

2.2 The initial capital base

The capital base is defined as the capital assets that form the covered pipeline and are used to provide transportation services. The initial capital base (ICB) is the value of those capital assets which has been determined for regulatory purposes. Once the ICB has been established it can be adjusted in subsequent access arrangement periods for depreciation, capital expenditure, redundant capital and inflation but cannot be revalued.

The ICB is the most crucial input parameter in determining the level of reference tariff. The return of capital (depreciation) and the return on capital (the weighted average cost of capital (WACC)) are both dependent on the value of the ICB and constitute most of the costs of delivering services.

In this section the value of the ICB proposed by APTPPL is examined for compliance with the code. The code specifies a range of factors (s. 8.10 of the code) that the regulator must consider in determining the value of the ICB. These can result in a range of feasible values for the ICB. In considering the relative weights to give to each of these factors the regulator is required to have regard to the objectives in s. 8.1 and where appropriate the factors in s. 2.24.

This section describes the code requirements and then discusses the value of the ICB proposed by APTPPL and the basis for that value. Submissions from interested parties are also outlined. The ACCC's considerations of the relative merits of each of the feasible values and APTPPL's proposed value for the ICB are then presented.

2.2.1 Code requirements

(i) The initial capital base—existing pipelines

For existing pipelines, the code (ss. 8.10 (a) and (b) and 8.11) requires that normally the value of the ICB should not fall outside the range of depreciated actual cost (DAC) and depreciated optimised replacement cost (DORC). In establishing the ICB, the code (s. 8.10) also requires the regulator to consider:

- other well-recognised asset valuation methodologies (s. 8.10(c)) and the advantages and disadvantages of these methodologies (including DAC and DORC) (s. 8.10(d))
- international best practice and the effect on the international competitiveness of energy consuming industries (s. 8.10(e))

- the basis on which tariffs have been (or appear to have been) set in the past, the economic depreciation of the covered pipeline, and the historical returns to the service provider from the covered pipeline (s. 8.10(f))
- the reasonable expectations of persons under the regulatory regime that applied to the pipeline before the commencement of the code (s. 8.10(g))
- the effect on the economically efficient use of gas resources (s. 8.10(h))
- the comparability with the cost structure of new pipelines that may compete with the pipeline in question (for example, a pipeline that may by-pass some or all of the pipeline in question) (s. 8.10(i))
- the price paid for any asset recently bought by the service provider and the circumstances of that purchase (s. 8.10(j))
- any other matters considered relevant (s. 8.10(k)).

(ii) *General principles*

The regulator is also guided by the objectives in s. 8.1:

- (a) providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;
- (b) replicating the outcome of a competitive market;
- (c) ensuring the safe and reliable operation of the Pipeline;
- (d) not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries;
- (e) efficiency in the level and structure of the Reference Tariff; and
- (f) providing an incentive to the Service Provider to reduce costs and to develop the market for Reference and other Services.

To the extent that any of these objectives conflict in their application to a particular Reference Tariff determination, the Relevant Regulator may determine the manner in which they can best be reconciled or which of them should prevail.

2.2.2 Current access arrangement provisions

The access arrangement for the RBP does not include an initial capital base established in accordance with ss. 8.1, 8.10 and 8.11 of the code.

2.2.3 APTPPL proposal

APTPPL has calculated the value of the ICB through the application of the ‘NPV cost-based DORC’ (NPV DORC) methodology, based on the decision of the Tribunal in the Moomba to Sydney Pipeline (MSP) case.¹⁴

The optimised replacement cost (ORC) has been calculated at \$456.1 m at October 2005. For the calculation of NPV DORC the ORC value is adjusted by:

- including equity raising costs at a level of 3.83 per cent¹⁵ of equity value, as noted by the Allen Consulting Group (ACG)
- reducing linepack costs.¹⁶

The NPV DORC has been calculated at October 2005, and gives a value of \$342.6 m. APTPPL has adopted this amount as the ICB.¹⁷

The ORC and ICB values are shown in table 2.2.3.1.

The assets that form the ICB have then been allocated into the asset classes shown in table 2.2.3.1. This allocation of costs in the ICB is based on the proportion of the costs of each asset class in the optimised replacement pipeline.

¹⁴ Application by East Australian Pipeline Limited [2004] ACompT 8 (8 July 2004) and [2005] ACompT 1 (18 March 2005).

¹⁵ The ACG (2004) ‘Debt and equity raising transaction costs: report to the Australian Competition and Consumer Commission’ p. 61.

¹⁶ The ORC pipeline included \$681 000 in linepack. This has been reduced to \$180 000 to reflect the assumption that users would provide some of the linepack consistent with current practice.

¹⁷ The ICB is at October 2005. This figure has been inflated by forecast CPI and adjusted for depreciation to obtain a July 2006 value for the ICB of \$343.9 m.

Table 2.2.3.1: APTPPL’s proposed RBP initial capital base (\$m October 2005)

Asset class	ORC value (\$m)	% of ORC	NPV DORC (\$m)	ICB (\$m)
Transmission pipelines (incl. linepack)	368.2	80.7		276.5
Compressor stations	54.0	11.8		40.6
Receipt and delivery stations	13.7	3.0		10.3
Land	13.3	2.9		10.0
Buildings	2.1	0.5		1.6
Communications	4.8	1.1		3.6
Total	456.1	100.0	342.6	342.6¹⁸
Add equity raising costs	6.6			
Subtract linepack	0.5			
Adjusted total	462.2			

Depreciated actual cost (s. 8.10(a))

APTPL asserted that DAC is within a range of \$0 to \$253.3m. It placed no weight on this estimate. It claimed that there was insufficient financial information to make any meaningful calculation of the amount of economic depreciation recovered from users over the life of the RBP.

Depreciated optimised replacement cost (s. 8.10(b))

APTPL has proposed an ICB of \$342.6 m. This value was determined by applying the NPV DORC approach used by the Tribunal in its consideration of East Australian Pipeline Limited’s (EAPL) appeal against the ACCC’s further final decision on the Moomba to Sydney Pipeline (MSP) access arrangement.

While APTPL calculated a straight-line apportionment of the ORC at \$315 m, it did not give any weight to this estimate nor the basis of this calculation.

Other well-recognised asset valuation methodologies (s. 8.10(c))

APTPL stated that it bought the remaining 15 per cent interest in the RBP in 2001 but that this purchase price should not be given any weight in determining the ICB as the purchase transaction occurred in the context of: the vendor exiting Australia and this was one of its few remaining assets; APTPL had pre-emptive rights relating to the purchase; and there was no public or competitive process undertaken by the vendor.

APTPL stated that it is not aware of any other well-recognised valuation methodologies relevant to the calculation of the ICB of the RBP under the code.

¹⁸ The ICB figure of \$342.6 includes equity raising costs and is reduced for linepack.

Advantages and disadvantages of each valuation methodology (s. 8.10(d))

APTPPL made no comment on the advantages and disadvantages of either the DAC or NPV DORC. As noted above, APTPPL does not consider it appropriate to give any weight to the price it paid in 2001 for the remaining 15 per cent of the RBP.

International best practice and affect on international competitiveness (s. 8.10(e))

APTPPL made no comment.

Basis for past tariffs, economic depreciation and historical returns (s. 8.10(f))

APTPPL claimed that there was insufficient information available to determine the basis on which tariffs were negotiated or to establish accurate identification of economic returns to the service provider over the life of the pipeline.

Reasonable expectations under the previous regulatory regime (s. 8.10(g))

APTPPL claimed it was reasonable for it to expect to be able to continue to charge tariffs established under the RBP access principles approved by the Queensland Government or contracts. Implicit in this is the view that the ICB should underpin existing tariffs, but APTPPL did not calculate a value for the ICB based on this approach.

The economically efficient use of gas resources (s. 8.10(h))

APTPPL made no comment.

Comparability with the cost structure of competing pipelines (s. 8.10(i))

APTPPL stated that it was not aware of any proposal for a pipeline that may by-pass the covered pipeline.

APTPPL considered that the ORC reflects the cost of a pipeline to by-pass the RBP. As the NPV DORC methodology recognises the shorter remaining life of the existing pipeline, the proposed ICB will result in tariffs which are no higher than tariffs that the developer of a by-pass pipeline would have to charge to recover the costs of the new pipeline over its life.

Because the ORC reflects the most efficient route and design of a replacement (or by-pass) pipeline, an ICB and tariffs reflecting that ORC do not lead to a result which encourages inefficient by-pass.

The price paid for any asset recently bought by the service provider (s. 8.10(j))

APTPPL referenced the sale price for this section of the code. For simplicity, the sale price is addressed under s. 8.10(c)—other well-recognised asset valuation methodologies.

Other factors the regulator considers relevant (s. 8.10(k))

APTPPL made no comment.

2.2.4 Submissions in response to the revised access arrangement

Queensland Gas Corporation (QGC) stated that:

- it was difficult to reconcile the ORC value with unit construction costs of the Peat lateral. The ORC value was considered excessive or alternatively sufficient to provide significantly expanded delivery capacities
- a clear statement of compression vs line diameter should be provided to allow for the determination of a reasonable optimised capacity
- it considered APTPPL's actual cost of the pipeline was reasonable before consideration of any direct user capital contributions
- APTPPL's proposed DORC approach undermines users' decisions to expend additional funds to secure certainty in future contracts
- adopting actual expenditure to date and allowing for the complete replacement or looping of the metropolitan section would result in an ICB that would be more acceptable to users

Energex stated that:

- APTPPL has accrued substantial amounts of economic depreciation of the assets before the establishment of the ICB. Accordingly, Energex firmly believes the ACCC should analyse the available information and ensure ss. 8.10(a) and (f) of the code are appropriately considered.

2.2.5 ACCC's considerations

Depreciated actual cost (s. 8.10(a))

Section 8.10(a) of the code requires the regulator to consider the value that would result from taking the actual capital cost of the covered pipeline and subtracting the accumulated depreciation for those assets charged to users (or thought to have been charged to users before the start of the code). This value is referred to as depreciated actual cost (DAC).

The Western Australia Court of Appeal in *Re Michael* observed that in calculating the DAC it is usual to take the net book value and to depreciate this in line with accounting standards.¹⁹ APTPPL's 2005 statutory accounts reveal an asset value of \$182.2 m and a depreciated value of \$133.7 m.²⁰ In the access arrangement information, APTPPL stated that revaluations of assets have occurred which increased the book value of the asset by \$34.9m. Further details of the asset lives were obtained that enabled a calculation of the total depreciated value of these revaluations as being \$25.4 m at June 2005.²¹ This results in a net book value of \$108.3m at June 2005.

¹⁹ Re Dr Ken Michael AM; ex parte EPIC Energy (WA) Nominees Pty Ltd & Anor [2002] WASCA 231, paragraph 163.

²⁰ From annual accounts at June 2005 (the analysis included accounts from 1991/92 to 2004/05 financial years).

²¹ In APTPPL's response to ACCC request for information (2/3/06), the revaluation figures were provided. ACCC used APTPPL assumptions that revaluations described as 'transmission plant' would have an assumed life of 35 years and the revaluation described as 'Pipeline' would have an

APTPPL claimed that the reference to ‘charged’ under s 8.10(a) indicated that economic not accounting depreciation is required to calculate the DAC.²² It claimed that there was insufficient financial information to make any meaningful calculation of the amount of economic depreciation recovered from users over the life of the RBP. APTPPL submitted that economic depreciation is calculated as the residual value derived from subtracting costs (including a return on capital) from revenue. It stated that for any pipeline the minimum value for DAC will be zero (where depreciation is at least equal to the actual costs) and the maximum will be the actual costs (where no depreciation is recovered).

APTPPL therefore stated that the DAC will fall within a range of zero (where depreciation from users is equal to or greater than the actual capital cost) to \$253.3 m which APTPPL stated is the actual capital cost of the pipeline where there has been no depreciation recovered from users.²³ However, APTPPL placed no weight on this estimate.

Economic depreciation is defined as the change in the value of an asset from one period to the next. For regulatory purposes it is often calculated as the difference between revenue less operating costs and a normal return on assets. It is this latter definition that APTPPL seems to have used when submitting that the DAC is in the range of zero to \$253.3 m, the total actual costs with no depreciation recovered. Taking an extreme case, on this basis the value of an asset at the end of its useful life could be as high as its actual costs (where the asset has some intrinsic value), whereas the true value of the actual asset at that time would be its scrap value only.

In other regulatory decisions accounting standards have been used when there is insufficient financial information to establish an appropriate value for economic depreciation.²⁴ In this instance, the ACCC has reviewed the financial accounts for the period 1991-92 to 2004-05 and is satisfied that it has been able establish a value for DAC of \$108.3 m. The ACCC does not accept APTPPL’s argument that DAC has to be applied using economic depreciation.

Depreciated optimised replacement cost (s. 8.10(b))

Section 8.10(b) requires an assessment of the value of the pipeline from applying a depreciated optimised replacement cost methodology (DORC).

In previous regulatory decisions concerning gas transmission pipelines, the ACCC has applied a value for DORC based on the straight-line apportionment of the ORC.

assumed life of 50 years. No information was provided on the assumed life for the revaluation described as ‘adjustment’ so ACCC have used an assumed life of 50 years. These revaluations were depreciated using their assumed life and totalled \$25.4 m. The DAC is therefore \$133.7 m minus \$25.4 m, i.e. \$108.3 m.

²² Access arrangement information p. 7.

²³ The actual cost of the pipeline in nominal dollars is \$155.8 m. However, APTPPL has used CPI to index this figure to June 30 2005 dollars resulting in a figure of \$253.3 m.

²⁴ For example *Re Michael*, para. 163. This was noted by the ACCC in the final decision on the MSP as support for its position in that case. See also ACCC final decision—*Access arrangement by AGL Pipelines (NSW) Pty Ltd for the Central West Pipeline 30 June 2000*.

Except for the MSP access arrangement, this has been the DORC proposed by service providers in other access arrangements for gas transmission pipelines. While APTPPL has proposed a NPV DORC for this access arrangement, the ACCC considers it appropriate to consider both approaches in its assessment as the code provides no guidance on the methodology to be used to determine the value of DORC. It is open to the regulator to consider the merits of both methodologies in terms of the 8.1 objectives of the code to determine the best estimate of DORC.

NPV DORC

APTPPL has proposed a DORC value at October 2005 of \$342.6 m. APTPPL has defined DORC as the NPV of the difference between the lifecycle costs of an optimal replacement pipeline established in 2006 and the life cycle costs applying to the existing pipeline including its eventual replacement. However, as discussed in more detail later in this section, APTPPL has not taken into account potential differences in service potential between an optimal replacement pipeline and the existing pipeline. To the extent that differences exist, APTPPL's proposed cost-based NPV DORC will overstate the true value of the NPV DORC.

The NPV DORC methodology can be considered as the deprival value of the existing asset to the service provider.

APTPPL has provided a model supporting its proposed DORC valuation. Major inputs into the model are:

- The value of the optimal new pipe: the cost of construction now and the cost of future expansions to meet anticipated demand, as well as the cost of replacement of these assets when they wear out. Replacement costs are less than current costs due to assumed technology developments.
- The cost of expanding the current pipeline so that it can meet anticipated demand.²⁵
- The cost of replacing the current pipeline when its assets wear out, including a forecast of how the system may be changed to a more optimal configuration over time.
- The value of operating and maintenance expenditures appropriate to both the new and the existing pipelines. APTPPL has used the same operations and maintenance forecast as it has provided for the revenue model. It has factored in an increase in operations and maintenance each year when assets are aging and a reduction when assets are replaced with new assets. The ACCC agrees with this approach.
- The discount rate for establishing the present value of future costs.

Consultant engineer to APTPPL, Venton & Associates (Venton), estimated the cost of the optimised new pipeline to be \$456 m (in October 2005 dollars), with another \$38 m needed in 2008 to increase capacity from 203-236 TJ/day to 290-304 TJ/day, the

²⁵ The model does not include duplication of the Brisbane section of the RBP as mooted by Queensland Minister for Energy in his statement on 14 July 2006.

maximum forecast by APTPPL over the next 20 years.²⁶ The ACCC asked Sleeman Consulting (Sleeman), to independently estimate the cost of the optimised replacement. Sleeman's optimal pipeline is costed at \$502 m (in May 2006 dollars) with no additional expenditure required for expansion.²⁷ Both estimates are based on comparably sized pipelines²⁸ with two compressor stations each containing two compressors. In view of the sizeable contingency factors surrounding such estimates, the ACCC considers the difference in the costs of the two estimates to be immaterial. It therefore accepts the Venton estimate with a modification to the 'return allowed during construction cost'.

Venton based the 'return allowed during construction cost' on a nominal WACC of 10.6 per cent.²⁹ Consistent with its previous decisions, the ACCC considers the nominal WACC to be the appropriate rate at which to calculate a return during construction. Venton's figure is above the nominal 10.0 per cent return rate derived from APTPPL's proposed real WACC of 6.9 per cent.

In any event, the ACCC has concluded that the best estimate of the WACC as 5.3 per cent real, or 8.5 per cent in nominal terms (see section 2.5 of this draft decision), and considers that this return during construction cost should be applied in calculating the ORC value. This will reduce Venton's ORC by around \$5.3 m.

There are problems with the methodology APTPPL has adopted to implement NPV DORC and the value of some inputs used. The ACCC commissioned NERA Economic Consulting (NERA) to assess the assumptions used by APTPPL's consultant CRA International (CRA) in modelling the DORC value for the RBP.³⁰ The principal criticisms relate to the choice of discount rate, the treatment of taxation, the use of an asset replacement schedule on the basis of effective life averaging and the differences in optimal service levels between the new and existing pipelines. The first three of these factors, which warrant changes to the model, are discussed below. The last factor (service differentials) is also discussed below but the model has not been adjusted to take this factor into account.

Another limitation of APTPPL's model is the modelling of the approach in perpetuity. APTPPL's modelling assumes that the pipeline system will exist forever, that the demand forecast for the medium term will continue forever and that this demand can be supplied. This assumption is unrealistic. However, the ACCC's analysis of the model indicates that limiting the life of the model to 80 years (for example) does not significantly change the result. Therefore the model has not been changed in this respect.

²⁶ While the model makes its analysis over 238 years, APTPPL has assumed that demand will not increase beyond the maximum demand over the next 20 years.

²⁷ Sleeman's estimate is arrived at using a 'steady state' model whereas the Venton estimate is based on a transient model. The former is a more conservative approach and may tend to overestimate the required pipeline diameter and hence the construction cost.

²⁸ The only difference is Venton uses a 500 mm diameter for the section from Wallumbilla to Arubial whereas Sleeman uses 450 mm.

²⁹ Venton report Optimised Replacement Cost Study, p. 64.

³⁰ The result of that study is NERA, 'Assessment of elements of APT's DORC calculations for RBP', 25 July 2006 cited as NERA, 'DORC calculations'.

Discount rate

APTPPL used its proposed pre-tax real WACC of 6.9 per cent to discount the difference between the future costs associated with the optimal replacement pipeline and those associated with the existing pipeline. However, the appropriate discount rate for costs (as opposed to profits) is the real risk free rate (currently 2.44 per cent) as recommended by NERA.³¹ This is based on the observation that there is little, if any, systemic risk in the forecast cost streams. The use of the risk free rate is also supported by empirical studies of the volatility of after-tax profits compared with costs. This supports the position that the discount rate for costs should not include a risk premium.³² NERA also references Professor Bruce Grundy who supported the use of the risk free rate for discounting costs in a paper written for the Tribunal when it considered the NPV DORC concept in the context of the MSP appeal.³³

The error of using a company's rate of return as the discount rate for costs can be seen intuitively by considering what happens when the company takes on increasingly risky projects.

The discount rate increases (the return on capital increases to compensate investors for the increased risk) and therefore the present value of the liability decreases.³⁴ The logical extension of this is that if the company took on projects with almost infinite risk, it could make the future liability reduce to almost zero in present value. Intuitively, this is wrong, as the nature of that same liability has not changed. Insurance industry practice also recognises that the value of the liability does not change with the company's cost of capital by requiring that liabilities be discounted by the risk free rate.³⁵

Tax

APTPPL did not take tax into account in its NPV DORC calculations. CRA International, the consultants that calculated the NPV DORC model for APTPPL, claimed that it has taken tax into account implicitly by using a pre-tax WACC for the discount rate.³⁶ NERA's report shows that CRA International's approach results in the post-tax cost of expenditure in early years being over valued and in later years being under valued compared to the correct approach of discounting post-tax costs using a post-tax discount rate. The timing of tax payments can be modelled directly and needs to be given the importance of the timing of tax payments in influencing investment decisions.

³¹ NERA, 'DORC calculations', p. 8.

³² Brealey, Cooper and Habib, *Oxford Review of Economic Policy*, p. 24, cited in NERA, 'DORC calculations', p. 4.

³³ NERA, 'DORC calculations', pp. 3–8.

³⁴ Assume a company has a rate of return of 10 per cent and a liability of \$100 in one year. Using the rate of return as a discount rate would imply that the current value of that liability is \$90.91. Assume now that the company takes on more risky projects such that its rate of return is now 20 per cent. Using the rate of return as a discount rate would imply that now the current value of that liability is \$83.33. The more risky the company's projects, the lower the present value of that same future liability, even though its nature has not changed.

³⁵ NERA, 'DORC calculations', p. 4.

³⁶ CRA International, *Roma-Brisbane Pipeline: DORC Asset Valuation*, February 2006, p. 12.

The tax deductions available depend among other things on the length of time the pipeline has operated and the extent to which the pipeline has generated sufficient revenue to allow expenses to be deducted from assessable income. The incumbent owner is likely to have less by way of capital allowances to deduct, compared with a new entrant, because some past deductions (even where they paid more than the construction cost of the asset) will have already been claimed whereas the new entrant will be able to claim deductions for its full purchase price of the asset. In the access arrangement information, APTPPL argued that the assumed tax position should be that of a new entrant rather than the incumbent. It said the DORC is the amount the new entrant would pay an incumbent to acquire the existing asset.³⁷ However, DORC can also be considered from the incumbent's perspective: as the value of the asset to the incumbent given the option of replacing it.

The code provides no specific guidance on whether DORC should be viewed from the incumbent's or a new entrant's position. Nevertheless the current context is the regulation under the code of a service provider that exists (an incumbent) and the valuation of its asset. Calculating DORC from perspective of the existing service provider is appropriate in this context.

Another issue to consider in selecting the appropriate DORC calculation is consistency with the assumptions underlying the revenue model used for the access arrangement. The ACCC uses post-tax revenue modelling in which tax liabilities are estimated. The liabilities are estimated from the incumbent's perspective (given that it is the revenue of the incumbent that is being modelled).

As NERA has pointed out, the same assumption regarding tax depreciation should be used for modelling both revenues and the ICB.³⁸ To do otherwise could allow an over-recovery of costs.³⁹

APTPL asserted that 'regulatory precedent and literature supports' the new entrant viewpoint for the calculation of DORC.⁴⁰ Given that the NPV of costs DORC methodology was developed in 2004 (during the Tribunal's consideration of the appeal concerning the MSP), the ACCC considers any literature on the new entrant viewpoint unlikely to be in the context of this DORC methodology.⁴¹

³⁷ APTPPL, access arrangement information, p. 10.

³⁸ NERA, 'DORC calculations', p. 21.

³⁹ If the new entrant perspective is used in the DORC, the DORC will be higher (as the costs of the existing pipeline will be lower because the maximum tax depreciation is available). To then use the incumbent perspective in the revenue modelling would give a higher revenue (than the new entrant perspective) because tax liabilities will be forecast to be higher (because there are less deductions available).

⁴⁰ APTPPL, further information provided to ACCC, 21 February 2006, p. 4. APTPPL provided no supporting evidence. The ACCC notes that the concept of a 'hypothetical new entrant' (HNE) is often used as the viewpoint for calculating estimates of contestable prices.

⁴¹ In its Draft Statement of Principles for the Regulation of Transmission Revenues (DRP), 27 May 1999, the ACCC had considered establishing DORC valuations based on alternative methodologies to the straight line approach. However, the ACCC did not develop or implement any alternative approaches. In 2000 Agility, in relation to the MSP access arrangement, submitted an NPV approach to calculating DORC which in its opinion was consistent with the principles contained in

APTPPL noted that the value calculated under the incumbent viewpoint will vary according to the incumbent's length of ownership. It claimed this is inconsistent with the valuation technique required by s. 8.10 of the code.

The ACCC acknowledges the incumbent's length of ownership affects the valuation of the pipeline but consider this does not conflict with s. 8.10. The ACCC considers that as the establishment of an ICB for a pipeline is in the context of regulating the (incumbent) owner of that pipeline, it is appropriate that that owner's actual tax position be taken into account when assessing the value of the pipeline. The ACCC concludes that the incumbent position should determine the DORC calculation and the tariff calculations for the RBP access arrangement.

Existing pipeline replacement schedule

Assets such as compressors and segments of the existing pipeline need to be replaced when they wear out. APTPPL did not forecast a replacement schedule for these assets. Instead, for the sake of simplicity, it calculated the average lives of the existing pipes (57 years) and compressors (12 years).

NERA's report shows that this approach systematically biases the DORC calculation upwards because it ignores the economies of scale involved in replacing all the assets at once and that discounting an average life cost will underestimate the present value of the individual replacement costs.⁴²

The ACCC considers it appropriate to model a realistic replacement scenario in the NPV DORC calculations. Sleeman considered a number of alternatives for the ACCC. The lowest cost alternative involves expanding the existing pipeline and replacing existing assets when they come to the end of their useful lives with looping and compression which have specifications that will enable them to form part of the optimal pipeline. The system eventually reflects the optimal pipeline in 2075 when the 400mm pipe reaches the end of its life. Thus the system would be progressively optimised.⁴³

Applying assumptions about the appropriate time to replace existing assets to the NPV DORC methodology with the risk free rate for the discount rate and making the appropriate adjustments for tax produces an estimate of \$171.6 m for the NPV DORC.

It should be noted that APTPPL's approach is a simplification of the appropriate calculation of a NPV DORC. APTPPL's approach to modelling NPV DORC did not take account of the actual time when parts of the pipeline would have to be replaced. Instead it provided a proxy for this through the average remaining life of the pipeline. As NERA noted, the appropriate calculation of a NPV DORC would be the net economic value of future services provided by an optimally designed new pipeline less the net economic value of future services provided by the existing pipeline.⁴⁴ The APTPPL approach only approximates the appropriate value as it is assumed that the

the DRP. The Agility approach was based on the NPV of future revenues, as opposed to future costs.

⁴² NERA, 'DORC calculations', pp. 15–7.

⁴³ Sleeman Consulting, 'Optimised replacement cost and replacement schedule of Roma Brisbane pipeline (to meet future demand)', 24 June 2006, pp. 14–8.

⁴⁴ NERA, 'DORC calculations', p. 9.

two pipelines (the existing and the optimal replacement) have the same service potential. If the service potential of the new pipeline is greater than the existing pipeline, the APTPPL approach will over estimate the true DORC value.

NERA listed several areas in which the new pipeline delivers a service potential greater than the existing pipeline. These include increased public safety and a greater ability to service expected loads afforded by the route of the new pipeline, away from existing residential areas and closer to expected demand.⁴⁵

The ACCC is aware that it is very difficult to quantify these service potential differentials and is not proposing that APTPPL's model be adjusted in an attempt to do so. To the extent that differences in service potential exist an NPV DORC based solely on costs will overstate the true value of DORC.

Straight-line apportionment of the optimal replacement cost pipeline

Before the Tribunal's decision on MSP, the ACCC's approach to calculating DORC was to discount the value of the optimised replacement cost (ORC) on the basis of the ratio of the expected remaining life of the actual pipeline over the economic life the optimal pipeline.

In its access arrangement information, APTPPL calculated a straight line apportionment of the ORC at \$315 m but it did not place any weight on this approach. In its modelling, APTPPL allocated the remaining asset lives for the asset classes of the current pipeline (pipe, compressor, easements and communication) to the dollar values associated with similar asset classes in the ORC estimate.

As with the NPV DORC, APTPPL used average asset class lives for pipelines and compressors.

The ACCC considers this approach should be refined by allocating the ORC to various individual assets in proportion to the historic costs of the individual assets (expressed in 2006 dollars). This is consistent with the rejection of the use of average lives as discussed above on NPV DORC.

In calculating the straight line DORC a smaller pipeline (based on current capacity) has been used rather than a pipeline with greater capacity that APTPPL used to calculate the NPV DORC. Straight line DORC is less complicated where future expansions do not have to be considered when determining the capacity of the optimal pipeline. Because APTPPL has proposed that the reference service be based on the existing capacity, the ORC value for the straight line DORC is different from the ORC of the NPV DORC which has to take account of future capital works on the existing pipeline to bring it up to the capacity of the optimal replacement pipeline.

Accordingly, the ACCC requested Sleeman to estimate an ORC for the existing pipeline based on its current licensed capacity (180 TJ/day). Sleeman designed a

⁴⁵ NERA, 'DORC calculations', pp. 10. Note also that the ORCs presented by Venton and Sleeman are designed to current safety standards rather than to the safety standards of the existing pipeline. For example, the wall thickness for the pipe in the metropolitan section is thicker than that which currently exists.

pipeline that could deliver the licensed capacity of the pipeline and estimated the cost to be \$371 m.⁴⁶ After reviewing Sleeman's analysis, Venton noted that while the Sleeman designed pipeline could deliver 180 TJ/day, it would not be capable of delivering the load that the pipeline actually delivered in 2005.⁴⁷

Venton designed an optimal pipeline that could deliver the same service potential as the existing pipeline and estimated its cost at \$427 m.⁴⁸ Sleeman subsequently adjusted the pipeline design to take account of the higher service potential of the pipeline over its licensed capacity, resulting in a revised ORC estimate of \$422.7 m (in \$October 2005).

Both Venton's and Sleeman's final estimates are based on similar designs with similar overall costs. In view of the sizeable contingency factors surrounding such estimates, the ACCC considers the difference in the costs of the two estimates to be immaterial. It therefore accepts the Venton estimate, with the same exception as noted above for the ORC used in the NPV DORC approach: that the return during construction be calculated using the nominal version of the WACC proposed by the ACCC in this decision, that is, 8.5 per cent.

Apportioning the Venton estimate, according to the refined methodology discussed above, establishes a DORC of \$295.84 m (in \$June 2006).

Other well-recognised asset valuation methodologies (s. 8.10(c))

Section 8.10(c) of the code requires the regulator to consider the value that would result from applying other well-recognised asset valuation methodologies in determining the valuation of the ICB. APTPPL states that it is not aware of any other well-recognised valuation methodologies that would be appropriate and are given substantial weight by regulators under the code.

The WA Court of Appeal in *Re Michael Epic* considered Epic's argument that the purchase price was relevant under 8.10(c) as representing the asset's market value and agreed with that argument. The sale price of the MSP was considered but not given much weight by either the ACCC or EAPL in setting the ICB for that pipeline. In that case, EAPL claimed that it had secured the pipeline on favourable terms and that the sale price from the government should not be the basis of the pipeline's value for the purposes of regulation. The ACCC did not seek to use the sale price for setting the ICB.

APTPPL bought a 15 per cent interest in the RBP in 2001 from Interstate Pipelines Pty Limited for \$12.3 m. APTPPL stated that the purchase transaction occurred in the context of that:

- the vendor was exiting Australia and this was one of their few remaining assets
- APTPPL having a pre-emptive rights relating to the purchase
- there was no public or competitive process undertaken by the vendor.

⁴⁶ Sleeman Consulting, 'Optimised replacement cost of existing Roma Brisbane pipeline', 24 June 2006, p. 19.

⁴⁷ APT RBP Review – Sleeman's Optimised Replacement Cost, p. 1.

⁴⁸ *ibid*, p. 7.

For these reasons, APTPPL stated that this purchase price should not be given any weight.

APTPPL's reasons for rejecting the sale value of the 15 percent interest are not compelling. While Interstate Pipelines Pty Limited might not have been in a strong bargaining position, it would have been aware of the commercial value of the pipeline and the benefit to APTPPL of full control of the pipeline.

The ACCC has estimated that the valuation of the ICB derived from this method is approximately \$165 m.⁴⁹

Advantages and disadvantages of each valuation methodology (s. 8.10(d))

Section 8.10(d) of the code requires the regulator to consider the advantages and disadvantages of each valuation methodology applied under ss 8.10(a), 8.10(b) and 8.10(c). However, s. 8.10(d) does not guide the regulator on what criteria it should use to assess the advantages and disadvantages of each valuation methodology.

Accordingly, as in the MSP final decision, the ACCC has had regard to the s. 8.1 objectives in its consideration of s. 8.10(d). Consideration of the s. 8.1 objectives for the ICB is discussed later in this decision.

International best practice and impact on international competitiveness (s. 8.10(e))

Section 8.10(e) of the code requires the regulator in setting the value of the ICB to consider the international best practice of pipelines in comparable situations and the impact on the international competitiveness of energy consuming industries. APTPPL made no comment on this section.

The West Australia Economic Regulation Authority (ERA) considered the issue of international best practice in asset valuation in its draft decision on the Dampier to Bunbury pipeline. It considered the practices in the UK and US, as these are the two countries with the longest history of energy regulation. The ERA concluded that the US regulators have traditionally relied on historical cost valuations, whereas UK regulators have relied on replacement cost methodologies such as DORC. The ERA noted that UK regulators have in some cases adopted 'market valuation' approaches.

Regarding the Australian regulatory experience, the ERA stated regulators have used 'DORC' as the starting point and in some instances discounted the DORC in accordance with some criteria balancing the interests of the service provider and users. Typically, the criteria have been that regulated tariffs should not exceed existing tariffs. The ERA concluded that there is no established or well accepted 'international best practice'.⁵⁰

⁴⁹ Based on confidential asset price information provided by APTPPL adjusted for inflation and statutory accounts figures which included annual capex (covering expenditure on looping and the Peat lateral) up to 2004/05.

⁵⁰ Independent Gas Pipelines Access Regulator, Office of Gas Access Regulation, WA, Draft decision: *Proposed access arrangement Dampier to Bunbury pipeline system*, 21 June 2001, part B, pp. 145–7.

International experience (UK and US) suggests that both historical costs and valuations based on replacement costs should be considered.

Basis for past tariffs, economic depreciation and historical returns (s. 8.10(f))

Section 8.10(f) which deals with the basis on which tariffs have been (or appear to have been) set in the past, the economic depreciation of the covered pipeline; and the historical returns to the service provider from the covered pipeline is significant for the RBP.

APTPPL stated that there was insufficient information available to determine the basis on which tariffs were negotiated or to establish accurate identification of economic returns to the service provider over the life of the pipeline.

It further stated that:

‘No capacity expansion has been funded through capital contributions by customers.’ ... Users have not funded expansions of the RBP. Users have paid tariffs for provision of services, including services provided by the expansions. While revenue from tariffs may have supported expansion of the pipeline, it is an incorrect characterisation to suggest that Users have funded, in the sense of financing, the expansion. APTPPL understands that the term “capital contribution” would more commonly be used where Users have treated payments as “capital” in their books.

In general contracts with tariffs such as “compression charges” or “looping charges” were established when CSR Oil & Gas was the pipeline owner (i.e. they were established before 1988).

APTPPL has not identified any detailed records of how such tariffs were negotiated, the information provided to users or how cost allocation was undertaken.⁵¹

Energex stated:

Energex has made significant financial contributions towards the establishment and expansion of the RBP over the past 36 years.

These include compression and looping surcharges, for the services provided through the expansions. A summary and a table showing these payments over time is included as confidential information in Appendix 1 (C).

ENERGEX understands that APT does not consider any previous contributions from users to be Capital Contributions under the definition provided by the Gas Code. This may be arguable, however ENERGEX believes that the contributions provided by users to obtain additional capacity need recognition in a transparent manner in the revised Access Arrangement.⁵²

As required by section s. 8.10(f) of the code, the ACCC has considered the basis on which tariffs have been set in the past and the historical returns to APTPPL on its investment in expansion of the RBP. It has had access to historical and current contracts. These contracts are confidential and this has necessitated the ACCC’s analysis being presented in a confidential appendix: Appendix D—section 8.10.

⁵¹ APTPPL, ‘Response to ACCC request for information dated 2/3/06 and 24/3/06’, 7 April 2006, p. 18.

⁵² Energex, submission, 18 May 2006, p. 10.

A number of historical contracts examined by the ACCC provide for payments over standard charges for transportation services. Moreover these payments are linked to capacity expansions undertaken by APTPPL, specifically all six compressors, looping sections 1 and 2 and part of looping 3. The result of this analysis is that the ACCC concludes that APTPPL has more than fully recovered, through past tariffs, the capital associated with these capacity expansions.

Reasonable expectations under the prior regulatory regime (s. 8.10(g))

Section 8.10 (g) of the code requires the regulator to consider the reasonable expectations of persons under the regulatory regime that applied to the pipeline before the commencement of the code.

APTPL stated that under the prior regulatory regime, it was reasonable for APTPL to expect that it could continue to charge tariffs established under the access principles or contracts. APTPL did not state how these expectations would affect the ICB for the pipeline.

Before the introduction of the regulatory regime established in 1995 under Part 8 of the *Petroleum Act 1923*, tariffs were set through commercial negotiation. Following the amendments to Part 8 of the *Petroleum Act*, tariffs were set in accordance with the access principles or by negotiation, subject to the requirement for ministerial approval.

The previous regulatory regime concluded on 18 May 2000. However, a transitional phase existed until 29 July 2006 where the tariff elements remained derogated from the code provisions in favour of terms approved by the Queensland Government under the previous regime.

The ACCC does not believe the previous regulatory regime could have given rise to any reasonable expectations that would bear upon the ICB of the pipeline under the current regulatory regime. Put simply, there is nothing in the previous regulatory regime that could lead to the expectation that a service provider would be entitled to charge tariffs determined under that regime once the transitional phase concluded. The access principles approved by the Minister contain no provisions that suggest that derogated tariffs should extend beyond the term of the derogation (that is, beyond 29 July 2006).

The economically efficient utilisation of gas resources (s. 8.10(h))

Section 8.10(h) of the code requires the regulator to consider the effect on the economically efficient use of gas resources. APTPL made no comment on this section.

The ACCC considers that the economically efficient use of gas resources can best be achieved by setting a value for the ICB that is consistent with the objectives in s. 8.1 of the code. In particular, the asset value should allow the opportunity for recovery of efficient costs, replicate the outcomes of a competitive market and not distort investment decisions in gas transportation or upstream and downstream gas industries.

Comparability with the cost structure of competing pipelines (s. 8.10(i))

Section 8.10(i) of the code requires the regulator to consider the comparability with the cost structure of pipelines that may compete with the pipeline in question (for example, a pipeline that may by-pass some or the entire pipeline in question). APTPPL stated that it is not aware of any proposal for a pipeline that may by-pass the covered pipeline. ACCC agrees with APTPPL that because an ORC reflects the most efficient route and design of a replacement (or by-pass) pipeline, an ICB and tariffs reflecting that ORC should not lead to a result which encourages inefficient bypass.

The price paid for any asset recently bought by the service provider (s. 8.10(j))

Section 8.10(j) of the code requires the ACCC to consider the price paid for any asset recently bought by the service provider and the circumstances of the purchase. APTPPL referenced the sale price relating to this section of the code.

For simplicity, sale price is addressed under s. 8.10(c) other well-recognised asset valuation methodologies.

In addition to the historic cost less accounting depreciation the value of an asset can be assessed on the basis of industry cost benchmarks. The nominal licensed capacity of the RBP has been expanded since 1998 by more than 40 per cent.

The cost of expansion was \$97.6 m (\$2005) or approximately \$460 000 per km. This compares with an estimated optimised replacement cost of \$422.7 m for the whole RBP or approximately \$810 000 per km.⁵³

The QGC submission noted that the ORC reflects a higher unit cost than in recent pipeline projects.⁵⁴ The ACCC agrees with this observation but notes that recent rises in the cost of line pipe and pipeline construction were apparent in both the Venton report commissioned by APTPPL and the report prepared by Sleeman for the ACCC.

Section 8.1 of the code requires the regulator in determining the reference tariff to consider the objectives underpinning the reference tariff. When these objectives conflict the regulator may determine the manner in which they are best reconciled taking into account s. 2.24 factors.

It is clear that the efficient construction costs have increased significantly since the capacity of the pipeline was expanded from 2000. However, basing the value of the pipeline entirely on current construction costs could mean that APTPPL would be able to achieve revenues that are not consistent with past efficient costs (s. 8.1(a) of the code).

Moreover, setting the reference tariff on the basis of current replacement cost of the asset may therefore require tariffs that are uneconomic for users and this would imply that the pipeline would not be replaced. This is inconsistent with s. 8.1(d) of the code

⁵³ This analysis is based on a comparison of the last four stages of looping measured against similar components detailed in the ORC developed by Sleeman Consulting. The cost per km of \$810 000 is based on an adjusted ORC of \$319.6 m (which excludes the metropolitan section and several other non-applicable costs).

⁵⁴ QGC submission, p. 4.

which requires that tariffs should not distort investment decisions. In such circumstances the application of a replacement cost methodology is problematic.

More information on s. 8.10(j) considerations is contained in confidential appendix D—section 8.10.

Other factors the regulator considers relevant (s. 8.10(k))

Section 8.10(k) of the code requires the regulator to consider other relevant factors in determining the value of the ICB. APTPPL made no comment on this section. However, APTPPL's claim for equity raising costs at a level of 3.83 per cent of equity in the ORC used in the NPV DORC calculation has been assessed under this section. APTPPL references an ACG report prepared on behalf of ACCC to support its claim for this allowance.⁵⁵

The recent AER Directlink draft decision also references this report stating that where the ICB has yet to be established, the opening ICB value should reflect all costs, including a benchmark allowance for the cost of raising equity (subject to how the assets are financed).

If equity raising costs are allowed, the ACG recommended the use of initial public offering (IPO) costs as a proxy for equity raising costs. ACG proposed a benchmark based on the median IPO transaction cost measured across a sample of seven infrastructure capital raisings. ACG also found that utility floats can be expected to have a lower transaction cost due to their generally stable and regulated cash flow streams.

The ACG also recommended treating the cost of raising equity as part of the ORC value and depreciating it (along with other assets) to the DORC cost value.

The Directlink draft decision accepted the inclusion of equity raising costs because the ICB was being established for the first time. It accepted a median equity benchmark of 3.64 per cent⁵⁶ after updating ACG's analysis to include the Hastings Diversified Utilities Fund IPO.⁵⁷ Since then the data have been further updated to include initial public offers (IPOs) by Alinta, SP Ausnet and Spark. Consequently the updated median of the equity raising costs is 3.77 per cent.

On this basis the ACCC proposes to use equity raising costs of 3.77 per cent in the calculation of the ORC.

ACCC's conclusions on the initial capital base

Establishing the ICB relies on the evaluation of, and the weight to be given to, each of the factors in s 8.10 (including choice of valuation methodology—historical cost and current replacement cost or deprival valuations). This task is intended to be guided by s. 8.1.

⁵⁵ The ACG (2004) 'Debt and equity raising transaction costs: report to the Australian Competition and Consumer Commission, p. 61.

⁵⁶ Directlink draft decision p. 224.

⁵⁷ *ibid.*, p. 223.

A wide variation in value between historical cost and current replacement cost or deprival valuations is to be expected. However, for the RBP, the variation is particularly wide reflecting the fact that pipeline construction costs have escalated in recent years consistent with a buoyant resources sector. This means that the replacement of the actual pipeline would cost considerably more than the historical cost of the pipeline or capacity created by recent extensions and expansions.

It is worth noting that the value determined for ORC is a notional value only. The pipeline is not actually being replaced at this time. As the ORC is an input into the value of the ICB, caution should be exercised in placing too much weight on short-term increases in costs that may not be sustainable over the medium to long term.

This is important in establishing the ICB under the code as once the ICB is set it cannot be revalued at a later date. Moreover, in a competitive market assets would not be constructed or replaced if their cost was out of line with prices users would be willing to pay.

In establishing the ICB, the ACCC has considered each of the s. 8.10 factors in light of the objectives contained in s. 8.1 of the code.

Section 8.1(a) provides that a service provider should be given the opportunity to recover its efficient costs. The WA Court of Appeal observed that ‘the DAC and DORC methodologies have an acceptability for the purposes of the concept of economic efficiency’.⁵⁸

Section 8.1(b) states that the reference tariff and reference tariff policy should be designed to achieve the objective of replicating the outcome of a competitive market. The WA Court of Appeal noted the complementary nature of the objectives in ss. 8.1(a) and 8.1(b) in view of the interrelationship between economic efficiency and competition in a market.⁵⁹

In the MSP final decision, the ACCC argued that a valuation based on DORC, which represents the forward-looking efficient costs of delivering services, would be consistent with s. 8.1(b).⁶⁰ In theory, prices based on DORC represent the maximum that would be observed in a competitive market providing that a consequent price shock would not make replacement of the asset uneconomic. Accordingly, ACCC considers that DAC and/or past sale price are less likely to meet this objective than DORC.

Section 8.1(c) states that the reference tariff and reference tariff policy should be designed to achieve the objective of ensuring the safe and reliable operation of the pipeline.

The WA Court of Appeal interpreted this provision as requiring that the revenue stream should be sufficient to meet the safety and reliability needs as and when it is necessary.⁶¹ This interpretation suggests to the ACCC that this objective is directed

⁵⁸ [2002] WASCA 231, para. 176.

⁵⁹ [2002] WASCA 231, para. 128.

⁶⁰ MSP final decision, p. 68.

⁶¹ [2002] WASCA 231, para. 146.

more at operating expenses and capital expenditure with little direct relevance to the establishment of the value of the ICB.⁶²

The objective of section 8.1(d) of the code is that investment decisions in pipeline transportation services and upstream and downstream industries should not be distorted by the reference tariff or reference tariff policies.

The WA Court of Appeal dismissed submissions that this provision would be met by setting tariffs solely in accordance with the forward-looking efficient costs without having regard to past investment decisions.

According to the WA Court of Appeal to ignore past investment may have adverse effects on future investment. Accordingly it is open to the regulator to take into account the actual investment of the owner in the pipeline.

For this reason APTPPL's submission that no weight should be given to DAC or the 1991 sale of a 15 per cent interest in the pipeline is not supported.

While it is not proposed to base the value of the ICB on either of these methodologies, it is noted that the value proposed in this draft decision for the ICB allows APTPPL to recover more than its actual investment (depreciated) in the pipeline.

The objective of s. 8.1(e) of the code is efficiency in the level and structure of the reference tariff. Section 8.1(f) requires the reference tariff policy to provide for incentives to the service provider to reduce costs and develop the market for reference and other services.

In the MSP final decision, the ACCC concluded that the objectives contained in ss. 8.1(e) and 8.1(f) form part of the broader assessment of the reference tariff and reference tariff policy, rather than the ICB alone. Nevertheless, the ACCC noted in its decision that 'efficiency in the level of the reference tariff' is interrelated with the concept of 'efficient costs' in s. 8.1(a) and also the notion of replicating the outcomes of a competitive market (s. 8.1(b)).⁶³ Moreover, if the ICB were set at a level above efficient costs and that which would be observed in a competitive market, and therefore incorporated monopoly rents, a service provider would have less of an incentive to reduce costs and develop the market. Accordingly, for the reasons outlined above, the ACCC considers that a DORC value can be consistent with these two objectives.

In the past, for those regulated pipelines for which the ACCC has set the value of the ICB equal to DORC, it has used the straight-line approach to depreciation. APTPPL has proposed an NPV DORC methodology rather than the straight-line approach.

Either approach would be acceptable if they were equally likely to produce an ICB that is consistent with the principles in s. 8.1 of the code. However, the ACCC does not believe that the use of NPV DORC, in this instance, will produce such an outcome for the reasons given below.

⁶² Nevertheless, a plausible interpretation is that a value of the ICB that is set too low, for example below the level of the service provider's investment, may encourage the service provider to cut costs to increase its return on its investment to the detriment of the integrity and safety of the pipeline.

⁶³ MSP final decision, p. 73.

There remains a high degree of uncertainty surrounding the estimation of parameter values that are required by the NPV DORC approach. This conclusion is expanded on in work recently commissioned from NERA to provide a comparison of the straight-line and the NPV DORC methodology. This means that the NPV DORC methodology is highly prone to errors or differences of opinion in the estimation of these parameter values.

NERA concludes that as a proxy economic DORC, NPV DORC has two practical disadvantages relative to straight-line DORC: it is informationally and conceptually more complex; and it can only be implemented using information that is asymmetrically held by an interested party (i.e., the regulated business).⁶⁴

These practical disadvantages are evidenced in ACCC's assessment of several of APTPPL's assumptions and inputs in its NPV DORC calculations, including the choice of discount rate, the treatment of taxation and the expansion and replacement schedule for the actual pipeline. Correcting for these differences results in a \$172 m variance between ACCC and APTPPL's NPV DORC valuation (\$171.6 m) compared to \$342.6 m).

The extent of this variance leads the ACCC to conclude that it can have little confidence that the use of NPV DORC is likely to produce an ICB figure that is consistent with the principles in s. 8.1 of the code. The ICB determined using this method could lead to tariffs significantly above (or below) the tariffs that would meet the objectives in s. 8.1(a) and (b) in particular.

By contrast, straight-line DORC is relatively transparent and simple. The only information required is the cost of a pipeline that provides the same services as the actual pipeline (ORC), the remaining life of the actual pipeline and the economic life of the optimised replacement pipeline.

If this approach to DORC is used then the scope for argument is reduced to the value of the ORC and the remaining life of the actual pipeline and economic life of the optimised replacement pipeline. This also largely eliminates relying on information that is held asymmetrically (namely future expenditures on the actual pipeline and changes in the pipeline's operating costs).

While the ACCC acknowledges that this is a less sophisticated approach than NPV DORC, this does not mean that it would necessarily produce a less accurate estimate of DORC.⁶⁵

At the same time, use of this methodology substantially reduces the risk that the ICB will be skewed (in either direction) by errors or differences of opinion in the estimation of parameter values, such as long-term estimates in differences in costs (both capital and operating costs), operating risks, the rate of technological change and the timing of future capital expenditure.

⁶⁴ Comparison of DORC estimation procedures—NERA.

⁶⁵ *ibid.* NERA states that it is not possible to conclude that one or the other is, in general, a more accurate estimate of economic DORC without further detailed work. Even then, it is likely that the available data will not yield conclusive results.

It also reduces the complexity and improves the transparency and predictability of the regulatory process. Each of these factors means that the use of straight-line DORC is much more likely to result in tariffs that satisfy the principles in s. 8.1.

Considering these factors, the ACCC believes that the use of straight-line DORC is also justified under s. 2.24. This approach reduces complexity, while improving transparency, predictability and accuracy will promote the legitimate interests of the service provider as well as the interests of users and prospective users. These are also relevant factors that may be considered in their own right under s. 2.24(g).

In its decision on the access arrangement for the MSP, the Tribunal stated that the DORC methodology it had chosen (NPV DORC) will not always be appropriate for setting an ICB for a pipeline. The Tribunal stated that the ICB should be determined in the context of a particular application considering the particular facts applicable.⁶⁶ The facts in this case suggest that the use of NPV DORC, compared to straight-line DORC, is significantly more complex, and produces an outcome that is more uncertain.

For these reasons, the use of NPV DORC to establish the ICB in this case is not appropriate and the ICB should instead be assessed using straight-line DORC.

The ACCC has also considered the basis on which tariffs have been set in the past and the historical returns to APTPPL on its investment in expansions of the RBP (s. 8.10(f)).

It has had access to historical and current contracts. These contracts are confidential and this has necessitated the ACCC's analysis being presented in a confidential appendix, appendix D—section 8.10.

A number of historical contracts examined by the ACCC provide for payments over and above standard charges for transportation services. These were linked to capacity expansions undertaken by APTPPL, specifically, all six compressors, looping sections 1 and 2, and a proportion of looping 3. The ACCC concluded from this analysis that APTPPL has more than fully recovered through past tariffs the capital associated with these capacity expansions. The RBP is contracted to operate at close to its capacity, and has only been expanded when underpinned by contracts. In such circumstances it is reasonable to expect and there is some evidence to support the view that past tariffs have been set on the basis of fully recovering the costs of expansions through the contracts associated with those expansions.

APTPPL has stated that users did not finance expansions. This is correct in the sense that users who have made contributions to the construction of the expansion do not have property rights to those expansions. Nevertheless, users have fully paid for the costs of the expansions through tariffs under foundation contracts and this is akin to users financing the expansions.

To allow APTPPL to continue to receive a return on these assets would result in an inefficiently high level of tariffs (s. 8.1(e)) and in turn this could distort investment

⁶⁶ Application by East Australian Pipeline Limited [2005] ACompT 1 (18 March 2005).

decisions (s. 8.1(d)). Accordingly, the ICB should not reflect any value for the assets associated with these expansions.

The code states that normally the value of the ICB should fall within the range of DAC and DORC. Consideration of the objectives in s 8.1 of the code supports this position. It would be rare that consideration of all these factors would indicate that one single value (or a very narrow range of values) would be the appropriate value for the ICB. Given that a range of values for the ICB is feasible, the factors in s. 2.24 of the code can also provide guidance to the regulator in determining the value of the ICB. In particular s. 2.24 requires the regulator to take into account the interest of the service provider and users and prospective users.

The Federal Court considered the application of s. 10 of the code and noted [186] that:

Section 8.10 of the Code recognises that the values derived from the application of the valuation methodologies referred to in subpars (a), (b) and (c) may be adjusted or varied depending on the relative consideration and extent of that consideration given to the factors found in sub para (e) to (k) of s. 8.10.⁶⁷

The circumstances of the RBP do not entirely match that of the MSP. The ACCC considers it appropriate to adjust the forward looking estimate of the replacement cost of the pipeline to take account of past contributions from users.

The value of the ICB proposed in this draft decision provides a fair balance between the interests of the service provider and users and prospective users.

It allows the service provider to more than recover its investment in the pipeline (as defined by DAC or recent sale price) and takes into account the contributions of users towards the costs of expansions.

Derivation of ICB from DORC

To calculate the value of the ICB the value of the DORC for the overall pipeline has been reduced by the proportion of the DORC assigned to each of the expansions funded by users. For the purposes of calculating the ICB more weight has been given to DORC than DAC, given the age of the RBP and its progressive expansion through looping (which means the current configuration differs significantly from the optimal pipeline).

Table 2.2.5.1 shows the basis for deriving the DORC of \$295.84 m from the ORC of \$428.14 m and the ACCC's proposed value for the ICB of \$250.63 m (which includes an allowance for equity raising costs).

The proportion of the original costs (in 2006 dollars) for each pipeline segment and compressor to their total costs has been used as the basis for allocating the ORC to each of these assets.

The DORC for each asset is then derived by depreciating the ORC by the ratio of each asset's remaining life to the life of a new pipeline. To calculate the ICB of \$250.63 m

⁶⁷ Australian Competition and Consumer Commission v Australian Competition Tribunal [2006] FCAFC83 (2 June 2006).

the ACCC has subtracted from the DORC those expansions which have been fully funded by users (all compressors and two loopings) and the looping that has been partly funded by users.

Further explanation is given by way of an example in the box below.

Allocation of DORC to various assets and derivation of ICB from DORC

The ORC for the optimised replacement pipeline (excluding compressors, easements and communications) is estimated at \$374.2m. (The equivalent DORC is \$261.1m.) The \$374.2m is then allocated to the original pipeline, the various loopings and the Peat lateral.

For example, the actual costs of the original pipeline (in \$2006) is \$82.1m which is 36.2 per cent of the total actual costs of \$226.9m (in \$2006). Therefore \$135.3m (36.2 per cent of the pipeline ORC of \$374.2)⁶⁸ has been allocated to the original pipeline. A similar allocation methodology has been applied to compressors.

The ICB for the RBP is the DORC for the overall pipeline less the DORC allocated to each of those assets funded by users. (Looping 3 has been partially funded by users and hence the DORC of \$20.6m has been reduced proportionately to \$14.3m.)

⁶⁸ Numbers may be imprecise due to rounding.

Table 2.2.5.1: ACCC proposed ICB calculations by segments (\$m)

	Life (years)	R/Life (years)	Cost (\$2006)	ORC	DORC	ICB
Pipeline				374.2	261.1	234.6
Compressors				48.6	18.7	0.0
Easements				13.8	13.3	13.3
Communications				5.0	3.3	3.3
Sub-total				441.5	296.4	251.1
Less linepack				0.5	0.5	0.5
Total				441.0	295.8	250.6
Allocation						
Pipes						
Original	60	23	82.1	135.3	38.9	38.9
Looping 1	80	62	7.2	11.8	9.1	0.0
Looping 2	80	64	8.3	13.7	11.0	0.0
Looping 3	80	72	13.9	22.9	20.6	14.3
Looping 4	80	75	19.0	31.3	29.4	29.4
Looping 5	80	77	58.8	97.0	93.3	93.3
Looping 6	80	77	10.4	17.2	16.5	16.5
Lateral	80	75	27.3	45.0	42.2	42.2
Subtotal			226.9	374.2	261.1	234.6
Compressors						
Dalby	35	11	1.3	7.9	2.5	0.0
Kogan	35	11	0.8	4.7	1.5	0.0
Oakey	35	12	1.0	6.0	2.1	0.0
Condamine	35	13	1.4	8.4	3.1	0.0
Yuleba	35	15	1.8	10.5	4.5	0.0
Gatton	35	16	1.9	11.1	5.1	0.0
Subtotal			8.3	48.6	18.7	0.0
Easements	1000	963		13.8	13.3	13.3
Communications	15	10		5.0	3.3	3.3
Less linepack				0.5	0.5	0.5
Total				441.0	295.8	250.6

Notes: R/Life = Remaining life.
Some columns may not add up due to rounding.

Amendment 01

Before APTPL's revised access arrangement for the RBP can be approved, the value of the ICB must be set at \$250.63 m.

2.3 New facilities investment

2.3.1 Code requirements

The code (ss. 8.15-8.16) allows for the capital base to be increased where additional capital costs are incurred in constructing new facilities for the purpose of providing services. The amount of the increase is the actual capital cost provided that the investment is prudent in terms of efficiency, in accordance with accepted good industry practice and is designed to achieve the lowest sustainable cost of delivering services.

Furthermore, the regulator must be satisfied that the anticipated incremental revenue exceeds the cost of the investment, that the new facility either has system wide benefits (justifying higher tariffs for all users), or that the new facility is necessary to maintain the safety, integrity or contracted capacity of services.

Under ss. 8.18 and 8.19 of the code a service provider may also undertake new facilities investment if these criteria are not met. To the extent that an investment does not meet the s. 8.16 criteria or has a speculative element, the addition to the capital base needs to be correspondingly reduced.⁶⁹

Reference tariffs may be determined on the basis of forecast investment during the access arrangement period, provided that such investment is reasonably expected to pass the requirements noted above when the investment is forecast to occur (s. 8.20 of the code). However, the inclusion of forecasts does not necessarily mean that the criteria contained in s. 8.16 of the code have been satisfied. The relevant regulator may reserve its judgment until the time the investment is undertaken or at the next review of the access arrangement. The code (s. 8.22) also states that the reference tariff policy should specify how the new facilities investment is to be determined for the purposes of s. 8.9, including how discrepancies between forecast and actual investment are to be reflected in the capital base at the commencement of the next access arrangement period (so as to meet the objectives of s. 8.1 of the code). The alternative is for the regulator to determine how the expenditure will be treated for the purpose of s. 8.9 at the time a revision to the access arrangement is submitted to the regulator.

2.3.2 Current access arrangement provisions

The access arrangement does not currently include a new facilities investment policy.

2.3.3 APTPPL proposal

APTPPL proposes that it may undertake new facilities investment that does not meet the requirements of the code for inclusion in the capital base, subject to the extensions and expansions policy.

APTPPL proposes that total revenue include minor capital expenditure and stay in business capital. It does not include any capital expenditure for expansion of the pipeline as the reference tariff it proposes is to apply only to the existing capacity. Whether capital costs of any capacity expansion are added to the capital base will be determined as part of the consideration of the next access arrangement revisions, in or around 2011.⁷⁰

APTPPL states that minor capital expenditure and stay in business capital make up forecast capital expenditure costs on the RBP and consist of the following items:

- pigging program in 2007 and 2010

⁶⁹ That portion of the investment which is of a speculative nature is held in the speculative investment fund and may be added to the asset base at a later date when it meets the criteria of section 8.16.

⁷⁰ Roma Brisbane pipeline access arrangement - response to ACCC request for information dated 2/3/06 and 24/3/06, p. 21.

- pipeline excavation and inspection program
- coating defect assessment in 2009
- compressor overhauls from 2007 to 2011
- minor capital and stay in business capital
- access arrangement costs (capitalised over the length of the access arrangement)
- the RBP proportion of a new APT IT system.

APTPPL states that the amounts included in the calculation of total revenue represent the efficient cost of work required for the continued safe and reliable operation of the pipeline. In particular, the forecast expenditure reflects a program of work required to be undertaken to ensure the ongoing integrity of the RBP.

Amounts have been allowed for pigging of the RBP in two years to reflect the fact that both pipes (DN 400 and the DN 250) need to be pigged. This is consistent with AS 2885.3 which requires periodic inspections, with frequency dependent on the condition of the pipeline, and the *Queensland Petroleum and Gas (Production and Safety) Act 2004* which requires pigging of established pipelines at an interval of no longer than 10 years.

To recognise the need for additional minor capital work to be undertaken as the pipeline ages, some costs, have been escalated by 1 per cent on a year to year basis. APTPPL's forecast capital expenditure is shown in table 2.3.3.1.

Table 2.3.3.1: RBP capital expenditure (July 2006 \$M)

Capital expenditure	2006–7	2007–8	2008–9	2009–10	2010–11
Pigging	1.00	-	-	0.66	-
Coating defect assessment	-	-	0.17	-	-
Pipeline excavation and inspection	0.19	0.19	0.19	0.19	0.20
Compressor overhauls	0.31	0.32	0.32	0.32	0.32
Minor and stay in business capital	2.04	1.59	0.94	0.81	0.71
Access arrangement costs	0.50	-	-	-	-
IT system upgrade	0.10	-	-	-	-
Total	4.14	2.09	1.62	1.98	1.23

Source: AAI, p. 13

2.3.4 Submissions in response to the revised access arrangement

QGC believes that periodic predictable costs such as routine compressor overhauls and access arrangement review costs should be recovered over the access arrangement period. However, clarification is required as to which capital costs APTPPL will bear and which costs the shippers will bear. The actual operating costs such as compressor maintenance/overhaul that APTPPL may expend should be amortised (“smoothed”) over the periods between occurrence by use of a sinking fund or accrual. APTPPL in its last two annual reports indicated that nationwide it spent less than \$5 m per annum on stay in business capital.

2.3.5 ACCC’s considerations

Certain provisions of APTPPL’s pipeline licences require periodical in-line inspections to monitor the integrity of the various pipelines in the RBP.

The ACCC has assessed the proposed minor capital expenditure and is satisfied that the planned overhaul of compressors and stay in business capital expenditure are costs that are reasonably expected to be incurred by a prudent service provider to maintain the safety, integrity or contracted capacity of services. These items are of a recurring nature and are allocated an asset life of 5 years and capitalised over that period. This appears to be consistent with the approach advocated in the QGC submission.

The forecast minor capital expenditure is reasonably likely to pass the requirements of s. 8.16 of the code. Hence they have been included these forecast costs in the calculation of the reference tariff for the forthcoming access arrangement period.

Approval by the regulator to allow the reference tariff to be based on forecast capital expenditure does not mean that the capital expenditure will be automatically included in the capital base. That is, the code allows the regulator to decide at a later date (for example, when the investment is made or at the next review of the access arrangement) whether the capital expenditure passes the tests under s. 8.16 of the code.

The code allows the service provider to specify the approach for inclusion of the capital expenditure in the capital base, including adjustments for any discrepancies between forecast costs and actual costs. APTPPL has not specified any such approach in its revised access arrangement. Accordingly, the regulator will assess any new facilities investment (NFI) incurred in the access arrangement period against the requirements of the code

2.4 Capital redundancy

2.4.1 Code requirements

Once the value of the initial capital base is established, the capital base for each subsequent period is determined as the value of the capital base at the start of the preceding period plus new facilities investment (or the recoverable portion), less depreciation and redundant capital (s. 8.9 of the code).

Section 8.27 of the code allows a reference tariff policy to include (and the regulator may require that it include) a mechanism that will remove redundant capital from the capital base. Such an adjustment would occur at the start of the next access arrangement period to:

- ensure that assets which cease to contribute to the delivery of services are not reflected in the capital base
- share costs associated with a decline in sales volume between the service provider and users.

Before approving a reference tariff which includes such a mechanism, the regulator must consider the potential for uncertainty and its effect on the service provider, users and prospective users. In particular the regulator must consider whether this uncertainty will affect the determination of the rate of return and the economic life of the assets.

While the code permits a reference tariff policy to include a mechanism to subtract redundant capital from the capital base, it also allows for other mechanisms that have the same effect on reference tariffs while not reducing the capital base (s. 8.29 of the code).

2.4.2 Current access arrangement provisions

The current access arrangement does not include a redundant capital policy nor has the inclusion of such a policy been considered before this assessment.

2.4.3 APTPPL proposal

APTPPL states that to calculate the capital base at the start of the subsequent access arrangement, the capital base will be adjusted if necessary and to the extent that assets are redundant.

2.4.4 Submissions in response to the revised access arrangement

No submissions were received from interested parties on this issue.

2.4.5 ACCC's considerations

APTPPL's proposed revised access arrangement contains the provision that the capital base will be adjusted for redundant assets. In accordance with s 8.27 of the code, the ACCC has also taken into account the uncertainty arising from the redundant capital policy in determination of the rate of return and life of assets. In particular, the value of the beta for APTPPL was determined in reference to the redundant capital policy. Also, the ACCC has accepted the proposed economic life of the pipeline.

2.5 Rate of return

2.5.1 Code requirements

Section 8.30 of the code states that the rate of return used in deriving a reference tariff should provide a return commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service (as reflected in the terms

and conditions on which the reference service is offered and any other risk associated with delivering the reference service).

Section 8.31 states that the rate of return may be set on the basis of the weighted average return applicable to each source of funds (for example, equity and debt). These returns may be determined using a well-accepted financial model such as the capital asset pricing model (CAPM). In general, the weighted average of the return on funds should be calculated by reference to a financing structure that reflects standard industry structures for a going concern and best practice. However, other approaches may be adopted if the regulator is satisfied that the objectives set out in s. 8.1 of the code are met.

Section 8.2(e) states that the regulator must be satisfied that any forecast required represents best estimates arrived at on a reasonable basis.

2.5.2 Current access arrangement provisions

The rate of return for the access arrangement has not previously been set in accordance with the code because the tariff elements were set by the derogation.

2.5.3 APTPPL proposal

Drawing upon several assumptions and parameters, APTPPL adopts the CAPM to calculate a return on equity which is an input for its pre-tax real WACC calculation. In applying the model, it uses a range of values when parameters are not readily observable or subject to interpretation and recent market values for parameters that are readily observable.

Using this approach, it derives a pre-tax real WACC range of 5.42 per cent to 7.15 per cent.⁷¹ Details of the parameters adopted are set out in table 2.5.5.5.

APTPPL quotes the ERA 2005 final decision on the proposed access arrangement for the Goldfields Gas Pipeline in support of its approach to use parameter ranges to derive a WACC range. APTPPL quotes the ERA position that:

The Authority accepts that its task is to consider whether the Rate of Return used for the Derivation of Reference Tariffs in the revised Access Arrangement falls within the range of rates commensurate with the prevailing market conditions and the relevant risk. This Rate of Return will comply with the Code if the Value used is within the range of values that different minds acting reasonably might attribute to the Rate of Return, applying the methodology of the CAPM that was chosen by GGT. In undertaking this task, the Authority has given consideration to the range of values within which the Rate of Return might be supported by reasonable minds as being commensurate with prevailing conditions in capital markets.⁷²

Further the ERA states that ‘... the range of values that would comply with the code should not include the values that lie within the lower ten percent or upper ten percent of the range that may be derived by the application of the extreme values for each of

⁷¹ APTPPL, *Access arrangement information*, January 2006, para. 3.5.

⁷² *ibid.*, p. 15.

the parameters of the CAPM'.⁷³ APTPPL truncates its pre-tax real WACC range, consistent with the ERA's approach, resulting in a range of 5.42 per cent to 7.15 per cent.

From within this range it has nominated a pre-tax real WACC of 6.90 per cent to be used in calculating its reference tariff. APTPPL has provided no reasons as to why it has nominated 6.90 per cent from within its proposed range as its cost of capital parameter.

2.5.4 Submissions in response to the revised access arrangement

Submissions received have not made substantial comments on APTPPL's proposed rate of return. However, both Energex and QGC have commented on the risk associated with the pipeline.

Energex was of the view that:

... if the ACCC accepts the proposal that the access arrangement only apply to current capacity then it should elect to use a low equity beta in response.⁷⁴

QGC is of the opinion that due to the 'extraordinary growth observed in the industry it is difficult to identify a downside risk'.⁷⁵

2.5.5 ACCC's considerations

APTPPL's proposed revisions to its access arrangement for the RBP is being assessed at a time when the energy sector regulatory arrangements for determination of the cost of capital are undergoing change in the context of establishing the AER as the national economic regulator for all regulated energy businesses, as part of a process to achieving more streamlined regulatory decisions and encouraging commonality in gas and electricity economic regulation where appropriate.

The Australian Energy Market Commission (AEMC) has published a Draft Rule prescribing WACC parameters (including an equity beta of one and a debt equity ratio of 60:40) for electricity transmission.⁷⁶ Legislation establishing the economic regulatory framework for gas transmission, gas distribution and electricity distribution is currently being drafted by governments. It is possible these developments may have implications for how the cost of capital should be established in the future.

Taking these changes into account the ACCC considers it appropriate to adopt a cautious approach to moving from established parameters for determining the cost of capital.

⁷³ Economic Regulatory Authority, Final Decision on the proposed Access Arrangement for the Goldfields Gas Pipeline 2005, para. 93.

⁷⁴ Energex, Response to the ACCC issues paper, 18 May 2006, p. 11.

⁷⁵ QGC response to the RBP access arrangement review, 18 May 2006, comments on s. 3.5.2.2 of access arrangement information.

⁷⁶ AEMC, Draft Rule Determination, National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006, s.6A.6.2.

Contemporary market data have been relied upon to establish whether APTPPL's proposed WACC is consistent with the code. Given the unsettled changes to legislation and rules, it is considered appropriate that the debt to equity ratio and equity beta should be assessed consistently with past regulatory decisions.

However, in any future decision the regulator, consistent with applicable legislation, code or rules, would be entitled to revise its assessment of these parameters taking into account a settled view on market data.

2.5.5.1 'Range' approach

In *Re Michael; Ex parte Epic Energy*, the Western Australia Court of Appeal recognised that the process of deciding whether a proposal complies with ss. 3.4 and 3.5 of the code requires 'evaluation, the exercise of judgment, the formation of opinion and other exercises of discretion by the Regulator'.⁷⁷

Section 8.2 of the code requires the regulator to be satisfied that the total revenue is established according to one of the methodologies contained in s. 8, and that any forecasts required in setting the reference tariff represent best estimates arrived at on a reasonable basis. Whilst ss. 8.4 and 8.5 permit a range of methodologies, the methodology used must be consistent with ss. 8.30 and 8.31. Section 8.30 requires the rate of return to be 'commensurate with prevailing conditions in the market for funds and the risk involved in delivering the Reference Service'.

In *Application by GasNet Australia (Operations) Pty Ltd* the Tribunal stated:

... there is no single correct figure involved in determining the values of the parameters to be applied in developing an applicable Reference Tariff. The application of the Reference Tariff Principles involves issues of judgment and degree. Different minds, acting reasonably, can be expected to make different choices within a range of possible choices which nonetheless remain consistent with the Reference Tariff Principles.⁷⁸

In cases where there is no conflict or tension between the reference tariff principles, the Tribunal addressed this problem by requiring acceptance of a proposal that 'falls within the range of choice reasonably open and consistent with reference tariff principles'.⁷⁹

There are other sections of the code that expressly provide for the regulator to identify what it considers to be the 'best' outcome. For example, s. 8.6 provides that the regulator may have regard to relevant financial and operational performance indicators 'in order to determine the level of costs within the range of feasible outcomes under s. 8.4 that is **most consistent** with the objectives contained in s. 8.1'. Similarly, s. 8.2(e) requires the ACCC to be satisfied that forecasts 'represent **best estimates** arrived at on a reasonable basis' (emphasis added).

Energex stated that it is supportive of APTPPL's proposed 'range' approach. It has not provided any reasoning as to why it supports the range approach nor made any

⁷⁷ [2002] WASCA 231 per Parker J at [65] & [73].

⁷⁸ [2003] ACompT 6, para. 29.

⁷⁹ *ibid.*

substantive comments on individual parameters. It also stated a preference to rely on the ACCC's expertise to determine the appropriate WACC.⁸⁰

The ACCC acknowledges that there are provisions of the code which can be satisfied by more than one outcome. This is especially true in relation to WACC parameters. It has been held that the regulator has no power to reject a proposal that satisfies the relevant requirements of the code simply because it believes a different proposal would better satisfy these requirements. The 'range' approach recognises that, in certain cases, there is a range of proposals that will satisfy the relevant requirements of the code.

Some regulators have sought to apply the 'range' approach by identifying a range of outcomes and accepting a proposal within that range.⁸¹ However, this does not overcome the lack of precision described above. The effect of this approach is that it typically results in the approval of values at or near the top of the range established by the regulator. Instead of inviting debate over the single point that represents the 'best' outcome, this approach invites debate over the points that represent the boundaries of the range (typically the upper boundary). The exercise of identifying a boundary point is as subjective as the exercise of identifying a single point.

The Tribunal has noted that questions can, and should, be dealt with in the context of a particular application having regard to the particular facts applicable, stating that 'it is preferable that an issue of substance be explored with the benefit of the consultation process envisaged by the gas code'.⁸²

At the same time, policy makers are seeking to balance consistency and certainty in regulatory decisions, with the need to allow for a degree of flexibility to recognise changes in financial market conditions and developments in finance theory and practice.⁸³ This suggests that regulators need to be cautious at this time in moving from established positions in relation to the WACC.

Ultimately, the task of the regulator is to decide not whether the service provider's proposal is 'reasonable' but whether it satisfies the requirements of the code.⁸⁴ Recognising that the law may allow a range of acceptable values for a parameter does not relieve the regulator of its duty to determine whether the service provider's proposal satisfies the requirements of the code. The regulator cannot reject a service provider's proposal simply because it differs from the regulator's considered position. Nor can the regulator reject a service provider's proposal because the regulator believes

⁸⁰ Energex, Response to ACCC issues paper, 18 May 2006, p. 10.

⁸¹ ERA, Final Decisions: Goldfields Gas pipeline access arrangement, May 2005; review of the access arrangement for the Mid-West and South-West gas distribution system, July 2005; review of the access arrangement for the Dampier to Bunbury Natural Gas Pipeline, November 2005; ICRC, Final Decision: review of access arrangement for ActewAGL natural gas system in ACT, Queanbeyan and Yarralumla, October 2004; IPART, Final Decision, review of the access arrangement for AGL Gas Networks, April 2005; review of the access arrangement for Country Energy Gas Network, November 2005.

⁸² Application by East Australian Pipeline Limited [2005] ACompT 1, para. 12.

⁸³ AEMC, *Draft Rule Determination*, July 2006, p. 58.

⁸⁴ *Telstra Corporation Limited* [2006] ACompT 4, para. 63.

that, while the proposal is acceptable, the regulator's position is better.⁸⁵ However, a proposal must be rejected where it does not satisfy the relevant criteria in the code.⁸⁶

While it is possible that there will be more than one proposal that satisfies the relevant criteria, this does not mean the regulator must confine itself to identifying only the range of such proposals. A proper assessment of a service provider's proposal requires the regulator to examine the proposal and the reasons offered in support of it, and to carefully consider the relevant requirements of the code. In doing so, the regulator will usually form a view on the outcome that would best satisfy those requirements. It is permissible and appropriate for the regulator to compare that view with the service provider's proposal. Rejection of the service provider's proposal is not justified simply because there is a difference between the two positions, but it is justified where the reasons for that difference lead to the conclusion that the service provider's proposal does not satisfy the requirements of the code.

In deciding whether a service provider's proposed WACC satisfies the requirements of the code, the ACCC believes that the proper approach is to compare the service provider's proposal to the ACCC's best estimate of the outcomes that satisfy those requirements. The ACCC will not reject a service provider's proposal simply because it does not equate to the ACCC's position. Rather, the ACCC will examine the reasons for the difference between the two positions. If those reasons indicate that the service provider's proposal does not satisfy the requirements of the code, then the ACCC will withhold approval.

This approach recognises that, in some cases, more than one outcome might be tolerated by the code. For example, applying this approach, the ACCC would accept a service provider's proposal where the differences between the ACCC's best estimate and the service provider's proposal are not material or where the arguments in support of the respective outcomes do not clearly favour one over the other. This degree of tolerance equates, in effect, to the range of outcomes permitted by the code.

The ACCC believes this is consistent with the observations in *Re Michael* and *GasNet*, and provides a practical framework for application of these decisions in the regulatory environment established under the code. This approach:

- avoids the need for debate about whether a figure is the 'correct' outcome or the upper boundary of a 'reasonable range'
- focuses on the reasons for the service provider's proposal and the regulator's response, rather than mechanically comparing a proposed figure with a range of figures
- adheres more closely to ss. 8.2(e) and 8.6 of the code by enabling the regulator to reasonably determine, where necessary, the outcome that best satisfies the code requirements.

⁸⁵ ACCC v Australian Competition Tribunal & Anor [2006] FCAFC 83, para. 165.

⁸⁶ Section 2.46 provides that the regulator may approve 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" (emphasis added).

APTPPL's proposal highlights the difficulties associated with applying a reasonable range approach without regard to the regulator's best estimates. APTPPL has proposed upper and lower boundaries for some parameters used in the calculation of the WACC. However, in some cases it has not stated the points within the ranges that it has used for these parameters. This makes it difficult, if not impossible, for the regulator to assess these proposals in accordance with the code.

For example, when a parameter involves forecasts, it is difficult for the regulator to satisfy itself that those forecasts are best estimates arrived at on a reasonable basis (as required by s. 8.2(e)) if no point estimates are proposed by the service provider. Where APTPPL has not proposed values for WACC parameters the ACCC has applied its view as to the best estimates for those parameters.

2.5.5.2 Pre-tax and post-tax

The WACC is a measure of the total cost of capital, with the cost of debt and return on equity weighted in accordance with a benchmark capital structure. The WACC may be expressed on a post-tax, pre-tax or vanilla basis and within a nominal or real framework. Under the post-tax approach, tax liabilities are accounted for in the cash flows. In contrast, the pre-tax approach contains an allowance in the rate of return to cover tax liabilities.

APTPPL has proposed the use of a pre-tax approach to calculating its cost of capital. It considers this to be preferable as it avoids the need for modelling for tax payments and is an approach applied by several other regulators.⁸⁷

The ACCC approach to calculating the revenue requirements of a service provider is to use a post-tax revenue model. Further details of this approach may be found in the ACCC's *Post-tax Revenue Model Handbook*.⁸⁸

In theory, these two approaches can produce the same result (in NPV terms over the life of the project, not in each year) if the factor for tax contained in the pre-tax WACC reflects the effective tax rate. APTPPL has used the statutory tax rate of 30 per cent as an input into its pre-tax calculation. This overstates the tax liability and therefore produces a higher revenue calculation than the ACCC's modelling.

The use of the company tax rate ignores the existence of important aspects of tax legislation that may cause the effective tax rate to differ substantially from the company tax rate. An entity's ability to depreciate assets for tax purposes at a rate that is faster than the decline in the asset's real economic value means that tax depreciation differs from actual depreciation resulting in a considerable deferral of tax liabilities.

Thus, the inclusion of the company tax rate in any formula used to derive the pre-tax WACC is likely to result in an overstatement of the effective tax rate and in turn an overstatement of the required return on equity. As a result the rate of return estimated would fail to reflect the return which is commensurate with prevailing conditions in the

⁸⁷ APTPPL response dated 7 April 2006 to ACCC's requests for additional information, response 37.

⁸⁸ ACCC, *Post-Tax Revenue Handbook*, October 2001.

market for funds and the risks involved in delivering the reference service, and is therefore inconsistent with s. 8.30 of the code.

The pre-tax approach attempts to compensate for tax liabilities that will not occur until well into the future. As a result it is subject to considerable uncertainty stemming from inflation effects. This introduces an unnecessary level of uncertainty into the cost of capital estimate.

Given the shortcomings associated with the pre-tax approach, the ACCC has adopted a post-tax approach to measuring the rate of return and considers that this better satisfies the code. To determine the allowed return on capital the vanilla WACC is applied to the capital base.⁸⁹ The cash flow modelling accounts for tax liabilities and imputation credits. The ACCC considers this approach produces the best estimate, arrived at on a reasonable basis, of the forecast rate of return (s. 8.2(e)) and is commensurate with the market for funds and the risk involved in delivering the reference service (s. 8.30).

The calculation of an effective tax rate is not required as an input in the post-tax framework. However, based on the post-tax methodology and given the age of the pipeline's assets an effective tax rate can be derived from the cash flows for the purpose of comparison with the estimate provided by the service provider. The ACCC's modelling has derived an effective tax rate of 16.26 per cent for the RBP. Appendix C provides general information on the post-tax approach adopted by the ACCC.

Value of imputation credits

A further factor that must be taken into account in either the pre-tax or post-tax derivation of the WACC is the benefit accorded to shareholders through the dividend imputation system. Consistent with ACCC's post-tax approach the value for imputation credits is accounted for in the cash flows.

APTPPL has proposed a gamma value in the range of 30–60 per cent and has stated that it is generally consistent with recent regulatory decisions. APTPPL has not nominated a point estimate from within this range.

The value of gamma to an investor largely depends on whether the investor is fully able to utilise the value of the credit. This will depend on the nature of the investor for tax purposes. In this context, the ACCC has to date assumed that the relevant benchmark for regulatory purposes is the assumption that the average equity investor is domiciled in Australia and is entitled to the full benefit of imputation credits.⁹⁰ This assumption ensures consistency in applying the CAPM in the context of the Australian market.⁹¹

⁸⁹ Vanilla WACC = $r_e \cdot E / (D+E) + r_d \cdot D / (D+E)$
(where r_e is the post-tax return on equity and r_d is pre-tax cost of debt).

⁹⁰ Resident individual investors receive the full benefit regardless of their tax position, as franking credits are now treated as a refundable rebate rather than as a tax deduction. Complying superannuation funds are preferentially taxed, which in the past, may have resulted in imputation credits being eroded. Under the new tax system, franking credits are paid to the fund as a rebate from the Australian Tax Office.

⁹¹ If this assumption were to change then modifications would have to be made to a number of other parameters including the market risk premium and the equity beta.

The ACCC's assumption on the segregation of the Australian market has also been advocated by Associate Professor Martin Lally.⁹²

In a paper prepared for the ACCC, Lally considered the issue of the relevance of foreign investors in detail and concluded that:

... continued use of a version of the Capital Asset Pricing Model that assumes that national equity markets are segmented rather than integrated (such as the Officer model) is recommended. It follows that foreign investors must be completely disregarded. Consistent with the disregarding of foreign investors, most investors recognised by the model would then be able to fully utilise imputation credits.⁹³

Lally recommended that the ratio of imputation credits assigned to company tax paid should be set at the relevant industry average. Having recourse to the imputation credit/tax ratio of the eight largest listed entities in Australia⁹⁴, Lally concluded that the ratio of imputation credits to tax is close to one for most industries.⁹⁵

To the extent that there were a significant proportion of foreign investors who could not fully avail themselves of the imputation credits, Lally suggested that it was not appropriate to change just one parameter in the CAPM.

Instead, Lally advocated the application of an international version of the CAPM with the CAPM parameters being based on international financial markets.

Using this approach Lally showed that the cost of capital for foreign investors was lower than for investors with a domestic focus and the domestic investor assumption did not compromise the position of foreign investors. The culmination of these two recommendations and the analysis on foreign investors led Lally to conclude that the product of the utilisation rate and the ratio of imputation credits assigned to company tax paid (gamma) should be at, or close to, a value of one for most companies.

A study by Cannavan, Finn and Gray using share futures to value imputation credits argues that it is difficult to detect any value in imputation credits.⁹⁶ Other studies such as by Hathway and Officer suggest that assuming a zero value for imputation credits would be a gross error.⁹⁷ The ACCC has in the past consistently applied a gamma value of 0.50. Australian regulators have almost uniformly adopted the assumption that franking credits created are valued at approximately half of their face value.

Considering all the information available on imputation credits, there are good arguments that the value of gamma should be closer to one. However, given the inconclusive nature of the empirical evidence to date on this issue, the ACCC has

⁹² M. Lally, The cost of capital under dividend imputation, June 2002.

⁹³ M. Lally, The cost of capital under dividend imputation, June 2002, p. 43.

⁹⁴ The eight entities referred to were: Telstra, News Corporation, National Australia Bank, BHP Billiton, Rio Tinto, Westpac, Commonwealth Bank and ANZ.

⁹⁵ The evidence for payout of imputation credits is discussed in M. Lally, *The cost of capital under dividend imputation*, June 2002, p. 19.

⁹⁶ D Cannavan, F Finn and S Gray, 'The value of dividend imputation tax credits in Australia', *Journal of Financial Economics*, vol. 73, issue 1, 2004, pp. 167–9.

⁹⁷ Neville Hathway and Bob Officer, The value of imputation tax credits, Update, 2004, p. 26.

placed weight on consistency with past decisions in deciding on the best estimate value for gamma uncertainty.

Accordingly, a value of gamma equal to 0.5 has the quality required by ss. 8.30 and 8.2(e) of the code and would achieve the objectives of not distorting investment decisions in pipeline transportation systems (s. 8.1 (d)) and the safe and reliable operation of the pipeline (s. 8.1(c)).

2.5.5.3 Capital structure

To determine the appropriate weighted average cost of debt and equity in the WACC framework, the value of debt and equity as a proportion of an organisation's total value is required. The ACCC uses benchmark gearing in determining the WACC rather than the actual gearing consistent with s 8.31 of the code.

APTPPL has proposed a debt equity ratio of 60:40 and considers it generally consistent with recent regulatory decision.

In the *Statement of principles for the regulation of electricity transmission revenues*—December 2004 (SRP), the ACCC stated that it would not use actual gearing of the regulated entity, but an appropriate benchmark instead. Table 2.5.5.1 provides a gearing sample of gas network companies.

Table 2.5.5.1: Gearing levels of gas network companies

Company	Actual gearing
Alinta	43.5
Envestra	83.9
GasNet	75.8
DUET	78.3
APT	68.0

Source: Standard and Poor's, *Industry Report Card: Australian Utilities*, May 2006 (debt as a percentage of total capital TD/TC); and APT announcement to the market – *APA acquires Murraylink*, 30 March 2006.

The industry gearing as evidenced by the table above indicates a current average gearing level of 70 per cent. The ACCC in its MSP final decision noted that a 60:40 debt equity ratio reflects a standard industry structure as evidenced by market data at that time.⁹⁸

APTPPL has proposed the use of a 60:40 debt equity gearing ratio. No submissions have been received suggesting that this gearing ratio should be altered.

All previous ACCC gas and electricity regulatory decisions have consistently applied a 60:40 debt equity gearing benchmark. Other regulators also have consistently adopted the same gearing benchmark in their gas and electricity regulatory decisions.⁹⁹ Although contemporary market data suggests that it may be appropriate to change the benchmark debt equity ratio, consideration is also being given to locking in these

⁹⁸ ACCC; *MSP final decision*, p. 115.

⁹⁹ ERA, *Supplementary submission to the Export and Infrastructure Taskforce*, May 2006, attachment 3.

parameters as part of changes to electricity and gas rules. In this context maintenance of the status quo is appropriate at this time.

Continuing with the current benchmark for this draft decision would achieve the objectives of not distorting investment decisions in pipeline transportation systems (s. 8.1 (d) of the code); and the safe and reliable operation of the pipeline (s. 8.1(c) of the code).

The arguments do not, on balance, support the rejection of APTPPL's proposal. Accordingly, the ACCC is of the view that APTPPL's proposed debt to equity ratio of 60:40 should be accepted for the purpose of deriving the WACC for this draft decision.

2.5.5.4 Cost of debt

The ACCC considers that a benchmarking approach to estimating the cost of debt facing the service provider is better than applying the service provider's actual cost of debt and is consistent with s 8.31 of the code. The actual cost of debt may not reflect efficient financing sources. This approach has been applied by the ACCC in past gas transmission regulatory decisions.¹⁰⁰

The benchmarking approach requires consideration of two distinct empirical questions: the benchmark credit rating of the service provider; and the market observed debt margin associated with the benchmark credit rating.

APTPL has proposed a debt margin of 1.02–1.09 per cent above the risk free rate based on Bloomberg figures for synthetic BBB rated 10-year corporate bond for November 2005. It supports the use of a BBB rating with reference to the Tribunal decision in the *MSP* matter.¹⁰¹

The risk-free rate, inflation, benchmark credit rating, debt margin and the best estimate of the cost of debt are discussed below.

Estimating the risk-free interest rate and inflation

The risk-free rate (r_f) is an important parameter used to determine the rate of return (for both debt and equity). It measures the return that an investor would expect from an asset with certainty of returns being achieved. The risk-free rate cannot be observed directly. Most regulators including the ACCC have used the yield on long-term Australian Government securities (bonds) as a proxy for the risk-free rate, as the risk of government default is generally considered to be very low.

The expected inflation rate can be estimated by:

- the difference between the nominal and indexed bond yields, or
- Commonwealth Treasury's inflation forecasts.

¹⁰⁰ *MSP, Final Decision*, October 2003; *GasNet, Final decision*, November 2002.

¹⁰¹ Application by East Australian Pipeline Limited [2004] ACompT 8.

The standard approach is to use the inflation rate implied by the difference between the nominal bond rate and the inflation indexed bond rate, as determined by using the Fisher equation.

APTPPL has proposed a nominal risk-free rate of 5.43 per cent and a real risk-free rate of 2.48 per cent based on the 20 working day average of Australian Government 10 year bond rates (6.25 per cent 15 April 2015 bond and 4.0 per cent 20 August 2015 indexed bond) for the period 3–30 November 2005. It also applies the Fisher equation to derive an expected inflation figure of 2.88 per cent.

Sampling period

APTPPL's proposal to use a 20-day average sampling period of the risk-free rate satisfies the principles set out in ss. 8.30 and 8.2(e) of the code.

However, given that the bond rate data are published daily by the Reserve Bank of Australia and the CAPM framework requires the adoption of up to date information (subject to constraints imposed by the decision making process) the ACCC will sample a 20 day moving average of the yield on government bonds to 10 August 2006 for this draft decision as against the period 3–30 November 2005 proposed by APTPPL. Adopting contemporary data is necessary in order to satisfy the requirements of s. 8.30 of the code.

Term of the risk-free rate

The ACCC considers the use of a 20-day average sampling period and a 10 year bond to establishing the risk free rate and expected inflation as proposed by APTPPL complies with ss. 8.30 and 8.2(e) of the code. However, APTPPL's use of bonds maturing in 2015 as the proxy for calculating the risk free rate does not result in accurate figures. This is due to the period to maturity being shorter than 10 years.

To estimate the most precise rate corresponding to the proxy term, the ACCC has undertaken a linear interpolation of the two closest bond series. This approach is consistent with previous ACCC gas access arrangement decisions.¹⁰² The ACCC has used this approach in all of its electricity transmission revenue cap decisions and the AER has applied it in its Directlink final decision.¹⁰³ Accordingly, the ACCC has interpolated the 15 April 2015 and 15 February 2017 bonds to arrive at a more accurate figure for the risk-free rate.

Based on the methodology outlined above, for this draft decision, the use of the nominal 10 year bond rate and 20-day moving average for Commonwealth bond rates at 10 August 2006 results in a proxy nominal risk free rate of 5.92 per cent and an inflation-indexed bond rate of 2.44 per cent (effective annual compounding rate). Applying the Fisher equation results in a market-inferred inflation expectation of 3.4 per cent. These rates are only indicative and will be re-calculated with current data in the final decision.

¹⁰² *Final Decision, MSP*, p. 118.

¹⁰³ AER, Directlink Joint Ventures' Application for Conversion and Revenue Cap, 3 March 2006.

Benchmark credit rating

APTPPL has proposed the use of BBB as the benchmark credit rating.

For the benchmark credit rating of the service provider, the relevant code provisions (ss. 8.30 and 8.2(e)) are best met by reference to Australian gas transmission and distribution companies. It is important for consistency with other parameter assumptions that these companies are stand-alone entities and devoid of government ownership.

Table 2.5.5.2 sets out the long-term credit rating for four Australian transmission and distribution gas companies that meet the stand-alone entity criteria and have been assigned a credit rating by Standard and Poor's.¹⁰⁴

In previous gas transmission determinations, the ACCC sampled AGL, Alinta, Envestra and GasNet.¹⁰⁵ However, it is appropriate to change the sample for this draft decision to achieve a more representative benchmark. The ACCC has removed AGL from the sample because its business profile no longer makes it an appropriate comparator company.¹⁰⁶ The Diversified Utilities Trust (DUET) has been included in the sample given that 70 per cent of its asset and energy mix consists of gas transmission and distribution assets.¹⁰⁷

Table 2.5.5.2: Credit rating associated with stand-alone gas companies

Company	Long-term rating
Alinta	BBB
Envestra	BBB
GasNet	BBB
DUET	BBB –
APA	na

Source: Standard and Poor's, *Industry Report Card: Australian Utilities*, May 2006.
na – Not available

Based on the data in table 2.5.5.2, all companies except for DUET have a credit rating of BBB. Although averaging the results may indicate a rating marginally below BBB, it is evident that the credit rating associated with stand-alone gas companies is BBB.

¹⁰⁴ A stand-alone entity is defined as an entity that does not have a parent company (a company that holds the majority of voting stock). On companies used to estimate the benchmark credit rating:
—The largest shareholder of GasNet is National Nominees Limited with 7.05 per cent (source: 2005 Annual Report).

—Approximately 17.1 per cent of Envestra is owned by Cheung Kong Infrastructure Holdings (Malaysia) Ltd. (source: www.envestra.com.au/share_info, viewed 30 May 2006).

—The largest holder of DUET is AMP Life Limited with 18.79 per cent (source: www.duet.net.au/investor_preso_may06 viewed 30 May 2006).

¹⁰⁵ ACCC, *Final decision: MSP*, October 2003, p.121; ACCC, *Final decision: GasNet*, November 2002, p. 90.

¹⁰⁶ Currently, AGL owns no transmission pipelines (it owns a 30 per cent interest in APT) and only 6.78 per cent of its total revenue is derived from gas distribution networks (p. 11, 2005 annual report).

¹⁰⁷ DUET fact sheet (source: www.duet.net.au) viewed 30 May 2005.

Accordingly, the ACCC considers APTPPL's proposal to apply a BBB credit rating to estimate its debt margin is appropriate and complies with the code.

Associated debt margin

APTPPL's use of corporate bonds with a term of 10 years is appropriate for calculating the debt margin. The 10 year term is consistent with the term of the risk free rate.

Few bonds are issued with a term of 10 years in the Australian market. The ACCC's analysis indicates that there are no BBB rated bonds with a 10-year maturity currently available in the market.

Therefore, in this instance, it is not possible to compare the consistency of the BBB yield provided by Bloomberg with actual yields for the bonds being benchmarked (BBB 10-year bond), as suggested by ACG.¹⁰⁸

On the evidence before it the ACCC sees no reason to not accept APTPPL's proposed use of Bloomberg data for determining the benchmark debt margin for the RBP.

The ACCC considers it appropriate to measure the Bloomberg data by taking an average of the spread over the same period (20 working days) used to determine the risk-free rate. This reduces any potential distortions and results in a best estimate arrived at on a reasonable basis as required by s. 8.2(e) of the code. APTPPL's proposal to nominate a range of observations without averaging them over the same period as for the risk-free rate does not result in a best estimate arrived at on a reasonable basis and is not accepted.

The ACCC considers that its approach to establishing the debt margin is cogent, transparent and consistent with the determination of the other WACC parameters and satisfies the requirements of ss. 8.30 and 8.2(e) of the code.

Accordingly, the 20-day average of the debt margin for a BBB rated bond based on Bloomberg data over the same period used to measure the risk-free rate (that is, the period ending 10 August 2006) is 1.07 per cent or 107 basis points (effective annual compounding rate). These rates are only indicative and will be re-calculated with then current data before the final decision.

Debt raising costs

APTPPL has proposed a range of 0.125 per cent (12.5 bppa) to 0.25 per cent (25 bppa) per annum as debt raising costs to be added to the debt margin. In support of this range it stated that the Tribunal in the *GasNet* decision allowed 25 basis points per annum (0.25 per cent) and other recent regulatory decisions relating to gas infrastructure have allowed 12.5 basis points per annum.¹⁰⁹ APTPPL has not nominated a point estimate from within this range.

¹⁰⁸ ACG, 'A' rating debt margin differential between Bloomberg and CBASpectrum—Memorandum, February 2006.

¹⁰⁹ APTPPL, *Access arrangement information*, January 2006, p. 16.

The ACCC considers that APTPPL should be provided a benchmark allowance for debt-raising costs and that the best estimate of these forecast costs is one that is based on current costs.

The ACG report commissioned by the ACCC analysed the necessity of benchmarking debt raising costs within the CPI-X incentive regulation framework and developed its recommended benchmark costs based on current market data gathered from publicly available sources as well as interviews with market participants.¹¹⁰ The ACCC considers that this approach to estimating debt-raising costs is transparent and consistent with the determination of other WACC parameters. Through reference to current market evidence, this approach provides the service provider an opportunity of earning a stream of revenue that recovers the efficient costs of delivering the service (s. 8.1 (a) of the code).

In developing the benchmark, ACG calculated a gross underwriting fee benchmark of 5.5 bppa based on a five-year term. To this it added allowances for legal and roadshow expenses, credit rating fees for the firm and for each issue of bonds and registry and paying charges. The median bond issue size was determined to be \$175 m.

The ACCC has updated ACG's work on the gross underwriting fee and issue size benchmarks by incorporating publicly available current data. The gross underwriting fee has increased from 5.5 bppa to 6.0 bppa and the median bond issue size increased from \$175 m to \$200 m.¹¹¹ Table 2.5.5.3 shows the updated build up of debt-raising costs and the total benchmark for different numbers of bond issues based on the ACG's recommended methodology.

¹¹⁰ ACG, *Debt and equity raising costs*, December 2004.

¹¹¹ The underwriting fee increase is in line with trends reported on Bloomberg.

Table 2.5.5.3: Benchmark debt-raising costs for bond issues

Fee	Explanation/Source	1 issue	2 issues	4 issues	6 issues
Amount raised	Multiples of median bond issue size	\$200m	\$400m	\$800m	\$1200m
Gross underwriting fees	Bloomberg for Aust. Intl. issues, tenor adjusted	6.0	6.0	6.0	6.0
Legal and roadshow	\$75K–\$100K: Industry sources	1.0	1.0	1.0	1.0
Company credit rating	\$30K–\$50K: S&P ratings	2.5	1.3	0.6	0.4
Issue credit rating	3.5 (2–5)bps up-front: S&P ratings	0.7	0.7	0.7	0.7
Registry fees	\$3K per issue: Osborne Associates	0.2	0.2	0.2	0.2
Paying fees	\$1/\$1m quarterly: Osborne Associates	0.0	0.0	0.0	0.0
Total	Basis points per annum	10.4	9.2	8.5	8.3

Based on the ACG report and updated evidence, the ACCC considers it appropriate to allow benchmark debt raising costs derived in accordance with the above table. The RBP has an ICB of \$250 m and the assumed benchmark gearing ratio is 60:40. This provides the notional debt component of the ICB to be around \$150 m ($\$250 \text{ m} \times 0.6$). According to table 2.5.5.3 the overall debt size of this amount would require one issue with a corresponding transaction cost of 10.4 bppa.

While the range proposed by APTPPL may be consistent with past decisions, it is not a range of outcomes that is based on current costs. Accordingly, this range of debt-raising costs is not a best estimate of such costs arrived at on a reasonable basis. Nor would it be consistent with prevailing conditions in the market.

For this decision, an allowance of 10.4 bppa for debt-raising costs is the best estimate arrived at on a reasonable basis as required by s. 8.2(e) of the code.

Debt-raising costs could be recovered either through an addition to the WACC or as a direct allowance to operating expenses. ACG recommended either approach. In this instance, the ACCC considers it appropriate that debt-raising costs be added to the debt margin as proposed by APTPPL.

The cost of debt

As per its range approach, APTPPL has proposed a pre-tax nominal cost of debt range of 6.58 per cent to 6.77 per cent and a pre-tax real cost of debt range of 3.59 per cent to 3.78 per cent (including its debt-raising cost estimate). APTPPL does not specify the point estimate it has adopted from within this cost of debt range for calculating its WACC.

The ACCC's best estimates of the parameters needed to calculate the cost of debt determines a pre-tax nominal cost of debt of 7.09 per cent (including debt-raising costs). This converts to a pre-tax real cost of debt of 3.58 per cent. These rates are only indicative as they will be re-calculated before the final decision.

2.5.5.5 The return on equity

APTPPL has elected to use the CAPM to estimate the required return on equity. The CAPM specifies the return required by equity holders given the opportunity cost of investing in the market (r_f), the market's own volatility ($E(r_m) - r_f$), and the relative systematic risk of holding equity in a particular entity (β_e). The CAPM formula may be expressed as:

$$r_e = r_f + \beta_e (E(r_m) - r_f)$$

The ACCC regards the CAPM as being an appropriate framework for determining the required return on equity and notes that its use is consistent with the example contained in s. 8.31 of the code.

Market risk premium

APTPPL has proposed a market risk premium range of 5–6 per cent. It considers that this is generally consistent with recent regulatory decisions, but the upper limit of the range could be higher. APTPPL has not nominated a point estimate from within this range.

Although a substantial amount of research has been undertaken on the market risk premium, there is continuing debate as to the appropriate value. Submissions received on this issue during the finalisation of the SRP supported a market risk premium of 6 per cent. However, arguments for both higher and lower values were received from interested parties earlier in the consultation process.

The issue of the appropriate methodology and value to be accorded to the market risk premium has been the subject of a detailed examination by the Essential Services Commission of Victoria (ESC). Giving consideration to a number of studies and estimations of the magnitude of the market risk premium, the ESC concluded that the weight of evidence before it provided:

... a sound basis for adopting an estimate of the equity premium that is below the point estimate provided by the average of the historical premia, but which otherwise is within the range provided by historical returns, given the variability associated with this measure.¹¹²

Accordingly, the ESC concluded that a value of 6 per cent was appropriate for regulatory purposes. This issue was more recently considered by the ESC and it continued to adopt a market risk premium of 6 per cent.¹¹³

The ACCC considers the value of the market risk premium (MRP), based on a traditional long term view using historic measures (ex-post measure), remains around 6 per cent.¹¹⁴

¹¹² ESC, Final decision: Review of gas access arrangements, October 2002, p. 336.

¹¹³ ESC, Electricity Distribution Price Review 2005 -10, Final decision, (2005) Vol. 1 p. 365.

The rationale for using historical data as a measure of the expected MRP is that investors' expectations will be framed on the basis of the market's past performance. A recent analysis indicated that the MRP has fallen to around 3–4 per cent over recent years.¹¹⁵ However, the ACCC is cautious that this may reflect short term market trends and that statistical estimates over shorter periods tend to have higher standard errors suggesting that caution must accompany the interpretation of these results.

A study undertaken by Associate Professor Lally for the ACCC assessed various approaches and estimates of the market risk premium. Briefly, Lally determined that across four different approaches the average estimate for the market risk premium in Australia was 6.1 per cent and concluded that:

... the range of methodologies examined give rise to a wide range of possible estimates for the market risk premium and these estimates embrace the current value of 6 per cent. Accordingly the continued use of the 6 per cent estimate is recommended.¹¹⁶

In 2004 ACG reviewed the empirical evidence on the Australian MRP. Based on the evidence presented which includes an analysis of international trends in MRP, ACG concluded that:

... there is no justification for applying an MRP different from 6%, as is the practice of Australian regulators.¹¹⁷

ACG noted that while the point estimate of the MRP provided by historical evidence suggests a higher figure, the qualitative and empirical evidence from ex-ante models provide persuasive evidence that 6 per cent overstates the expected MRP. More recently, ACG having considered historical estimates, forward looking analysis, surveys of market practitioners and previous regulatory decisions recommended a MRP of 6 per cent as the 'best' estimate for regulatory purposes.¹¹⁸

The consultancies prepared by Associate Professor Lally and the ACG indicate that 6 per cent is an appropriate balance of the available evidence on the MRP. Although historical premiums typically suggest a higher MRP than 6 per cent, further estimates of the MRP over more recent periods and forward looking estimates typically suggest a lower MRP than 6 per cent.

Notwithstanding the uncertainty surrounding the derivation of the market risk premium, a point estimate is needed to derive the post-tax nominal return on equity. In view of the information currently before it, a market risk premium of 6 per cent is consistent with s. 8.2(e) of the code and in turn will provide for a rate of return which is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service (s. 8.30 of the code).

¹¹⁴ There appears to be consensus that the MRP cannot be easily predicted over shorter periods and is likely to have poor statistical properties.

¹¹⁵ Headberry Partners and Bob Lim, Further capital markets evidence in relation to the market risk premium and equity beta values—for ECCSA, December 2003, p. 48.

¹¹⁶ M. Lally, The cost of capital under dividend imputation, June 2002, p. 43.

¹¹⁷ ACG, Review of studies comparing international regulatory determinations, March 2004, p. 113.

¹¹⁸ ACG, Cost of capital for Queensland gas distribution, Report for the QCA, December 2005, p. 67.

Although APTPPL has not provided a point estimate from within its market risk premium range of 5–6 per cent, the ACCC notes that its best estimate of 6 per cent for the market risk premium is the upper limit of the range proposed by APTPPL.

Equity beta

The equity beta measures financial risk that cannot be eliminated in a balanced and diversified portfolio (systematic risk). Inclusion of other technical or operational risk factors is inconsistent with the underlying principles of the CAPM and is not consistent with a market based rate of return. An equity beta of one indicates that the stock's risk is equal to the market portfolio (an equity beta below/above one indicating a lower/higher risk relative to the market portfolio).

APTPPL has proposed an equity beta range of 0.8–1.2. It has not nominated a point estimate from within this range and believes that the upper range could be higher for some pipelines.

APTPPL has noted that its range is consistent with the ERA's Dampier to Bunbury Natural Gas Pipeline (DBNGP) regulatory decision but wider than the 0.9–1.1 range suggested by the ACG (ACG's Queensland Competition Authority report) on the cost of capital for Queensland gas distribution. It stated that gas transmission pipelines, especially in Queensland, directly supply power stations and industrial loads. It noted that transmission pipelines have an additional degree of upside and downside risk due to the size of their loads which may not be present for distribution companies. It further noted that the difference between the ERA and ACG's ranges could be due to differences in their truncation methodologies.¹¹⁹

In previous ACCC decisions it has noted the complexities in estimating an equity beta for regulated activities, mainly because few regulated entities are listed on the stock exchange for a sufficient period of time to produce robust data. Further, the available listed entities provide services in addition to the regulated service, resulting in the estimated equity beta not accurately reflecting the systematic risk of the regulated activities. The accepted approach to address this is to estimate a proxy beta for a group of listed entities operating in a similar line of business. General information relevant to estimating a proxy equity beta is provided in appendix C.

The QGC submitted that given the extraordinary growth observed in the industry it is difficult to identify a downside risk for the RBP and that the risk of maintaining a secure income stream can be assessed as being lower than what has been proposed by APTPPL.¹²⁰

Energex submitted that the equity beta should be at the lower end of the proposed range because APTPPL faces lower risks due to its current capacity being fully supported by contracts and it has proposed that the access arrangement only apply to current capacity.¹²¹

¹¹⁹ APTPPL, Access arrangement information for Roma to Brisbane pipeline, January 2006, p. 17.

¹²⁰ QGC response to the RBP access arrangement review, 18 May 2006, comments on s. 3.5.2.2 of access arrangement information.

¹²¹ Energex, Response to the ACCC issues paper, 18 May 2006, p. 11.

The ACG report to the ACCC on proxy beta values in 2002 suggested an equity beta for Australian gas transmission companies of just below 0.7 based exclusively on market evidence.¹²² ACG also considered data for comparable businesses in the USA, Canada and UK. These data produced lower beta estimates, and ACG concluded that this secondary information supports the view that Australian estimates are not understated.

As shown in table 2.5.5.4, the ACCC has derived re-levered (applying the 60 per cent benchmark gearing ratio) equity betas for five comparable Australian firms.¹²³ These are based on September 2005 and December 2005 data from the Australian Graduate School of Management (AGSM).¹²⁴ For calculation purposes, the ACCC took into account raw (unadjusted) beta estimates, set the debt beta at zero, and used corresponding gearing levels from Standard and Poor's except for APT which was not included in Standard and Poor's recent report.¹²⁵ The sample market beta estimates (average re-levered beta of 0.27 in December 2005 and 0.23 in March 2006) suggests that the ACCC has been conservative with its equity beta estimate of one in previous regulatory decisions.¹²⁶

¹²² ACG, Empirical evidence on proxy beta values for regulated gas transmission activities, Final report for the ACCC, July 2002, p. 46.

¹²³ These firms are comparable because they operate in a similar line of business (regulated networks) as the target firm such that the systematic risk of the underlying assets is likely to be of similar magnitude. However, AGL could be considered not representative given that its revenue from regulated networks was only 11 per cent in 2005. The inclusion of AGL in the sample group is continued because a larger sample is preferable and other business areas (non-regulated) are likely to overstate its systematic risk, implying a higher equity beta, and resulting in a more conservative average. Similarly, other non-regulated business of the sample company's is likely to overstate the systematic risk of the company, resulting in a more conservative average.

¹²⁴ AGSM uses monthly observations over 48 months of the firm's trading history (with a minimum of 20 observations). Although DUET is a listed company there are insufficient market observations to be included in the AGSM data.

¹²⁵ Standard and Poor's, *Industry report card: Australian utilities*, May 2006; and APA announcement to the market—*APA acquires Murraylink*, 30 March 2006.

¹²⁶ These two quarters are the most recent for which AGSM data is available.

Table 2.5.5.4: Equity beta estimates based on AGSM data

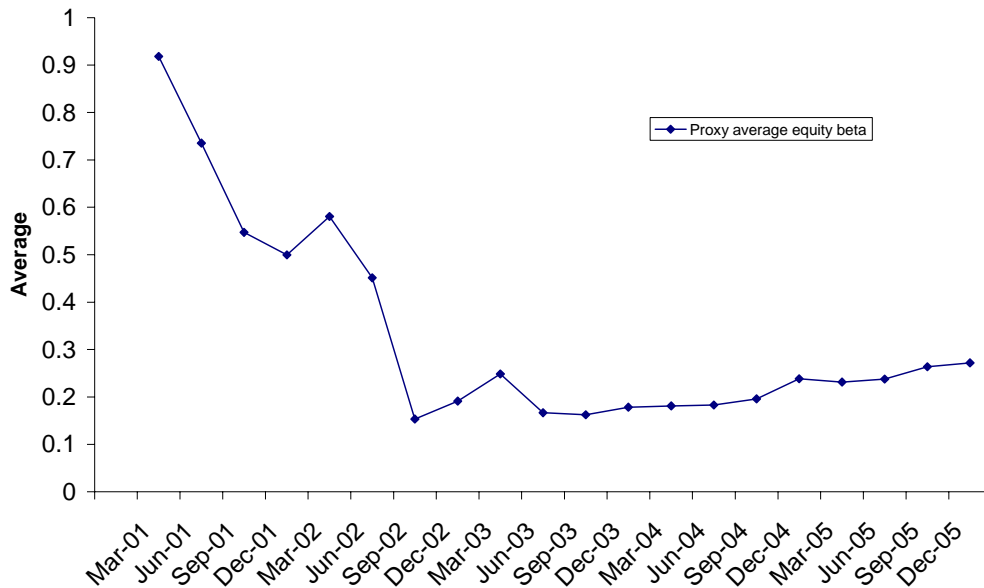
Company	Gearing	December 2005 AGSM data			March 2006 AGSM data		
		Unadjusted β_e	De-levered β_a	Re-levered β_e	Unadjusted β_e	De-levered β_a	Re-levered β_e
Australian Pipeline Trust	68.0	0.33	0.11	0.26	0.29	0.09	0.23
Envestra	83.9	-0.08	-0.01	-0.03	-0.16	-0.03	-0.06
Alinta Gas	43.5	0.48	0.27	0.68	0.47	0.27	0.66
Australian Gas Light	33.3	0.21	0.14	0.35	0.14	0.09	0.23
GasNet	75.8	0.17	0.04	0.10	0.13	0.03	0.08
DUET		na	na	na	na	na	na
Average	60.9	0.22	0.11	0.27	0.17	0.09	0.23

Figure 2.5.5.1 shows the average equity beta estimates over the past five years for the proxy group of companies based on AGSM data (applying the same methodology as applied to derive the equity beta estimates in table 2.5.5.4).¹²⁷ The comparator group consists of APT, Envestra, AGL, United Energy, Alinta Gas and GasNet.¹²⁸ Figure 2.5.5.1 demonstrates that the equity beta measurement has been relatively stable below 0.3 from the end of 2002 to 2005.

¹²⁷ Gearing levels as disclosed by Standard and Poors various reports over the five-year period have been utilised for the purpose of de-levering.

¹²⁸ Not all companies are represented for the whole period of the graph. For example, up to 2002 the comparator group included only AGL, Envestra and United Energy; in September 2003 GasNet was included and United Energy data ceased to be available.

Figure 2.5.5.1: Average equity beta for proxy group



In 2002, the ACG recognised the need for a conservative approach that does not move too far from previous regulatory decisions and recommended a proxy equity beta of one. However, it noted that in the future it should be possible to place greater reliance on market evidence.¹²⁹

Previously, in the MSP and GasNet access arrangement decisions the ACCC having considered the ACG advice adopted an equity beta estimate of one.¹³⁰ The ACG in a recent report to the Queensland Competition Authority (QCA), having applied various methods to remove the effects from the dot-com bubble in order to arrive at a forward looking beta estimate concluded that;

... empirical evidence, together with the desirability of maintaining stability in regulatory decisions over time and consistency in regulatory decisions across companies justifies the use of an equity beta of 1.0 (for a gearing level of 60%) for the Queensland gas distribution ...¹³¹

As set out previously, the ACCC recognises that consistency with the CAPM framework requires that equity holders be compensated only for systematic risk. The ACG cautioned against making ad hoc adjustments on account of perceptions of differences in non-diversifiable risk in the absence of empirical evidence on the required adjustment.¹³²

¹²⁹ ACG, Empirical evidence on proxy beta values for regulated gas transmission activities, Final report for the ACCC, July 2002, p. 43.

¹³⁰ MSP, *Final decision*, October 2003; GasNet, *Final decision*, November 2002.

¹³¹ ACG, Cost of capital for Queensland gas distribution, Report for the QCA, December 2005, p. 58.

¹³² ACG, Empirical evidence on proxy beta values for regulated gas transmission activities, Final report for the ACCC, July 2002, p. 55.

APTPPL has not provided any relevant information that supports a view that the RBP faces increased systematic risks that justify an equity beta above one. An equity beta of one assumes that the regulated entity experiences the same volatility as the market portfolio in general. APTPPL's comments on the nature of gas pipeline loads and comparison with beta ranges in other regulatory decisions does not indicate that the RBP has a risk profile that is greater than the market in general. The ACCC notes the comments made by QGC and Energex, which suggest that the risks faced by RBP are lower than the average gas transmission company.

APT, one of the sample companies for calculating the proxy equity beta is the parent company of APTPPL. The ACCC's regulatory framework based on a benchmarking approach does not rely solely on the individual service provider's equity beta estimates in determining proxy equity beta values. However, in the context of APTPPL's comments that imply that the RBP is entitled to an equity beta value above one, the ACCC notes that APT's re-levered equity beta estimate for December 2005 and March 2006 is 0.26 and 0.23 respectively.

The ACCC is aware of the potential for bias associated with sampling intervals and notes ACG's comment in its report to the ACCC that monthly sampling intervals are commonly seen as the least susceptible to bias.¹³³ Nevertheless, the ACCC notes that the proxy beta estimates based on weekly observations tend to be higher than the monthly observations. Contemporary beta estimates based on Bloomberg weekly observations (60 weeks) indicate that the average equity beta for the five comparable companies as at the end of March 2006 was 0.8 (re-levered to 60 per cent debt).¹³⁴ The ACG in a recent report noted that, since January 2004 the weekly beta estimates have predominantly been in the range of 0.4 to 0.8 with the average being 0.55.¹³⁵

Although ACG in 2002 cautioned against relying exclusively on empirical beta estimates, it noted that there are sound arguments for relying upon the latest market evidence when deriving a proxy equity beta for regulated gas transmission entities. It further noted that:

Moreover, reliance upon the most recent market evidence – particularly where betas are drawn from a credible independent beta estimation service – is also a rule that can be replicated across price reviews and industries, and thus go some way towards reducing the uncertainty associated with the regulatory process.¹³⁶

The latest empirical evidence is considered relevant in assessing the proposed equity beta. This data indicates that it may be appropriate to adopt an equity beta value of less than one. Recent regulatory decisions in gas and electricity however have mainly applied an equity beta of one.¹³⁷

¹³³ ACG, Empirical evidence on proxy beta values for regulated gas transmission activities, Final report for the ACCC, July 2002, p. 22.

¹³⁴ Raw data from Bloomberg for the proxy group has been adjusted applying the same methodology as that applied to derive the re-levered equity betas in table 2.5.4.5.

¹³⁵ ACG, Cost of capital for Queensland gas distribution, Report for the QCA, December 2005, p. 54.

¹³⁶ ACG, Empirical evidence on proxy beta values for regulated gas transmission activities, Final report for the ACCC, July 2002, p. 41.

¹³⁷ ERA, *Supplementary submission to the Export and Infrastructure Taskforce*, May 2006, Attachment 5, National regulatory determinations: equity beta.

The ACCC notes the previously mentioned ongoing changes to the regulatory framework for electricity and gas and considers in this context that maintenance of the status quo for equity beta is appropriate at this time for achieving the code objectives of not distorting investment decisions in pipeline transportation systems (s.8.1 (d)), and the safe and reliable operation of the pipeline (s. 8.1(c)).

In the future, however, the ACCC may place greater weight on contemporary market information in deriving a best estimate of equity beta in accordance with s. 8.2(e) of the code, noting that this may lead to an equity beta value of less than one.

The return on equity

As per its range approach, APTPPL has proposed a range of 9.43–12.63 per cent for its nominal cost of equity but does not specify the return on equity value used in its WACC. As discussed above, the parameters acceptable to the ACCC result in a post-tax nominal return on equity of 11.92 per cent.

2.5.5.6 Estimation of the WACC

APTPPL has proposed a pre-tax real WACC of 6.90 per cent. It has not nominated a corresponding vanilla WACC. Based on the above reasoning, the ACCC considers that a nominal vanilla WACC of 9.02 per cent represents a rate of return commensurate with prevailing conditions in the market for funds given the risks of delivering the reference service.¹³⁸ For comparison purposes the pre-tax real WACC is 5.85 per cent (applying the effective tax rate of 16.26 per cent as discussed in s. 2.5.5.2).

Table 2.5.5.5 compares APTPPL's proposed WACC parameters (point estimates and ranges) with the ACCC's WACC estimates. The ACCC's estimated pre-tax real WACC of 5.85 per cent is materially lower than APTPPL's proposed pre-tax real WACC of 6.90 per cent. If the increase in the government bond rate since the receipt of APTPPL's access arrangement is discounted, then the difference is even higher. The primary reasons for the discrepancy are the treatment of tax and the choice of equity beta value.

¹³⁸ As required by s. 8.30.

Table 2.5.5.5: Comparison of WACC parameters and estimates

WACC parameters	APTPPL's proposal		ACCC draft decision
	High	Low	
Nominal risk free rate	5.43%	5.43%	5.92%
Real risk free rate	2.48%	2.48%	2.44%
Inflation rate	2.88%	2.88%	3.40%
Debt to equity ratio	60:40	60:40	60:40
Corporate tax rate	30.0%	30.0%	30.0%
Effective tax rate	n/a	n/a	16.26%
Cost of debt margin over risk free rate	1.09%	1.02%	1.07%
Cost of raising debt	0.25%	0.125%	0.104%
Market risk premium	6.0%	5.0%	6.0%
Value of imputation credits	30.0%	60.0%	50.0%
Equity beta	1.2	0.8	1.0
Cost of capital measures			
Nominal return on equity	12.63%	9.43%	11.92%
Nominal Vanilla WACC	na	na	9.02%
Real Vanilla WACC	na	na	5.44%
Pre-tax real WACC range	7.37%	5.20%	Na
Pre-tax real WACC range - truncated	7.15%	5.42%	Na
Proposed Pre-tax real WACC	6.90%		5.85%

na - Not available.

APTPPL has calculated the pre-tax real WACC from a post-tax real WACC by using the corporate tax rate in its formula. As discussed above (see discussion in 2.5.5.2) this approach is incorrect when applied in a regulatory framework. Accordingly, the post-tax framework is the best and most reasonable basis upon which the rate of return can be forecast (s. 8.2 (e) of the code) and is most likely to lead to a rate of return commensurate with prevailing conditions in the market for funds and the risks involved in delivering the reference service (s. 8.30).

As noted above, while APTPPL provides the range of some parameter values used to determine its WACC range, it does not specify the value of those parameters

underlying its chosen WACC. From its parameter ranges and its equity beta range of 0.8–1.2, it can be inferred that APTPPL has applied an equity beta above 1.0 in achieving its proposed WACC of 6.9 per cent. The market data indicates that the contemporary beta estimate for a group of comparable Australian companies could be as low as 0.3 (see discussion on equity beta in 2.5.5.5). Recent regulatory decisions have mainly applied an equity beta of around 1.0. Although placing greater weight on market data would suggest that an equity beta value less than 1.0 is appropriate, a conservative equity beta value of 1.0 in this instance is reasonable.

At this time the application of a conservative equity beta value of 1.0 and a gearing ratio of 60 per cent debt will provide APTPPL with a WACC that does not understate its commercial cost of capital.¹³⁹

The rate of return critical to a regulated entity's ability to attract equity funding is the expected post-tax nominal return on equity. The post-tax nominal return on equity associated with the ACCC's pre-tax real WACC is 11.92 per cent. It is important to note that this return on equity is an expected return. Accordingly, there is scope for APTPPL to earn a rate of return in excess of this within the regulatory framework.

Caution must be exercised before drawing any inferences from regulatory decisions from other jurisdictions. Nevertheless, benchmarking indicates that the proposed return on equity of 11.92 per cent for the RBP is comparable with recent gas regulatory decisions (as shown in table 2.5.5.6).

¹³⁹ The purchase of the regulated MurrayLink interconnector by APA (the parent company of APTPPL) in March 2006 at 1.5 times its regulated asset value given its fixed maximum allowable revenue until 2013 under the current regulatory period, implies that the rate of return given by the ACCC may be generous.

Table 2.5.5.6: Comparison of gas regulatory returns

	Date	Nominal return on equity (%)	Nominal vanilla WACC (%)
ACCC final decision for MAPS	Sep 2001	12.6	9.1
ACCC final decision for GasNet	Nov 2002	11.2	6.3 ^(a)
ACCC final decision for ABDP	Dec 2002	11.7	8.9
ACCC final decision for MSP	Sep 2003	11.3	8.2
ACCC draft decision for RBP	Aug 2006	11.92	9.02
ESC final decision for gas distribution	Oct 2002	11.8	6.8 ^(a)
ICRC final decision	Nov 2004	10.8 – 12.0	Na
ERA final decision GGT	May 2005	9.5 – 13.4	Na
ERA final decision Alinta gas networks	July 2005	9.2 – 11.2	Na
ERA final decision DBNGP	Nov 2005	9.5 – 12.7	Na
QCA final decision for gas distribution	May 2006	11.9	Na

Source: ACCC various decisions; ESC, final decision: *gas access arrangements*, October 2002; ICRC, final decision: *review of access arrangement for ActewAGL natural gas system in ACT, Queanbeyan and Yarralumla*, October 2004; ERA, final decisions: *Goldfields Gas pipeline access arrangement*, May 2005; *review of the access arrangement for the Mid-West and South-West gas distribution system*, July 2005; *review of the access arrangement for the Dampier to Bunbury Natural Gas Pipeline*, November 2005. QCA, final decision: *revised access arrangements for gas distribution networks*, May 2006 (Allgas and Envestra decisions).

Notes (a) Real vanilla WACC, others are nominal.

Although stakeholders may argue as to the appropriateness of a particular value chosen for a parameter, this decision must consider the overall WACC to be applied in setting the reference tariff. Debate on the appropriateness of individual parameters should be considered in light of the reasonableness of the overall WACC.

This decision has considered the effect that estimating individual parameters conservatively has on the regulatory WACC. Associate Professor Martin Lally in a recent report concluded that:

... the practice of applying conservatism at the level of each parameter, rather than to the output price resulting from a series of parameter estimates (or at least to the WACC), is to generate an output price that is not only very conservative but probably far more so than might be anticipated. Furthermore, the resulting degree of conservatism in the output price will not be transparent.¹⁴⁰

Recognising the ongoing legislative changes to the regulatory framework mentioned above, it is appropriate not to change the gearing ratio and equity beta to better reflect market data. This conclusion takes account of Lally's view that this approach may be overly conservative.

¹⁴⁰ Lally, M Prof, *The Appropriate Credit Rating for Australian Electricity Transmission Businesses*, March 2006, p. 7.

In selecting a point value for each parameter, the ACCC has sought to adopt best estimates, arrived at on a reasonable basis that satisfy s. 8.30 and result in the closest alignment with the objectives set out in s. 8.1 of the code. This decision also recognises the potential conflict in achieving these objectives. Placing more weight on market evidence in estimating an equity beta and benchmark gearing will result in a reference tariff that could be considered more efficient in both level and structure (s. 8.1(e)); better circumvent any potential distortion in investment in upstream and downstream markets (s. 8.1(d)); and better replicate the outcome of a competitive market (s. 8.1(b)). In contrast, such a reference tariff could be considered as increasing the potential for distortions in investment decisions in pipeline transportation systems (s. 8.1(d)); and possibly affect the safe and reliable operation of the pipeline (s. 8.1(c)).

In resolving this conflict consideration was given to s. 2.24 of the code. Overall, the ACCC considers that when there is uncertainty about a particular parameter, a conservative approach will ensure that: there are enough incentives for appropriate investment (s. 2.24(a)); and other aspects of the service, such as the safe and reliable operation of the pipeline (s. 2.24(c)) will continue. Taking a long term view, placing weight on these two factors could also be considered as taking account of the interests of users and prospective users (s. 2.24(f)).

Based on the reasoning above, the following amendment is proposed in relation to the appropriate rate of return for the RBP.

Amendment 02

APTPPL must amend the rate of return estimates and associated parameters forming part of the access arrangement and access arrangement information to reflect the ACCC's estimates as set out in table 2.5.5.5 of this draft decision. The calculation of the reference tariff must reflect these parameters.

2.6 Non-capital costs

2.6.1 Code requirements

Sections 8.36 and 8.37 of the code allow for recovery of the operating, maintenance and other non-capital costs that a prudent service provider, acting efficiently and in accordance with good industry practice, would incur in providing the reference service. Non-capital costs may include, but are not limited to, costs incurred for generic market development activities aimed at increasing long-term demand for the delivery of the reference service.

The regulator must also be satisfied that any forecasts in a setting reference tariff represent best estimates arrived at on a reasonable basis (s. 8.2(e) of the code) and that the non-capital costs comply with the objectives in s. 8.1.

Attachment A to the code (see appendix B to this draft decision) requires the disclosure in the access arrangement information of costs (including wages and salaries, rental equipment, gas used in operations, materials and supply, corporate overheads and marketing) with some disaggregation by zones, services or categories of assets, unless

it would be unduly harmful to the legitimate business interests of the service provider, user or prospective user. The service provider must also disclose gas used in operations.¹⁴¹

2.6.2 Current access arrangements provisions

There are currently no explicit provisions for non-capital costs in the access arrangement as the tariffs were set by the Queensland Minister and included in the access arrangement through the derogation.

2.6.3 APTPPL proposal

APTPPL's total revenue requirement includes non-capital costs incurred in the delivery of the reference service. All non-capital costs have been allocated to the reference service. APTPPL's proposed non-capital costs are provided in table 2.6.3.1 below. APTPPL advises that these proposed costs have been based on direct costs to APTPPL of operating the RBP, including services provided by Agility Management Pty Limited (Agility) on a contract basis, and an allocation of APT corporate overheads.

Table 2.6.3.1: APTPPL proposed total non-capital costs (July 2006 \$m)

Non-capital expenditure	2006-7	2007-8	2008-9	2009-10	2010-11
Wages and salaries	0.83	0.86	0.88	0.91	0.94
APT other corporate costs	2.08	2.08	2.07	2.06	2.06
Operations, maintenance, insurance, licence fees, security and self insured risk	6.40	6.35	6.29	6.24	6.19
Total	9.31	9.28	9.24	9.21	9.18

Source: Access arrangement information, 31 January 2006, p.21

APTPPL advises that operating and maintenance services for the RBP are provided by AGL affiliate company Agility under an agreement known as the Pipeline Management Agreement (PMA).

The efficiency of proposed non-capital costs for the RBP in terms of the code requirements is discussed below.

APTPPL's corporate costs

APTPPL advises that corporate costs include items such as salaries, directors' fees, rent, office costs, IT costs, communications costs, costs associated with stock exchange listing (e.g. share registry fees, annual report preparation) and other costs incurred in

¹⁴¹ Section 2.7 of the code requires the provision of access arrangement information. Section 2.8 allows for certain information to be categorised or aggregated to avoid disclosure of confidential information. It also notes that nothing in s. 2.8 limits the regulator's power under the Gas Pipelines Access Law to obtain information.

the operation of the APT Group. APTPPL's allocation of corporate costs is described below.

Labour costs

APTPPL advises that it has allocated costs for each staff member as follows:

- Staff who perform a significant amount of work directly related to the RBP (e.g. staff in Queensland) are allocated at a percentage reflecting the proportion of their work involving the RBP.
- Staff whose work covers the whole company and whose costs are otherwise not allocated are allocated at approximately 14 per cent to the RBP.
- No cost allocation has been made in the case of staff whose work does not relate to the RBP (e.g. staff in Western Australia).

These costs have been escalated by APTPPL at 6 per cent per annum (in nominal terms) to reflect its forecast rate of increase for salary and personnel costs.

Non-labour costs

APTPPL advises that its allocation process between direct and non-direct costs related to the RBP is as follows:

- Direct costs are allocated 100 per cent to the RBP.
- Queensland office costs are attributed 75 per cent to the RBP. The APT Queensland office is responsible for the RBP and the Carpentaria gas pipeline. The work undertaken is predominantly driven by contract management and legal and commercial issues. This allocation is broadly consistent with the number of contracts on the RBP and the relative amounts of work undertaken on the pipelines.
- The remaining costs are allocated at approximately 14 per cent to the RBP.

These costs have been escalated at APTPPL's forecast CPI increase of 2.88 per cent a year.

Operations and maintenance cost

Agility provides operations and maintenance services for the RBP.

The proposed cost of services provided by Agility and of spare parts is \$5.8 m in 2006–07 which APTPPL states 'escalates generally in line with CPI'.¹⁴² The services include all asset management, operations and maintenance work required for the safe and reliable operation of the pipeline. The amount paid to Agility includes the costs of direct operations, operations support, engineering support, pipeline maintenance and easement management. Key categories of this work are:¹⁴³

- planned and corrective maintenance on pipework and compressors

¹⁴² APTPPL has identified the actual escalation approach in its Confidential AAI p. 20.

¹⁴³ AAI p. 20.

- planned and corrective easement patrol and easement management
- planned and corrective cathodic protection
- pipeline monitoring and control (control centre functions, including telemetry)
- asset maintenance planning and scheduling
- asset performance testing and validation
- accounting for day-to-day operations
- regulatory compliance obligations relating to technical regulatory compliance and maintenance of asset records. This includes compliance with licences, the Pipeline Code (AS 2885), environmental regulations and other statutory obligations.

Other costs

This item includes insurance, licence fees and government charges.

Insurance, licence fees, rates and other government charges are a material component of APTPPL's proposed non-capital costs.¹⁴⁴ The estimate for insurance was based on a quote for the stand-alone cost to insure the RBP obtained from the company's insurance broker. Insurance constitutes the major component of this cost category. The other costs in this category are based on actual costs.

These costs have been escalated by APTPPL at its forecast rate for the CPI.

Additional non-capital costs

Security

APTPL advises that it has included an amount for additional operating expenditure as a result of increased security measures in response to the threat of terrorism. The company is undertaking reviews of the security of key infrastructure with a view to improving the security of key installations. Additional expenditure has been estimated to allow for additional patrols, remote monitoring, programs to assess security risk and development of contingency capabilities.

The amount included in APTPL's forecast costs is \$100 000 per year, escalated at CPI. This represents approximately 1 per cent of non-capital costs. APTPL advises that the recent ESC decision on Victorian electricity network prices made allowances for additional costs for infrastructure security¹⁴⁵.

In that decision some distributors sought operating costs to cover security items while others sought capital expenditure. On average across all distributors the amount sought for capital expenditure and operating expenditure was approximately 0.6 per cent of

¹⁴⁴ APTPL has identified its proposed expenditure on this category in its Confidential AAI, p. 20.

¹⁴⁵ Essential Services Commission, *Electricity distribution price review 2006–10*. Final decision, volume 1: statement and purpose of reasons, 2005, p. 309.

total capital expenditure and operating expenditure but individual networks recovered security operating expenditure and capital expenditure up to approximately 1.5 per cent of total operating expenditure and capital expenditure.

Self-insured risk

APTPPL has included an allowance for the cost of self-insurance to cover asymmetric risks it considers to be of low likelihood but high impact. This allowance is sought to cover the costs incurred as a result of a rare event that is not insured.

Risks cited by APTPPL as examples of those for which it self-insures include computer crime, computer breakdown, crisis management, legal actions, extortion and death or disability of key personnel. Its estimated costs of self-insurance are \$80 000 per annum. These costs have been escalated at the forecast CPI.

The 2003 GasNet Tribunal decision allowed for asymmetric risks of \$172 000 per annum. APTPPL submits that its forecast amount of \$80 000 is consistent with the GasNet figure as a percentage of non-capital expenditure.

2.6.4 Submissions in response to the revised access arrangement

Energex considered that it was not in a position to make significant comment on the reasonableness or prudence of the forecast non-capital costs but submitted that the following concerns should be addressed:¹⁴⁶

- transparent identification of the productivity and efficiency gains built into the forecast non-capital costs
- that any non-capital costs associated with planned pipeline expansions be allocated to those expansions and not included within the access arrangement costs; and
- that any margin included in the costs for services provided by Agility should be regulated and transparent.

QGC submitted that the operating costs component appears too high and queried the justification of the costs by reference to ORC rather than actual capital costs. It also questioned whether an affiliated company (Agility) was the only entity capable of managing aspects of the pipeline. QGC noted that APT's annual reports have indicated operating costs nationwide were about 21 per cent of pipeline revenue which would mean that such costs for the RBP should be about \$6 m rather than around \$9 m.¹⁴⁷

2.6.5 ACCC's considerations

APT corporate costs

Wages and salaries

APTPPL provided annual wages and salaries estimates for the 2006–07 to 2010–11 period as set out in table 2.6.5.1 below.

¹⁴⁶ Energex submission, p. 11.

¹⁴⁷ QGC submission, p. 14.

APTPPL also provided a breakdown of labour costs by function on a confidential basis.¹⁴⁸ Its proposed labour costs have been escalated at 6 per cent per annum. APTPPL's proposed costs contain an arithmetic error. After adjustment for the error, labour costs for the base year of \$790 000 are considered to be reasonable.

Publicly available Australian Bureau of Statistics (ABS) quarterly labour price indices for the public and private sector, Australia wide, show a 5.9 per cent increase in labour costs for the year to March 2006 for the electricity gas and water supply (EGW) industry.¹⁴⁹ In comparison wages in the mining sector increased by 4.9 per cent, construction sector wages increased by five per cent and wages for all industries increased by 4 per cent. The ABS data also show that the overall labour price index has increased by 4.6 per cent in Queensland over the past year, compared with four per cent in NSW and nationally. The ABS data show that wages costs in the EGW industry have exceeded the average across all industries in the past four years.

Forecast wage data is not readily available, but in its submission to the Senate Select Committee into Superannuation, the Association of Superannuation Funds of Australia Ltd (ASFA) used an Average Weekly Earnings (AWE) growth of 3.75 per cent per annum when considering long-term superannuation requirements.¹⁵⁰

The Treasury submission to the same Senate Committee assumed four per cent long-term annual wages growth.¹⁵¹

In these circumstances the proposed yearly escalation of 6 per cent over the duration of the access arrangement period is excessive and inconsistent with s. 8.37 of the code as the proposed costs do not represent the costs that would be incurred by a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service. Moreover, they are unlikely to represent best estimates arrived at on a reasonable basis (s 8.2(e)). Hence if the reference tariff was based on APTPPL's proposed costs it would be likely to recover more than efficient costs (s. 8.1(a) of the code), not replicate a competitive market (s. 8.1(b), result in an inefficient tariff (s. 8.1(e)) and potentially distort investment decisions (s. 8.1(d)).

A 4.6 per cent increase per annum (in nominal terms) is assessed as being consistent with ss 8.1, 8.2(e) and 8.37 of the code. The equivalent costs in real terms for the duration of the access arrangement are shown in table 2.6.5.1. Nevertheless, any further information submitted by APTPPL in response to this draft decision to substantiate its claim will be considered.

¹⁴⁸ This category covers some of the costs of running APT's Brisbane office but is mainly for local office functions performed in Sydney.

¹⁴⁹ ABS Labour Price Index, cat No 6345.0, March 2006, released 17/05/06.

¹⁵⁰ The Association of Superannuation Funds of Australia Ltd, submission to the Senate Enquiry into superannuation and standards of living in retirement, 12 December 2002, p. 57 table 6.3.

¹⁵¹ The Treasury, submission to the Senate Enquiry into superannuation and standards of living in retirement, July 2002.

Table 2.6.5.1: Wages and salary costs (July 2006 \$m)

Non-capital expenditure	2006-07	2007-08	2008-09	2009-10	2010-11
APTPPL proposed labour costs	0.83	0.86	0.88	0.91	0.94
ACCC proposed labour costs	0.79	0.80	0.81	0.82	0.83

Amendment 03

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on wages and salaries as set out in table 2.6.5.1.

Agility management fee

A material component of the non-labour costs proposed by APTPPL is a management fee that it pays to Agility. The management fee is payable in accordance with the PMA and escalates at 75 per cent of the CPI up to a maximum quarterly increase of 2 per cent, and for quarterly increases in excess of this, at 40 per cent of the excess.¹⁵² APTPPL has advised the ACCC of the portion allocated to the RBP on a confidential basis. Neither APTPPL nor Agility has provided any information indicating that any of this amount represents expenditure actually forecast to be incurred by Agility. In the absence of such information it cannot be concluded that the proposed costs are consistent with section 8.37 of the code as they do not represent the costs that would be incurred by a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service.

If the reference tariff was based on APTPPL's proposed costs it would recover more than efficient costs (s. 8.1(a) of the code), not replicate a competitive market (s. 8.1(b)), result in an inefficient tariff (s. 8.1(e)) and potentially distort investment decisions (s. 8.1(d)) This position is consistent with that taken on the same item in the MSP access arrangement. Nevertheless any supporting information provided by APTPPL in its response to this draft decision with respect to this matter will be considered.

External legal costs

APTPPL has proposed a material expenditure for this item.¹⁵³ The expenditure covers the cost of legal services associated with haulage contracts for the RBP. The amount has been considered in the light of recent actual costs and the anticipated legal work load during the forthcoming access arrangement period. APTPPL has advised that it does not expect that the reference service will actually be used by any customer during the 2006–11 access arrangement period. If that is the case, all external legal costs

¹⁵² Buried Treasure (APT Offer Document) 5 May 2000, p. 64.

¹⁵³ APTPPL has identified its proposed expenditure on this category of expenditure in its confidential response to an ACCC request for additional information, 19 March 2006, p. 15.

incurred during that period will be more appropriately allocated to the negotiated services.

The proposed expenditure on external legal costs is inconsistent with s. 8.37 of the code. Recovery of legal costs associated with negotiated services through the reference tariff would be inconsistent with a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service. If the reference tariff was based on APTPPL’s proposed legal costs it would recover more than efficient costs (s. 8.1(a) of the code), not replicate a competitive market (s. 8.1(b), result in an inefficient tariff (s. 8.1(e)) and potentially distort investment decisions (s. 8.1(d)).

The ACCC’s proposed non-labour costs are set out in table 2.6.5.2 below.

Table 2.6.5.2: APTPPL other corporate costs (July 2006 \$m)

Non-capital expenditure	2006-07	2007-08	2008-09	2009-10	2010-11
APTPPL proposed other corporate costs	2.08	2.08	2.07	2.06	2.06
ACCC proposed other corporate costs	1.05	1.05	1.05	1.05	1.05

Amendment 04

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on non-labour costs to exclude the amounts proposed for the Agility management fee.

Amendment 05

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to remove the component for external legal costs from its proposed expenditure.

Operations and maintenance costs

The ACCC has considered the appropriateness of arrangements between APTPPL and Agility for the operation and maintenance of the RBP for establishing the basis for setting operating and maintenance costs benchmarks. It notes that there are other organisations in Australia which possess the expertise to perform those services. The fundamental consideration is therefore whether the services are provided by Agility at an efficient cost. Closely related to the issue of efficiency in this context is consideration of ‘corporate memory’. While the RBP has only been ultimately owned by APT since 2000, the pipeline was previously owned by AGL Pipelines from 1988. Agility is a wholly-owned subsidiary of AGL.

The ability to maintain continuity in personnel involved in pipeline operation, maintenance and management or to have access within the company to personnel with direct experience means that Agility may enjoy a significant advantage over any alternative entity in performing the services in question. The existence of corporate memory has significant efficiency benefits in maintaining assets such as pipelines. The ability to draw upon experience of the past can save considerable effort in understanding problems and their causes and can provide insight into possible solutions. Corporate memory is complementary to effort in staying abreast of new developments in order to achieve efficiency in operations.

Operating costs as a proportion of ORC (rather than actual capital costs) is a reasonable benchmark albeit no more than a broad indicator of efficiency. This is particularly so for a pipeline such as the RBP which is almost 40-years old and has had numerous capital expansions since the early 1980s.

Comparison of operating costs with ORC provides a more consistent basis of comparing different pipelines. Comparison of operating costs against pipeline revenue is not a reliable indicator of efficiency because of the wide variability in the characteristics of pipelines and the markets they serve and the fact that throughput is not a significant cost driver (except for compressor fuel).

In the course of its examination of APTPPL's non-capital costs the ACCC sought and obtained detailed information from the company about its costs.

To assist in its assessment of whether APTPPL's estimated costs were reasonable and in accordance with the code, the ACCC sought information about expenditure in the five year period since 2000–01. APTPPL provided information on payments made to Agility under the PMA in the period 2000–01 to 2004–05 on a confidential basis.

Payments to be made to Agility by APTPPL fall under three categories:

- specified services
- additional services
- management fee.

Where additional services are to be performed, those services must be approved by APTPPL in writing before they can be carried out.

APTPPL is provided with details of payments for 'additional services' by Agility and it provided details to the ACCC on a confidential basis.¹⁵⁴ The principal items covered by additional services during the period 2000–01 to 2004–05 arose from the construction of the Peat/Scotia lateral in 2000–01 and stages 4, 5 and 6 of RBP looping. The 121 km Peat/Scotia lateral and Looping 4, 5 and 6 (212 km) increased the length of pipeline to be operated and maintained by 333 km from 633 km to 966 km.¹⁵⁵ The other major

¹⁵⁴ APTPPL has identified its proposed expenditure on this category in its confidential response to an ACCC request for additional information dated 7 April 2006 p. 24.

¹⁵⁵ AAI p. 25.

additional services expenditure in the period was associated with Peat lateral subsidence, compressor station pipeline modification, pig run follow-up work and washout repairs at a creek crossing.

Under the PMA Agility is paid a fixed fee for specified services and while those specified services to be provided are comprehensively defined, no breakdown of this fee is provided in the PMA. APTPPL did, however, provide its own estimate of the breakdown of operations and maintenance on a confidential basis.¹⁵⁶ The management fee is discussed under other corporate costs. Agility also provided a breakdown to the ACCC on a confidential basis (that breakdown is not available to APTPPL).

APTPPL provided a copy of the PMA as well as the asset management plan and the safety and operating plans and for the RBP and the Peat/Scotia lateral (all on a confidential basis). The PMA started with the formation of APT in 2000 and has an initial term of 20 years and rolling five year terms thereafter, terminable on 12 months notice.¹⁵⁷

The PMA provides for limited renegotiation of some terms at regular intervals. Renegotiations have occurred recently and the scope of work to be performed and pricing have been revised and are being acted on.

The ACCC also held discussions directly with Agility to obtain detailed information on the operating and maintenance costs and all aspects of operation of the RBP. Because that pricing information is not available to APTPPL, the pipeline owner was not present at these confidential discussions. To assist in its analysis Agility provided details of:

- staff who work on the RBP and the proportion of their time spent on RBP activities
- charge-out rates for staff
- the methodology and inputs for calculating charge-out rates
- categories of work
- actual cost of materials used in operations and maintenance.

The charge-out rates and the allocation of staff activities are reasonable for a pipeline having the characteristics of the RBP. Moreover, Agility is able to achieve economies of scale in the provision of certain services including, for example, accounting, asset management, human resources, health and safety and training. The PMSA also contains an annual price escalation for specified services, APTPPL identified to the ACCC on a confidential basis.

The costs to be paid by APTPPL to Agility for operations and maintenance and hence APTPPL's forecast operations and maintenance costs for the period 2006–11 are considered to be consistent with s. 8.37 of the code.

¹⁵⁶ APTPPL has identified its estimated break up of proposed expenditure on this category in its confidential response to an ACCC request for additional information dated 7 April 2006, p. 25.

¹⁵⁷ Buried Treasure (APT Offer Document) 5 May 2000, p. 64.

Other costs

Insurance, licence fees and government charges

Insurance costs have escalated dramatically following the HIH collapse and the September 2001 terrorist attacks in the USA but subsequently fell. APTPPL provided confidential information about the insurance quote and is aware of the level of licence fees for the RBP.

The base year cost proposed by APTPPL is considered to be consistent with s. 8.37 of the code. In the current circumstances the escalation of this amount at the rate of CPI is appropriate and consistent with the costs that would be incurred by a prudent service provider in accordance with the code.

Additional non-capital costs

Security

APTPPL advises that additional work on security measures is being undertaken in response to a generally increased focus on security for essential infrastructure. It acknowledges that at this stage it cannot accurately identify what the costs of responding to additional government requirements may be. However, it advised the ACCC on a confidential basis of the broad areas of expected increased spending.¹⁵⁸ As information regarding security measures is potentially of a sensitive nature, the ACCC accepts this confidentiality claim.

The ACCC notes that the total costs faced by service providers vary over time for a range of reasons. Some costs may increase more than average, others may decline. APTPPL provided little information on this item except for anticipated costs of one item.¹⁵⁹

The ACCC considers that there is insufficient evidence to conclude that an allowance of \$100 000 per year is a reasonable forecast that would be consistent with s. 8.2(e) and s. 8.37 and hence represent the costs that would be incurred by a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service. To the extent that APTPPL's proposed costs overstate the efficient costs and if the reference tariff was based on those proposed costs, it would recover more than efficient costs (s. 8.1(a) of the code), not replicate a competitive market (s. 8.1(b), result in an inefficient tariff (s. 8.1(e)) and potentially distort investment decisions (s. 8.1(d)).

Given the uncertainty of likely costs at this stage, but recognising that some level of costs are likely to be incurred, for the purposes to this draft decision the ACCC proposes to include \$50 000 per annum for the costs of additional security measures. Any supporting information provided by APTPPL in its response to this draft decision to support its claim for an allowance of \$100 000 per annum will be considered.

¹⁵⁸ APTPPL confidential response to an ACCC request for additional information, 7 April 2006, p. 34.

¹⁵⁹ The ACCC notes that some of these costs appear to be, at least in part, of a capital nature. To the extent that this is the case, such expenditure could (subject to s 8.16) be included in the capital base at the next review. To also include an allowance as non-capital would represent double counting.

Amendment 06

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement by reducing the costs for additional security measures from \$100 000 to \$50 000.

Self-insured risk

APTPPL has included costs for self-insured risk and has cited the 2003 ACT decision relating to GasNet in which \$172 000 per year was allowed. APTPPL has proposed an amount of \$80 000 based on the proportion of non-capital costs.

The ACCC has considered the appropriate treatment of self-insured risk in a number of its decisions and set out the following proposed approach in its *Statement of principles for the regulation of electricity transmission revenues*.¹⁶⁰

The cost of self-insurance will be recognised as an operating expense subject to the implementation of appropriate administrative arrangements including:

- a board resolution to self-insure (i.e. a copy of the signed minutes recording resolution made by the board)
- confirmation that the TNSP is in a position to undertake credibly self-insurance for those events
- self-insurance details setting out the specific risks which the TNSP has resolved to self-insure
- a report from an appropriately qualified actuary or risk specialist verifying the calculation of risks and corresponding insurance premiums
- ensuring that the cost of self-insurance is recorded as an operating expense in the audited and published income statement, and thereby deducted from the calculation of attributable profits
- ensuring that a self-insurance reserve (funded by self-insurance premiums charged in the income statement) is established in the audited and published balance sheet
- ensuring that when a claim against self-insurance is made, that an appropriate deduction to the self-insurance reserve is recorded.

It is inappropriate to allow for self insurance risk unless these arrangements are in place. Without such arrangements supporting the need for self-insurance and the costs to be allowed, these costs would not be consistent with s. 8.37 as they would not represent the costs that would be incurred by a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service.

¹⁶⁰ ACCC, *Statement of principles for the regulation of electricity transmission revenues*, 8 December 2004, p. 14.

Amendment 07

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must implement appropriate administrative arrangements as described above in this section (2.6.5).

Summary of ACCC proposed non-capital costs

Table 2.6.5.1 below sets out the non-capital costs for the forthcoming access arrangement period which are considered to be the costs that would be incurred by a prudent service provider, acting in accordance with s. 8.37 of the code and which represent best estimates arrived at on a reasonable basis (s. 8.2(e) and comply with the s. 8.1 objectives.

Table 2.6.5.1: ACCC proposed non-capital costs (July 2006 \$m)

Non-capital expenditure	2006-07	2007-08	2008-09	2009-10	2010-11
Wages and salaries	0.79	0.80	0.81	0.82	0.83
APT other corporate costs	1.05	1.05	1.05	1.05	1.05
Operations, maintenance, insurance, licence fees, security and self insured risk	6.27	6.21	6.16	6.11	6.05
Total	8.11	8.07	8.02	7.98	7.93

2.7 Forecast volumes

2.7.1 Code requirements

Section 8.2(e) of the code requires that any forecasts required in setting the reference tariff represent best estimates arrived at on a reasonable basis.

2.7.2 Current access arrangement provisions

There are currently no forecast volumes in the access arrangement as the tariffs were set by the Queensland Minister and included in the access arrangement through the derogation.

2.7.3 APTPPL proposal

APTPPL has proposed two volumes forecasts. The forecast used directly for the reference tariff calculation¹⁶¹ excludes extensions and expansions. The forecast used as

¹⁶¹ The reference tariff is calculated by dividing the forecast total revenue by the forecast total demand.

input to determining the NPV DORC includes expansions. APTPPL has advised it is currently in discussions with several parties concerning the possible expansion of the pipeline, but that the scope and timing are not finalised.

This section covers both the reference tariff forecast and the longer term forecast used for initial capital base. APTPPL has advised there is little scope for additional gas to be carried by the pipeline without substantial capital expenditure. APTPPL also advised shippers are required to deliver gas that complies with AS4564 to customers.

Reference tariff volume forecasts

Table 2.7.3.1 shows APTPPL’s forecast throughput and peak day capacity volumes over the proposed access arrangement period. The access arrangement period projection is based on the pipeline as configured at 31 January 2006, and forms the basis of the offered services.

Table 2.7.3.1: Access arrangement period forecast volumes

Volumes	2006-07	2007-08	2008-09	2009-10	2010-11
MDQ (TJ/ day)	196.2	199.1	199.8	200.5	202.9
Throughput (PJ/pa)	56.5	57.3	57.5	57.7	58.4

The pipeline has a nominal capacity of 180 TJ/day. APTPPL advised the forecast volumes are able to exceed the nominal capacity as load is withdrawn from the mainline upstream of capacity constraints and slightly downstream of a major receipt point.

The MDQ and throughput increase over the access arrangement period reflecting existing contracts. For the revenue model, the capacity and throughput beyond 2011 have been kept constant at the 2011 levels.

NPV DORC volume forecasts

The longer term projections covering the period 2006 to 2025 can be seen in figure 2.7.5.2. The NPV DORC forecast is not constrained to the existing capacity of the pipeline, and includes expansions. APTPPL considers it reasonable to assume projects, such as those currently under discussion or similar, will be developed over the forecast period, and has confidence that CSM projects will assist in meeting future demand.

APTPPL advises that the methodology used to derive the forecast volumes involved in-house forecasts using known data, public sources of information and some key strategic assumptions.

In developing their forecasts, APTPPL reflected the following¹⁶²

- contracted loads

¹⁶² APTPPL Access Arrangement for Roma to Brisbane pipeline Further Information provided to ACCC 21 February 2006, section 8, volumes p. 9.

- organic growth in the retail gas market
- no growth in the large industrial market
- step change growth in the power generation market.

The forecasts were prepared in July 2005 and were reviewed, at APTPPL's request, by consulting company ACIL Tasman Pty Ltd (ACIL Tasman).¹⁶³ ACIL Tasman notes that its report focuses on the annual gas throughputs associated with supply of gas loads, rather than on the pipeline capacity required.¹⁶⁴

ACIL Tasman noted the APA¹⁶⁵ forecasts are based on the following strategic assumptions:¹⁶⁶

- no new alternative pipelines directly supply the Brisbane market (that is, no bypass);
- any gas supply to south east Queensland from the proposed Papua New Guinea (PNG) pipeline will flow through the RBP and replace gas from current sources;
- sufficient gas exists to meet demand;
- the RBP capacity is expanded to meet new loads in a timely manner; and
- the RBP is not extended to any new geographical markets.

ACIL Tasman supports the forecast of demand for gas growing in the distribution market, but made different assumptions for the industrial and generation segments. The key difference between the APT and ACIL Tasman forecasts for power generation can be attributed to different assumptions regarding the future fuel choices for new generating plants and the possible location of that plant.

ACIL Tasman assumes the new plant entering service in 2011 will be coal-fired, but acknowledges that the plant could be gas-fired and located where it could be supplied with gas via the RBP. ACIL Tasman also notes this variation is outside the proposed access arrangement period.

In summary, ACIL Tasman concludes:

On the basis of this analysis we consider the APA forecasts of gas throughput on the RBP to be reasonable. While there are some differences in the assumptions we consider the APA positions in relation to these components of the market are within the bounds of reasonable probability.¹⁶⁷

¹⁶³ ACIL Tasman, *Market Outlook for the Roma (Wallumbilla) to Brisbane Gas Pipeline*, 2 December 2005.

¹⁶⁴ ACIL Tasman, 2 December 2005, p. 1.

¹⁶⁵ APA is the Stock Exchange code of APT, APTPPL's parent company.

¹⁶⁶ ACIL Tasman, 2 December 2005, pp. 2–3.

¹⁶⁷ ACIL Tasman (confidential version), 2 December 2005, p. V, Executive summary.

2.7.4 Submissions in response to the revised access arrangement

Several users commented on aspects relating to forecast volumes.

The QGC notes there are significant gas fields being developed and proven that could use the RBP and that QGC is but one producer. QGC notes the declining conventional sources from the Surat Basin were initially supplemented by supplies from the Cooper Basin. Supplies were augmented by CSM from the Fairview field and more recently from Peat and Scotia. From 2007, the South West Queensland gas flows into the RBP will diminish greatly with substitution from Surat Basin CSM sources.¹⁶⁸

Origin Energy (Origin) considers the forecasts to be highly conservative. Origin stated the forecasts used by CRA International¹⁶⁹ ignore power stations currently under construction and other industrial and commercial proposals.

Energex states that demand forecasting for the RBP is difficult as high transportation tariffs, lack of access and pipeline capacity constraints have constrained demand and affected project viability. Energex concludes the proposed forecast load is conservative, particularly in the area of power generation and that, with reasonable tariffs, the volumes could be significantly higher than at present. Energex also noted the development of CSM industry near the mid point of the pipeline.

TRUenergy, in commenting on another issue, states that under Full Retail Contestability (FRC) the competition is between retailers for a customer, but this does not result in incremental load growth.

2.7.5 ACCC's considerations

As required by section 8.2(e) of the code the ACCC reviewed the gas forecasts submitted by APTPPL to establish whether the forecasts represented best estimates arrived at on a reasonable basis.

In carrying out this review, the ACCC took into account an independent forecast prepared for it by McLennan Magasanik Associates Pty Ltd (MMA) prior to receiving the access arrangement and MMA's subsequent review of APTPPL's forecasts and the assessment of those forecasts provided by APTPPL's consultant, ACIL Tasman.

Since its inception, the capacity of the pipeline has increased substantially, particularly in recent times. The capacity roughly doubled between 1982 and 1998 and again since 1998. The current configuration is considered by APTPPL to be able to deliver 202.9 TJ/day. The ACCC understands this growth has typically been underpinned by contractual negotiations and long term contracts. The ACCC also understands, that based on the existing configuration, at least an extra 6.7 TJ/day¹⁷⁰ of capacity is available depending upon load locations and profile.

¹⁶⁸ QGC submission 18 May 2006 p. 8.

¹⁶⁹ Charles River Associates International (CRA) prepared the DORC Asset Valuation report for APTPPL. The CRA International report used the forecast volumes provided by APTPPL.

¹⁷⁰ This amount is derived from the difference between MDQ in 2006-07 and 2010-11. This is assumed to be uncontracted capacity.

Reference tariff volume forecasts

In considering the methodology and assumptions in the APTPPL forecasts, the ACCC compared the results with its own independently commissioned study¹⁷¹ and the subsequent review of APTPPL and ACIL Tasman forecasts.¹⁷² For the revenue forecast model, there are not significant discrepancies in volume forecasts.¹⁷³ This is illustrated in figure 2.7.5.1 below. User feedback indicated that demand existed for extra capacity if it was available. User submissions indicated that effective demand may be higher than current volumes, that capacity may be the current limiting factor, despite expansions being available by negotiation. This is consistent with MMA conclusions regarding the constrained nature of the pipeline that:

On the basis of the above comparisons MMA considers the APTPPL constrained throughput and capacity forecasts to 2011 to be reasonable.¹⁷⁴

The ACCC notes that under the price path approach, APTPPL would achieve a better (worse) than benchmark rate of return if demand is greater (less) than forecast during the access arrangement period. As volumes are under contract, the ACCC anticipates little downside risk for APTPPL that the forecast volumes will not be achieved. In its constrained forecast (which reflects MMA's understanding of existing capacity), MMA noted the difficulty in forecasting the capacity of the pipeline. The constrained MMA forecast also suggests that the risk is more upside than downside. Improved trading arrangements may result in additional volumes being shipped using the existing capacity. To the extent that APTPPL may achieve higher than benchmark revenue, it has an incentive to better utilise the existing capacity of the pipeline.

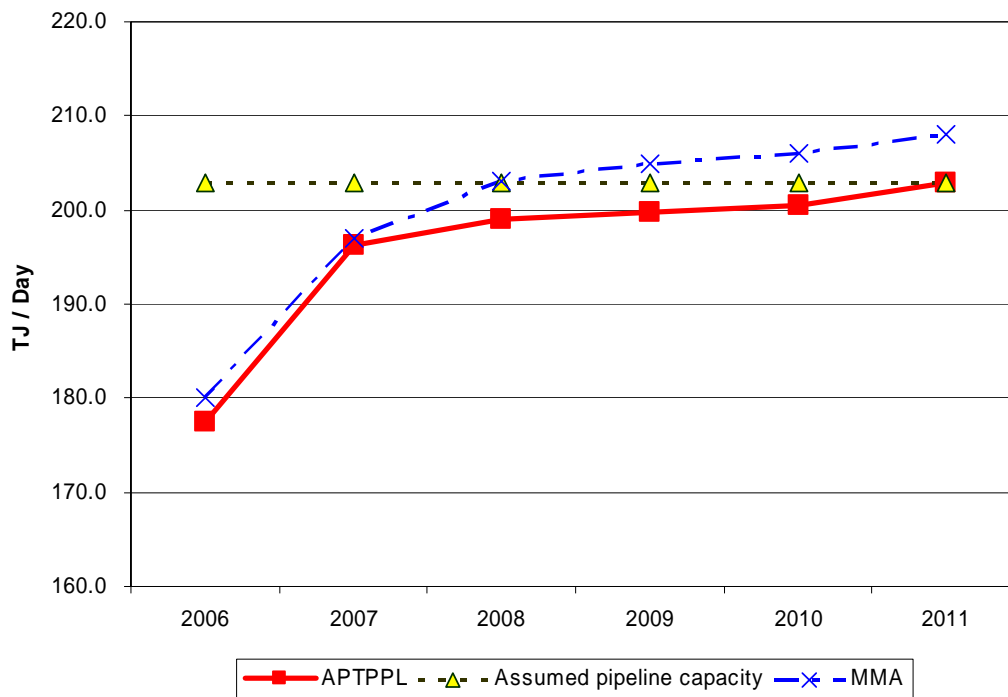
¹⁷¹ MMA, *Roma-Brisbane Pipeline Throughput and Capacity Requirement Forecasts*, 7 February 2006.

¹⁷² MMA, *Roma-Brisbane Throughput Forecasts Comparisons of APTPPL, ACIL Tasman and MMA Forecasts*, 26 June 2006.

¹⁷³ Both consultants MMA and ACIL Tasman expressed difficulty in forecasting the capacity required for the pipeline due to the unknowns such as load factors, co-incident peaks, profiles and operating requirements. ACIL Tasman's forecasts only reflected total throughput in PJ as a result.

¹⁷⁴ MMA, 26 June 2006 p. vii.

Figure 2.7.5.1: Volumes for revenue forecast model



Source: After MMA, 26 June 2006, Figure E-3 p. vii. Note ACIL Tasman did not provide a comparable Tj/day forecast.

Accordingly, the ACCC accepts APTPPL’s reference tariff volume forecasts, based on contracted capacity and the pipeline being effectively fully contracted, as reasonable.

Initial capital base volume forecasts

In assessing the longer term forecasts, the ACCC looked beyond the current contracts. This included assessing APTPPL’s strategic assumptions outlined above. The longer term volume forecasts drive the expected capacity¹⁷⁵ of the pipeline and future expansions.

In assessing the first three of APTPPL’s strategic assumptions (no bypass of the RBP; PNG gas will flow via the RBP; and sufficient gas reserves), the ACCC notes users’ comments about declining traditional sources of gas being replaced with CSM. This is supported by submissions such as from QGC who refer to significant potential CSM reserves. Additionally, MMA notes that contracted gas available to major buyers each year exceeds forecast usage¹⁷⁶ and there are significant gas reserves.¹⁷⁷ This significant availability of gas reserves does not include the proposed PNG Pipeline. APTPPL assumes that the PNG Pipeline, if it proceeds, will supply gas to Brisbane via the RBP.

¹⁷⁵ Both consultants MMA and ACIL Tasman expressed difficulty in forecasting the capacity required for the pipeline due to the unknowns such as load factors, co-incident peaks, profiles and operating requirements. ACIL Tasman’s forecasts only reflected total throughput in PJ as a result.

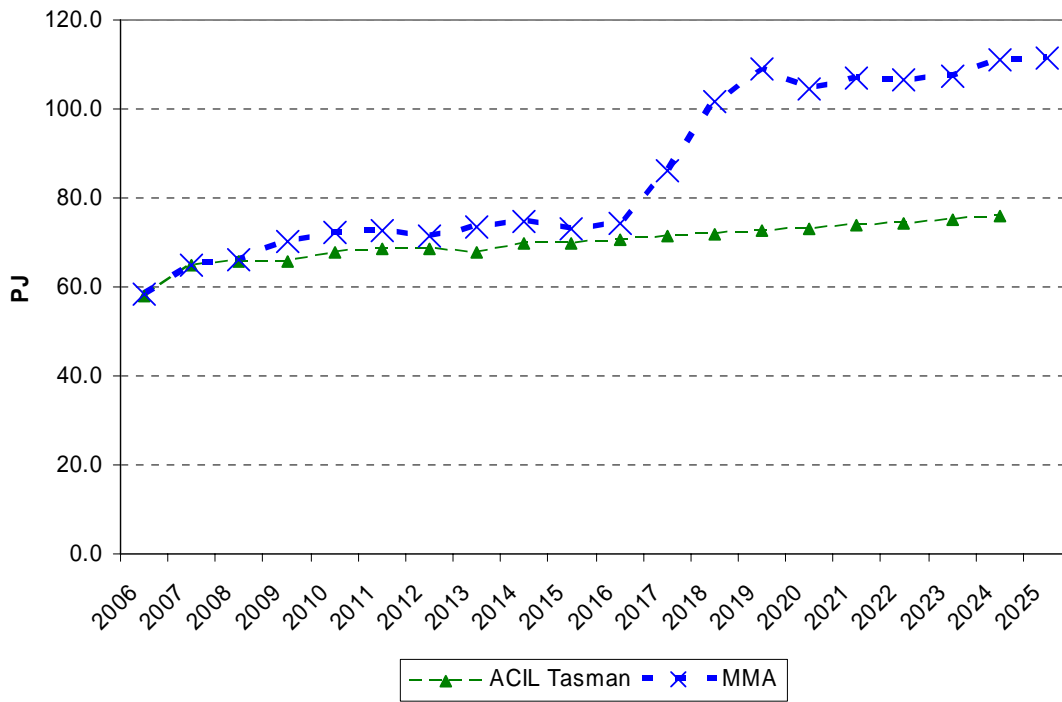
¹⁷⁶ MMA, 26 June 2006—see chapter 4.

¹⁷⁷ MMA, 7 February 2006—refer section 5.3.3.

Accordingly, the ACCC is satisfied there is likely to be a sufficient supply of gas for the life of the pipeline.

A summary of forecasts used in the determination of the initial capital base is shown in figure 2.7.5.2. The APTPPL forecast was provided but is not shown for confidentiality reasons.

Figure 2.7.5.2: Unconstrained throughput forecasts (PJ)



Source: After MMA, 26 June 2006 Figure E-1 p. iv. Note annual consumption used to enable comparable forecast comparison with ACIL Tasman’s PJ forecasts only.

In assessing the timely need to expand capacity, the ACCC also adopted the approach of focussing on the major end user groups: distribution load; large users; and power generation.

Distribution load: APTPPL used public forecasts for its profile of the distribution load. The forecasts used were not based on the latest public data available prior to the submission date but this is considered a timing issue, as APTPPL needed to provide forecasts as input to for engineering work for the NPV of costs DORC and other aspects of the access arrangement. MMA also provided an assessment of the public forecasts, with explanations for their proposed variations, in their report which was also submitted prior to the submission date. APTPPL’s use of public information is accepted as reasonable. Full retail contestability for gas has been announced, but is not expected to increase the volume. Augmentation to the metropolitan section of the pipeline, as suggested by the Queensland Minister for Energy, may increase volumes but were

announced after the submission of the proposed access arrangement revisions, and as such have not been reflected.¹⁷⁸

Large users: The ACCC considers APTPPL provided a conservative forecast for major users. There are differences in key assumptions. The ACCC accepts APTPPL's forecast as reasonable but conservative.

Power generation: The major difference between the forecasters was in electricity generation largely reflecting different views on how the Queensland Government policy requiring that 13 per cent of electricity be generated from gas is met over time.¹⁷⁹ The NEMMCO forecasts identify the need for additional generation to meet the growth in south-east Queensland, but do not specify location or the fuel source required. As power stations are typically long term assets (20 to 40+ years), any users that source gas from the RBP are likely to be long term users.

APTPPL assumes one of the electricity generation plants required will be gas-fired and connected to the RBP. ACIL Tasman assumes that the generation required will come from a mix of coal-fired and gas-fired plant. ACIL Tasman assumes that a gas-fired new entrant will not be a base load plant, but a peaking plant which has a low capacity factor. MMA assumes growth of RBP sourced generation will rise substantially from 2018, reflecting an assumption that growth of generation is concentrated in that period because earlier gas-fired generators in the RBP corridor are expected to obtain supply directly from CSM producers, i.e. bypassing the RBP.

In assessing these forecasts, the ACCC notes the uncertainty regarding the size, timing, location and fuel source for likely increases in electricity generation. This uncertainty has been increased since the forecasts were submitted following the Queensland Government announcement of a restructuring of its electricity assets and sale of the retailers. Given the uncertainty, the ACCC accepts APTPPL's generation forecasts as being reasonable, while noting the significant variations in forecast around 2011 and 2018 in particular.

The ACCC accepts the volume forecasts for determining an optimal replacement pipeline as reasonable.

ACCC conclusions

APTPPL's reference tariff forecasts reflect the strong expected demand for the capacity of the pipeline in the short to medium term, coupled with the proposal that the reference tariff only apply to existing capacity. In that context the forecasts are reasonable.

¹⁷⁸ Minister for Energy and Aboriginal and Torres Strait Islander Policy, The Hon. John Mickel, 14/07/2006, 'Minister announces moves to foster gas competition'.

¹⁷⁹ Minister for Energy and Aboriginal and Torres Strait Islander Policy, John Mickel MP, Queensland Energy Forum, 5 April 2006. Novotel Brisbane speech noted the Queensland 13 per cent gas scheme was a major plank of the May 2000 Queensland energy policy. The 13 per cent scheme requires liable parties to source 13 per cent of the electricity they sell in Queensland from gas-fired generation.

APTPPL's volume forecasts for the replacement pipeline, and independent forecasts for the ACCC by MMA, suggest the pipeline is required to deliver around 88PJ pa in 2017. The ACCC notes these forecasts exceed the ACIL Tasman forecasts, but accepts them as reasonable for input into designing the optimal replacement pipeline used as part of the NPV of costs DORC calculation.

The ACCC also notes the increasing complexity in developing a single volume forecast for the RBP with increasing numbers of gas suppliers injecting at locations other than Wallumbilla and users receiving gas at locations west of Brisbane.

The ACCC accepts the reference tariff and initial capital base volumes forecasts provided by APTPPL as being consistent with code requirements.

2.8 Incentive mechanisms

2.8.1 Code requirements

The code's general tariff principles provide that, where appropriate, the reference tariff should be designed to provide the service provider with the ability to earn greater profits (or less profits) than anticipated between reviews if it outperforms (or underperforms) against the benchmarks that were adopted in setting the reference tariff. The intention is that, to the extent possible, service providers be given a market-based incentive to improve efficiency and to promote efficient growth of the gas market (an incentive mechanism).

Section 8.1(f) of the code refers to an incentive 'to reduce costs and to develop the market for reference and other services'. Section 8.2(d) permits the regulator to incorporate incentive mechanisms into the reference tariff policy wherever appropriate. Section 8.4 allows the service provider to retain none, some or all of the benefits arising from efficiency gains under an incentive mechanism. Section 8.44 provides that the reference tariff policy should, if the regulator considers it appropriate, contain an incentive mechanism.

In accordance with s. 8.45 an incentive mechanism may include (but is not limited to) the following:

- (a) specifying the reference tariff that will apply during each year of the access arrangement period based on forecasts of all relevant variables
- (b) specifying a target for revenue from the sale of all services and specifying that a certain proportion of any revenue received in excess of that target be retained by the service provider and that the remainder must be used to reduce the tariffs for all services or to provide a rebate to users
- (c) a rebate mechanism for rebateable services that provides for less than a full rebate of revenues from the rebateable services to the users of the reference service.

Section 8.46 sets out the following objectives for an incentive mechanism:

- a) To provide the service provider with an incentive to increase the volume of sales of all services, but to avoid providing an artificial incentive to favour the sale of one service over another.
- b) To provide the service provider with an incentive to minimise the overall costs attributable to providing those services, consistent with the safe and reliable provision of such services.
- c) To provide the service provider with an incentive to develop new services in response to the needs of the market for services.
- d) To provide the service provider with an incentive to undertake only prudent New facilities Investment and to incur only prudent Non Capital Costs, and for this incentive to be taken into account when determining the prudence of New Facilities Investment and non-capital costs for the purposes of ss. 8.16(a) and 8.37.
- e) To ensure that users and prospective users gain from increased efficiency, innovation and volume of sales (but not necessarily in the access arrangement period during which such increased efficiency, innovation or volume of sales occur).

2.8.2 Current access arrangement provisions

The access arrangement does not currently include an explicit incentive mechanism.

2.8.3 APTPPL proposal

As permitted by the code in s 8.3(b), APTPPL has adopted a price path approach, under which the reference tariff is determined for the whole access arrangement period to follow a path forecast to deliver the total revenue. The reference tariff will be adjusted to reflect actual movements in the CPI.¹⁸⁰

Under APTPPL’s proposal the company would retain all of the additional revenue if the quantity of gas it contracts to transport during the access arrangement period exceeds the forecast quantities assumed in the calculation of the reference tariff. These quantities are set out in table 2.8.3.1 below.

Table 2.8.3.1: Forecast volumes for the Roma to Brisbane pipeline

Volumes	2006-7	2007-8	2008-9	2009-10	2010-11
MDQ (TJ/day)	196.2	199.1	199.8	200.5	202.9
Throughput (PJ/pa)	56.5	57.3	57.5	57.7	58.4

¹⁸⁰ APTPPL used a real approach to the derivation of total revenue as allowed by s. 8.5A of the code.

2.8.4 Submissions in response to the revised access arrangement

Energex is supportive of transparent incentive mechanisms that encourage the pipeline owner to increase efficiencies and reward any increased service. However it is concerned that the revised access arrangement, although affording the opportunity for APTPPL to reduce costs, is focussed on current contracted capacity. It advocates inclusion of the expansion capacity within the access arrangement to increase the transparency of the incentive mechanisms. As noted in the section on Tariff Policy APTPPL has elected not to include expansion capacity in the scope of the reference service at this stage but it may be included in the future. For the costs associated with expansion policy to be rolled-in, the ACCC would need to be satisfied that those costs reflected prudent expenditure consistent with the code.

2.8.5 ACCC's considerations

The ACCC proposes to accept the price path methodology APTPPL has proposed for the reference service. It provides APTPPL with appropriate incentives to operate efficiently and to develop the market for the services of the RBP.

Issues concerning APTPPL's proposal that the reference service only be available for existing capacity and that any additional services be provided on a negotiated basis are addressed in 3.1 Services policy and 3.6 Extensions and expansions policy. In short, the ACCC considered a range of options (including provision of rebateable services) but concluded that APTPPL's proposal is appropriate given the current state of development of the RBP. Under this approach, the reference tariff applying over the new access arrangement period has been determined so as to recover all costs associated with providing services using the existing capacity. Any revenue from services such as backhaul, interruptible and park and loan will be in addition to the revenue earned for providing the reference service. This will provide APTPPL with a strong incentive to develop and supply these services.

The ACCC considers that APTPPL's proposed access arrangement should contain an incentive mechanism (s 8.44). Further, it has concluded that APTPPL's access arrangement will provide it with incentives to increase throughput and to decrease costs, and that the incentive mechanisms are consistent with code requirements.

2.9 Cost allocation and tariff setting

This section addresses cost allocation and the tariff structure. The setting of the initial tariff is undertaken in conjunction with the tariff path assessment in 2.10 and the two sections should be considered together.

2.9.1 Code requirements

Section 8.38 of the code requires that, to the maximum extent that is commercially and technically reasonable, the reference tariff should recover costs directly attributable to the reference service and a fair and reasonable share of costs incurred jointly with other services. Section 8.42 of the code also requires that the recovery of a particular user's share of costs follows these principles. These requirements must be met, regardless of the methodology used to calculate total revenue.

2.9.2 Current access arrangement provisions

Cost allocation and tariff setting principles are not currently included in the access arrangement. Tariffs applicable are shown in table 2.9.2.1. A surcharge was applicable for capacity from 78.9TJ/day to 101TJ/day. Tariffs above that level were negotiable up to the then nominal capacity of 178TJ/day.

Table 2.9.2.1: RBP reference tariffs 1 July 2002 (0-78.9TJ/day)¹⁸¹

	\$ / GJ
Capacity reservation charge	\$0.2582
Throughput rate	\$0.1482
Surcharge: Load Factor (LF) < 1.6	\$0.3984
Surcharge: 1.6 <=LF<=2.0	\$0.4647
Surcharge: > 2.0	\$0.5087

MMA commented on this pricing as follow:

‘this tariff structure results in a considerable variance in charges between users of different capacity, from a low of approximately \$0.43/GJ in 2005 terms for a 100% LF user, to \$0.86/GJ with the surcharge for an equivalent user. It is understood that negotiated tariffs for firm service have been similar to the surcharge level.’¹⁸²

2.9.3 APTPPL proposal

APTPPL proposed a reference tariff and tariff path that is intended to align the reference tariff in 2011 with the average contract tariff at that time. APTPPL proposed an NPV approach to determining its total revenue (as permitted by s 8.4 of the code) such that costs and revenues are matched over the life of the assets but not in a particular year. The tariff path is discussed in 2.10.

The proposed reference tariff is for a single reference service of firm forward haul between all receipt and delivery points for the existing capacity of the pipeline as at 31 January 2006 (i.e. one zone). For capacity beyond that, APTPPL proposed a negotiated tariff. The reference tariff is structured to recover fixed costs through a capacity charge and variable costs by a throughput charge.

The split of 95 per cent capacity and 5 per cent throughput is appropriate according to APTPPL as the high capacity charge reflects the fixed pipeline capacity required and it is similar to the 96:4 per cent split for the MSP.

¹⁸¹ MMA Roma-Brisbane Pipeline Throughput and Capacity Requirement Forecasts 7 February 2006, Table 2-1, p. 17.

¹⁸² MMA Roma-Brisbane Pipeline Throughput and Capacity Requirement Forecasts 7 February 2006 pp. 16-17.

APTPPL supported the use of a single zone (or ‘postage stamp’) pricing as a way to avoid the opportunity cost of one shipper shipping gas a short distance and preventing another shipper from shipping gas a long distance.

The proposed reference tariff, shown below in table 2.9.3.1 consists of the sum of the capacity charge and the throughput charge. The capacity charge is based on the GJ of maximum daily quantity (MDQ), while the throughput charge is based on the volume transported.

Table 2.9.3.1: APTPPL proposed reference tariff (\$ July 2006)

Tariff Component	1/7/06 – 30/6/07	1/7/07 – 30/6/08	1/7/08 – 30/6/09	1/7/09 – 30/6/10	1/7/10 – 30/6/11
Capacity reference tariff (\$/GJ of MDQ/day)	0.4243	0.4243	0.4243	0.4243	0.4243
Throughput reference tariff (\$/GJ)	0.0283	0.0283	0.0283	0.0283	0.0283

Source: Access arrangement, 31 January 2006, p. 11.

Users will also pay other applicable tariff charges (i.e. overrun, imbalance and daily variance charges) and other charges in respect of receipt and delivery stations.

2.9.4 Submissions in response to the revised access arrangement

QGC sought the provision of gas transmission services at a ‘competitive cost-reflective price’.¹⁸³

QGC was critical of the Peat / Scotia Lateral being included in a single tariff zone, whilst Energex welcomed its inclusion as it facilitates sourcing cheaper CSM. Origin sought separate tariffs to facilitate backhaul.

Origin and Energex both argued for a zonal tariff for Brisbane. Origin, noting that new gas sources (e.g. CSM in locations east of Wallumbilla) will increase in importance and also the westward industrial expansion of Brisbane, suggested that many future users may not wish to transport gas for the full length of the pipeline.

Recognising that looping of the Brisbane metropolitan section of the pipeline will become necessary as load growth in Brisbane and the Gold Coast continues, Origin considered that users with loads west of Brisbane should not have to pay for the Brisbane area looping. Energex also considered that a zonal tariff would better reflect future demand.

QGC also argued that zonal pricing would provide more accurate cost reflective services by segregating market-wide costs and benefits from capital investments that are of benefit to particular market segments.

¹⁸³ QGC submission 18 May 2006, p. 1.

2.9.5 ACCC's considerations

The ACCC considered the issues under the following criteria: reasonableness of the tariff level; cost reflective pricing; cost allocation; tariff structure; and postage stamp pricing.

Reasonableness of the tariff level

The code requires that to the maximum extent reasonably possible, reference tariff should recover costs directly attributable to a service and a share of joint costs. The ACCC notes that all the costs incurred in providing services using the existing capacity are assumed to be attributable to the reference service, as only one reference service is proposed. To the extent that APTPPL will derive additional revenue from providing additional services (such as backhaul), the ACCC considers that this will provide suitable incentives for APTPPL to develop the market for these services.

The ACCC does not accept the reasonableness of the proposed tariff level. This is discussed in 2.10.

Cost reflective pricing

As APTPPL has proposed a NPV methodology for determining its benchmark revenue, the revenues should be cost reflective over the life of the assets rather than over a particular access arrangement period. For this pipeline, the major costs are the fixed costs of the assets to provide capacity. Minimal additional costs are required for throughput, and these are primarily for compressor fuel. The fixed costs are allocated to the users via the capacity tariff, reflecting their peak maximum daily requirements. This also transfers the capacity risk to users. The throughput charges reflect actual usage, regardless of the peak usage which drives the capacity requirement. The throughput risk to the service provider is thus low.

Not all the proposed charges are cost reflective. The ACCC notes the significant increases in the level of overrun and similar charges, even if the relative percentages have been maintained i.e. 120 per cent for authorised capacity and 300 per cent for unauthorised capacity. The ACCC accepts APTPPL's argument that these charges are designed to encourage good operating practices and notes the flexibility for example in overruns¹⁸⁴ designed to assist users to minimise the number of times these charges are incurred.

Cost allocation

The ACCC notes the allocation of all pipeline costs to the reference service. As noted above, this approach provides APTPPL with a strong incentive to promote additional services.

¹⁸⁴ For example, see Access arrangement, 31 January 2006, clause 2.3.4.

Tariff structure

The ACCC accepts APTPPL's contention that the proposed 95:5 split between the capacity reservation charge and the throughput tariff approximates the split between fixed and variable costs for this pipeline. Essentially all costs except for compressor fuel and a minor element of compressor maintenance may be regarded as fixed. Compressor fuel costs comprised 4 per cent of revenue in 2004-05.

Postage stamp pricing

Historically most of the gas transported along the RBP entered the pipeline at Wallumbilla and a very high portion was delivered to points in or near Brisbane. Since 2002-03, an increasing proportion of gas has been transported along the Peat / Scotia Lateral. In the future, the emergence of new sources of gas (such as CSM typically to the east of Wallumbilla) and the construction of more gas-fired power stations near the western end of the pipeline may mean that this situation changes. MMA estimates that the average haulage distance on the pipeline has been reduced from around 418km in 2000/01 to 379km in 2004/05 and this is forecast to fall to around 300 km in 2014 and to stay about that distance until 2025.¹⁸⁵ The fact that most gas has been transported the full length of the pipeline has supported a volume based tariff which did not take account of the distance gas is transported.

In some circumstances multi-zone or distance based pricing can be more efficient in terms of improving decision making in relation to pipeline augmentations, locating new industrial demand and supporting gas powered generation along the pipeline.

The ACCC considered the case for making the Peat/Scotia lateral and Wallumbilla/Condamine separate zones for pricing purposes. This would have involved establishing a distance-based tariff that reflects the actual cost of the Peat/Scotia lateral and the replacement cost of the older sections of pipeline between Wallumbilla and Condamine. However, the ACCC could see little merit in this approach as these segments of the pipeline are broadly similar in length, and the methodology would entail additional complexity and potential difficulties in determining the replacement cost of older sections.

Where a pipeline is operating at or near full capacity changing the pricing structure to provide an incentive for the provision of short haul gas could reduce the capacity to deliver gas to other points along the pipeline and may not result in any increase in the utilisation of the pipeline. In such a situation a distance based tariff would result in higher charges for some users and lower charges for others.

Where users have made decisions to locate based on a single tariff any shift to a location based tariff could have adverse consequences for their viability.

Going forward there is an arguable case that users with loads west of Brisbane should not have to pay for any looping in the Brisbane area and that a zone based tariff might

¹⁸⁵ *Roma-Brisbane throughput and capacity requirements forecasts*, MMA, 7 February 2006, p. 48. Note this excludes the Peat Lateral and uses MMA assumptions about the power stations being located in the upper end of the pipeline, an assumption not shared by all.

be appropriate. In the meantime any industrial user or power generator wishing to consume gas west of Brisbane could seek to negotiate a separate tariff.

Taking all factors into consideration, including the need to send appropriate pricing signals and the objective of facilitating short term capacity trading, the ACCC accepts APTPPL's postage stamp pricing arrangement during the forthcoming access arrangement period while foreshadowing the possibility of a move towards distance-based pricing.

2.10 Forecast revenue and tariff path

This section covers the forecasts revenue, tariff path and the initial tariff level. The rationale for setting the tariff structure is provided in 2.9, which should be read in conjunction with this section.

2.10.1 Code requirements

Section 8.3 of the code allows options as to the manner in which the reference tariff may vary in an access arrangement period. The choice is within the discretion of the service provider, but is subject to the regulator being satisfied that the reference tariff policy is consistent with s. 8.1 and s. 8.3A of the code. Section 8.1 of the code sets out the objectives that the reference tariff and reference tariff policy should be designed to meet. Section 8.3A – 8.3H of the code establish the manner in which a reference tariff may be varied within an access arrangement period.

Under the NPV approach, as selected by APTPPL, if the chosen tariff path leads to a situation where forecast total revenue and costs do not correspond within an access arrangement period, then economic depreciation acts a residual or balancing factor and a residual value is determined as at the end of the period.

Section 8.34 of the code (which applies where the NPV or IRR approach is used) requires the depreciation schedule to be designed in a manner consistent with the efficient growth of the market.

2.10.2 Current access arrangement provisions

Under the derogation, the tariff arrangements for the RBP to 28 July 2006 were covered by the access principles approved by the Queensland Minister for Mines and Energy in accordance with amendments to the *Petroleum Act 1923* which came into effect on 1 July 1995.

2.10.3 APTPPL proposal

APTPPL's proposed revisions to the access arrangement use the NPV methodology to establish the revenue requirements of the RBP over the remaining life of the pipeline. The NPV methodology requires a tariff path that provides for the recovery of the costs of supplying services over the life of the pipeline. The depreciation profile is the device

used to achieve the required tariff path having regard to the building blocks (i.e. return on and of capital and non-capital costs) and forecast volumes.

The revenue requirement utilizing the NPV methodology has been calculated using:

- An ICB of \$342.6 m (October 2005) plus minor capital expenditure;
- A pre-tax real rate of return of 6.9 per cent;
- Economic depreciation calculated as the residual amount once operating costs and the return on assets is deducted from total revenue;
- Forecast non-capital costs comprising APT corporate costs and the operations and maintenance costs consistent with the asset management contract with Agility.

APTPPL proposes that the reference tariff for the access arrangement period be set so that the average tariff level approximates the forecast average tariff for current contracted users in 2011.¹⁸⁶ APTPPL states this will minimise any price shock that may occur as contracts expire post 2011.

The reference tariff would be varied annually using a CPI-X formula. In the upcoming access arrangement period (5 years) the X value would equal zero, implying a constant real tariff. Going forward the NPV methodology implies that the reference tariff would increase post July 2011 in real terms by 0.8227 per cent per annum. The tariff path proposed has negative economic depreciation until 2017.

APTPPL has proposed a starting tariff as shown in table 2.10.3.1. The proposed reference tariff seeks to recover revenue of \$32 m in 2006-07 increasing to \$33.1 m (\$2006) in 2010-11.

Table 2.10.3.1: APTPPL proposed reference tariff (excluding GST)

Tariff Component	2006-7	2007-8	2008-9	2009-10	2010-11
Capacity reference tariff (\$/GJ of MDQ/day)	0.4243	0.4243	0.4243	0.4243	0.4243
Throughput reference tariff (\$/GJ)	0.0283	0.0283	0.0283	0.0283	0.0283

Source: Access arrangement, 31 January 2006, p.11.

APTPPL's forecast revenues for the access arrangement period are shown in table 2.10.3.2 below. APTPPL's actual revenues in the access period, however, are determined by existing haulage contracts which apply to the pipeline's current capacity for the entire access period. Also, under APTPPL's proposed approach, revenue from additional backhaul, interruptible, park and loan services and other charges (overrun,

¹⁸⁶ APTPPL, Further information 21 February 2006, p. 10.

imbalance, daily variance and change of receipt/delivery point) are not included in recoverable revenues.

Table 2.10.3.2: APTPPL total forecast revenue (July 2006 \$M)

	2006-7	2007-8	2008-9	2009-10	2010-11
Return on capital	23.7	24.1	24.3	24.5	24.7
Non-capital costs	9.3	9.3	9.2	9.2	9.2
Depreciation	-1.0	-0.9	-0.9	-1.0	-0.7
Total revenue	32.0	32.5	32.6	32.7	33.1

Source: Access arrangement information, 31 January 2006, table 11, pp. 21-22.

The increase in revenue beyond 2006-07 reflects the increase in forecast MDQ and throughput as shown in table 2.10.3.3 below. Beyond 2011, the MDQ and throughput remain constant.

Table 2.10.3.3: Forecast volumes for the pipeline as configured 31 January 2006

Volumes	2006-7	2007-8	2008-9	2009-10	2010-11
MDQ (TJ/ day)	196.2	199.1	199.8	200.5	202.9
RBP forecast throughput (PJ/pa)	56.5	57.3	57.5	57.7	58.4

Access arrangement information, 31 January 2006, table 13, p. 8.

2.10.4 Submissions in response to the revised access arrangement

QGC stated that it sought a sub CPI glide path to be consistent with other access arrangements and the requirements for demonstrated economic efficiency. QGC also noted that a 75 per cent CPI tariff adjustment had been a feature of the RBP's access agreement since commissioning.¹⁸⁷

QGC also sought

Charges that are penalties and not reflective of the actual costs incurred by the pipeline owner should not be a feature of an access arrangement. As a minimum, those income streams should be considered in the revenue determination for reference services or returned to the "compliant" users by way of a rebateable service.¹⁸⁸

¹⁸⁷ QGC submission 18 May 2006, p. 5.

¹⁸⁸ QGC submission 18 May 2006, p. 11.

Origin noted the CPI adjustment increased from 75 per cent to 100 per cent, but commented that APTPPL provided little detail of any change in the cost structure. Origin urged the ACCC to closely examine whether such an increase was warranted.¹⁸⁹

Energex expressed surprise at the reference tariff price path being escalated annually by CPI, and queried the basis for having no significant real tariff reductions over the period of the access arrangement.¹⁹⁰

2.10.5 ACCC's considerations

APTPPL has proposed a reference tariff and tariff path that is intended to align the reference tariff in 2011 with the average contract tariff at that time and recover its proposed costs over the life of the pipeline (using the NPV methodology permitted by s. 8.4 of the code).

To achieve this outcome the reference tariff has been set at a level that does not recover proposed allowable costs in the access arrangement period. This proposal for negative depreciation in the access arrangement period means that the regulatory asset base will be higher in July 2011 than at its starting point in July 2006 and that the reference tariff will have to increase in real terms beyond 2011 to recover allowable or forecast costs.

The code requires that the manner in which the reference tariff will vary within the access arrangement period is consistent with s. 8.1.¹⁹¹ Further, s. 8.34 (d) states that, where the NPV approach is adopted, the reference tariff should change over the access arrangement period in a manner that is consistent with the efficient growth of the market. Where, for example, it is expected that demand will grow over time, the depreciation schedule may be backend loaded so that a greater proportion of the costs of providing services will be recovered when volumes are expected to be greater.

APTPPL's proposed backend loaded depreciation schedule (including negative depreciation to 2017) would be consistent with a market that is predicted to grow over time. This however is not consistent with APTPPL's volume forecasts - essentially flat after 2011 and the constrained capacity of the pipeline.¹⁹²

A more appropriate depreciation profile would be one that includes positive depreciation charges in 2006 and there after. This would produce a tariff profile that declines in real terms over time as the capital base is depreciated.¹⁹³ Accordingly, the tariff path proposed by APTPPL is not consistent with efficient growth of the market for services and is therefore not consistent with s. 8.34(d) of the code.

¹⁸⁹ Origin submission, 19 May 2006, p. 4.

¹⁹⁰ Energex submission, 18 May 2006, p. 8.

¹⁹¹ ACCC v Australian Competition Tribunal [2006] FCAFA 83, paragraph [59].

¹⁹² The ACCC proposes to accept the forecasts (see 2.7) and the proposal that the reference tariff only apply to the pipeline's current capacity.

¹⁹³ In practice adjustments will be made to the depreciation schedule and tariffs to reflect additional capital expenditure rolled into the capital base and revisions to volume forecasts.

In addition the manner in which the reference tariff is proposed to vary within the access arrangement period is not consistent with the principles in s. 8.1. In a competitive market, tariffs would not be expected to increase in real terms in the face of constant volume forecasts and improving productivity (s. 8.1(b)). The prospect of increasing real tariffs could have the effect of discouraging (and thereby distorting) investment decisions in upstream or downstream industries (s. 8.1(d)). Both of these factors suggest that the proposed tariff path is not an efficient structure for the reference tariff (s. 8.1(f)). Accordingly, the ACCC does not accept the depreciation schedule and tariff path proposed by APTPPL.

In determining the tariff path that should apply the ACCC notes that the NPV methodology provides flexibility in the starting tariff and tariff path. However, the range of permissible starting tariff and tariff paths is limited by ss. 8.1 and 8.34.

In earlier sections of this chapter, the ACCC has proposed changes to the ICB, WACC and non-capital costs. Applying these proposed values reduces the total revenue requirement of the pipeline. In determining a reference tariff and tariff path consistent with the pipeline's total revenue requirement set in accordance with these amendments the ACCC considered a number of possible tariff and tariff paths. Three possible options are shown in table 2.10.5.1 below. Option 1 has the highest starting tariff, and greatest reduction over time. Option 3 is the base case, that is, it is a tariff which would recover the total revenue of the pipeline while being held constant in real terms. Option 2 is an approximate mid-point starting tariff. Each of these options provides the same forecast revenue over time in NPV terms.

Table 2.10.5.1: Indicative summary of tariff changes proposed (based on ACCC's variables)

Option	Starting tariff * (reduction as a %)	X factor – 2007 to 2011	Tariff 2011* (nominal)	Asset Base in 2011 (next AA) (real) \$M	X factor– 2011 to 2063
1. APTPPL tariff	0.4243 (0)	1.60	0.4548	220	1.60
2. Mid tariff	0.3819 (10)	0.87	0.4215	232	0.87
3. Flat tariff	0.3325 (22)	0	0.3801	247	0

* Only capacity charge shown. Capacity and throughput charges are adjusted by the same percentage.

Summary of options considered

While the ACCC has rejected APTPPL's proposed tariff path (based on the proposed depreciation schedule and tariff path as set out above), it does not mean that the starting tariff of \$0.4243/GJ must necessarily be rejected. However, setting the starting tariff at

this level would however require the tariff to decline annually by 1.60 per cent in real terms in order to recover the allowed total revenue.

The options highlight the trade off between a lower starting tariff maintained at a constant real level i.e. where X equals 0 (option 3) or a higher starting tariff which is adjusted annually and is reduced in real terms by 0.87 in order to provide the same real revenues over the assumed life of the pipeline (option 2). Setting a constant real tariff requires the starting tariff to be set at 22 per cent below the tariff proposed by APTPPL.

While each of the tariff options will provide the same total revenue over the life of the pipeline in present value terms option 3 requires a tariff which is less than the ACCC's best estimate of the cost of possible incremental expansions of the pipeline in the period to 2011.¹⁹⁴ In view of the likely price shock effect and potential for the tariff to be less than the incremental expansion cost of the pipeline this tariff is assessed as not meeting the s. 8.1(b) requirements of the code in that it is not consistent with the outcome of a competitive market.

The ACCC considers that, for the operating environment of the RBP, the tariff profile that would best meet ss. 8.1(b), 8.1(d), 8.1(e) and 8.1(f) is one where the path of the tariff falls (in real terms) over time; depreciation is positive; starts at a suitable level which supports an appropriate tariff path; and is based on the forecast costs and reflects the volume forecasts.

The ACCC believes the most appropriate tariff path involves a starting tariff less than that proposed by APTPPL, reflecting the ACCC's assessment of the pipeline's total revenue requirement. It considers a tariff that does not result in a significant price shock will best reflect code requirements. Accordingly, a starting tariff of \$0.3819/GJ of MDQ/ day, throughput reference tariff of \$0.0255/GJ and an X of 0.87 is proposed.

The revenues associated with the proposed tariff and tariff path are set out in table 2.10.5.2 below. Benchmark revenues in 2006-07 are \$4.2 m less than those proposed by APTPPL. The reduction in revenue reflects a lower return on capital and a positive return of capital.

¹⁹⁴ For example using the data in the CRA International Roma-Brisbane Pipeline: DORC Asset Valuation February 2006 and data covering cost of prior expansions.

Table 2.10.5.2: Mid range estimate total forecast revenue (July 2006 \$M)*

	2006-7	2007-8	2008-9	2009-10	2010-11
Return on capital	13.6	13.6	13.4	13.1	13.0
Non-capital costs	8.1	8.1	8.0	8.0	8.0
Tax	0.5	0.5	0.6	0.6	0.7
Depreciation	5.6	5.9	5.9	6.0	6.3
Total revenue	27.8	28.0	27.9	27.7	27.8

* Totals may not match due to rounding.

The ACCC adjusted APTPPL's financial model to conform to a post tax approach, which adjusts asset values for tax effects.

For the access arrangement to be accepted, the ACCC requires the following amendment.

Amendment 08

Before APTPPL's revised access arrangement can be approved, the reference tariff must be amended to the starting tariff of

- Capacity Reference Tariff = 0.3819 (\$/GJ of MDQ / day)
- Throughput Reference Tariff = 0.0255 (\$/GJ)

and thereafter increased annually by CPI-X where X = 0.87

2.11 Reference tariff variation policy

2.11.1 Code requirements

Section 8.3 of the code states the manner in which a reference tariff may vary within an access arrangement period is within the discretion of the service provider. This is subject to the regulator being satisfied the policy is consistent with s. 8.1 and s.8.3A (reference tariff variation method) including s. 8.3B (variation due to a specified event) to s. 8.3H.

2.11.2 Current access arrangement provisions

Under the derogation, tariff arrangements for the RBP to 28 July 2006 were covered by the access principles approved by the Queensland Minister for Mines and Energy in accordance with amendments to the *Petroleum Act 1923* which came into effect on 1 July 1995. Tariffs were adjusted quarterly by 75 per cent of the increase in CPI.

2.11.3 APTPPL proposal

APTPPL elected that the reference tariff will only be adjusted in accordance with the CPI-X formula.¹⁹⁵ The proposed reference tariff only covers the capacity and throughput charges. The tariff is to be adjusted annually from 1 July.

APTPPL has moved from quarterly to annual indexation for this access arrangement period. The proposed indexation formula is shown below, noting CPI_{n-1} means the CPI figure September 2005 for the review on 1 July 2007.

$$RT_n = RT_{n-1} \times \left[1 + \frac{CPI_n - CPI_{n-1}}{CPI_{n-1}} \right]$$

APTPPL proposed to use another series for indexation other than CPI if the quarterly CPI is no longer published. APTPPL has proposed that the initial indexation to start from the September quarter 2005.

The s. 8.3B to s. 8.3H criteria are addressed. These sections cover the implementation of the approved reference tariff variation method. Clause 4.4 (c) (i) for example requires APTPPL to provide a notice to the Regulator 30 Business Days prior to 30 June each year.

APTPPL has not elected to include a trigger event to re-open the access arrangement, but seeks adjustments at the next access arrangement period if demonstrated as appropriate. APTPPL argues the pipeline is fully contracted until 2012 and triggers are normally for longer access arrangement periods.

The proposed access arrangement states (clause 4.4(d)), if the introduction of gas market reforms leads to ‘significant’ or ‘material’ impact (detrimental or beneficial), then APTPPL **may** (*emphasis added*) address the financial impact through adjustment to the capital base at the commencement of the next access arrangement period.¹⁹⁶ It further states, in such a case, the service provider must reasonably demonstrate to the regulator the impact of such new requirements.

2.11.4 Submissions in response to the revised access arrangement

Users generally commented on the proposed 100 per cent CPI escalation rate, noting that this represented an increase upon the current 75 per cent escalation.¹⁹⁷

QGC specifically commented on trigger events suggesting underlying demand should be a consideration.

¹⁹⁵ Access arrangement, 31 January 2006, 4.4 (a), p. 16.

¹⁹⁶ Access arrangement, clause 4.4(d).

¹⁹⁷ More specific users comments can be found in the 2.10.

2.11.5 ACCC's considerations

The ACCC addressed the proposal that adjustments to the reference tariff be at 100 per cent of CPI at 2.10.2. Consistent with this approach, the reference tariff variation formula proposed has no reference to the X factor (as $X=0$ under APTPPL's proposal). Whilst it is clear from clause 4.4(a) of the proposed access arrangement that APTPPL proposes that the tariff be adjusted by a CPI-X mechanism, the ACCC considers that the tariff adjustment formula should explicitly reflect the CPI -X in the formula. This matter has been raised with APTPPL and will be redressed when it submits its amended revised access arrangement.

The initial escalation period was proposed to start from September quarter 2005, with subsequent escalations from the March quarter. As the initial tariff would be in dollars of July 2006, consequent to the ACCC's proposed changes, there is no longer a need to index from September 2005. To address this, the following amendment is required.

Amendment 09

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 4.4 (b) by removing the words in brackets ('except for the purposes of the review on 1 July 2007 when CPI_{n-1} means the CPI published for the September quarter 2005').

APTPPL has proposed to use another indexation other than CPI if the quarterly CPI is no longer published by the Australian Bureau of Statistics. The APTPPL proposal is to use another index that APTPPL reasonably determines most closely approximates that index. While the ACCC believes the approach is reasonable, cessation of publication of the CPI would have wider implications than just for the RBP access arrangement which would need to be considered prior to implementation of an alternative methodology. The ACCC has discussed this with APTPPL. APTPPL has agreed to amend the indexation paragraph to reflect agreement as to the replacement index with the regulator.

APTPPL has proposed that the reference tariff may be varied each year of the access arrangement period in accordance with s. 8.3B and s. 8.3H of the code, subject to giving the regulator notice 30 business days prior to the end of the financial year, and the minimum notice period under s. 8.3D(b)(i) of 20 business days. The current wording of clause 4.4 (c) (i) appears to require APTPPL to lodge its notification on a specific day ('30 Business Days prior to 30 June each year') appears unnecessarily prescriptive. The ACCC discussed with APTPPL amending the clause to reflect a minimum, rather than fixed period before 30 June. APTPPL has agreed to this change.

QGC proposed that there be a trigger event linked to underlying demand to adjust the reference tariff, which APTPPL did not support. The ACCC has accepted the volume forecasts (and their basis) for the pipeline (see 2.7) and therefore does not see any benefit in a trigger mechanism linked to demand.

APTPPL proposed in clause 4.4(d) of the access arrangement that financial costs associated with the introduction of full retail contestability would be considered at the next access arrangement review. For these costs to be accepted APTPPL would need to demonstrate that they were directly linked to the implementation of gas market reforms. It is open also to APTPPL to bring forward revisions under s. 2.28 where it wants to recover costs associated with FRC in the current access arrangement period. If this were to occur associated revisions to terms and conditions might also be required.

3. Non-tariff elements

Introduction

This chapter considers the non-tariff elements of APTPPL's access arrangement. Non-tariff conditions, among other things, refer to arrangements for the allocation of gas between shippers, overrun and balancing charges as well as terms and conditions for trading capacity, queuing for spare and developable capacity, as well as gas specification.

The code sets out principles for determining the reference service and the terms and conditions to be set out in the access arrangement which apply to the provision of pipeline services to users and prospective users. In addition, service providers and their customers may agree to more detailed arrangements in their gas haulage contracts. The ACCC's role is to ensure that proposed terms and conditions of the access arrangement are reasonable and do not prevent the efficient provision of the pipeline's services.

The day to day operation of the pipeline is also subject to other technical regulation which ensures the safe operation of the pipeline. In addition the Queensland government has announced the establishment of a gas retail market operator. While this arrangement is directed more at the retail and distribution segments of the market the operation of full retail contestability in the Queensland gas market in 2007 may impact on the terms and conditions on which gas is transported on the RBP.

The introduction of full retail contestability and other initiatives flowing from the Gas Market Leaders Group (GMLG) may necessitate changes to terms and conditions of supply on the RBP. The code can accommodate such changes as s 2.28 allows a service provider to submit revisions to its access arrangement at any time. However, some of the issues raised in the current review go beyond the scope of the code and will need to be addressed by policy makers using other legal instruments. For example, effective information sharing may require input from a range of market participants.

A number of amendments have been proposed to the non-tariff elements of the revised access arrangement. All of these are consistent with both the code and the policy reforms under consideration by the GMLG. APTPPL, in discussions with the ACCC, has shown a willingness to consider variations to its access arrangement consistent with the wider energy market reform agenda.

3.1 Services policy

3.1.1 Code requirements

Under s. 3.2 of the code, the services policy in an access arrangement must comply with the following principles:

- (a) The Access Arrangement must include a description of one or more Services that the Service Provider will make available to Users or Prospective Users, including:

- (i) one or more Services that are likely to be sought by a significant part of the market; and
- (ii) any Service or Services which in the Relevant Regulator's opinion should be included in the Services Policy.

Under s. 3.3 of the code, an access arrangement must include a reference tariff for:

- (a) at least one Service that is likely to be sought by a significant part of the market; and
- (b) each Service that is likely to be sought by a significant part of the market and for which the Relevant Regulator considers a Reference Tariff should be included.

The code defines a reference service as a service specified in an access arrangement and for which a reference tariff has been specified in that access arrangement.

Rebateable services are defined in s. 10.8 of the code as services where:

- (a) there is substantial uncertainty regarding expected future revenue from sales of that Service due to the nature of the Service and/or the market for that Service; and
- (b) the nature of the Service and the market for that Service is substantially different to any Reference Service and the market for that Reference Service.

Rebateable services are so named because some or all of the revenue realised from sales of rebateable services is rebated to users of reference services.

Section 8.40 of the code provides that, for rebateable services ...

... the structure of such a rebate mechanism should be determined having regard to the following objectives:

- (a) providing the Service Provider with an incentive to promote the efficient use of Capacity, including through the sale of Rebateable Services; and
- (b) Users of the Reference Service sharing in the gains from additional sales of Services, including from sales of Rebateable Services.

Costs incurred when providing rebateable services are included in the total revenue calculation. The reference tariff is then calculated by dividing the total revenue by the forecast volume of the reference service. Users of the reference service may be compensated for any additional costs incurred by the service provider in providing the rebateable services (and passed on to users through the reference tariff) through a rebate.

3.1.2 Current access arrangement provisions

Section 1 of the access arrangement currently states that the service provider's services policy for the pipeline consists of a reference service and negotiated services. The reference service for the pipeline is described in the tariff arrangement approved by the Queensland minister (under the derogation). The reference service is offered for capacity up to the first 101TJ/day of contracted capacity in the pipeline.

A negotiated service is offered for capacity from 101 TJ/day to 178 TJ/day.

3.1.3 APTPPL proposal

In its proposed revised access arrangement, APTPPL has included only one reference service—firm forward haul. It has not proposed any non-reference services other than a negotiated service. Users requiring services other than firm forward haul would need to reach a negotiated agreement with the service provider on the tariff and other terms. APTPPL does not propose to take account of the any revenues from providing these services when setting the reference tariff.

APTPPL asserts that the only service likely to be sought by a significant part of the market is a firm forward service. APTPPL argues that five of the six major shippers on the RBP have firm forward haul and that only a very small quantity of gas hauled in the year to February 2006 was transported on an interruptible basis.

APTPPL also notes that a single reference service has applied under the access arrangement under the previous regulatory regime.

It further argues that there is little information that could be used to determine load forecasts and cost allocations and that modelling of additional reference services would be problematic.

3.1.4 Submissions in response to the revised access arrangement

The need for additional reference services was addressed in all submissions received from users or prospective users. Energex, Origin, TRUenergy and QGC all considered that a wider range of reference services, as outlined below, should be offered by APTPPL.

Origin

- Firm and as available back haul—producers in the Walloons area of south-west Queensland will increasingly require back haul services to the Wallumbilla hub to supply southern markets (particularly with the decline of Cooper Basin supply). A back haul service would foster growth of new gas production areas in central Queensland in particular, encouraging greater competition with established production fields.
- As available forward haul—producers often need to engage in short-term trades (less than one year) to supply small blocks of gas into the south-east Queensland market.
- Line pack swap service—a line pack swap facility between shippers is required. The costs to the service provider of facilitating such swaps are very small (to the extent that it simply nets out imbalances) yet the cost savings to shippers can be substantial.

In view of the demand for the above services, Origin considers that APTPPL's proposal is overly restrictive in what it intends to provide as reference services.

QGC

- Westward flow i.e. backhaul—the provision of a westward flow service can be provided at an administrative cost consistent with the contractual offset of flows. This would allow access to some 120TJ of capacity to Wallumbilla.
- As available i.e. interruptible eastward flow—around the existing contracting basis, there is a need for a service to meet intermittent loads such as gas-fired generation and industrial users with either fuel switching capabilities or excess manufacturing capacity that could be selectively operated to build stockpiles of their finished products (e.g. brickworks, refineries).
- Capacity trading—the south-eastern Queensland market serviced by the RBP exhibits some unused capacity on a daily and seasonal basis. To enable users to better understand their options in accessing unused capacity (both contracted and uncontracted) the aggregate of nominated delivery quantities should be posted and accessible to users as well as prospective users before the start of a gas day.
- Imbalance trading—would allow users to amend pipeline nominations within appropriate timeframes.
- Zonal service/pricing—gas consumption growth will be sustainable and competition would increase in a transparent economically efficient manner if the RBP provided zonal services and pricing as reference services. Zonal pricing would provide more accuracy in the provision of cost-reflective services by segregation of market-wide costs and benefits from capital investments that are of benefit to particular market segments.

QGC also stated in its submission that:

The proposal that all revenue is derived from a reference tariff based only on a forward haul reference service, with theoretical flow from Wallumbilla eastward to Brisbane on a postage stamp basis, significantly understates the RBP's revenue opportunities over the term of the proposed access arrangement ... These functions could be incorporated as intrinsic elements of an umbrella reference service in addition to being offered as discrete reference services.

Energex

Energex strongly supports the inclusion of other reference services for the RBP during the next access arrangement period. To date, the majority of users have sought only one reference service. However, due to the constrained nature of the pipeline it has been difficult for parties to use capacity on the RBP according to commercial needs. Energex suggests that the consideration of previous market conditions is not an appropriate measure to assess future services required. It advocates the following reference services:

- backhaul
- interruptible—forward and backhaul
- park and loan

- storage.

Energex recognises the difficulty in forecasting these services and is therefore supportive of having income from these services fall outside the revenue calculation for the access arrangement.

TRUenergy

TRUenergy believes that the access arrangement should support full retail contestability by providing a platform of varied services that would allow both incumbent and new entrant retailers to tailor solutions to meet their needs. TRUenergy suggested that an interruptible service be offered as a reference service at 130 per cent of the firm service rate.

APTPPL

APTPPL states that the reference service reflects the requirements of a significant portion of the market when the only significant service sought on the RBP in previous years of operation was firm forward haul. The needs of users for other services can be negotiated. Currently negotiated backhaul and interruptible services are provided on the RBP.¹⁹⁸

3.1.5 ACCC's considerations

The code requires an access arrangement to include a reference service for 'at least one service that is likely to be sought by a significant part of the market; and each service that is likely to be sought by a significant part of the market' for which the regulator considers a reference tariff should be included. The intent of the code is that the cost of providing a reference service should be recovered through the reference tariff.

As indicated in submissions, users and prospective users have sought to have services other than firm forward haul included in the access arrangement as reference services. The first question is whether a significant part of the market is likely to seek services such as interruptible supply, backhaul or other services.

An assessment of APTPPL's haulage contracts indicates that additional services such as, backhaul interruptible and park and loan are already contracted for. With the introduction of full retail contestability and greater use of gas-fired power generation the demand for these services by distributors and retailers is likely to grow. Analysis of supply data indicates that the power generation sector already uses a substantial portion of average deliveries on the pipeline and this sector is likely to need services other than firm forward haul.¹⁹⁹

In view of the current demand (and possibly unfulfilled demand) for additional services on the pipeline and expected future developments, APTPPL's contention that additional

¹⁹⁸ Roma to Brisbane pipeline access arrangement, APTPPL response to the ACCC issues paper, 4 July 2006, p. 1.

¹⁹⁹ Roma-Brisbane Pipeline Throughput Forecasts Comparisons of APTPPL, ACIL Tasman and MMA Forecasts 26 June 2006, p. 2.

services are not needed by a significant part of the market is not viewed as being reasonable.

Users have sought to have these additional services provided as reference services with established reference tariffs. In its submission, Energex raised the concern that

... without a guiding access arrangement for the future capacity, and given all services are negotiated services, this leaves a prospective user open to negotiations that are not representative of the fair and reasonable terms principles applied in the Gas Code. Energex ... would be reluctant to go through an exhaustive arbitration process where so many uncertainties exist with respect to the arbitrated outcome for service, price and terms and conditions of supply.²⁰⁰

The additional services sought (backhaul, interruptible and park and loan) are significantly different services to firm forward haul. However, establishing the demand for these services is not straightforward. The ability to supply an interruptible service or storage service depends on the availability of the pipeline's capacity after existing contractual commitments have been met.

The basis of TRUenergy's proposal for an interruptible service, set at 130 per cent of the firm haulage rate is not explained. Analysis of the US market indicates that interruptible tariffs in the US are less than firm haulage rates. Also setting an interruptible tariff above the firm haulage tariff when a pipeline is close to full capacity could give the service provider the incentive to provide access to the pipeline on an interruptible rather than on a firm basis and this could have adverse consequences for some users or discourage the timely expansion of the pipeline. Given that an interruptible service offers less certainty than a firm carriage service and the fact that the pipeline is close to capacity the tariff for interruptible haulage should be less than that for firm haulage.

Backhaul services require matching the needs of counterparties at particular times. In some circumstances additional services can be provided without diminishing the availability of firm forward haul and this makes establishing costs attributable to these services problematic. For these reasons, and because of the difficulty in accurately forecasting costs and the level of demand, the determination of reference tariffs for these services is problematic.

When expected revenues from a service are uncertain or future sales difficult to predict, the code provides for the provision of rebateable services. Rebateable services and their markets also need to be substantially different to any reference service and their markets.

Rebateable services are also appropriate where the actual cost of providing service is variable and or recovery of the pipeline's costs is to be fully recovered through the reference service.

Given the above facts consideration was given to making backhaul, interruptible and park and loan services rebateable services. While these services might only constitute a small proportion of the market there is evidence that demand might be constrained by

²⁰⁰ Energex submission, p. 13.

the prospect of inadequate supply given that the pipeline's capacity is close to being fully contracted over the access arrangement period. In this situation requiring APTPPL to rebate revenues when limited spare capacity is provided as a reference service might act as a disincentive to the provision of the reference service. Moreover, the fact that APTPPL's revenues over the access arrangement period will be earned under pre-existing contracts may make the operation of a rebate arrangement difficult.

While there is an arguable case that the additional services sought by users should be provided on a rebateable basis, the ACCC considers that access to these services is likely to be best achieved by determining that services such as backhaul, interruptible supply and park and loan services be provided as negotiable services for the forthcoming access arrangement period. As noted in 2.8 Incentive mechanisms, as the reference tariff has been calculated so as to recover all costs associated with providing services using the existing capacity, any revenue from these negotiated services will be in addition to the total revenue (s. 8.4 of the code). This provides APTPPL with a strong incentive to develop and market these services.

The code provides that where prospective users are unable to agree to terms with a service provider on the supply of services they are able to invoke the dispute resolution provisions of s. 6 of the code. In circumstances where it is technically feasible to supply the services the arbitrator could establish tariff terms by applying the provisions in s. 6.15 of the code.

3.2 Terms and conditions

3.2.1 Code requirements

Section 3.6 of the code requires an access arrangement to include the terms and conditions on which a service provider will supply each reference service. These terms and conditions must be reasonable. In assessing whether the proposed revised terms and conditions are reasonable, the regulator is guided by s. 2.24 of the code.

3.2.2 Current access arrangement provisions

Section 2 of the RBP access arrangement currently states that the service provider will provide services on the terms and conditions set out in an access agreement with the user. The terms and conditions of access agreements are to be consistent with the access arrangement, including the tariff arrangement. The service provider undertakes not to discriminate between prospective users in the provision of services on the basis of:

- past transactions or relationships with the service provider
- the identity of the prospective user
- the fact that the prospective user is a related party of the service provider.

3.2.3 APTPPL proposal

APTPPL has advised that it would like the terms and conditions applicable to the RBP to be consistent with other pipelines owned by its parent company APT, while making some allowances for the specific characteristics and existing contracts of the RBP.

Obligation to transport

On any day/hour, subject to the user delivering gas at the receipt point at a pressure in accordance with the terms and conditions principles, APTPPL will be obliged to:

- receive into the pipeline at the receipt point a quantity of gas up to the MDQ/MHQ
- deliver at the delivery point a thermally equivalent quantity of gas not exceeding the MDQ/MHQ

This gas will be net of system use gas and the user's share of users' linepack, and subject to any interruptions or curtailments, priority provisions, adjustments and the balancing provisions.

Title to and responsibility for gas

The user will warrant that it has title to gas delivered at the receipt point. APTPPL is entitled to commingle gas received from a user with gas that is received into the pipeline from other users.

APTPPL will be responsible for any gas lost from the pipeline due to its negligence or wilful default.

MDQ and MHQ

At the start of the transportation agreement the user must establish for each contract year a receipt point MDQ, a receipt point MHQ, a delivery point MDQ and a delivery point MHQ that fairly reflect the user's expected requirements at each receipt point and delivery point. The sum of the delivery point MDQs and the receipt point MDQs must be the same.

On any day, APTPPL will receive at a receipt point quantities of gas up to the receipt point MDQ and will deliver at a delivery point a thermally equivalent quantity of gas up to the MDQ for that delivery point. In any hour, APTPPL will receive at a receipt point and will deliver at a delivery point, a thermally equivalent quantity of gas up to the MHQ for that receipt point and delivery point.

Adjustment in MDQ for gross heating value

When APTPPL is reasonably of the opinion, because of a reduction below 40 MJ/m³ in the average gross heating value of the gas, that the aggregate quantities of gas to be delivered on behalf of all users may exceed the capacity of the pipeline, APTPPL has proposed formulae for adjusting its obligations for the MDQ and throughput charge.

Daily variance

A daily variance occurs when the quantity of gas:

- received from or on behalf of the user at a receipt point during a day is different from the nomination for that receipt point, or
- delivered to or for the account of the user at a delivery point during a day is different from the nomination for that delivery point by more than 10 per cent (either positive or negative) of the MDQ for the receipt point or the delivery point respectively (excluding any portion of that variation that has been caused by APTPPL).

APTPL may require the user to pay a daily variance.

Gas pressure

APTPL has specified the following minimum pressures for its receipt points on the RBP:

- 10 200 kPag at the Scotia and Peat receipt points
- 9 600 kPag at all other receipt points.

Nominations

The user must provide a nomination for each month at least three business days before the first day of the month and may vary the nomination for any particular day by giving reasonable notice (but not later than 24 hours before the start of the particular day).

Overruns

Overruns may be authorised or unauthorised. A user may request an authorised overrun by giving at least one clear day's notice to APTPL. The user is required to pay charges for overruns.

If in any contract year:

- the user has more than 12 overruns that are more than 5 per cent above the MDQ for that contract year, and
- the user is not able to demonstrate to APTPL's reasonable satisfaction that the user will not again exceed the MDQ by more than 5 per cent during the remainder of that contract year

then APTPL may determine that the MDQ under the transportation agreement for the remainder of that contract year will be equal to the average of the 12 highest daily withdrawals made by the user during that contract year—and the charges payable by the user will be adjusted accordingly.

System use gas and linepack

Users are required to provide system use gas at their own cost. APTPPL will advise on the monthly supply of such gas, which will be based on the proportion of throughput attributable to the particular user.

APTPPL is responsible for providing a share of linepack. Users are to be responsible for a portion of the remaining linepack, based on their MDQ.

Metering and records

Withdrawals of gas at delivery points will be metered. If metering equipment fails to operate, the quantity of gas withdrawn will be determined by agreement between the user and APTPPL.

Users are allowed to inspect and audit metering equipment. A user may appoint an independent auditor to inspect and audit records used in determining amounts payable by the user at least once annually and within 12 months of termination of a transportation agreement.

The quantity of gas delivered at a delivery point on any day will be the product of the volume of gas delivered and the average heating value of gas delivered as declared or measured for the pipeline on that day.

Gas quality

Users are obliged to provide gas at receipt points that complies with the gas quality specification. APTPPL is responsible for delivering gas that complies with the specification. APTPPL may refuse to accept gas that does not meet the specification.

Interruptions and curtailments

APTPPL will give users reasonable notice of any planned work. After consulting with users who may be affected, it will make reasonable efforts to carry out that work with as minimal disruption to services as possible.

When services are to be curtailed, they will be curtailed or interrupted downstream of the location of the affected part of the pipeline; and curtailed or interrupted proportionately according to the user's nominations for the first day and user's MDQ thereafter, or as otherwise agreed with all users.

APTPPL states that it will not be liable for any losses, liabilities or expenses incurred by the user and/or the user's customers arising from interruptions and curtailments, when it acts in accordance with the principles of the access arrangement in good faith.

Force majeure

If there is a charge based on an MDQ, and APTPPL is unable to perform its obligations under the transportation agreement, due to an event of force majeure affecting APTPPL, the following will apply. The charge for each day during the period APTPPL is unable to so perform its obligations will be based on the highest quantity of gas (up to the applicable MDQ) available to be continuously withdrawn during that period rather than that MDQ.

Force majeure provisions do not apply to a party's failure to pay money, or a user failing to ensure that gas delivered to a receipt point meets the specifications.

Allocation

When gas is delivered to a receipt or delivery point for more than one user, those users must establish an allocation method and notification processes reasonably acceptable to the service provide. They must also provide sufficient information to APTPPL to enable it to reconcile between users the quantities of gas received and delivered. If no such method or processes are established, APTPPL will adopt a reasonable method such as a pro-rating based on nominations.

Liabilities and indemnities

Each party will be required to indemnify the other for any loss arising out of its gross negligence or wilful misconduct.

Scheduling priority

If, for any reason permitted under this access arrangement, there is not sufficient capacity to transport all the quantities of gas nominated by all users on the day that the quantities are to be transported by APTPPL, then APTPPL must schedule the quantities nominated by users in the following priority and sequence.

1. Quantities nominated by users under firm transportation agreements, not to exceed their respective MDQs.
2. Quantities nominated by users with firm transportation agreements in excess of their respective MDQs pursuant to authorised overrun facilities.
3. Quantities nominated by users under interruptible transportation agreements, first on the basis of highest rate paid, second on a first-come, first-served basis and third on a pro-rata basis.

Gas balancing

Each user will be responsible to control and, if necessary, adjust the nomination, receipts and deliveries of gas to maintain a balance between the user's receipts (net of system use gas and line pack gas) and deliveries.

Based on the best information available, a user and APTPPL are obliged to cooperate in good faith to minimise any imbalance and to eliminate any imbalance that does occur as soon as possible, taking into consideration the reasonable time required by any entities delivering gas to, or receiving gas from, APTPPL.

If there is an imbalance at the end of a month, the user is obliged to correct a continuing imbalance during the subsequent month by making adjustments in nomination, receipts and/or deliveries.

If a user fails to take corrective action, APTPPL may adjust the user's receipts and deliveries contained in the nomination over that subsequent month to correct that continuing imbalance.

If an imbalance still remains at the end of the subsequent month, APTPPL may:

- charge the user an imbalance charge
- if there is an imbalance shortfall, require the user to correct any such imbalance through payment of an imbalance charge.

APTPPL has undertaken not to impose charges for a ‘minor imbalance’ but has not specified any tolerance levels for imbalances.

Connection of facilities to the pipeline and charges for receipt and delivery points

A prospective user may, provided it has the relevant authorisations, and subject to the conditions set out below, construct and operate its own facilities downstream from a delivery station, or upstream from a receipt station, at any agreed location along the pipeline. The user shall arrange for the connection of its facilities to the pipeline on terms acceptable to APTPPL. The user shall pay APTPPL for the cost of the connection work.

APTPPL will only withhold its agreement to a location sought by a prospective user on the basis of technical, operational or safety considerations.

APTPPL will construct the receipt station or delivery station at the user's expense. The construction will be performed to APTPPL's usual standards and requirements including AS2885 or any substituted Australian standard.

APTPPL is also entitled to recover from users operating and maintenance costs for capital improvements for receipt and delivery points; and investigating the cost of constructing the capital improvements of receipt and delivery points.

Gas quality specification

The user must ensure that gas delivered by it or on its behalf at each receipt point complies with:

- the specifications prescribed by any Queensland law, applying during the agreement that extends to any such gas
- if the law does not prescribe a particular matter, or for any period during the transportation agreement in which there is no such law, the specification detailed in the access arrangement, and
- any other specification notified by APTPPL to a user from time to time.

Should there be any inconsistency, the specifications prescribed by any Queensland law prevail over other specifications.

When gas quality is measured upstream of the pipeline, permissible variations outside of the specifications will be determined by APTPPL from time to time, subject to the specifications prescribed by any Queensland law.

Transfer of receipt or delivery points

On request by a user in writing, APTPPL may transfer all or part of a user's MDQ for a receipt point or delivery point to another receipt point or delivery point respectively. APTPPL may only withhold its consent to such a transfer on reasonable commercial or technical grounds and may make its consent subject to conditions if they are reasonable on commercial or technical grounds.

3.2.4 Submissions in response to the revised access arrangement

Queensland Gas Company

MDQ and MHQ

QGC has an issue with the wording of clause 2.3.2 (c). It maintains that the sum of receipt point MDQs and the aggregate MDQ need not be the same. This is because transmission pipeline capacity is the service on offer, not receipt point capacity or delivery point capacity. The receipt point capacity is determined by the gas field operators who cannot oversell capacity and delivery point capacity is determined by the needs of the industrial facility or network being supplied.

Adjustment in MDQ for gross heating value

QGC calls clause 2.3.3 an irrelevant and inaccurate provision. It states the Wobbe index is used to determine the amount of frictional gas losses for different gas types. It claims that the formula proposed could potentially result in a 6 per cent higher tariff for some shippers. It indicates that CSM typically has a lower heating value and a lower relative density, resulting in a Wobbe index equivalent to conventional gas sourced from Ballera.

Overruns and daily variance charges

QGC rejects the need for overrun charges and daily variance charges as outlined in clause 2.3.4 (clause 3.3.1) and clause 3.3.3. In reference to daily variance charges, QGC maintains that as long as the aggregate of delivery points and aggregate of receipt volumes are in balance over a period of three days there should be no adverse effect on the operation of the pipeline.

System use gas and linepack

QGC submits that if expansion of a pipeline can be achieved at a lower capital cost through compression rather than looping, the cost of system use gas should be the responsibility of the pipeline owner.

Allocation

Clause 55 of the proposed revised access arrangement states that users must establish allocation methodologies and notification processes reasonably acceptable to APTPPL. If no such methodologies or processes are established, APTPPL will be entitled to adopt a reasonable methodology such as a pro rating based on nominations.

QGC states that this has been a historical problem as APTPPL has been unwilling to accept the user's requirements.

It also states:

The proposed approach in the access arrangement has been demonstrated to be less than optimal. The correct party to configure an allocation protocol is the operator of the interconnected facility. In the case of a connected network, the operator of a network is legally required under the market business rules to provide a breakdown of quantities received on behalf of each market participant at each network inlet. In the case of an industrial facility or a receipt point, the operators of those facilities are aware of the parties with whom they have contracted and the amounts that have been contracted to have been bought or sold. This provision/process has been a feature of some negotiated contracts and should be a requirement under any access arrangement to accurately reconcile the off-pipeline contracted positions of market participants. All delivery and receipt points have real time data communication with the RBP control centre – these connections can also be used for the timely relay of allocations data by the connected producer, industrial facility or network.²⁰¹

Connection of facilities to the pipeline

QGC expressed concern with schedule 3 as it does not clarify the basis and circumstances in which APTPPL would withhold its agreement to the location of facilities or APTPPL's usual standards.

Gas quality specification

Commenting on schedule 4, QGC states that variations between gas specifications are a recognised disincentive to gas market development. It considers that all users will benefit from the application of the specification established in Australian Standard AS 4564—which was developed by collaboration between industry participants including transmission operators, producers and end users, and further enshrined by law in all eastern Australian gas market jurisdictions. It submits that AS 4564 should be adopted without amendment.

Nominations

QGC submits that the current nominations timetable specified in access agreements is unrealistic and out of step with the needs of the market and physical requirements placed on the pipeline owner to respond to nominations. The Victorian market, which features a large proportion of demand subject to the vagaries of the climatic swings in that region, has been able to function quite reliably with nominations closing immediately before the start of the gas day.

APTPL

Overruns

In its submission APTPL addressed two overrun issues: whether APTPL's request that daily nominations be submitted 24 hours in advance is considered reasonable by users; and the reasonableness of the authorised overrun provision.

APTPL states that nominations for firm services are required 24 hours in advance to ensure that compressors are operating at appropriate levels and times to meet demand. It considers that the numerous receipt points and delivery points and load profile

²⁰¹ QGC submission, p. 12.

requirements of power stations make this a relatively complex task on the RBP and that the use of 24-hour nominations is common in the Australian pipeline industry.

APTPPL states that authorised overrun provisions are reasonable because they are designed to provide it with the ability to control and operate the pipeline and to provide an incentive to shippers to reserve the appropriate amount of capacity for their anticipated requirements.

It suggests that if a shipper requires authorised overruns on a regular basis, it is evident that the shipper has not reserved sufficient firm capacity to meet its needs and should either contract for additional firm capacity or address the issue via some other means such as interruptible contracts.

System use gas and linepack

APTPPL states that RBP linepack is owned by both APTPPL and shippers. The system and ratios by which linepack is owned has been fixed for a long time. It states that it is reflected in current gas transport agreements and that there is no operational reason to change linepack arrangements.

3.2.5 ACCC's considerations

The terms and conditions are principles against which more detailed terms and conditions will be established for individual transportation agreements. After considering submissions from APTPPL and other interested parties, the ACCC has proposed a number of amendments which are discussed below. All of the amendments are proposed to redress concerns about compliance with code principles. In addition, they are consistent with the policy developments arising out of the GMLG and the emergence of FRC in the Queensland energy market. If the gas market reforms materially affect the management or operation of the pipeline, it is open to APTPPL to bring forward revisions under s. 2.28 to the terms and conditions.

MDQ and MHQ

Clause 2.2.4 (c) of the access arrangement states that, although the sum of the user's receipt point MDQs or the sum of the user's delivery point MDQs may exceed the user's MDQ, subject to clause 2.2.5, the sum of all deliveries at all of the user's delivery points must not exceed the user's MDQ.

The proposed revised access arrangement goes further than this provision and states that the sum of the delivery point MDQs and the receipt point MDQs must be the same (clause 2.3.2(c)).

The ACCC notes QGC's concern with the wording of clause 2.3.2 (c). QGC considers that the sum of MDQs should not be required to be the same. In its discussion of the

issue, QGC refers to the Ballera to Mt Isa pipeline (Carpentaria gas pipeline) in support of this.²⁰²

The ACCC discussed clause 2.3.2 (c) with APTPPL and it was agreed that while daily total receipt MDQ has to match daily total delivery MDQ there should be flexibility in varying individual receipt point MDQ and individual delivery point MDQ.

The ACCC proposes that in the interests of users and prospective users (s. 2.24 (f) of the code) the access arrangement be amended.

Amendment 10

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to state that while daily total receipt MDQ has to match daily total delivery MDQ there is flexibility in varying individual receipt point MDQ and individual delivery point MDQ.

Liabilities and Indemnities

The liabilities and indemnities provisions are in line with the amendments proposed by ACCC, and accepted by EAPL, in the MSP review process.²⁰³ The ACCC considers that these remain reasonable and therefore that no amendment is required.

Transfer of receipt or delivery points

Section 68 (b) of the terms and conditions proposes that a charge is payable by users whether or not the transfer proceeds to completion. The concern is that the clause could be misconstrued to mean that, if the transfer does not go ahead, the user would be obliged to pay the full charge for a transfer instead of just the costs for considering the transfer.

There is also a concern that a reasonable charge is undefined and is a decision for APTPPL. The user and APTPPL must agree on the charge.

Having regard to the interests of users and prospective users (s. 2.24(f)), the ACCC proposes the following amendment.

Amendment 11

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend s. 68(b) to read the 'User agreeing to pay a reasonable charge (determined by APTPPL and the User) for the cost of transfer of the capacity. If the transfer does not proceed to completion, the User will only be liable for the legal and other costs associated with consideration of the request to transfer up until the time the user notifies APTPPL that it has decided not to proceed.'

²⁰² The access arrangement for the Carpentaria gas pipeline September 2002 (p. 28) acknowledges that the sum of the receipt point MDQs or delivery point MDQs may exceed the user's MDQ.

²⁰³ MSP final decision (p. 262) and final approval (p. 63).

Allocation

This clause is in line with the current wording of the access arrangement. However, the QGC submission suggests that APTPPL has not been willing to accept user requirements.

APTPPL has indicated that it usually only requires information on: nominations, meter readings, the identity of the shippers using the receipt or delivery points and the details of the tranche or pro-rata methodology used.²⁰⁴

However, because APTPPL has not specified these information requirements in the proposed revised access arrangement, the interests of users and prospective users are not adequately protected. The ACCC proposes that APTPPL make an amendment stating that a user's allocation methodology must include the above information.

Amendment 12

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clauses 55 and 56 so that it states a users' allocation must include the following information:

- nominations
- meter readings
- identity of shippers using the receipt or delivery points
- a clear description of the tranche or pro rata methodology used.

Adjustment in MDQ for gross heating value

The capacity of a pipeline is determined by the number of gas molecules able to pass through a pipeline (i.e. volumetric throughput). The product of the heating value per unit volume and the volumetric throughput determines the energy throughput (TJ/day). APTPPL has specified an adjustment formulae to apply on any day when it is reasonably of the opinion that, because of a reduction below 40 MJ/m³ in the average gross heating value of the gas presented by a user at any receipt point, the aggregate quantity of gas to be delivered on behalf of all users may exceed the capacity of the pipeline. In these circumstances the throughput charge is also adjusted by the formula specified in clause 2.3.3 of the access arrangement.

QGC questioned the need for an adjustment of MDQ by the service provider based on a reduction of gross heating value. It claims that it does not make allowance for the effect on energy flow of a possible lower relative density which tends to partially offset the lower heating value effect which may result in a 6 per cent increase in tariffs for some CSM shippers.

APTPPL states that it needs certainty in the heating value of the gas to design and operate the RBP. Historically it has been based on 40 MJ/m³—if the heating value falls then the shipper's MDQ could also fall. APTPPL has advised that it is willing to

²⁰⁴ APTPPL email to ACCC dated 4 July 2006.

consider ways to address this issue but it is shippers who supply the lower heating value gas.²⁰⁵

The ACCC accepts the principle of adjusting for heating value in the circumstances outlined in the proposed revised access arrangement and recognises that the formula proposed by APTPPL implicitly make some compensation for the relative density effect. However, a possible solution to accommodate the concerns of QGC would be to revise the formulae to make adjustment directly proportional to the average heating value but also proportional to the inverse of the square root of the relative density. This would make explicit provision for variation in relative density, consistent with s. 2.24 (d) and (f) of the code which relate to the economically efficient use of the pipeline and the interests of users and prospective users respectively.

Amendment 13

For APTPPL's proposed revised access arrangement for the RBP to be approved, APTPPL must amend the formulae specified in clause 2.3.3 to:

(a) APTPPL's obligation = $MDQ * (AHV2/AHV1) * \sqrt{(RD1/RD2)}$

(b) Adjusted throughput charge = $\text{throughput charge} * (AHV1/AHV2) * \sqrt{(RD2/RD1)}$

where

AV1 = heating value of the reference gas e.g. average for the year 2005

AV2 = average heating value of gas received on the day

RD1 = relative density of the reference gas e.g. average for the year 2005

RD2 = average relative density of gas received on the day.

Gas quality specification

The ACCC has not conducted a full technical review of the gas quality specification. However, it notes that the Queensland gas quality specification modifies the Australian Standard AS 4564 to include an additional restriction on carbon dioxide content.

Notwithstanding that APTPPL now states that it considers limits on carbon dioxide to be an important technical requirement,²⁰⁶ the ACCC understands that AS 4564 has been accepted in all Australian jurisdictions except Queensland.

The Queensland derogation relating to hydrocarbon dewpoint is considered reasonable while the Queensland transmission system is not connected to other state networks.

The hydrocarbon dewpoint limit seeks to avoid hydrocarbon condensation at locations such as meter stations where pressure reduction occurs. Hydrocarbon condensation is less likely in Queensland because of higher ambient temperatures during winter

²⁰⁵ RBP access arrangement—APTPPL response to roundtable, 24 May 2006, p. 6.

²⁰⁶ Roma to Brisbane pipeline access arrangement APTPPL response to ACCC issues paper 4 July 2006, p. 8.

Scheduling priority

The ACCC has examined the proposed scheduling priority provision and notes that it makes the distinction between a user subject to a firm transportation agreement (firm user) and a user subject to an interruptible transportation agreement.

While this provision does not specifically recognise negotiated services, it should be noted that negotiated services may be either firm or interruptible. There should therefore be no reason for a firm negotiated service to automatically receive a lower priority than the firm forward haul reference service.

The relative priorities of the services would have to be determined case by case given the specific economic, commercial and technical differences between the services. Establishing priorities on this basis will address the legitimate business interests of APTPPL (pursuant to s. 2.2.4(a) of the code) and those of users and prospective users (s. 2.24(f)) adequately.

Elsewhere in the proposed revised access arrangement APTPPL states that it will act in a non-discriminatory manner in providing services. It ascribes a meaning to non-discriminatory that APTPPL will act in a manner that is consistent for each service offered and between each service offered, subject to differences which APTPPL, in good faith, considers to arise from legitimate economic, commercial and technical considerations. Accordingly, the scheduling priority should operate in a non-discriminatory manner in relation to firm reference and firm negotiated services which should be stated in this provision.

APTPPL will need to take into consideration existing contractual rights when framing its response to the following amendment.

Amendment 14

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add an additional clause at the end of the provision to include the words, 'The order of priority will be determined in a non-discriminatory manner with firm services (whether negotiated or reference services) having the highest priority.'

Metering and records

The quantity of gas delivered is the volume of gas multiplied by the average heating value. Some modern gas metering systems measure mass rather than volume flow with the delivered quantity being mass to heating value. It is therefore desirable to ensure that the clause cannot be used to restrict the use of modern metering systems. Having regard to the operational and technical requirements necessary for the safe and reliable operation of the covered pipeline (s. 2.24(c)), the ACCC proposes the following amendment.

Amendment 15

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 24 of the terms and conditions to 'Where volumetric metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the volume of gas delivered and the average heating value per unit volume of gas delivered as declared or measured for the pipeline on that day. Where mass flow metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the mass of gas delivered and the average heating value per unit mass of gas delivered as declared or measured for the pipeline on that day.'

System use gas and linepack

The ACCC has considered QGC's contention that if expansion of a pipeline can be achieved at a lower capital cost through compression rather than looping, the cost of system use gas should be APTPPL's responsibility.

It is important that the cost of compressor fuel gas be taken into account when assessing the cost of pipeline expansion options. However, there are arguments in favour of, and against, the service provider supplying and charging for system use gas. The strongest argument against this is that users may have the opportunity to purchase gas more cheaply than APTPPL. It can be argued that if APTPPL were to purchase gas itself, it would have a greater incentive to minimise compressor fuel use. The ACCC has not been provided with any evidence that APTPPL operates the pipeline in a manner that disadvantages users with regard to compressor fuel use. The ACCC believes that there are economic incentives for APTPPL to minimise consumption of system use gas whether or not APTPPL purchases the gas. That is, users will either be required to pay for system use gas directly or indirectly through the operations and maintenance costs.

Moreover, the way system use gas is defined in the proposed revised access arrangement will encourage its efficient use. For these reasons, the ACCC considers that clause 18 is consistent with APTPPL's legitimate business interests (s. 2.24(a)) and is not contrary to the interests of users or prospective users (s. 2.24(f)). Accordingly, clause 18 is assessed as being reasonable and does not require any amendment.

Connection of facilities to the pipeline and charges for receipt and delivery points

QGC states in its submission that APTPPL does not make it clear the circumstances in which it will withhold its agreement to a location sought by prospective user nor does it specify its usual standards for the construction of a receipt or delivery station. The ACCC considers that the amendment below will address QGC's concerns. Having regard to the interests of users and prospective users (s. 2.24(f)) the following amendment is proposed.

Amendment 16

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the words under the heading 'Delivery station' in schedule 3 of the access arrangement as follows:

Add the word 'reasonable' before 'technical, operational or safety considerations'.

Operational charges (imbalance, overrun, variance)

The ACCC does not agree with QGC that overrun and daily variance charges are not warranted. For overruns, a reasonable regime is necessary to discourage users from under-booking capacity and to discourage behaviour by a user that is likely to disadvantage other users. This point is particularly relevant when a pipeline is near to being fully contracted as with the RBP.

The ACCC considers that APTPPL's proposed charges for imbalance, overruns and variance are broadly in line with those of other pipelines.

The authorised overrun charges are the same as authorised overrun charges applied to the Central West Pipeline (CWP) and less than the 200 per cent overrun charge rate for the MSP. The unauthorised rate is more than the 200 per cent for CWP and less than the 350 per cent for MSP. However, because RBP is fully contracted (and therefore more sensitive to overruns), the ACCC considers that charges proposed:

- are acceptable in preventing their misuse and to provide for the economically efficient operation of the RBP (s. 2.24(d))
- ensure the legitimate business interests of APTPPL (s. 2.24(a)) are taken into account
- adequately account for the interests of users and prospective users (s. 2.24(f)).

Daily variance charges are a mechanism by which service providers seek to encourage users to correctly nominate their gas needs and in so doing ensure the efficient operation of the pipeline. Users can avoid daily variance charges by ensuring that the quantity of gas they nominate to receive at each receipt point (or have delivered at each delivery point) is within a range of plus or minus 10 per cent of their MDQ. The ACCC considers this range provides users with reasonable flexibility and notes that the charge would only be applied if the variance occurs on more than four days in the month or 24 days in the contract year.

The ACCC therefore considers that a penalty of 120 per cent for variations beyond the 10 per cent range is reasonable in that it:

- provides users with the requisite incentive to correctly nominate their gas usage and further provide for the economically efficient operation of the RBP (s. 2.24(d))
- ensures the legitimate business interests of RBP (s. 2.24(a)) are taken into account
- adequately accounts for the interests of users and prospective users (s. 2.24(f)).

The ACCC adopted a similar view in its MSP final decision.²⁰⁷

In assessing the charges and the appropriateness of the gas balancing provisions, the ACCC has been guided by s. 2.24(c) of the code (which requires the regulator to take into account the operational and technical requirements necessary for the safe and reliable operation of the pipeline).

The ACCC considers that there is no evidence that the charges for the balancing arrangements are unreasonable. Furthermore, they appear to provide users with:

- a reasonable imbalance limit which is applied to the user's receipt and delivery points
- sufficient opportunity to rectify imbalances before the relevant imbalance charges are applied
- flexibility in rectifying monthly imbalances
- the necessary incentive to remain in balance as required for the safe and reliable operation of the pipeline.

Charges for receipt points or delivery points

A prospective user who is unable to gain access to an existing receipt station or delivery point may have no other option but to pay the costs quoted by APTPPL. Moreover, it is possible that a service provider could attempt to charge excessive prices for the initial construction and ongoing operating and maintenance services. Such an outcome would not be in the interests of prospective users, particularly given that the constructed receipt and delivery stations remain the property of APTPPL.

While the ACCC still has some concerns with this issue, it notes that in accordance with s. 8.23 of the code, a user may agree to pay the service provider a capital contribution. Section 8.24 also provides that all obligations between the service provider and the user on the capital contribution shall be as agreed between the service provider and the user.

If a prospective user and service provider disagree on the cost of construction of the receipt or delivery point, the prospective user is able to lodge an arbitration dispute under s. 6.1 of the code. The ACCC considers that the presence of the arbitration mechanism should operate as a constraint upon the potential exercise of monopoly power by APTPPL with regard to capital contributions for prospective users.

Notwithstanding the above considerations, while the charges in respect of receipt points or delivery points are similar to those currently in the access arrangement and the MSP draft decision,²⁰⁸ APTPPL has an additional provision that it is able to recover from users the engineering investigation costs.

²⁰⁷ MSP final decision, p. 263.

²⁰⁸ MSP final decision, p. 275.

As with the proposed queuing policy discussed in section 3.5 of this draft decision, it is reasonable that the users who fund engineering investigations are not restricted from being able to extract some residual value from the expenditure such as the ability to distribute, subject to confidentiality requirements, information generated by the investigation (where the potential user is unable to proceed with a request). This was discussed with APTPPL who has agreed to address the ACCC's concerns on this matter.

Nominations

QGC states that the current nominations timetable is out of step with the needs of the market, and quotes the Victorian market as being able to function reliably with nominations closing immediately before the start of the day. The Victorian transmission network operates differently from the South East Queensland network and is therefore not directly comparable. The ACCC understands that the RBP is currently run in a manner that seeks to minimise compressor usage while still fulfilling contractual obligations. A consequence is the need to program compressor operation. Also, the ACCC understands that the RBP control room is not currently manned outside normal business hours, which reduces costs but limits the ability to adjust compressor operation during these times. Nevertheless the ACCC considers that users ought to be able make minor revisions to nominations within 24 hours of the commencement of the particular gas day, provided that the safe and efficient operation of the pipeline is not compromised.

3.3 Capacity management policy

3.3.1 Code requirements

Section 3.7 of the code requires an access arrangement to include a statement that the covered pipeline is either a contract carriage pipeline or a market carriage pipeline.

3.3.2 Current access arrangement provisions

The current RBP access arrangement (s. 9) states that for the purpose of s. 3.7 of the code that the pipeline is a contract carriage pipeline.

3.3.3 APTPPL proposal

For the purposes of s. 3.7 of the code, and consistent with the current RBP access arrangement, the pipeline is a contract carriage pipeline.

3.3.4 Submissions in response to the revised access arrangement

No submissions were received from interested parties on this issue.

3.3.5 ACCC's considerations

The revised access arrangement includes a statement that the RBP is a contract carriage pipeline. Accordingly it satisfies the requirements of s. 3.7 of the code.

3.4 Trading policy

3.4.1 Code requirements

Sections 3.9 to 3.11 of the code set out the requirements for a trading policy. If a pipeline is a contract carriage pipeline, which APTPPL proposes for the RBP, the access arrangement must include a trading policy that explains the rights of a user to trade its right to obtain a service to another user. The trading policy must, among other things, allow a user to transfer capacity:

- without the service provider's consent, if the obligations and terms under the contract between the user and the service provider remain unaltered by the transfer (a bare transfer)
- with the service provider's consent, in any other case.

Consent may be withheld only on reasonable commercial or technical grounds and the trading policy may specify conditions under which consent will be granted and any conditions attached to that consent.

Section 5 of the code also requires a user to make such excess capacity available:

Users with Contracted Capacity which they do not expect to use must make available to any person who requests it information about the quantity, type and timing of that unutilised Contracted Capacity. The User may notify the Service Provider of its unutilised Contracted Capacity so that it is included on the Service Provider's public register.

3.4.2 Current access arrangement provisions

Section 5 of the access arrangement currently states that a user may:

- make a bare transfer without the consent of the service provider provided that it notifies the service provider of the portion and nature of contracted capacity subject to the bare transfer
- transfer in any other case provided it has the service provider's prior consent. Consent will only be withheld on reasonable commercial or technical grounds, which may be given subject to reasonable commercial or technical conditions
- only change the receipt point and/or delivery point specified in an access arrangement with the prior consent of the service provider, which will only be withheld on reasonable commercial or technical grounds, and which may be given subject to reasonable commercial or technical conditions.

3.4.3 APTPPL proposal

APTPPL has proposed a trading policy that is essentially the same as its current arrangement. However, APTPPL has specified the criteria where it may give its consent for a transfer of capacity (other than a bare transfer) for reasonable and commercial grounds, including:

- the user agreeing to pay a reasonable charge determined by APTPPL for the cost of the transfer
- APTPPL and the transferee executing a transportation agreement relating to the transferred MDQ
- the MDQ being for the transportation of gas from the same receipt point to the same delivery point or an alternative receipt point subject to conditions
- the transferee agreeing with any other user currently using the relevant receipt point and delivery point on sharing the facilities and any conditions and charges, at no additional cost to APTPPL
- the transferee providing written confirmation that it has made all necessary arrangements with other relevant parties relating to the service
- if the transfer requires additional facilities, agreement to pay APTPPL for the cost of construction on such terms and conditions as are reasonably determined by APTPPL
- the user not being in default under the existing transportation agreement
- the transferee meeting the prudential requirements.

APTPPL has also added a clause stating that it will undertake to respond to requests for transfers within 14 business days unless the request involves:

- receiving gas at a receipt point further upstream than the existing one or
- delivering gas at a delivery point further downstream than the existing one.

In such cases APTPPL will advise within 14 business days of receipt of the request a work program to assess the effect of the request on the operation of the pipeline.

3.4.4 Submissions in response to the revised access arrangement

The trading policy was raised in submissions received from three users: Energex, Origin and QGC. On 15 May 2006 the ACCC also conducted a roundtable with users and APTPPL on the trading and queuing policies where a number of issues were raised.

Feedback received from users included that the existing policy has not been successful in facilitating capacity trading and that the revised policy is unlikely to facilitate it going forward. The issues raised in both the submissions and roundtable can broadly be summarised as:

- interpretation of what constitutes reasonable commercial grounds for refusal of transfer
- ability to trade linepack

- inflexibility in changing receipt and delivery points
- lengthy lead times on trading requests.

Reasonable commercial grounds

At the Brisbane roundtable users expressed little concern with APTPPL's power to disallow capacity trades on technical grounds. They nevertheless required clarification of what might constitute 'reasonable commercial grounds' for refusal of a capacity transfer. QGC suggests that up-to-date capacity information on a website would enable users to better understand their options in accessing unused capacity.

Origin states that the current wording of the trading policy allows APTPPL excessive discretion to reject transfer requests with little explanation. Energex suggests that while the addition of a definition of 'reasonable commercial grounds' may be helpful for users to understand the parameters for denying a transfer request on commercial grounds, the fact remains that APTPPL has little incentive to facilitate trading as it is unlikely to receive additional revenue from the process.

Ability to trade linepack

The ability to trade linepack to facilitate balancing of accounts was an issue raised by several users at the roundtable.²⁰⁹ The ability to trade linepack is appropriate in situations where a user is unable to take its full capacity entitlement for a period due to plant breakdown.

QGC states that there is no avenue available to users to amend pipeline nominations within appropriate timeframes and that users are forced to incur variance or imbalance quantities that may affect market operations.

To mitigate these potential effects, it believes that APTPPL must provide an additional nomination option where a user can transfer an imbalance to another user (who will have lodged a corresponding transferee nomination) to evidence an off-pipeline transaction.

APTPPL has responded that it does not believe a linepack trading mechanism for managing linepack would provide shippers with a better mechanism than the current nomination provisions. However, it is willing to consider the issue further if users identify precise concerns with the proposed revised access arrangement.

Ability to change receipt and delivery points

Another trading issue raised at the roundtable was that users want greater flexibility to change receipt and delivery points than is provided for in existing contracts.

QGC states that the bare transfer provision does not work in practice because of current refusals to allow shippers to add receipt points and change existing negotiated

²⁰⁹ Linepack trading is discussed in this section of the draft decision as it was raised in the context of the Trading policy. However, the relevant provision of the code would be s. 3.6, Terms and conditions.

contracted delivery points. The flexibility to change receipt and delivery points is critical to an effective trading regime.

Lengthy lead times on trading requests

Energex has concerns with the length of response time (14 business days) for general transfer requests. It states that the time involved is inconsistent with business needs when trading requests are made for a substituted transfer or change of a receipt or delivery point. In situations where a trade is possible, timely responses and consent is essential to an effective trading regime.

Energex also recommends an inclusion of a request turnaround for urgent short-term requirements. Such a system would be achievable to fulfil a request within 48 hours.

3.4.5 ACCC's considerations

The ACCC particularly notes the different considerations that apply to short-term trading of capacity and trading of contractual rights. There is an incentive for some users with temporary excess capacity to trade. For example, plant operators may be required to shut down their plant for statutory pressure vessel inspection at periodic intervals. Such a company could reduce its gas costs by trading the capacity it does not use during those periods. Potentially it could also trade contracted volumes on a short-term basis during any periods of unscheduled plant shutdowns or of reduced production.

Power generators could also potentially benefit from capacity trading to access additional fuel gas. Such a facility would offer greater arbitrage opportunities in the national electricity market.

APTPPL's trading policy outlined in its proposed access arrangement is essentially the same as the current access arrangement, however interested parties have stated the policy does not facilitate capacity trading. It is therefore questionable whether it complies with the minimum requirements of the code.

Reasonable commercial grounds

A trading policy must enable prospective users to enter into transportation contracts that allow the user to transfer capacity as set out in s. 3.10 of the code. When the service provider's consent is required, s. 3.10 provides that the service provider may only withhold consent on 'reasonable commercial and technical grounds.'

Once the service provider and the user enter into a transportation contract that includes these terms, the user will be able to enforce its rights under the contract if it believes that a service provider has unreasonably withheld its consent.

Some interested parties have sought to have APTPPL define what constitutes its 'reasonable commercial grounds' on which it would withhold its consent to transfer capacity before entering a transportation contract with it.

The ACCC considers that it is in the interests of APTPPL and users to describe in some detail their proposed interpretation of 'reasonable commercial and technical grounds'. Although users with a transportation contract that includes these terms currently have

the option to seek commercial arbitration or court action, the ACCC considers that disputes over future contracts could be avoided, and initial contract negotiations could be made clearer, if APTPPL would provide users with a better understanding of what it considers to be ‘reasonable commercial grounds’ and ‘reasonable commercial and technical conditions’.

Amendment 17

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must explain in its proposed trading policy what constitute ‘reasonable commercial grounds’ and ‘reasonable commercial conditions’. These must be consistent with code principles.

Ability to trade linepack

APTPPL stated that it does not believe that either the current or proposed revised access arrangement restrict line pack trade.²¹⁰ Notwithstanding this, APTPPL has publicly stated that it is willing to consider the issue further if users identify precise concerns with the proposed revised access arrangement.²¹¹

Given that this issue has been raised by users in both the current and original access arrangement reviews, an amendment is proposed to specify conditions under which trading of linepack would or would not be permitted.²¹² Such conditions must be reasonable and subject to approval by the ACCC.

Amendment 18

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its proposed revised access arrangement to specify the conditions under which the trading of linepack will or will not be permitted. Such conditions must be reasonable and subject to approval by the ACCC.

Ability to change receipt and delivery points

Submissions made by a number of parties related to the use of receipt and delivery points and the transfer of MDQ by a user from one receipt or delivery point to another.

Flexibility regarding choice of receipt or delivery points can be negotiated between the parties at the outset, possibly with some premium on the charges to the user.

The code does not require APTPPL to forego rights it has arising from existing contracts but the proposed trading policy will permit users to provide for full flexibility in the ability to change receipt and delivery points. The ACCC considers that it is

²¹⁰ Roma to Brisbane roundtable, 15 May 2006, minutes, p. 4.

²¹¹ RBP access arrangement—APTPPL public response to roundtable, p. 5.

²¹² Linepack trading is not a specific requirement of the trading policy (ss 3.9-3.11 of the code). However, given that it has been raised by users in the context of the trading policy, for simplicity it is addressed here.

reasonable for APTPPL to seek cost recovery from users for transfer of receipt or delivery points.

At the same time, it is not reasonable to deny the transfer of receipt or delivery points when the user is willing to meet the reasonable costs of the transfer.

Lengthy lead times on trading requests

APTPL's trading policy needs to be considered in the context of not only code requirements but also current developments in gas market reform. The Ministerial Council on Energy (MCE) agreed in April 2004 to expand the gas market element of the energy market reform program to accelerate the development of a reliable, competitive and secure natural gas market and to further increase the penetration of natural gas. One of the principles promoted for gas market development was that 'gas market participants should be able to freely trade between pipelines, regions and basins'.

The GMLG was established by the MCE to develop a gas market development plan to deliver on the MCE's objectives for a competitive, reliable and secure natural gas market delivering increased transparency, promoting further efficient investment in gas infrastructure and providing efficient management of supply and demand interruptions. The GMLG has been examining two options for pursuing the MCE's gas market objectives:

- a bulletin board
- a short-term trading market.

Consistent with these policy developments and calls from users, there is merit in the suggestion that APTPL introduce an electronic bulletin board. The key objective would be to provide up-to-date information about where supply or pipeline constraints exist in real time, or may occur under certain conditions. This would help users (or prospective users) identify potential trading, risk mitigation or investment opportunities. Such an electronic bulletin board would also offer a facility for the voluntary posting of buy/sell offers for the supply or transportation of capacity.

In correspondence provided to the ACCC, APTPL has indicated it will consider an electronic bulletin board if its costs are recoverable from users.²¹³ It suggests that the users, who would be the beneficiaries of such trades, should fund any electronic bulletin board which facilitates trade.

It further notes that any electronic bulletin board would need a level of commitment and involvement from users to be workable, particularly to provide information on unused capacity.

The ACCC considers that the maintenance and operation of the bulletin board may appropriately rest with APTPL, users or the market operator.

²¹³ *ibid.*, p. 5.

The code (s. 5.9) requires the service provider to establish and maintain a public register of spare and developable capacity. APTPPL provided a copy of its public register and the information package it will make available to prospective users. However, it does not currently provide electronic access to the register, nor does it inform users of changes to the register.

APTPPL has indicated that it will establish electronic access to its register of spare and developable capacity if the costs are recognised as new facilities investment. Accordingly, the ACCC will allow the prudent costs borne by APTPPL in providing electronic access to be recognised in the current access period as new facilities investment and included in the opening asset value for the next regulatory period consistent with relevant code provisions.

3.5 Queuing policy

3.5.1 Code requirements

Section 3.13 of the code requires that the queuing policy must:

- (a) set out sufficient detail to enable Users and Prospective Users to understand in advance how the Queuing Policy will operate;
- (b) accommodate, to the extent reasonably possible, the legitimate business interests of the Service Provider and of Users and Prospective Users; and
- (c) generate, to the extent reasonably possible, economically efficient outcomes.

Section 3.14 provides that:

The Relevant Regulator may require the Queuing Policy to deal with any other matter the Relevant Regulator thinks fit taking into account the matters listed in section 2.24.

Section 5.1 of the code requires a service provider to maintain an information package for prospective users containing the following:

- the access arrangement and access arrangement information
- a summary of the public register of capacity
- information on the covered pipeline
- a description of the service provider's procedures relating to specific access requests
- any other information the regulator considers reasonable.

Section 5.2 of the code allows the relevant regulator to require the service provider to amend or include additional information in the information package.

3.5.2 Current access arrangement provisions

Section 6 of the access arrangement currently states that when there is insufficient capacity to satisfy a request, a queue will be formed. At the time a request is placed in the queue, the service provider will advise the prospective user of queue details.

A prospective user may reduce but not increase the capacity sought in a request which is in a queue.

A request for a reference service will have priority over a request for the same service at a tariff less than the reference tariff.

3.5.3 APTPPL proposal

The proposed queuing policy is similar to that currently in the access arrangement but it now includes provision for investigations to determine if capacity is available.

When APTPPL advises a prospective user that investigations are required to determine whether capacity is or can be made available, APTPPL will also advise the prospective user of the nature, likely duration and cost of the investigations.

The prospective user may then determine whether it wants APTPPL to undertake the investigations. Prospective users may share these costs in the proportion agreed to between them and APTPPL.

When the investigation identifies that investment is required to make capacity available, APTPPL will advise each of the prospective users on the queue of its plans to make capacity available and the terms and conditions on which the capacity will be available.

3.5.4 Submissions in response to the revised access arrangement

Several users raised issues relating to the existing queuing policy which indicated that the policy has not been successful in providing timely access to new (developable) capacity. The specific issues raised in both the submissions and interested parties at the Brisbane roundtable can broadly be summarised as follows:

- The time taken to negotiate access to new capacity is too long.
- Insufficient information has been provided to users previously on the cost of new capacity and how those costs are allocated between users when more than one user seeks access to that capacity.
- Users face considerable uncertainty regarding final demand, particularly in the early stages of project development and this has implications for the quantum of capacity they may seek.
- With the introduction of full retail contestability there is greater prospect of end users making alternative supply arrangements.

- The requirement that users fund engineering investigations to obtain a position on the queue for new capacity is not reasonable.
- It is not clear that the proposed queuing policy allows users who fund engineering investigations to extract some residual value from the expenditure (for example, the ability to sell information generated by the investigation when the prospective user is unable to proceed with a request or their ability to trade or sell their position in the queue).
- There is uncertainty among users about how the policy operates for existing capacity and new capacity.
- When services are based on a negotiated outcome, the queuing policy may be superfluous, given APTPPL will be in a position to manage the interests of parties and negotiate the best outcome regardless of a party's status in the queue.

In its submission, Energex seeks further clarification on the operation of the queuing policy for contracted capacity approaching the expiry of a long-term contract. In particular, it is concerned that one of the following situations could occur:

- The contracted party has the ability to recontract at negotiated prices, rather than in terms of the reference tariff, with the potential threat of losing priority to the capacity.
- The contracted party will lose priority to the capacity and it will be offered to the next party within the queue.

A further area of complaint from users concerns the length of time taken to negotiate access to new capacity. Energex argues that

... a period of 30 days for a prospective user to accept an offer provides little opportunity for the user to negotiate before potentially losing priority on the queue. ... A user can raise a dispute without losing priority. However, a dispute may prolong negotiations and cause delays in resolving access and perhaps in turn causing delays for the availability of additional capacity to other users.²¹⁴

3.5.5 ACCC's considerations

APTPPL's proposed queuing policy remains similar to that currently in the access arrangement. However, users have asserted that it does not facilitate timely access to capacity. The ACCC considers that the proposed policy does not meet code requirements, particularly s. 3.13(c) covering the requirement for economically efficient outcomes.

Section 5.2 of the code gives the regulator the power to require APTPPL to include additional information that will help a prospective user decide whether or not to seek services from the RBP. Such information can include details relevant to price, including cost data for new (developable) capacity i.e. an indicative tariff.

²¹⁴ Energex submission, p. 9.

The provision of indicative tariff information would assist in producing economically efficient outcomes.

As the RBP is almost fully contracted until 2012, most access inquiries from prospective users will arise in a context where expansion of capacity will be necessary. It would help prospective users to assess the attractiveness or otherwise of any expansion proposal if they were presented with some form of preliminary tariff information. This would help them in determining whether to proceed to the next stage of funding an investigation.

For these reasons, the ACCC believes it is within the scope of any other information required by the relevant regulator to be included in the information package (s. 5.1(e)).

APTPPL has indicated a willingness to provide indicative tariffs, provided that such information would be non-binding and provided only to enable a user to decide whether to contribute to investigations.²¹⁵

Accordingly, separately from this access arrangement, the ACCC will, under s 5.2 of the code, require APTPPL to include in its information package for the RBP indicative tariffs for developable capacity.

Further, having regard to the interests of users and the need to generate economically efficient outcomes, the ACCC requires the following amendment to the access arrangement.

Amendment 19

Before APTPPL's proposed revised access arrangement can the RBP to be approved, APTPPL must add a clause to the end of s. 6.1(e) of the proposed queuing policy to state that it will specify an indicative tariff before the start of an investigation into new capacity. This may be an indicative tariff specified in the information package if that indicative tariff is appropriate for the service sought by the prospective user.

The provision that APTPPL may require a prospective user to fund or partially fund an engineering investigation on new capacity options and costs is considered to be reasonable, given the considerable cost which detailed engineering investigations can entail. It is also a means of assessing the degree of user commitment associated with the queuing request.

Prospective users who agree to fund such an investigation should receive the findings of this investigation.

²¹⁵ RBP access arrangement—APTPPL response to roundtable, p. 3.

Amendment 20

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add a clause to the proposed queuing policy to state that a user who pays for a capacity investigation will be provided with a written report which:

- details the options considered to provide the developable capacity
- provides an itemised cost estimate for at least the recommended option
- provides a firm tariff for the capacity sought and the basis for deriving the tariff
- provides details on the allocation of costs of providing new capacity when more than one user would be using the new capacity.

Users have also expressed a desire to extract some residual value from expenditure on capacity investigations, particularly the right to distribute information generated by an investigation or trade their position in the queue, in circumstances where the user is unable to proceed with a request.

In correspondence to the ACCC following the Brisbane roundtable, APTPPL indicated a willingness to permit assignment of a request (i.e. allow a user to trade their position in the queue). However, it states that issues such as the potential for gaming and capacity hoarding will need to be addressed and that any queue trading system would have to be designed to ensure that it does not have unintended effects on competing shippers and would also have the endorsement of user groups.²¹⁶

The ACCC considers that a place in the queue should be tradable provided the potential for gaming and hoarding can be managed consistent with the objectives of s. 3.13(c).

Amendment 21

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to permit a prospective user to transfer its rights in a queue to another prospective user.

Prospective users should be able to manage uncertainty about the level of capacity to specify by either lodging a request for the highest expected quantity of capacity or by lodging a series of requests to cover possible load sizes. Under clause 6.2(a) of the proposed revised access arrangement, the prospective user can reduce its requested capacity.

The proposed revised access arrangement does not allow a current user to roll over its capacity rights at the expiry of the contract. An automatic roll-over may entrench current users and would not be fair to other prospective users. The ACCC does not believe such a requirement is appropriate.

Users' concerns about the uncertainty associated with the operation of the policy for existing capacity and new capacity would be improved through operating separate queues for existing and new capacity

²¹⁶ *ibid.*, p. 3.

Accordingly the following amendment is proposed.

Amendment 22

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to provide for separate queues for existing and new capacity.

3.6 Extensions and expansions policy

3.6.1 Code requirements

Section 3.16 of the code requires an access arrangement to have an extensions and expansions policy. The policy must set out the method to determine whether any extension to or expansion of the system's capacity will be treated as part of the covered pipeline. A service provider is also required to specify the effect on the reference tariff if an extension or expansion is treated as part of the covered pipeline. An extensions and expansions policy must also outline the conditions under which the service provider will fund new facilities and provide a description of those new facilities.

3.6.2 Current access arrangement provisions

If the service provider undertakes a geographic extension to the pipeline it will decide, after consultation with the regulator, whether the extension is covered and subject to this access arrangement.

If the service provider expands the capacity of the pipeline above 178 TJ/day, the expansion will, when it comes into operation, be covered and be subject to the access arrangement unless the regulator agrees that the expansion should not be covered.

When an expansion is covered and is subject to this access arrangement, access to that capacity will be offered as a negotiated service at a negotiated tariff.

Generally, the service provider would expect to continue to expand the capacity of the pipeline to meet requirements for additional capacity when:

- there are sufficient proven reserves to cover the economic life of the expanded pipeline
- the user commits to the use of the expanded capacity at a tariff negotiated between the service provider and the user
- it is technically and economically feasible to provide additional capacity.

3.6.3 APTPPL proposal

APTPPL proposes that if it undertakes a geographic extension to the pipeline it will decide (after consultation with the ACCC) whether the extension is covered. When an extension is covered, access to services provided through that extension will be provided as a negotiated service at a negotiated tariff.

APTPL proposes that if it expands the pipeline above the existing capacity,²¹⁷ the expansion will, when it comes into operation, be covered unless APTPL proposes and the regulator agrees that the expansion should not be covered. When an expansion is covered, access to services provided using that capacity will be offered as a negotiated service at a negotiated tariff.

Negotiated tariffs may differ from the reference tariff as additional capital and non-capital costs relating to the capacity expansion are incurred.²¹⁸

Augmentation would occur when, in APTPL's opinion, it is technically and economically feasible. APTPL has not included any costs for capital expansion in the access arrangement reference tariff.

APTPL proposes in clause 4.2(c) that if it undertakes new facilities investment in relation to an expansion of the capacity or extension of the RBP, it can elect whether:

- the additional capacity is rolled into the existing capacity, with access to that combined capacity being provided as a single reference service
- the costs of the additional capacity will be recovered through charges for a separate reference service
- the costs of the additional capacity will be recovered through charges for a negotiated service.

3.6.4 Submissions in response to the revised access arrangement

At the 15 May 2006 Brisbane roundtable, several users questioned the appropriateness of negotiation as a basis for expansions and were concerned about the level of information provided to potential users to assist in their negotiations.

In submissions responding to the issues paper, the following comments were also received.

Energex did not support the proposal to restrict application of the reference tariff to existing capacity and subjecting future capacity to commercial negotiation. Energex considered that:

- offering expanded capacity as a negotiated service does not satisfy the purpose of the code
- future expansions should be directly included in the access arrangement including calculation of the revenue and reference tariff based on the cost of these expansions. It states that the code supports this position by providing for new investment facilities and/or surcharges over and above the reference tariff.

²¹⁷ Existing capacity is defined as the capacity of the pipeline as it is configured on 31 January 2006, which is licensed at around 180 TJ/day but delivers up to 202.9 TJ/day according to APTPL's revenue model.

²¹⁸ Roma to Brisbane pipeline access arrangement response to ACCC request for information dated 2/3/06 and 24/3/06, p. 19.

In other words, there are sufficient mechanisms available in the code for APTPPL to recover its prudent capital spend for any expansion.

- the exclusion of new capacity will deny prospective users the benefit of a regulated tariff to assist in negotiations
- the lack of transparency does not support third party access and may lead to monopoly prices, and may not encourage an efficient gas transmission industry
- a tariff based on the expanded capacity (i.e. based on DORC) could be used.

Origin was concerned at the lack of detail provided by APTPPL on how it would determine negotiated tariffs. Origin noted that APTPPL has provided no principles, methodologies or quantitative detail on costs or tariffs. Origin seeks multiple tariffs to reflect the different tranches of capacity, partly so that the costs of each are transparent and partly for clarity on what existing capacity means in practical terms for negotiations.

Origin also stated that the code requires incremental capacity to be determined on the basis of a separate surcharge, which it supports. However, regardless of the approach adopted, transparency on how the costs and tariff(s) of existing and new capacity are determined is critical to competitive access to monopoly pipelines.

APTPPL submitted that the code requires an access arrangement for a covered pipeline—not the pipeline as it may subsequently be extended or expanded. APTPPL also argued that the timing, capacity, size and capital cost of expansions are unknown, implying that including them could distort investments and that it does not make speculative investments. It also asserts that under the code, an access arrangement does not automatically apply to future extensions or expansions of a covered pipeline.²¹⁹

TRUenergy submitted that it supports capacity expansions as a negotiated service, provided the regulator is satisfied that the dispute resolution procedures in the code will adequately address any disputes that arise.

In its submission QGC seeks a public planning process to encourage optimal use of the existing pipeline and efficient investment, including in the pipeline, upstream and downstream industries. It further argued that the nominal capacity under the access arrangement information should reflect the expanded capacity (greater than 260TJ/day) available on the mainline maximum allowable operating pressure (MAOP). The access arrangement should define the contracted capacity level up to which the reference tariff will be made available.

3.6.5 ACCC's considerations

The ACCC notes APTPPL's submission that the code requires an access arrangement for a covered pipeline rather than the pipeline as it may subsequently be extended or expanded. However, it also notes that the code does allow for the reference tariff to be

²¹⁹ Roma to Brisbane pipeline access arrangement APTPPL response to the ACCC issues paper, 4 July 2006, p. 2.

determined taking into account forecast expenditure on extensions and expansions, and that s.3.16 of the code requires an access arrangement to specify how an extension or expansion which is to be treated as part of the covered pipeline will affect the reference tariff.

In determining whether to accept APTPPL's proposal to subject future capacity expansions to commercial negotiation consideration was given to APTPPL's market power, users' countervailing power, APTPPL's requirement that future expansions would not occur unless capacity was fully contracted and the operation of the dispute resolution provisions of chapter 6 of the code. As has been noted users have asserted that over the life of the RBP, APTPPL has leveraged its market power in tariff negotiations on capacity expansions. The possible consequences of this market power have been observed in some contracts considered in the Appendix D. Balancing this contract terms are not identical and this may mean that some countervailing power might also have been exercised.

It is also a matter of fact that users did not seek to use the code's dispute resolution provisions to negotiate terms for possible capacity expansions during the course of the past access arrangement period (s. 6.22). Whether users considered that the operation of the derogation meant that tariff terms were outside the scope of the ACCC's powers in relation to dispute resolution can only be speculated on. The circumstances of the past access arrangement period, however, have now changed. The Queensland Government derogation on tariff has concluded. This means that there should be no uncertainty about the ACCC's ability to arbitrate disputes in relation to access terms for expanded capacity. Nonetheless, commercial negotiation has been used successfully to expand the pipeline and this should not be dismissed lightly given that the code provides that commercial negotiation can be used to agree access terms.

On balance, APTPPL's proposal that the reference tariff apply to the existing capacity of the pipeline and that terms for additional capacity be established on a negotiated basis is accepted for the forthcoming access arrangement period.

Surcharges and capital contributions

Users have raised the issue of whether APTPPL should be required to fund additional capacity through the use of capital contributions or surcharges. Nothing in the code prevents a user agreeing to pay a capital contribution to APTPPL. Similarly, APTPPL's proposed access arrangement does not attempt to preclude the use of a surcharge or capital contribution. Accordingly, no amendment is appropriate or required for the RBP access arrangement.

New facilities investment

APTPPL states that where an extension or expansion is covered, APTPPL can elect to provide access to that additional capacity as:

- (a) part of the existing reference service
- (b) as a separate reference service
- (c) as a negotiated service.

The ACCC does not oppose APTPPL having these options, however, it notes that option (b) – a separate reference service can not be introduced without following the s. 2. requirements of the code, including the need for public consultation.

The ACCC notes that while APTPPL has not specifically addressed a situation where a new facility is necessary to maintain the safety, integrity or contracted capacity of services, it does have the option of increasing the capital base in the next access arrangement period under s. 8.16(a) ii (C) of the code for such investment.

3.7 Review of the access arrangement

3.7.1 Code requirements

Section 3.17 of the code requires an access arrangement to include the date when the service provider must submit to the regulator a revised access arrangement (revisions submission date) and the date when the revisions are expected to take effect (revisions commencement date).

In deciding whether these two dates are appropriate, the regulator must consider the objectives contained in s. 8.1 of the code. Having done so, the regulator may require an amendment to the proposed access arrangement to include earlier or later dates. The regulator may also require that specific major events be defined as a trigger that would oblige the service provider to submit revisions before the revisions submission date (s. 3.17(ii)).

An access arrangement period accepted by the regulator may be of any duration. However, if the period is longer than five years, the regulator must consider whether mechanisms should be included to address the potential risk that forecasts, on which terms of the proposed access arrangement are based, could subsequently prove to be incorrect (s. 3.18 of the code). The code provides examples of such mechanisms for guidance. A regulator therefore could consider triggers for early revision submissions based on:

- divergence of the service provider's profitability or the value of services reserved in contracts from a specified range
- changes to the type or mix of services provided.

The regulator could require a service provider to return to users some or all revenue or profits in excess of a certain amount.

3.7.2 Current access arrangement provisions

The access arrangement currently states that:

- the service provider will submit revisions to the access arrangement on 31 January 2006 (the revisions submission date);

- the revisions will commence on the later of 29 July 2006 (the revisions commencement date) and the date which the regulator's approval of the revisions takes effect.

3.7.3 APTPPL proposal

APTPL has proposed that:

- it submit revisions to this access arrangement on or before 30 November 2010 (revisions submission date)
- those revisions start on 1 July 2011 (revisions commencement date).

Clause 2.3.6 states that:

Where the term of a Reference Service Transportation Agreement extends beyond the Revisions Commencement Date, the tariffs applicable to the Service after the Revisions Commencement Date will be the Reference Tariff for a comparable Service under the then applicable Access Arrangement.

3.7.4 Submissions in response to the revised access arrangement

Origin believes that an undefined tariff reset after the term of the proposed access arrangement is unacceptable. It considers that the proposed reset, coupled with a short five-year access arrangement term, serves to introduce significant uncertainty for market participants about the long-term cost of supplying end-use customers.

This affects users or shippers servicing retail energy markets, where much of the load is subject to a fixed regulated tariff. It also has an effect at higher levels of the gas supply chain where large fixed capital costs necessitate long-term fixed gas prices to underpin recovery of these costs.

Origin therefore proposes to extend the access arrangement term to a minimum of 10 years or alternatively, to exempt all existing transport contracts from the tariff reset for the term of the individual gas transportation agreement(s).

Queensland Gas Company (QGC) states that the potential introduction of a new gas source to the Eastern Australia market has been proposed as sole option for a trigger price review (if and when the eastward gas flows exceed the forward haul rates). However, the underlying demand within the market will cause achievement of equivalent triggers.

In its submission, APTPL argues that trigger events are more appropriate for an access arrangement with longer time frames and consequently greater uncertainty. It states that this is clear from the context of ss. 3.17 and 3.18 of the code. APTPL notes the RBP access arrangement revisions submission date in 2010 is only four years from the current start date.

APTPL stated that under its current configuration the RBP is effectively fully contracted until 2012. It is therefore reasonable to assume that the PNG pipeline will have no effect on the demand for reference services from the RBP before 2011.

APTPPL states that published plans of the PNG pipeline show it possibly connecting to Brisbane by way of two routes: Gladstone–Wallumbilla–Brisbane and Ballera/Moomba–Wallumbilla–Brisbane. If one or both of these routes eventuate, PNG gas will enter the Brisbane market through Wallumbilla and consequently, most likely through the RBP. APTPPL does not expect this to affect demand for RBP services before 2010.

APTPPL maintains that a decision to proceed with the PNG pipeline is not an appropriate trigger event. Such a decision may possibly be made in the next 12 months. This will lead to a review of the then current access arrangement for little benefit and considerable cost.

APTPPL does not consider the commissioning of the PNG pipeline to be an appropriate trigger event. Based on published timeframes any decision to proceed with the PNG project in 2006–7 is unlikely to result in PNG gas into south-east Queensland before 2009–10. In this event it would seem as though the 30 November 2010 date in the access arrangement is an appropriate time to consider the effect of the PNG pipeline.

APTPPL believes that no other major specific events should be trigger events. One of the factors underpinning incentive regulation is that it allows a sufficient period between regulatory resets to allow infrastructure owners to seek out and enact efficiency gains before they are returned to users through the regulatory process. The existence of multiple trigger events is likely to shorten regulatory periods and remove incentives for efficiency.

3.7.5 ACCC's considerations

APTPPL has proposed a five-year access arrangement period with a start date of 1 July 2011. If it had proposed a longer period, ACCC would have been obliged to consider possible trigger mechanisms. The threshold issue to determine is whether a five-year term is appropriate for the RBP.

Origin questioned the proposed length of the access arrangement period because of its concern with clause 2.3.6 of the proposed revised access arrangement. It suggests an extension of the access arrangement term to a minimum of 10 years or alternatively to exempt all existing transport contracts from the tariff reset (the next access arrangement review) for the term of the individual gas transportation agreement(s) referred to in clause 2.3.6.

The arguments put forth by Origin do not support a longer access arrangement period. The regulator will approve the next reference tariff for the RBP during the next revisions process (currently defined as five years) under the requirements of the code giving particular consideration to the objectives of s. 8.1 (or their replacement under revised regulatory requirements). During this process, Origin will be free to make submissions about the appropriate reference tariff or reference tariff principles at that time. It should also be noted that the approval of a clause in the access arrangement does not mean that it becomes a provision of an existing contract. An existing contract (and the charges in such a contract) will continue to apply unless the parties agree to vary it by, for example, adopting the wording of a particular clause.

Origin appears to have misconstrued clause 2.3.6. The ACCC interprets clause 2.3.6 to mean that a reference service transportation agreement entered into under the access arrangement would provide, if its duration extended into the following access arrangement period, for the corresponding reference tariff to apply in the latter period. This provision seems reasonable.

The ACCC has also considered whether there are any circumstances that point to a five-year term being too long for the RBP, particularly given that QGC sees the potential introduction of new gas sources to the Eastern and Western Australian markets in the next few years.

APTPPL states that under its current configuration the RBP is effectively fully contracted until 2012. It is therefore reasonable to assume that PNG pipeline will not affect the demand for reference services from the RBP before 2011. Following this logic, it is reasonable to conclude that APTPPL believes that no other new potential gas sources will affect the RBP before the expiry of the proposed access arrangement period.

An independent report commissioned by the ACCC indicates that APTPPL's demand forecasts are reasonable over the next five years.²²⁰ The ACCC is of the view that the relative certainty provided by these demand forecasts over the five-year access arrangement period is unlikely to distort investment decisions in pipeline transportation systems or in upstream and downstream industries (s. 8.1(d)). The tariff path proposed by the ACCC for the next five years should provide the service provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the reference service over the expected life of the assets used in delivering that service (s. 8.1(a)). It is also in accordance with the s. 8.1(e) objective to achieve efficiency in the level and structure of the reference tariff.

In the absence of compelling reasons to require either a trigger mechanism or a different access arrangement period, the ACCC accepts the proposed revisions submission and commencement dates.

The ACCC's *Access arrangement process guideline* (December 2005) discusses a number of matters relevant to the length of the access arrangement review. The guideline notes that the regulator is obliged to issue a final decision within six months of receiving a proposed access arrangement or proposed revisions to an access arrangement. This may only be possible if the service provider submits all information and supporting documentation considered necessary to meet the terms and conditions of the code. While the ACCC has the power under the code to extend the six-month timetable by up to two months at a time (ss. 2.21 and 2.43), it is aware of the desire for prompt decision making.

APTPPL may wish to consider whether it will be able to supply all information to the regulator on 30 November 2010 or consider an earlier revisions submission date.

²²⁰ MMA, 26 June 2006.

4. Key performance indicators

4.1 Code requirements

The code requires service providers to disclose key performance indicators (KPIs). Category 6 of attachment A of the code lists the following relevant items:

- industry KPIs used by the service provider to justify ‘reasonably incurred’ costs
- the service provider’s KPIs for each pricing zone, service or category of asset.

4.2 APTPPL proposal

APTPPL submitted access arrangement information with the proposed revised access arrangement on 31 January 2006. In response to the ACCC’s request to provide actual data supporting the benchmarking exercise APTPPL provided further information on 7 April 2006. It also provided a report prepared by Infrastructure and Regulation Services (IRS) as the source of the benchmarking measures adopted in the access arrangement information.²²¹ This report is available on the AER website.

APTPPL has noted the limitations of benchmarking but recognises that benchmarking can provide broad indications as to whether a pipeline’s costs lie within the range of possible efficient costs.²²² It has also noted the peculiarities of the RBP including the degree of looping and increased level of easement management due to about 10 per cent of it passing through the built up areas of Brisbane.

APTPPL argues that indicators using pipeline throughput and capacity are generally invalid as throughput and capacity do not significantly affect operating costs. In its view the best indicators use either pipeline length or a replacement value, such as ORC. The benchmarks used by APTPPL are:

- non-capital costs per km of route length
- non-capital costs per km of pipeline length
- non-capital costs as a proportion of capital costs.

Table 4.2.1 represents the key data underpinning APTPPL’s benchmarking exercise.

²²¹ IRS, Non-capital cost benchmarking for the Roma to Brisbane pipeline, January 2006.

²²² APTPPL, Access arrangement information, January 2006, p. 31.

Table 4.2.1: Benchmarking costs data provided by APTPPL

	Non-capital costs as per cent of ORC	Non-capital costs per kilometre (\$)
GasNet	4.27	17,701
Moomba to Adelaide pipeline	2.41	15,262
Dampier to Bunbury pipeline	2.18	21,677
Moomba to Sydney pipeline	1.82	9,404
Goldfields Gas pipeline	3.20	10,450
Roma to Brisbane pipeline	2.05	16,715 ^(a) - 9,691 ^(b)

Source: APTPPL response to ACCC request for information, 7 April 2006.

a. Non-capital costs per route km.

b. Non-capital costs per pipeline km

APTPL submitted that generally the RBP non-capital costs are in line with the industry standard. This view is based on its key findings that:

- the RBP performs moderately for non-capital costs per kilometre of pipeline route and performs favourably for non-capital costs per kilometres of pipeline in situ relative to its comparators
- non-capital costs as a percentage of ORC, at 2 per cent for the RBP, is lower than the level previously accepted by the ACCC for a fully compressed pipeline.²²³

Based on its experience, APTPL states that generalised rules suggest that total pipeline expenses (excluding compressor costs) as a percentage of asset replacement costs are 1.5 per cent (for a large pipeline), 2 per cent (average pipeline) and 2.5 per cent (small pipeline).

4.3 Submissions in response to the revised access arrangement

The Queensland Gas Company (QGC) submitted that APTPL's justification of non-capital costs by comparing it with ORC appears high and that the rule of thumb of cross checking or comparing the costs against the actual capital costs is the most appropriate (once adjusted for inflation).²²⁴ It also noted that APT annual reports have indicated that nationwide operating costs are approximately 21 per cent of revenue and that this ratio should result in costs for RBP of about \$6 m per annum and not the proposed charge of \$9 m.²²⁵

There were no other submissions on this issue.

²²³ APTPL, Access arrangement information, January 2006, p. 33.

²²⁴ QGC, Response to access arrangement and access arrangement information RBP, 18 May 2006, p. 14

²²⁵ *ibid*, para 5 comments on table 10 and s.6.4.1.

4.4 ACCC's considerations

The ACCC recognises the limitations of KPI information as noted by APTPPL,²²⁶ but considers the information can still provide a useful guide in benchmarking operating performance across pipelines.

As noted by APTPPL, the ACCC has previously considered forecast operating cost as a percentage of overall capital costs and indicated that in the interest of comparison between pipeline systems, the ORC figure may be used as a measure of the value of the capital asset employed. It also recognised that forecast non-capital costs as a percentage of overall capital assets employed typically ranges from 2 per cent for an uncompressed pipeline to 5 per cent for a fully compressed pipeline.²²⁷

APTPL's consultant, Infrastructure and Regulation Services (IRS), reported that many benchmarks use total capital investment as a proxy to account for cost differences associated with, for example, pipeline size, terrain, number of compressors etc., and notes that ORC is generally used as a measure of capital investment.²²⁸

Previously, in its assessment of the MSP access arrangement the ACCC noted the extensive debate on the efficacy of different unit cost KPI measures. It also concurred with the service provider on the limitations of benchmarking measures given the traditional difficulties of 'normalising' pipelines. However, to elucidate the costs claimed by the MSP service provider the ACCC calculated additional KPIs for that regulatory decision and those indicators provided broad evidence in support of its concerns with the proposed non-capital costs.

The IRS analysis of non-capital cost benchmarking for the RBP considered the need to use meaningful metrics in conducting a benchmark exercise and concluded that reporting non-capital costs against throughput or capacity can be quite misleading because the costs are not driven by throughput or capacity.²²⁹ The ACCC notes that the varying degrees of available capacity, throughput and utilisation of Australian comparator pipelines tend to undermine the value of capacity or throughput based performance indicators in the absence of acceptable mechanisms of normalisation. Accordingly, the ACCC agrees that the benchmarks provided by APTPPL are appropriate performance indicators.

On the QGC's view about using actual capital costs, the ACCC has indicated previously that it considers the use of the ORC figure to be appropriate in measuring the value of the capital assets employed. It is a useful figure in benchmarking as it reflects the most efficient route and design of a replacement pipeline and would also take account of new technology. Given the differences in pipelines and in particular the age of the original RBP, the use of the ORC figure is more appropriate than the actual capital costs of the RBP in a benchmarking exercise.

²²⁶ A further issue is that forecast costs (rather than actuals) are generally used in Australian pipeline benchmarking studies).

²²⁷ ACCC, Final decision: *MAPS access arrangement*, September 2001, p. 203.

²²⁸ IRS, Non-capital cost benchmarking for the Roma to Brisbane pipeline, January 2006, p. 4.

²²⁹ IRS, Non-capital cost benchmarking for the Roma to Brisbane pipeline, January 2006, p. 5.

In response to QGC's comments on APT's nationwide operating costs, the ACCC notes that the benchmarking exercise will generally be more useful when compared with pipelines that are not owned by APT. Further, the comparator companies already include the MSP which is fully owned by APT and the Goldfields Gas Transmission Pipeline (GGT) which is 88 per cent owned by APT. However, the ACCC compared the approved non-capital costs of the APT owned pipelines as a percentage of revenue for the current access arrangement period. The results indicate that non-capital costs as a percentage of revenue range from 27–31 per cent for the MSP; 15–23 per cent for the GGT, and 27–29 per cent for the RBP.²³⁰ This suggests that the RBP costs are within the broad range of costs as a percentage of revenues for APT pipelines.

APTPPL has expressed costs in its access arrangement information in July 2006 dollars (\$ Jul 06) but is unclear whether all other pipelines costs have been expressed in similar dollars for the benchmarking exercise. The ACCC analysis indicates that this does not materially change the figures or rankings of the results presented by APTPPL.

The ACCC accepts that a comparison with GasNet requires a proportion of VENCORP's operating costs to be considered as part of GasNet's non-capital costs. It accepted this approach in its final decision on revisions to Gasnet's access arrangement.²³¹ In that instance, an annual cost of \$620,000 to accommodate VENCORP's gas control function, as recommended by GasNet's consultant Cap Gemini, was added to the benchmark expenditure for GasNet. In contrast, IRS has included all VENCORP's gas related costs, which are approximately \$16 m a year. This is inappropriate as VENCORP performs a range of functions in the Victorian gas market beyond those undertaken in other states and territories. The ACCC recognises that the precise amount to be allocated to GasNet is not unambiguous and would require a detailed analysis. While such an analysis of this issue has not been undertaken for this draft decision GasNet's reported costs would be about 40 per cent less if the only VENCORP costs included were for the gas control function.

This decision recognises that some costs are driven by pipeline length and therefore all pipelines cannot be compared on the basis of pipeline route kilometres. This is of particular relevance to the RBP as it is almost a completely looped pipeline. None of the other pipelines exhibit similar levels of looping. Although the RBP has the shortest route, when the looped component is added its length is more comparable to the length of the other pipelines included in the table above.

For the RBP it is reasonable to consider both pipeline route kilometres and pipeline in situ kilometre measures. Although the RBP's costs per route kilometre are at the upper end of the range, comparing the costs per pipeline kilometre provides the opposite result. The ACCC recognises that looping may provide some cost benefits such as for common easement management. However, some cost items such as 'pigging' and 'cathodic protection' are driven by the length of the pipe.

²³⁰ ACCC, MSP final decision, October 2003, pp. 156 and 204; ERA, GGT final decision, May 2005, pp. 82 and 90; and RBP Access arrangement information, January 2006, pp. 21 and 22.

²³¹ ACCC, Final Decision GasNet Australia access arrangement revisions for the Principal Transmission System, 13 November 2002, p. 297.

Therefore, given the peculiarities of the RBP the ACCC concurs with APTPPL that a comparison of both measures will provide a range in which it would be reasonable to accept the composite measure to fall. Consideration of both distance based measures indicates that the RBP performs within an acceptable range in the distance-based benchmarks presented by APTPPL.

APTPPL performs relatively well on non-capital costs as a percentage of ORC (2.05 per cent). This figure is near the bottom of the range of results in table 4.1 being above only the MSP. This decision has recognised the difficulties associated with ‘normalising’ pipelines in undertaking a benchmarking exercise. However, it could be argued that the RBP is most comparable with MAPS (based on the level of intensity of compression) or with the DBNGP (based on capacity utilisation). On the other hand, both MAPS and DBNGP do not exhibit the same level of looping as in the RBP. The difficulties which arise from differences in the terrain and geographical conditions associated with the pipeline route can also make ‘normalising’ of pipelines difficult.

The ORC for the RBP reflects recent substantial capital cost increases associated with pipeline construction and comparisons with pipelines whose capital bases were established in earlier years tend to show it in a more favourable light for that reason. Benchmarking based on ORC as a denominator must be used with caution in circumstance where capital costs are escalating steeply. Nevertheless, as noted earlier the measure of costs as a proportion of ORC is a reasonable benchmark and it provides a broad indicator of operating efficiency.

The limitations of benchmarking studies given the inherent difficulties of comparing pipelines that exhibit different characteristics such as pipeline diameter, number of compressors, throughput, number of off-takes and different system operations has been recognised. However, the three KPIs provided by APTPPL broadly support the conclusion that the proposed non-capital costs (as amended) are reasonable and comparable with those of a prudent service provider operating efficiently in accordance with the code.

5. Draft decision

Pursuant to section 2.35(b) of the code, the ACCC proposes not to approve APTPPL's access arrangement for the RBP in its present form. This draft decision states the amendments, or nature of amendments as appropriate, that would have to be made in order for the ACCC to approve the proposed access arrangement.

Amendments from Chapter 2 – Tariff

Amendment 01

Before APTPPL's revised access arrangement for the RBP can be approved, the value of the ICB must be set at \$250.63 m.

Amendment 02

APTPPL must amend the rate of return estimates and associated parameters forming part of the access arrangement and access arrangement information to reflect the ACCC's estimates as set out in table 2.5.5.5 of this draft decision. The calculation of reference tariff must reflect these parameters.

Amendment 03

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on wages and salaries as set out in table 2.6.5.1.

Amendment 04

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on non-labour costs to exclude the amounts proposed for the Agility management fee.

Amendment 05

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to remove the component for external legal costs from its proposed expenditure.

Amendment 06

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement by reducing the costs for additional security measures from \$100 000 to \$50 000.

Amendment 07

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must implement appropriate administrative arrangements as described above in this section (2.6.5).

Amendment 08

Before APTPPL's revised access arrangement can be approved, the reference tariff must be amended to the starting tariff of

- Capacity Reference Tariff = 0.3819 (\$/GJ of MDQ / day)
- Throughput Reference Tariff = 0.0255 (\$/GJ)

and thereafter increased annually by CPI-X where X = 0.87

Amendment 09

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 4.4 (b) by removing the words in brackets ('except for the purposes of the review on 1 July 2007 when CPI_{n-1} means the CPI published for the September quarter 2005').

Amendments from Chapter 3 – Non-tariff

Amendment 10

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to state that while daily total receipt MDQ has to match daily total delivery MDQ there is flexibility in varying individual receipt point MDQ and individual delivery point MDQ.

Amendment 11

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend s. 68(b) to read the 'User agreeing to pay a reasonable charge (determined by APTPPL and the User) for the cost of transfer of the capacity. If the transfer does not proceed to completion, the User will only be liable for the legal and other costs associated with consideration of the request to transfer up until the time the user notifies APTPPL that it has decided not to proceed.'

Amendment 12

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clauses 55 and 56 so that it states a users' allocation must include the following information:

- nominations
- meter readings
- identity of shippers using the receipt or delivery points
- a clear description of the tranche or pro rata methodology used.

Amendment 13

For APTPPL's proposed revised access arrangement for the RBP to be approved, APTPPL must amend the formulae specified in clause 2.3.3 to:

(a) $\text{APTPPL's obligation} = \text{MDQ} * (\text{AHV2}/\text{AHV1}) * \sqrt{(\text{RD1}/\text{RD2})}$

(b) $\text{Adjusted throughput charge} = \text{throughput charge} * (\text{AHV1}/\text{AHV2}) * \sqrt{(\text{RD2}/\text{RD1})}$

where

AV1 = heating value of the reference gas e.g. average for the year 2005

AV2 = average heating value of gas received on the day

RD1 = relative density of the reference gas e.g. average for the year 2005

RD2 = average relative density of gas received on the day.

Amendment 14

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add an additional clause at the end of the provision to include the words, 'The order of priority will be determined in a non-discriminatory manner with firm services (whether negotiated or reference services) having the highest priority.'

Amendment 15

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 24 of the terms and conditions to 'Where volumetric metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the volume of gas delivered and the average heating value per unit volume of gas delivered as declared or measured for the pipeline on that day. Where mass flow metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the mass of gas delivered and the average heating value per unit mass of gas delivered as declared or measured for the pipeline on that day.'

Amendment 16

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the words under the heading 'Delivery station' in schedule 3 of the access arrangement as follows:

Add the word 'reasonable' before 'technical, operational or safety considerations'.

Amendment 17

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must explain in its proposed trading policy what constitute 'reasonable commercial grounds' and 'reasonable commercial conditions'. These must be consistent with code principles.

Amendment 18

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its proposed revised access arrangement to specify the conditions under which the trading of linepack will or will not be permitted. Such conditions must be reasonable and subject to approval by the ACCC.

Amendment 19

Before APTPPL's proposed revised access arrangement can be approved, APTPPL must add a clause to the end of s. 6.1(e) of the proposed queuing policy to state that it will specify an indicative tariff before the start of an investigation into new capacity. This may be an indicative tariff specified in the information package if that indicative tariff is appropriate for the service sought by the prospective user.

Amendment 20

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add a clause to the proposed queuing policy to state that a user who pays for a capacity investigation will be provided with a written report which:

- details the options considered to provide the developable capacity
- provides an itemised cost estimate for at least the recommended option
- provides a firm tariff for the capacity sought and the basis for deriving the tariff
- provides details on the allocation of costs of providing new capacity when more than one user would be using the new capacity.

Amendment 21

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to permit a prospective user to transfer its rights in a queue to another prospective user.

Amendment 22

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to provide for separate queues for existing and new capacity.

Appendix A: Submissions

The following parties provided submissions prior to this draft decision.

Organisation	Date received
APT Petroleum Pipelines Limited	18 May 2006
Energex (Sun Retail Pty Ltd)	18 May 2006
Queensland Gas Company	18 May 2006
TRUenergy Australia Pty Ltd	18 May 2006
Origin Energy	19 May 2006
APTPPL - comment on submissions to ACCC Issues Paper on the RBP Access Arrangement	4 July 2006

Appendix B: Attachment A of the code

Information disclosure by a service provider to interested parties

Pursuant to section 2.7 the following categories of information must be included in the access arrangement information.

The specific items of information listed under each category are examples of the minimum disclosure requirements applicable to that category but, pursuant to sections 2.8 and 2.9, the relevant regulator may:

- allow some of the information disclosed to be categorised or aggregated; and
- not require some of the specific items of information to be disclosed if in the relevant regulator's opinion it is necessary in order to ensure the disclosure of the information is not unduly harmful to the legitimate business interests of the service provider or a user or prospective user.

Category 1: Information Regarding Access & Pricing Principles

- Tariff determination methodology
- Cost allocation approach
- Incentive structures

Category 2: Information Regarding Capital Costs

- Asset values for each pricing zone, service or category of asset
- Information as to asset valuation methodologies - historical cost or asset valuation
- Assumptions on economic life of asset for depreciation
- Depreciation
- Accumulated depreciation
- Committed capital works and capital investment
- Description of nature and justification for planned capital investment
- Rates of return - on equity and on debt
- Capital structure - debt/equity split assumed
- Equity returns assumed - variables used in derivation
- Debt costs assumed - variables used in derivation

Category 3: Information Regarding Operations & Maintenance

- Fixed versus variable costs
- Cost allocation between zones, services or categories of asset & between regulated/unregulated
- Wages & Salaries - by pricing zone, service or category of asset
- Cost of services by others including rental equipment
- Gas used in operations - unaccounted for gas to be separated from compressor fuel
- Materials & supply
- Property taxes

Category 4: Information Regarding Overheads & Marketing Costs

- Total service provider costs at corporate level
- Allocation of costs between regulated/unregulated segments
- Allocation of costs between particular zones, services or categories of asset

Category 5: Information Regarding System Capacity & Volume Assumptions

- Description of system capabilities
- Map of piping system - pipe sizes, distances and maximum delivery capability
- Average daily and peak demand at "city gates" defined by volume and pressure
- Total annual volume delivered - existing term and expected future volumes
- Annual volume across each pricing zone, service or category of asset
- System load profile by month in each pricing zone, service or category of asset
- Total number of customers in each pricing zone, service or category of asset

Category 6: Information Regarding Key Performance Indicators

- Industry KPIs used by the service provider to justify "reasonably incurred" costs
- Service provider's KPIs for each pricing zone, service or category of asset

Appendix C: Rate of return general information

The following discussion on the post-tax approach and the proxy equity beta provides general information relevant to the ACCC's assessment of APTPPL's proposed rate of return.

C.1 Post-tax approach

The post-tax approach explicitly accounts for tax liabilities and eliminates the need to calculate a tax wedge and a long term effective tax rate. While assumptions on inflation are still required, they are only needed to be made over the access arrangement period rather than the life of the assets. Thus, the approach overcomes the problems associated with estimating these parameters. This approach also allows for the estimation of the pre-tax real WACC through the simulation of expected cash flows over the life of the asset.

The explicit compensation for tax also avoids the potential for incorrect compensation for future tax liabilities and an under or over recovery of revenue over the life of the assets. As far as the service provider is concerned, the post-tax approach removes any risks associated with future tax liabilities by ensuring full compensation for tax liabilities over the access arrangement period.

The ACCC has utilised the post-tax approach to assess APTPPL's proposed revenue and tariff over the coming access arrangement period. In doing so the ACCC has applied the vanilla WACC to the capital base with tax liabilities and imputation credits being accounted for explicitly through the cash flows. The cash flow modelling requires some assumptions about:

- benchmark tax liabilities
- initial tax position
- depreciation rates
- company tax rate
- value of imputation credits.

Tax related issues

A key objective in determining the allowance for taxation is that it reflects an estimate of tax liabilities for an efficient company. A number of the inputs required to deduce likely tax liabilities for the regulated operations are readily available from the regulatory framework, namely:

- assessable revenue—assumed to be the benchmark revenue
- operating expenditure—assumed to be the forecast operating expenditure
- capital expenditure—taken to be forecast capital expenditure

- interest expenses—taken as the nominal interest payments implied by the benchmark financing arrangements (in particular the gearing ratio).

The remaining information required includes:

- the tax position of the regulated business at the start of the access arrangement period
- information to determine depreciation allowances for taxation purposes
- an assumption on the company tax rate
- and an assumption on imputation credits facing the benchmark firm.

The initial tax position of the firm is essentially defined by two variables: the written down value of the assets for tax purposes and the carried forward tax loss which can be offset against future income to diminish future tax liabilities. The written down value of the assets at the start of the access arrangement period is needed to determine the amount of tax depreciation that can be assigned to reduce assessed income and hence the associated tax liability. A carried forward tax loss is incurred when previous tax depreciation results in assessable income being negative. This negative carryover can be offset against future positive income and tax liabilities.

Effective tax rate

An estimation of the tax liabilities may be made in light of these assumptions. The effective tax rate is not required as an input for the determination of regulated revenues within the post-tax framework. Rather, the required return on capital is generated independently of the effective tax rate. The effective tax rate may still, however, be estimated in the post-tax framework by simulating cash flow expectations over the life of the asset and comparing the post-tax return on equity (r_e) determined through the CAPM with the pre-tax return on equity derived through the cash flows (r_{te}) using the relationship below (where T_e is the effective tax rate).

$$r_e = r_{te} \cdot (1 - T_e)$$

Value of imputation credits

The tax system recognises that tax paid by the company is in effect personal income tax withheld at the company. The imputation system provides value to the shareholders and requires a modification to the standard CAPM and WACC models to reflect this value. This modification is carried out through the introduction of gamma (γ) which measures the proportion of imputation credits which can on average be utilised by shareholders of the company to offset tax payable on other income.

The ACCC's post-tax approach accounts for gamma in the cash flows. This approach provides for the regulated entity's taxes less the value accorded to gamma. It recognises that the portion representing the value of gamma will be paid to the investor through the imputation system by the Australian tax office and therefore treats gamma as an offset to its taxes. The value of gamma lies between zero and one (no value and full value). A higher gamma therefore reduces the required return on equity and in turn the WACC. As a consequence, the value accorded to the parameter has been the source of much debate.

C.2 Equity beta

For listed entities the estimation of an ex-post equity beta is relatively straightforward requiring only a sufficiently long time series of returns to the entity and the market portfolio to estimate the expected volatility of the entity relative to the overall market. Formally, this is given by:

$$\beta_e = \frac{Cov(r_e, r_m)}{Var(r_m)}$$

A common method to estimate a proxy beta is to have recourse to a group of listed entities that are considered to be operating in a similar business and facing similar levels of systematic risk as the regulated entity. However, given the effect gearing has on the equity beta an alternative measure that removes the effects of gearing (de-levering) is required. That alternative measure is the asset beta (β_a) which is the equity beta that would apply if the firm was wholly financed by equity. The asset beta is derived by ‘de-levering’ the equity beta.

The asset beta may then be converted to an equity beta using a consistent gearing assumption. The elimination of the gearing effect then enables comparisons to be made across entities (or with the same entity over time) either on an asset beta basis or on a re-levered equity beta basis.

While there are several de-levering and re-levering formulae available, the ACCC has typically adopted the Monkhouse formula, which recognises the effect of imputation credits. It is also consistent with the CAPM assumptions. That is, it is derived on the basis that the firm has an active debt management policy which maintains gearing at a constant level. The Monkhouse formula can be written as:

$$\beta_e = \beta_a + (\beta_a - \beta_d) \left[1 - \left(\frac{r_d}{1 + r_d} \right) (1 - \gamma) T_e \right] \frac{D}{E}$$

This formula may be used to de-lever from an equity beta with a specific gearing ratio to yield the relevant asset beta. It may then be used to re-lever to an equity beta with a standard gearing ratio. The process of de-levering and re-levering also requires an assumption regarding the value for the debt beta (β_d) which measures the level of systematic risk borne by debt holders. If an equity beta is de-levered to derive the relevant asset beta and then re-levered it to derive a benchmark equity beta, then provided the same debt beta assumption is used, the actual value assumed for the debt beta will have only a minor effect on the re-levered equity beta.