Draft Decision

Access Arrangement proposed by Epic Energy South Australia Pty Ltd for the Moomba to Adelaide Pipeline System

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Commissioners:
Fels
Shogren
Martin
Cousins
Jones

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Abbreviations and glossary of terms

ABDP	Amadeus Basin to Darwin Pipeline (Northern Territory)
ACCC	Australian Competition and Consumer Commission
AGL	The Australian Gas Light Company
AGLES&M	AGL Energy Sales & Marketing Limited
ATO	Australian Taxation Office
BG	British Gas Transco or British Gas plc
Boral or Boral Energy	Boral Energy Limited, which became Origin Energy Limited in February 2000
CAPM	capital asset pricing model
code	*National Third Party Access Code for Natural Gas Pipeline Systems*
Commission	Australian Competition and Consumer Commission
covered pipeline	pipeline to which the provisions of the code apply
CPI	Consumer Price Index
CCA	current cost accounting: an accounting framework in which the value of capital assets is maintained in real terms by the application of an index for changes in the general level of prices or in a specific range of prices
CW	Connell Wagner Pty Ltd
DAC	depreciated actual cost
DBNGP	Dampier to Bunbury Natural Gas Pipeline
DEA	Data envelopment analysis, referred to by TGT
DEI	Duke Energy International
DORC	depreciated optimised replacement cost
EAPL	East Australian Pipeline Limited, operator of the Moomba-Sydney Pipeline System prior to the June 2000 float of the Australian Pipeline Trust
EBB	electronic bulletin board
EGP	Eastern Gas Pipeline (Victoria/New South Wales)
Epic	Epic Energy South Australia Pty Ltd
ETSA	ETSA Power, acquired, since its submission was made, by a member company of the AGL group
GUF	gas unaccounted for
GJ	gigajoule
GPA	GPA Engineering Pty Ltd
GPAL or Law	Both terms refer to *Gas Pipelines Access (South Australia) Law* or *Gas Pipelines Access Law*
GSN	Great Southern Energy Gas Networks Pty Limited

GST	Goods and Services Tax
haulage	the term generally applied in this draft decision to the service provided by the operator or owner of a gas pipeline transmission system. Also described in the industry as ‘transmission’ or ‘transportation’ of gas
ICB	initial capital base
imputation tax credit	the deduction from an Australian shareholder’s personal tax liability that the shareholder can claim when an Australian company pays dividends from profits that have been subject to Australian corporate tax
IPART	Independent Pricing and Regulatory Tribunal, New South Wales
KPI	key performance indicator
kW	kilowatt (unit of power)
Law or GPAL	*Gas Pipelines Access (South Australia) Law* or *Gas Pipelines Access Law*
m	million
MAPS or MAP	Moomba to Adelaide Pipeline System
MDQ	maximum daily quantity
MHQ	maximum hourly quantity
MMC	Monopolies and Mergers Commission (Great Britain), now known as the ‘Competition Commission’
MPa	megapascal (unit of pressure)
MRP	market risk premium
MSOR	Market and System Operations Rules (Victoria)
MSPS	Moomba - Sydney Pipeline System
NAdb	Nadb Energy Services Pty Ltd
NGASA	Natural Gas Authority of South Australia
NPV	net present value
O&M	operating and maintenance (costs)
OEP	Office of Energy Policy (SA)
OFO	operational flow order
ORG	Office of the Regulator-General (Victoria)
Origin Energy	Origin Energy Limited, known as ‘Boral Energy Limited’ until February 2000, when it was publicly listed
p.a.	per annum
PASA	Pipelines Authority of South Australia, the operator of MAPS prior to Tenneco Energy and Epic Energy
PCQ	primary capacity quantity
PIRSA	Primary Industries and Resources SA

PJ	petajoule (equal to 1 000 000 GJ)
SA	South Australia
SAGEUG	South Australian Gas and Electricity Users Group
SAIPAR	South Australian Independent Pricing and Access Regulator
SCADA	supervisory communications and data acquisition (for monitoring and control of pipeline gas flows)
shipper	an alternative term generally used in this draft decision to describe an existing user of MAPS
SPC	system primary capacity
SSC	system secondary capacity, a term used by Boral in its submission
STC	Stephen Timms Consulting Pty Ltd
TCF	trillion cubic feet (volume of gas)
Tenneco	Tenneco Gas Australia, which later became Tenneco Energy Australia and subsequently, Epic Energy
TFP	total factor productivity
TGT	Terra Gas Trader Pty Ltd, trading as 'Terra Gas trader'
TJ	terajoule (equal to 1 000 GJ)
TPA	in this draft decision, refers to both Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd
UAG	unaccounted-for gas
vanilla WACC	the nominal weighted average of the cost of equity and debt to the business before any adjustments for taxes and change in the general level of prices vanilla WACC = $E/V.R_e + D/V.R_d$ where R_e is the post-tax cost of equity determined by the CAPM formula; R_d is the pre-tax nominal cost of debt
Victorian Code	*Victorian Third Party Access Code for Natural Gas Pipeline Systems*
WACC	weighted average cost of capital

Executive summary

Introduction

On 1 April 1999 Epic Energy South Australia Pty Ltd (Epic) applied for approval of its proposed access arrangement for the Moomba to Adelaide Pipeline System (MAPS). The application was made under section 2.2 of the *National Third Party Access Code for Natural Gas Pipeline Systems* (the code).

The Commission now releases its draft decision on the application and invites submissions from the applicant and interested parties by Thursday, 14 September 2000, to assist the Commission in reaching a final decision.

MAPS connects the Cooper Basin production and processing facilities, at Moomba, to markets for natural gas in Adelaide and in regional centres including Port Pirie, Whyalla and Berri, the regional centres being connected to the trunkline by laterals. Most of the demand for gas haulage services arises in the Adelaide area.

Epic's access arrangement describes the reference tariff, access policies and the terms and conditions on which the company proposes to make access to its pipeline system available to third parties. Epic's access arrangement information explains how the proposed reference tariff, access policies and the terms and conditions of access have been devised. The Commission has conducted its assessment of the proposed access arrangement and access arrangement information against the principles in the code, using information provided by Epic and interested parties and the results of its own research and analysis.

Epic has indicated that the firm (FT) and interruptible (IT) services described in the access arrangement can only be made available in limited circumstances in the initial access arrangement period. The pipeline system capacity is fully committed and the terms of the existing haulage agreements (notably shipper rights to renominate on the gas day and shipper control of available capacity at delivery points) limit the service provider's flexibility in the type of service it can provide while those agreements continue. As the pipeline system is fully contracted, unless existing firm capacity is released, applications for access to the pipeline system, at least for firm service, are likely to involve parties making a capital contribution for new facilities.

Since the access arrangement was lodged, Epic has proposed to redesign its IT service. However, Epic is still expected to earn its revenues primarily from existing haulage agreements. To a lesser degree, revenues will also flow from other arrangements entered into outside the terms of the access arrangement.

Therefore, most of the total revenue that will accrue to Epic over the initial access arrangement period cannot be varied by the Commission's decision on the access arrangement, since this revenue is derived from existing contractual rights or will fall outside the access arrangement for this period.

The Commission estimates that under the existing contracts, Epic Energy will continue to receive revenues yielding a nominal after-tax return on equity of 18 per cent per annum on the regulatory asset base assessed by the Commission. Under the code, these

agreements are preserved irrespective of the Commission's decision on the access arrangement.

In the future when new gas haulage contracts are negotiated, the terms of the access arrangement will form an important input to these negotiations. If the proposals made by the Commission in this draft decision are fully applied when new gas contracts are negotiated, Epic Energy would receive a return on equity of 13 per cent p.a.

The Commission is concerned that the agreements made in 1995 substantially foreclose the opportunities for new entry provided by a deregulating gas market. The Commission is also concerned that Epic proposes, in providing for the parties to give effect to the provisions of the existing haulage agreements in its access arrangement, to not entirely exclude exclusivity rights that arose on or after 30 March 1995. Furthermore, apart from the question of exclusivity rights, as will be explained later in relation to the queuing policy, the Commission has been concerned to address the possibility that the parties may seek to extend the existing agreements in substance beyond 2005.

At the time the agreements were made (30 June 1995), the COAG commitment to free and fair trade in gas had been in place for more than a year and steps were being taken towards its implementation. The parties were therefore in effect on notice that regulatory bodies and policy-makers were likely to view with concern new arrangements that ran counter to the COAG principles. The code's cut-off date for preservation of exclusivity rights (30 March 1995) reflects that logic. However, the constraints in the existing agreements (identified in the original access arrangement and in Epic's March 2000 revisions) that hinder the development of competition go beyond the exclusivity rights. The clauses that are not exclusivity rights are protected from regulatory intervention for purposes of applying the code to the access arrangement. (See discussion below under 'Relevance of existing haulage agreements'.)

A number of factors identified in the draft decision together mean that unless other developments (such as a new pipeline) occur, the difficulties facing new entrants will continue throughout the period of this arrangement and into the future. Relevant issues, in the light of the pipeline being at full capacity, are Epic's proposed queuing and extensions and expansions policy and contract renewal terms.

The Commission has proposed amendments to the access arrangement to address these issues.

The draft decision at a glance

The following table sets out the key parameters of the Commission's draft decision.

All figures are stated as at 30 June 2000 (except where specifically noted) and are stated to the nearest decimal point.

Parameter	Epic proposed	The Commission proposes
Optimised replacement cost (ORC) of pipeline system assets	$570m $December 1998 (Applying a CPI index, equates to $590m in June 2000.)	$527m $June 2000.
Initial capital base	$354m $June 2000 after depreciation of the ORC system and having regard to other valuations. $383m $June 2000 if assets were depreciated by asset class. (Valuation proposed by Epic in May 2000 correspondence with Commission.)	$310m $June 2000 after depreciation of the ORC system by asset class, deferred tax adjustment and having regard to valuations using other methodologies.
Stay-in-business capital	$2.5m calendar 2000 and thereafter as estimated in access arrangement information.	Accepted subject to review of expenditures before next period of access arrangement commences.
Working capital	$0.8m and similar levels in each following year.	Not accepted submissions invited from interested parties.
Escalation of initial capital base	CPI as fixed principle.	CPI fixed principle not approved.
Nominal rate of return on service provider's equity in initial capital base	13.1%-16.8% p.a. on initial capital base proposed by Epic.	13.0% p.a. on initial capital base proposed by Commission.
Gearing ratio assumed for purposes of calculating return on equity and other cost of capital parameters	60:40 debt:equity.	Accepted.
O&M expenditure	$14.9m calendar 2000 and thereafter as estimated in access arrangement information.	Accepted as reasonable having regard to industry yardsticks. To be reviewed before next period commences.
Forecast revenue (continued next page)	$56.1m initial calendar 2000 annual cost of service.	$45.7m (actually stated on half-yearly basis for 2000 as $22.9m, thereafter annually).

Parameter	Epic proposed	The Commission proposes
Forecast revenue (continued)	Application for approval limited to $51.2m calendar 2000 contract revenue, with forecast revenue thereafter to increase in line with contract revenues.	Forecast revenue thereafter calculated as forecast cost of service revenue, subject to a smoothing factor, CPI-X, where X = 1.6%. $44.2m ($22.1m on half-yearly basis for 2000, thereafter annually) if tariff escalator – see below – is approved in final decision. Forecast revenue to be reviewed before next access arrangement period commences.
Projected tariffs	Tariffs calculated from existing contract revenue divided by contract volumes.	Tariffs calculated from cost of service revenue divided by system capacity (since pipeline is fully contracted).
Tariff escalator	95% of CPI (for 12 months ending previous September).	Amount to be decided in final decision, subject to market submissions in the light of tariff escalator's relevance to revised extensions and expansions policy proposed by Epic in March 2000. At this stage the Commission proposes a CPI-X escalator where smoothing factor, X = 1.6%.
Incentive mechanism for shippers to release firm capacity for interruptible (IT) service.	Proposed by Epic March 2000.	Accepted.
Requirement for third parties to sign existing facilities agreement for access to infrastructure serving existing shipper's firm capacity reservations.	Proposed by Epic March 2000.	Accepted but rejected in respect of seeking consent to use the laterals.
Access arrangement period	From final approval until 31 December 2005.	Accepted.
Revisions submission date (commencement of review period)	1 July 2005.	Accepted.

Parameter	Epic proposed	The Commission proposes
Significant major event to be trigger for early review.	Concept rejected by Epic in response to submission and later discussions.	Proposed amendment by ACCC, submissions invited as to: ▪ whether to so amend; ▪ if so, definition of trigger event; and ▪ appropriate scope of regulatory review.

Reference tariff elements

Epic has proposed a cost of service methodology, where total revenue is set to recover costs. These costs are calculated using the building block approach, comprising a return on capital, a return of capital (depreciation) and operating and maintenance costs. The rate of return is set to provide a return commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service.

The initial capital base

Evaluation of the capital base

In assessing the initial capital base, the Commission has had regard to Epic's depreciated optimised replacement cost (DORC) calculations based on both the weighted average life of the pipeline system as a whole and depreciation by asset class. In addition, the Commission has been guided by the results of a desk-top audit by Connell Wagner Pty Ltd (consulting engineers), the depreciated sale price, the adjusted book value, and the residual value resulting from economic depreciation of the sale price of the PASA pipeline assets. The code required the Commission to consider the depreciated actual cost (DAC) of the pipeline system assets. However, in the Commission's view the aggregation of depreciated capital expenditures made over a long period while the pipeline was in government ownership does not provide a useful indicator of the return on capital that a private sector operator could reasonably expect.

The Commission has adopted the least-cost option identified by its own analysis – generally comparable to Epic's Option D. The optimisation model differs from Epic's mainly in the treatment of the Port Pirie-Whyalla lateral and compression requirements and relies on a more detailed methodology than that employed by Epic in its submission. This issue is discussed further in section 2.2 and Annexure 2 of the draft decision.

For the purposes of evaluating DORC, Epic proposed to depreciate the pipeline system as a whole – assuming that the pipeline has a remaining life of 50 years, following 29 years' service at the time of valuation. The Commission considers that this approach does not provide the transparency necessary to track movements in assets over time and, in particular, makes it difficult to link capital expenditure to the expiry of assets. Therefore, in depreciating the ORC to arrive at a DORC valuation for a pipeline system, the Commission favours depreciation by asset class.

Adjustment of the capital base

In assessing revenues for services of infrastructure assets it is essential to take account of the tax depreciation provisions linked to those assets so as to adequately provide in the revenues for tax expenses. This is the objective of the Commission's preferred post-tax cost of capital methodology. Accelerated tax depreciation not only defers the timing of taxes but also means that the tax depreciation is exhausted in advance of economic or regulatory depreciation of the assets.

This raises the issue of how to account for the exhaustion of tax depreciation in establishing the regulatory asset base for established businesses at the commencement of an access arrangement period.

Taking first the taxation treatment, if the physical assets were transferred or sold, the Australian Tax Office (ATO) would permit the tax value to be re-established for tax depreciation purposes, based on the sale price. (This is what happens when government assets are privatised and is the basis for Epic's 1995 written-down tax valuations.) Where a company is not sold or is sold as a going concern, the ATO does not normally permit a re-establishment of the asset value for tax depreciation but relies on the earlier written-down tax value of the assets for future tax assessment.

There is a similar issue regarding the valuation of the regulatory asset (capital) base.

If ownership of the assets is transferred at the time the regulatory asset base is established, no adjustment needs to be made for what has happened in the past. Epic's situation at the commencement of this access arrangement period is that of an established, continuing business. The asset transfer is not taking place now; it occurred five years ago. Therefore, a substantial part of Epic's tax depreciation concessions may already have been utilised to defer tax.

As the tax liabilities deferred will have to be paid in the future, the value of future cash flows to the business is reduced. Accordingly, there is a reduction in the value of the physical assets to the continuing business.

The difference in value for the continuing business is closely approximated by the estimated value of cumulative deferred tax liabilities. This difference in value represents the savings in immediate tax expense that have already been realised by the business through accelerated depreciation.

The component of the firm's revenue requirement that these deferred taxes represent can be interpreted as compensation for the loss in value of future cash flows. That is, it is a return of capital, reflecting the reduction in the value of the physical assets to this business arising from its deferral of tax. It is therefore appropriate to reflect this return of capital in the regulatory asset base by reducing the valuation of the physical assets derived by other means, in this case, derived by a DORC estimation.

Where historic revenues have included a component to cover normal or prima facie taxes, users will already have compensated the business for the associated tax payments or loss of value of future cash flows by a corresponding amount. This issue is taken into account in modelling the post-tax revenue requirement.

To establish the initial MAPS capital base in accordance with the principles outlined above, the Commission proposes to adjust the valuation yielded by DORC for Epic's accumulated deferred income tax liability.

The amount of the adjustment is only a portion of the accumulated liability. This reflects the fact that investors receive the value of imputation credits associated with the payment of tax liabilities. The deferral of tax through accelerated depreciation gives imputation credits diminished value in the hands of shareholders. For the purposes of this access arrangement, the Commission has adopted a multiplier of 50 per cent to represent the rate of utilisation of imputation credits by shareholders, as discussed in section 2.5.4 of the draft decision.

In respect of Epic, the amount of the adjustment for deferred tax is $6 million. Unless this adjustment is made to the initial capital base, the quantum of capital that has been returned to date to the entity would be understated. Consequently its initial capital base would be overstated, with the result that two components of cost of service (return on capital and depreciation) would be overstated in each succeeding year.

Initial capital base

The Commission has taken into account the requirements of the code in assessing the information available to it and applying its previous practice, the *Draft Regulatory Principles*[1] and its developing principles.

The Commission has thereby determined an initial capital base for MAPS using its DORC methodology, adjusted for deferred tax liabilities, of $310 million.

The rate of return

Using the Capital Asset Pricing Model (CAPM) Epic proposed a nominal cost of equity of between 13.08 per cent and 16.84 per cent. Epic derived a real pre-tax weighted average cost of capital (WACC) range of 9 per cent to 10 per cent using a 'forward transformation' conversion process.

As outlined in its *Draft Regulatory Principles* and in recent decisions,[2] the Commission prefers to use a post-tax regulatory framework. The post-tax nominal return on equity is better understood by financial markets than the pre-tax real weighted average cost of capital (WACC), with shareholder returns typically being expressed in nominal, post-tax terms. Furthermore, the post-tax nominal return on equity determines whether investors are willing to advance equity to finance the capital infrastructure required to provide services.

Based on its own analysis and the parameters identified by the Commission as being appropriate to Epic within this access arrangement period, a nominal cost of equity of **13.0 per cent** per annum was derived. Based on cash flow modelling, the pre-tax real

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1 ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues,* 27 May 1999.

2 ACCC, 'NSW and ACT Transmission Network Revenue Caps 1999/00-2003/04', *Decision,* 25 January 2000 and ACCC, 'Access Arrangement by AGL Pipelines (NSW) Pty Ltd for the Central West Pipeline', *Final Decision,* 30 June 2000.

WACC that corresponds to a post-tax nominal return on equity of 13.0 per cent is 6.7 per cent.

In establishing the cost of service revenue requirement, the Commission has normalised Epic's tax payments over the life cycle of the assets to avoid discontinuity in the level of the revenue requirement and reference tariffs. The objective of normalisation is to ensure that in a later period customers do not pay a disproportionately high charge for services provided by the same portfolio of assets as the result of higher tax payments that will need to be made at that time. To normalise tax liabilities, the Commission has included in the post-tax revenue stream a normalisation factor that, in effect, represents additional depreciation (or return of capital).

The cost of service revenue stream proposed by the Commission has been smoothed using a CPI-X mechanism to prevent volatility in the reference tariff over the access arrangement period. Under this approach, revenues are increased annually by CPI-X where the 'X' factor is set such that the net present value (NPV) of the 'smoothed' revenue stream is equivalent to the NPV of the 'unsmoothed' revenue stream over the access arrangement period. The 'CPI-X' approach to revenue smoothing has been used by the Commission in its other regulatory decisions and has been widely used by other regulators in Australia and overseas.

The Commission has used the cost of equity and WACC it derived to determine the revenue requirement for Epic for each year during the regulatory period. The Commission has proposed an amendment to the access arrangement to link the reference tariff to the cost of service revenue requirement rather than, as proposed by Epic, to revenues under existing contracts (refer to section 2.8).

Operating and maintenance costs

A widely-accepted benchmark for operating and maintenance costs is cost per pipeline length. This indicator was not provided by Epic, but was derived by the Commission and compared with those for other pipelines. Generally, Epic's operating costs lie at the high end of the range, however, this is largely attributable to MAPS being a shorter and more highly compressed pipeline.

The Commission considers that the O&M costs proposed by Epic over the access arrangement period are reasonable. When the Commission reviews the access arrangement at the end of 2005, it will consider whether the level of costs continues to be appropriate in the light of corporate restructuring that occurred after the access arrangement was lodged.

Reference tariffs and reference tariff policy

Epic has argued that its existing capacity is fully committed and operational flexibility impacted through its existing haulage agreements and it therefore has limited scope to offer the reference service during the first access arrangement period without enhancement of the pipeline system. Epic proposes that services involving more than a threshold level of expansion would not, in any event, be reference services.

The Commission has largely accepted this view and has not pursued a broader range of reference tariffs in this access arrangement. The Commission intends to re-examine the relevant services and extensions and expansions policies in association with reference tariff policy before the commencement of the next access arrangement period.

Tariff path and incentive structure

The level of Epic's proposed tariff escalator would affect the level of capital contribution for prospective FT service users for whom new capital investment is undertaken, as well as the tariff they would pay.

The formula for the capital contribution is contained in Epic's proposed extensions and expansions policy for which Epic proposed substantial revisions in March 2000. The capital contribution is defined as the difference between the actual cost of the new facilities and the present value of capacity charge revenues for FT service over the term of the contract.

As third parties have not yet had the opportunity to comment on the proposed revisions, the Commission now invites interested parties to address this issue in their submissions.

In response to submissions, Epic put forward an amended incentive and risk-sharing mechanism in its proposed revisions to the access arrangement of 2 March 2000. Epic proposes a rebate mechanism to reward FT service users and existing shippers for releasing firm capacity for IT service. Based on submissions to date, the Commission is satisfied that the revised incentive mechanism meets the terms of section 8.46 of the code.

Access policies, terms and conditions and review of arrangement

Epic proposes to incorporate detailed terms and conditions in the access arrangement. The Commission has taken the view that a number of these terms and conditions are unnecessarily restrictive. Through proposed amendments, the Commission has sought to strike a reasonable balance between the needs of users, prospective users and the service provider.

The Commission has indicated that it intends to assess the operation of a number of these terms and conditions at the next revision. Without limiting the scope of the review, clauses that the Commission identifies for such assessment deal with:

- service provider discretion in assessing requests for FT service (clause 6);
- management of system-use gas (clause 17);
- imbalance and zone variation (clause 19);
- curtailment notices and operational flow orders (clauses 24 and 25); and
- rules for operation of the Electronic Bulletin Board (clause 27).

The Commission notes that Epic intends to consult parties on the formulation and revision of rules for the use of the proposed electronic bulletin board. The Commission encourages such consultation. As part of future reviews of the access arrangement, the Commission reserves the right to review whether those rules have operated to the satisfaction of the parties.

The Commission has identified certain clauses on which it would be particularly assisted by further submissions from interested parties. These are:

- Epic's proposals that non-specified services and extension of FT services contracts not be subject to queuing (clause 6.8);
- frequency of clearance of the queue (clause 10.4);
- Epic's proposed limits on expenditure on extensions and expansions (clause 10.5(a) as proposed by Epic in response to submissions 1 February 2000, reflected in part in clause 10.5(a)(ii) in 2 March 2000 lodgement);
- forecasting, nominating and scheduling of service (clause 18);
- allocation of delivery point quantities (clause 22);
- order of priority of service in respect of non-specified services (clause 23.2);
- curtailment notices and operational flow orders (clauses 24 and 25);
- requirements for equipment and for measurement at receipt and delivery points (clauses 28 and 29);
- liability and indemnity (clause 35);
- dispute resolution and independent experts (clause 37); and
- confidentiality (clause 39.1(d)(vi) as proposed by Epic 2 March 2000).

Relevance of existing haulage agreements

The parties to the existing haulage agreements provided copies of the agreements to the Commission on a confidential basis pursuant to sections 41 and 42 of the *Gas Pipelines Access (South Australia) Law*. This confidentiality condition potentially limits the specificity with which the Commission can discuss the agreements. It does not prevent the Commission from discussing information about the agreements that is already in the public domain. Nor does it prevent the Commission, pursuant to section 42 of the Law, from publicly releasing information about the agreements on public benefit grounds, provided no application for review of the Commission's decision to release the information has been lodged.

The Commission has taken the agreements into account in considering the access arrangement proposed by Epic and in preparing the Commission's proposed amendments. The Commission has prepared a confidential annexure, called 'Confidential Annexure 4', to set out its reasoning in respect of issues in which a confidentiality obligation arises, and to describe provisions of the existing agreements as far as relevant to that reasoning. This confidential annexure will be made available to the parties only. The Commission intends to follow the processes set out in section 42 of the Law (as far as required by the parties), with a view to making material in the confidential annexure publicly available.

Possible exclusivity rights

Section 2.25 of the code provides that the regulator must not approve an access arrangement any provision of which would, if applied, deprive any person of a contractual right in existence prior to the date the proposed access arrangement was submitted (or required to be submitted).

However, this code provision does not apply to any exclusivity right that arose on or after 30 March 1995. This means that the access arrangement need not recognise exclusivity rights. An 'exclusivity right' is defined in the code as a contractual right that by its terms either:

> (a) expressly prevents a Service Provider supplying Services to persons who are not parties to the contract; or
>
> (b) expressly places a limitation on the Service Provider's ability to supply Services to persons who are not parties to the contract,
>
> but does not include a User's right to obtain a certain volume of Services.

The Commission has identified two clauses that appear to the Commission to constitute or contain exclusivity rights.

Other contractual provisions that, in the Commission's opinion, are not exclusivity rights, give the shippers substantial control of capacity during the term of the agreements. These provisions are the size of the shippers' capacity reservations (totalling 100 per cent of the system's indicative capacity), the right to renominate capacity on the day and the shippers' reservation of capacity in the laterals and delivery points. In other words, the scope of services that Epic can offer is constrained even without the exclusivity rights.

The Commission has not been able to establish from the information provided to it that existing shippers have declined to resell unutilised capacity. However, the information that the Commission has indicates some dissatisfaction with terms that have been offered.

The Commission has proposed several amendments to the access arrangement to address exclusivity rights. These amendments are framed so that the service provider and existing shippers would not be permitted to give effect to exclusivity rights arising on or after 30 March 1995. Another amendment is designed to permit prospective users recourse to arbitration to the full extent permitted under the code in the event of an access dispute.

Non-specified services

The Commission accepts that the access arrangement make provision for non-specified services. However, for reasons set out in section 3.5.5 of the draft decision, the Commission is concerned that Epic's proposed queuing policy and order of priority of service together could facilitate an extension of the duration and/or terms and conditions of existing haulage agreements beyond 2005. In the Commission's view, such an outcome would be to the detriment of new entrants. The Commission invites submissions on this issue.

Reallocation of released or surrendered capacity

There is good sense in an access arrangement providing for relinquishment and reallocation of capacity. The pipeline owner, the existing shipper, the new user and the ultimate gas customer all have a stake in assuring continuity of service and certainty of process to that end. Epic's trading policy provides for the reallocation of capacity in cases where it is released by the shipper to another user or to Epic.

In a competitive transmission market any capacity released or surrendered by a shipper in consequence of a lost sale would be available for resale by the pipeline operator (if the shipper did not itself deal with it) to facilitate the changeover of retail suppliers, whoever they might be.

In the Commission's view the access arrangement should also make provision for the service provider to require that capacity not required by an existing user, in consequence of losing a customer to another supplier, be transferred to the other supplier, if that capacity is not released by the existing user. Any such provision should be subject to the provisions of the relevant existing haulage agreement other than any exclusivity rights that arose on or after 30 March 1995.

The Commission recognises that market evolution provides opportunities for existing shippers to make interstate trades in gas to make up for sales lost in the 'home' market. The development of interstate trade is a fundamental objective of the code. In those circumstances, the shippers would be likely to have concerns about the service provider intervening to make some part of their capacity rights available to another party entering the home market.

Nevertheless, in the Commission's view, the proposed provision would be an instrument for introducing contestability to a significant geographic area of the market that is likely to be subject to the constraint of a fully-contracted pipeline for some considerable time into the future. At this stage there is uncertainty as to whether the SAMAG/South Australian Government initiative to introduce new supply sources would resolve this capacity constraint, and the terms on which it would do so.

In the Commission's view, a provision for the transfer of capacity to shadow transfers in contestable load is entirely consistent with code objectives of fostering trade in gas within a competitive market. It also gives visible effect to fair terms of access for all users of haulage services, which is a code objective.

While the amendments proposed in the Commission's draft decision would benefit South Australian gas users, additional benefits could arise if more were done to bring about competition in supply at the wellhead.

Possible trigger for early review

The South Australian Government has recently invited submissions from industry to propose new sources of gas supply to South Australia. Such proposals may involve the construction of a new pipeline. If the magnesium refinery proposed by SAMAG Limited proceeds, it has the potential to significantly impact on the current gas supply and haulage arrangements in South Australia.

In the Commission's view, the development of a new pipeline as an alternative or complement to MAPS, if realised, may render the existing range of services, constraints on service delivery and tariff structure out of date. Such a development would potentially bring the proposed reference tariff and reference tariff policy into conflict with code provisions for tariff design.

If any developments were to adversely impact on Epic, it could exercise its rights to apply for an early review. The Commission has given consideration to requiring Epic to incorporate in the access arrangement, pursuant to section 8.17(ii) of the code, a trigger for early review in the event that a 'significant major event' occurs. This would give other interested parties the opportunity to make submissions for changes to the access arrangement, but only if that trigger were activated. An example of such a trigger might be the irrevocable commitment of a pipeline developer to construct a new pipeline to serve customers in South Australia.

The Commission will be assisted in reaching a final position by submissions on the matter from the applicant, users and prospective users. The submissions should address the following issues:

- whether to include a section 3.17 trigger in the access arrangement;
- if so, how to define a 'significant major event' for purposes of that trigger; and
- whether the regulator's scope for review of the access arrangement should be limited, for example, to reviews of the tariff structure only.

The Commission emphasises that while prospective developments in the market have a bearing on such submissions, a trigger can only be defined in terms of the actual occurrence (in the future) of a 'specific major event'.

In the event the Commission is persuaded by submissions that the access arrangement should incorporate one or more trigger events it would, as part of the further process of public consultation:

- make the terms of such events known to Epic prior to the final decision;
- make known its views as to the scope of any review that should be triggered by the occurrence of the specific major event.

Proposed amendments

The amendments to the access arrangement proposed by the Commission are drawn together below. The Commission's reasons for requiring these amendments are set out in the body of the draft decision, immediately preceding each proposed amendment.

The Commission is obliged to make its draft decision on the access arrangement as originally lodged. Accordingly, this document sets out the Commission's draft decision on the corrected version, of 16 April 1999, of Epic's proposed access arrangement. However, in drafting the amendments to the access arrangement that the Commission requires in order to approve it, the Commission has taken into consideration and discussed in this draft decision Epic's proposed revisions of 2 March 2000. In respect of those of Epic's proposed revisions not specifically discussed in this draft decision, the Commission proceeds on the assumption that Epic will make the

changes to the access arrangement proposed in its lodgement of 2 March 2000 and in supplementary correspondence with the Commission.

Proposed amendment A2.1

In order for Epic's access arrangement for MAPS to be approved, the value of the initial capital base must be adjusted to the value derived by the Commission, **$310** million.

Proposed amendment A2.2

In order for Epic's access arrangement for MAPS to be approved, for the purpose of calculating Epic's capital charge (return on capital assets) the working capital component must not be included in the value of the capital base.

Proposed amendment A2.3

In order for Epic's access arrangement for MAPS to be approved:

- the WACC estimates and associated parameters forming part of the access arrangement must be amended to reflect the current financial market settings, by adopting the parameters set out by the Commission in Tables 2.9 and 2.10 above; and

- the target revenues and forecast revenues must be based on these new parameters.

Proposed amendment A2.4

In order for the access arrangement for MAPS to be approved, Epic must:

- incorporate the new clauses 30.4 and 30.5 proposed by Epic in its letter of 15 June 2000 in place of clause 30.4 of the original access arrangement;
- incorporate the new definition of 'imposts' proposed by Epic in its letter of 15 June 2000 in place of the original definition in clause 43.1(b); and
- replace the words 'GST Recipient' and 'GST Supplier' in the new clause 30.4(b) with the words 'Recipient' and 'Supplier' respectively.

Further, in the CPI-X revenue adjustment that occurs in the year following the introduction of GST, Epic must incorporate the measure of CPI that is exclusive of GST impacts, as stated by the Commission at that time.

Proposed amendment A2.5

For the access arrangement to be approved, Epic must amend the reference tariff proposed in Schedule 4 of the access arrangement. The amendment must have the effect that the reference tariff is derived by applying, to the system primary capacity:

- to derive the initial tariff, the cost-of-service revenue resulting from the amendments proposed by the Commission in this draft decision;

- in each subsequent year, the smoothed cost-of-service revenue resulting from the amendments proposed by the Commission in this draft decision.

Refer Table 2.22**.**

Proposed amendment A2.6

In order for Epic's access arrangement to be approved, the Commission requires that Epic delete clause 30.2 of the access arrangement (that clause being entitled 'CPI Adjustment') and amend clause 5.2(a)(xii) of the access arrangement to read as follows:

> The initial Reference Tariff (including the Whyalla Lateral Surcharge) is set out in Schedule 4. The Total Revenue Requirement and the resulting Reference Tariff will thereafter vary on 1 January in each year of the initial Access Arrangement period in accordance with the formula CPI – 1.6%. Charges in respect of other services are also shown in Schedule 4. These charges will remain unchanged during the initial Access Arrangement period.

Proposed amendment A2.7

In order for Epic's access arrangement to be approved, the Commission requires that Epic incorporate in the access arrangement the incentive and risk-sharing mechanism proposed by Epic set out in clause 5.3 of the revised access arrangement of 2 March 2000.

Proposed amendment A2.8

In order for the access arrangement to be approved, the Commission requires that Epic amend clause 5.2(a)(vi) of the original lodgement (renumbered as '5.2(a)(v)' in the lodgement of 2 March 2000) so that it reads as follows:

> The Capital Base is to be adjusted annually on 1 January by the Capital Cost Revaluation, which will be equal to the CPI for the 12-month period ending on the previous 30 September.

Proposed amendment A3.1

For Epic's access arrangement for MAPS to be approved, the Commission requires:

- that the access arrangement be amended to provide for the FT, IT and non-specified services set out in Epic's lodgement of 2 March 2000, subject to the proposed amendments in the remainder of this draft decision; and

- that clause 43.1 be amended to make the definition of 'Available Capacity' and 'Spare Capacity' consistent with the definition of 'Spare Capacity' in section 10.8 of the code.

Proposed amendment A3.2

For the access arrangement to be approved, the Commission requires that Epic incorporate the proposed amendment providing for Epic to post on the EBB each day:

- forecast maximum capacity for each delivery point, based on the gas specification and the conditions prevailing on the previous day; and
- the forecast net available capacity, based on monthly forecasts that are provided by the FT users (under clause 18.1(c)).

as described in Epic's response to submissions of 1 February 2000 (section 2.2.7, page 24 of public response) and in section 3.1.4 in this draft decision.

Proposed amendment A3.3

For the access arrangement to be approved, the Commission requires that it be amended to provide that capacity that is released or surrendered by a user be dealt with as proposed by Epic in its letter dated 15 June 2000, as quoted in section 3.1.4, to the effect that:

> capacity that is released by a user:
>
> (a) otherwise than under the trading policy clause 26.2,
>
> (b) for reason that a consumer or aggregator has changed suppliers
>
> may be contracted by another user, or a prospective user:
>
> (i) who is (directly or indirectly) supplying that consumer (or aggregator); and
>
> (ii) without following the queuing process set out in clause 10.

Proposed amendment A3.4

For the access arrangement to be approved, the Commission requires that it be amended to make provision for the service provider to require that capacity be transferred in specified circumstances. The circumstances are where:

- in consequence of losing a customer to another supplier, an existing user no longer requires the volume of capacity attributable to that customer; and
- the capacity is not released by the existing user;

it must be transferred to the other supplier.

Any such provision should be subject to the provisions of the relevant existing haulage agreement other than any exclusivity rights that arose on or after 30 March 1995.

Proposed amendment A3.5

For the access arrangement to be approved, the Commission requires that it be amended to contain a provision in the following terms:

> This access arrangement takes effect subject to any contractual rights in existence prior to the date of lodgement of the proposed access arrangement, 1 April 1999, with the exception of Exclusivity Rights (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.6

For the access arrangement to be approved, the Commission requires that clause 4.3, other than clause 4.3(g)(ii), as proposed in Epic's lodgement of 2 March 2000 be incorporated in the access arrangement, subject to adding the following to clause 4.3(c):

> For the avoidance of doubt, nothing in the Agreement requires or permits the Service Provider or User to observe or give effect to the terms of any Exclusivity Rights (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.7

For the access arrangement to be approved, the Commission requires that the definition, in clause 43.1, of 'Existing User Rights' proposed in Epic's lodgement of 2 March 2000 be incorporated in the access arrangement, subject to adding the following:

> The term 'Existing User Rights' does not include any Exclusivity Right (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.8

For the access arrangement to be approved, the Commission requires that the definition, in clause 43.1, of 'Existing Delivery Facilities' proposed in Epic's lodgement of 2 March 2000 be incorporated in the access arrangement, subject to the deletion of references to laterals.

Proposed amendment A3.9

For the access arrangement to be approved, the Commission requires that clauses 9.1 and 9.2 be modified so that:

- they read as proposed by Epic in its letter dated 15 June 2000 to the Commission as follows:

  > 9.1 The Service Provider will not be required to commence the Specified Service for a Prospective User or to continue to provide the Specified Service to the User if the Prospective User/User is not able to satisfy the Service Provider of the ability of the Prospective User/User to fulfil its obligations under the Agreement.
  >
  > 9.2 If the Service Provider is not satisfied that the Prospective User/User will fulfil its obligations or continue to fulfil its obligations under the Agreement, the Service Provider may require, and the Prospective User/User will provide, security for those obligations to the Service Provider's reasonable satisfaction.

- they are cross-referenced to Schedule 2, Form 3, of the access arrangement so as to clearly indicate the credit and financial information that the service provider can reasonably request of the user or prospective user.

Proposed amendment A3.10

For the access arrangement to be approved, the Commission requires that clauses 6.3, 11.1 and 11.2 be amended in the manner proposed in the lodgement of 2 March 2000, subject to adding to clause 11.2 a provision to the following effect:

> The Service Provider will accept reasonable requests for a shorter Term of Agreement for IT service. `

The Commission also requires that clause 11.3 be amended to read as follows:

> 11.3(a) Providing the User is not in default at the date of notice, the User may extend the Term for FT service by minimum periods of 2 years at a time:
>
> (i) by giving written notice to the Service Provider not less than 3 months prior to the Termination Date; or
>
> (ii) by giving notice at a time and in a manner previously arranged with the Service Provider.
>
> (b) Where the Agreement is for IT Service, the Term will automatically extend on a year by year basis from the Termination Date unless:
>
> (i) the User has given written notice of termination to the Service Provider under clause 36.5;
>
> (ii) the User is in default under the Agreement at the Termination Date.

Proposed amendment A3.11

For the access arrangement to be approved, the Commission requires that Epic amend clause 12.4 by replacing the term '60°C' with the following:

> 71°C, or such lesser temperature as may be agreed at a future date with all users of the pipeline system at that time or as may be agreed as part of a future national gas code.

Proposed amendment A3.12

For the access arrangement to be approved, the Commission requires that clause 13.3 be amended as proposed by Epic in its lodgement of 2 March 2000 and as modified by its letter dated 15 June 2000.

Proposed amendment A3.13

For the access arrangement to be approved, the Commission requires that clause 15 be amended as proposed by Epic in its lodgement of 2 March 2000, subject to:

- Epic amending clause 15.3(b)(ii) by replacing the word 'may' with 'will' and by adding after the word 'System' in that clause words to the following effect:

  > … and for that purpose will communicate directly with the operator of the Moomba processing plant or other originator of the non-specification gas (if known) to bring about a termination of the supply of that gas as soon as it becomes aware of the problem;

- Epic describing the steps it will take to ensure that users are not adversely affected by the proposed change in gas specification.

Proposed amendment A3.14

For the access arrangement to be approved, the Commission requires that, in addition to making its other proposed revisions of 2 March 2000 to clause 17, Epic change its proposed revision to clause 17.1(c) to adopt the following standard:

17.1 (c) The Service Provider will use its best endeavours to minimise the quantity of System Use Gas that is required for the operation of the Pipeline System.

Proposed amendment A3.15

For the access arrangement to be approved, the Commission requires that clause 18 be amended in the manner proposed in the revised lodgement of 2 March 2000.

Proposed amendment A3.16

For the access arrangement to be approved, the Commission requires that, in addition to making its other proposed revisions of 2 March 2000 to clause 19, Epic amend its proposed revision to clause 19.2(c) to read as follows:

19.2(c) If, at the date of expiration or termination of the Agreement there is an Imbalance, then despite the expiration or termination of the Agreement, the User must:

(i) if the Imbalance is negative, pay to the Service Provider (within 10 Days after receipt of an invoice) an amount equal to the number of GJs of the Imbalance multiplied by the Excess Imbalance Charge Rate; and

(ii) if the Imbalance is positive, make arrangements to sell the amount of the Imbalance to another user. The Service Provider will assist the User (for instance, by providing access to the EBB) so that the user has the opportunity to realise from the sale the full market value that would be achieved in the normal course of trading.

Proposed amendment A3.17

For the access arrangement to be approved, clause 20.2(b) must be amended so that it is clear that the charge applies to the outstanding excess imbalance, i.e., to that imbalance outstanding after any and all exchanges or trades have been made.

Proposed amendment A3.18

For the access arrangement to be approved, the Commission requires that clause 21 be amended as proposed in the revisions to the access arrangement of 2 March 2000.

Proposed amendment A3.19

For the access arrangement to be approved, the Commission requires that Epic incorporate in it the revision to clause 22.3(a)(ii) proposed in Epic's letter to the Commission of 15 June 2000, that is, the words 'if any' be added after the words 'Metered Facilities' in the parentheses.

Proposed amendment A3.20

For the access arrangement to be approved, the Commission requires Epic to:

- adopt the revisions to clauses 24 and 25 set out in its lodgement of 2 March 2000 and in its letter dated 15 June 2000; and

- amend clause 41.1(c) by deleting after the words ‘telephone and’ the word ‘/or’.

Proposed amendment A3.21

For the Commission to approve the access arrangement, Epic must amend clause 27.4(d) to read as follows:

> The Service Provider will not be responsible for any losses, costs, damages and expenses suffered or incurred by any person in relation to the use of the EBB or any communications related to the EBB, unless such losses are due to the negligence of the Service Provider or default by the Service Provider in complying with its obligations under the Agreement.

Epic must amend clause 4.2 of the EBB System Agreement in Schedule 5 of the access arrangement to reflect the above amendment to clause 27.4(d) and Epic’s proposed revisions of 2 March 2000 to clause 27.3(b) of the access arrangement.

Proposed amendment A3.22

For the access arrangement to be approved, the Commission requires Epic to amend clauses 28 and 29 and Schedules 8 and 9 to establish, in consultation with users and prospective users:

- threshold values at which, and circumstances in which, it is reasonable for the service provider to require the installation of measuring equipment and adherence to procedures set out in Schedules 8 and 9.

Proposed amendment A3.23

For the access arrangement to be approved the Commission requires that clause 32.1 be amended to read as follows:

> The User will pay each invoice by direct payment to a bank account nominated by the Service Provider by the later of the 14th day of the month or 10 business days after receipt of the invoice from the Service Provider.

The Commission also requires that Epic revise clause 32.2(a) as proposed in its lodgement of 2 March 2000.

Proposed amendment A3.24

For the access arrangement to be approved, Epic must amend clause 34.4(b) in accordance with the proposal in Epic’s lodgement of 2 March 2000.

Proposed amendment A3.25

For the access arrangement to be approved, the Commission requires that Epic incorporate in clause 35 the revisions proposed in its lodgement of 2 March 2000, subject to changing the word ‘lesser’ in clause 35.3 to ‘greater’.

Proposed amendment A3.26

For the access arrangement to be approved, the Commission requires that Epic:

- adopt the proposed revisions to clause 37.2(a)(i) set out in its letter dated 15 June 2000, that is, Epic is to add after the word 'practice' the following words:

  > and includes the grounds on which the Service Provider has issued a Curtailment Notice or an OFO

- add, after clause 37.1(d), the following sentence:

  > The Service Provider is bound to take part in a Dispute resolution process initiated by another Party.

Proposed amendment A3.27

For the access arrangement to be approved, the Commission requires Epic to make the revisions to clause 38 proposed in Epic's lodgement of 2 March 2000, subject to clause 38(2)(c) being amended to read as follows:

> 38.2(c) An assignment by the User will be conditional upon, and will not be binding until, the assignee has:
>
> (i) executed a deed of covenant in favour of the Service Provider agreeing to be bound by the Agreement. The Service Provider may prescribe a reasonable form of covenant but the User may make its own arrangements to draw up the deed and submit it to the Service Provider; and
>
> (ii) reimbursed the Service Provider's costs, within the limits of the Application Fee, that have been reasonably incurred in assessing whether the assignee meets the Creditworthiness Criteria.

Proposed amendment A3.28

For the access arrangement to be approved, Epic must not incorporate in its proposed revisions of 2 March 2000 to clause 39 its proposed amendment to clause 39.1(d)(vi).

Proposed amendment A3.29

For the access arrangement to be approved, the Commission requires that Epic add the following to clause 43.6:

> If there is any conflict or discrepancy between the clauses of the Access Arrangement and the Schedules to the Access Arrangement, then unless otherwise provided in a clause of the Access Arrangement, the clauses and Schedules will rank in order of interpretive precedence as follows:
>
> (a) clauses of the Access Arrangement; and
>
> (b) the Schedules.

Proposed amendment A3.30

For the access arrangement to be approved, Epic must amend clause 26 as proposed in its lodgement of 2 March 2000 and letter dated 26 March 2000.

Proposed amendment A3.31

For the access arrangement to be approved, the Commission requires that, except in the following respects, the arrangement incorporate Epic's proposed amendments of 2 March 2000 to clause 6.

- First, Epic is required to amend clause 6 so that it also applies to requests for non-specified services, in replacement or continuation of capacity reservations under the Existing Transportation Agreements or extensions thereof, by the Existing Users as defined in respect of those Agreements.
- Second, Epic is required to amend clauses 6.2(b) and (c) as proposed in Epic's revisions of 2 March 2000 to limit the information required from a 'User' as indicated in 3.5.5 above, that is, to limit the information to:
  - that required to assess whether there is capacity to supply the requested service; and
  - that required to update clause 9.2 (creditworthiness) information since it was first lodged.
- Third, Epic is to amend revised clause 6.2(c) so that a request to increase MDQ is not to be treated as a request for a separate, new contract when sufficient spare capacity is available to meet that request (subject to queuing). Such a request is to be treated as a request to vary service under clause 6.9;
- Fourth, Epic is to amend revised clause 6.2 by adding after clause 6.2(c) the following:

  > Where the Service Provider reasonably believes that the service requested pursuant to clause 6.2(a) or clause 6.2(c) could only be provided with an extension to or expansion of the system, an Application Fee is not required until the Prospective User or User has consented to join the queue for FT Service.

- Fifth, Epic is to amend revised clause 6.7(a) to read as follows:

  > All FT Requests will be placed in a queue and will be satisfied in the order in which they are received. Where the Service Provider reasonably believes that satisfaction of the Request for Service will require the construction of New Facilities, an FT Request will not be accorded any priority over any other FT Request falling in the same construction task. However, the priority of FT requests ranked in order of receipt will determine the order in which they are satisfied for all other purposes, including:
  >
  > (i) any construction associated with capacity enhancement for another party or parties, whether or not the construction is carried out under the terms of the access arrangement; and
  >
  > (ii) any allocation of spare capacity.

- Sixth, Epic is to amend revised clause 6.9(a) to include a request by a User to increase MDQ except:

  > (i) where the Service Provider reasonably believes that assessment of the Request for Service will involve an assessment of the cost of constructing new facilities; and
  >
  > (ii) the User is informed of that fact before the Request for Service is accepted.

Proposed amendment A3.32

For the access arrangement to be approved, the Commission requires that clause 10 be amended to make the queuing policy applicable to requests for non-specified services.

Proposed amendment A3.33

For the proposed access arrangement to be approved, the Commission requires that Epic incorporate the revised clause 7 as proposed in its lodgement of 2 March 2000, subject to:

- Epic deleting from clause 7.2 all words after 'Month,';
- Epic deleting the amount '$5,000' in respect of 'Application Fee – IT Service' in Schedule 4 Tariff Schedule; and
- Epic modifying its proposed revision to clause 7.5(a) so that, in the phrase 'in the order or priority', the words 'or priority' are deleted.

Proposed amendment A3.34

For the access arrangement to be approved, the Commission requires that Epic revise clause 10 as proposed in its lodgement of 2 March 2000, except as indicated in the following points:

- First, revise the procedures for clearance of the queue in accordance with the indications given above, following public consultation on relevant threshold values for determining when applications for access would be reviewed and cleared from the queue;
- Second, amend the definition of 'I' in clause 10.4(l)(iii) so that it reads as follows:

  > 'I' = the present value calculation (using as the discount rate the nominal post-tax vanilla WACC assessed by the Regulator) over the term of the FT Service Contract of the Capacity Charge revenue ('CCR');

- Third, incorporate further revisions in the access arrangement to reflect the intentions stated in its letter dated 15 June 2000 (clause 10.5(a) expenditure limit; queue clearance in association with capacity enhancement for a party or parties);
- Fourth, incorporate provisions establishing the minimum parameters that would apply in respect of commercial negotiations over timetable and allocation of construction risks for enhancements to capacity, taking into consideration the issues raised by Santos;
- Fifth, subject to further public consultation as indicated above, provide for clearance of the queue at more frequent intervals than annually;
- Sixth, delete clause 10.5(a)(ii); and
- Seventh, amend clause 10.6 as proposed in Epic's lodgement of 2 March 2000 by replacing 'I' with 'the lesser of "A" and "I" '.

Proposed amendment A3.35

For the access arrangement to be approved, the Commission requires that Epic amend the access arrangement to provide for the revisions submission date and revisions commencement date proposed in clauses 1.2 and 1.3 of its lodgement of 2 March 2000.

Proposed amendment A3.36

For the access arrangement to be approved, the Commission requires that Epic amend the access arrangement by defining, in response to the further process of public consultation, specific major events (if any) that would trigger an obligation on the service provider to submit revisions prior to the revisions submission date.

1. Introduction

1.1 Invitation to make submissions

On 1 April 1999 the Commission received an application from Epic Energy South Australia Pty Ltd (Epic) for approval of a proposed access arrangement for its Moomba to Adelaide Pipeline System ('MAPS' or 'MAP').

MAPS is a gas transmission system owned and operated by Epic. The system connects the Cooper Basin production and processing facilities at Moomba to markets for natural gas in Adelaide and in regional centres including Port Pirie, Whyalla and Berri connected to the main pipeline via laterals. MAPS has a maximum operating pressure of 7,322 kPa, except in certain locations. There are seven compressor stations along the length of the mainline. The pipeline system is described in clause 2 of the access arrangement and system operating characteristics and parameters in Schedules 1-3.

The application was submitted under section 2.2 of the *National Third Party Access Code for Natural Gas Pipeline Systems* (code). This followed approval by the Commission in 1998 of an extension of the lodgement date. Epic lodged access arrangement information for MAPS with its application. The access arrangement and access arrangement information describe the terms and conditions on which the company proposes to make available access to services over its pipeline system.

The Commission has now reached draft decision stage in the assessment process and invites submissions in response to the draft decision. Parties making submissions are particularly asked to have regard to Epic's proposed revised access arrangement of 2 March 2000, which has not previously been the subject of submissions. The Commission comments on the original proposed arrangement and on Epic's revisions in this draft decision.

Pursuant to section 2.13(b) of the Code, this draft decision gives reasons for and states the amendments (or nature of the amendments) that would have to be made to the proposed access arrangement in order for the Commission to approve it. In doing so, the draft decision identifies, for the benefit of the applicant and third parties, the issues that need to be resolved before the Commission makes a final decision whether to approve the reference tariff, access policies and terms and conditions proposed by the applicant.

The Commission has taken care, during the assessment process to date, to communicate to the applicant issues arising from analysis of information provided by the applicant and made available from other sources. This draft decision provides the applicant (and third parties) with confirmation of those issues and the Commission's proposed approach to dealing with them. The Commission will carefully consider responses by the applicant and third parties. The Commission may seek to follow up particular issues with the applicant and other interested parties during the remaining public consultation period. Contact details for enquiries to the Commission are given overleaf.

This introduction includes:

- a description of the current assessment process and of the steps to final approval of an access arrangement for MAPS;
- a description of the South Australian gas industry structure and regulatory framework;
- an outline of the access arrangement submitted for approval;
- a summary of the criteria for assessing an access arrangement under the code; and
- the Commission's draft decision.

How to make submissions

Please forward submissions so as to reach the Commission by close of business on Thursday, 14 September 2000. The Commission wishes the applicant and itself to have the opportunity to adequately consider the submissions before it holds a public forum for consultation on the access arrangement. Therefore only nominal extensions of time will be granted.

Please forward submissions in electronic and paper form and address them to:

File reference: C2000/269

Ms Kanwaljit Kaur
Acting General Manager
Regulatory Affairs – Gas
Australian Competition and Consumer Commission
P O Box 1199
DICKSON ACT 2602

e-mail submissions to: warwick.anderson@accc.gov.au

Enquiries: Mr Warwick Anderson

Tel: 02 6243 1240
Fax: 02 6243 1205

ACCC website: www.accc.gov.au

Public submissions will be e-mailed when received to the applicant, Epic, for response during September 2000. Submissions will be publicly available on public register files maintained by the Code Registrar and Commission. After all submissions in response to the draft decision are in, public submissions will be e-mailed to parties who themselves have made submissions in the first (following the *Issues Paper)* or second (following the draft decision) rounds of consultation.

If you include in your submission information that is of a **confidential** or **commercially sensitive** nature, it should be clearly marked as such. Under the code (section 7.12), the regulator (the Commission) must not disclose such information to any person nor to the Code Registrar. However, information may be disclosed if the

regulator is of the opinion that disclosure would not be unduly harmful to the legitimate business interests of the service provider, a user or a prospective user. Therefore if you wish to claim confidentiality or commercial sensitivity, please explain the reasons and identify the legitimate business interests that would be harmed by public disclosure of the information.

If you claim confidentiality for part of a submission, please provide hard and electronic copies of the submission in a 'public' and a 'confidential' version.

To name electronic documents a useful convention to follow would be:

> Public [or Confid] company name date [year month date].

For example: 'Public Gasgen 000824.doc'.

To avoid potential confusion over the date of electronic versions of submissions and covering letters, please avoid using templates that automatically date and later update documents.

Next step after submissions

The Commission intends to hold a public forum to discuss and, as far as possible, resolve issues arising from submissions in response to this draft decision. The Commission expects that this forum would take place in Adelaide in November 2000.

An outcome of the assessment process to date is that Epic has proposed substantial revisions to its original access arrangement (see 'Key documents' below) and the Commission has proposed further amendments to the Epic document in this draft decision.

The Commission understands that to facilitate the further public consultation, Epic is preparing a consolidated version of its access arrangement and access arrangement information. The Commission understands that this would incorporate in the original lodgement of April 1999 the substantial revisions proposed in March 2000 and identify corrections and all revisions proposed since March 2000.

The Commission intends to put the consolidated document on its website as soon as it is available, and to inform interested parties of that. (That is, the Commission would e-mail only parties that made submissions in response to the *Issues Paper* and any parties that indicate an intention to make a submission in response to the draft decision.)

Parties should note well that Epic's consolidated document is not intended to address the amendments proposed by the Commission in this draft decision. Rather, it would represent the consolidated state of the company's proposals addressed by the Commission in this draft decision.

Documentation associated with the application and draft decision is becoming substantial in volume. To assist parties at the proposed public forum, the Commission intends to prepare and circulate beforehand a consultation document to identify the key issues for decision and the location of relevant materials.

1.2 Consultative process and relevant documents

The Code sets out the following public consultation process applicable to the Commission as regulator. The Commission must:

- inform interested parties that it has received the access arrangement;
- publish a notice, in a national daily newspaper, that describes the covered pipeline to which the access arrangement relates, states how copies of the application documents can be obtained and requests submissions by a date specified in the notice;
- publish notices, in a national daily newspaper, of extensions to the date by which a final decision on the access arrangement is due;
- after considering submissions received, issue a draft decision that either proposes to approve the access arrangement or proposes not to approve the access arrangement. The regulator must state the amendments (or the nature of the amendments) that have to be made to the access arrangement in order for the regulator to approve it. The regulator must seek submissions following release of the draft decision;
- after considering any additional submissions and a revised access arrangement (if submitted), issue a final decision that either approves or does not approve the access arrangement (or revised access arrangement) and states the amendments (or nature of the amendments) that have to be made to the access arrangement (or revised access arrangement) in order for the Commission to approve it; and
- if the amendments are satisfactorily incorporated in a revised access arrangement, issue a final approval. If not, the Commission must draft and approve its own access arrangement for the pipeline system.

Following extensive continuing contacts during 1999 with Epic and the existing users in relation to the existing haulage agreements, pursuant to the requirements of the code, the Commission in September 1999 published a notice in a national newspaper and informed interested parties that it had received Epic's proposed access arrangement.

In the advertisement the Commission invited submissions from interested parties in response to an *Issues Paper* that it released at that time. The submissions subsequently received are listed in Annexure 1 to this draft decision. They are considered throughout this draft decision.

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

- duration of service contracts;
- type of interruptible service offered;
- terms and conditions of service and penalties for non-conformity;
- access to capacity;
- waiting times for extensions and expansions;
- the imbalance regime;
- nominations procedures;
- the incentive mechanism;

- retention allowance;
- valuation of the capital base; and
- return to the service provider.

Extensions to the final decision date were notified by the Commission in the national advertisement of September 1999 and in later advertisements at two-monthly intervals.

Key documents

After lodgement of its application, Epic made a number of corrections and editorial revisions to the documents, lodging the revised set of documents on 16 April 1999, after which the public documents were placed on the ACCC website.

Since then, Epic has proposed the following revisions to the original documents:

- on 16 July 1999, in consequence of extensions to certain existing haulage agreements, Epic amended the proposed revisions submission date to 1 July 2005 and the revisions commencement date to 1 January 2006;
- on 13 January 2000, Epic lodged a public version of corrections to Schedule 1, Attachments C and D - historical demand profile for MAPS, 1997 and 1998;
- on 2 March 2000, in response to submissions by interested parties, Epic lodged with the Commission its proposed revisions to the access arrangement, the revisions being shown in a marked-up version of the original document; and
- on 26 March 2000, Epic forwarded a proposed revision to clause 26.6 of the access arrangement not included in the above document.

The Commission placed these and other relevant documents on its website as public consultation proceeded, and drew them as appropriate to the attention of parties that had made a submission or otherwise expressed interest in developments.

Further (non-confidential) revisions proposed by Epic in a confidential letter dated 15 June 2000, are incorporated at the relevant points in this draft decision. Epic marked its letter of 15 June 2000 'confidential' but, in a covering e-mail message, stated 'Note that the letter is headed "Confidential" the areas which are considered confidential within the doc are fairly obvious'. The Commission makes references to this letter in chapters 2 and 3 of this draft decision. The majority of material in the letter contains amendments to Epic's proposed revisions to the access arrangement in response to Commission communications. There are some references or materials in respect of commercially sensitive issues such as existing haulage agreements and delivery forecasts. In referring to this letter in this draft decision, the Commission has avoided reference to commercially sensitive information. Further, the Commission formed the opinion in terms of section 7.12 of the code that disclosure of the information drawn from that letter and contained in this draft decision would not be unduly harmful to the legitimate business interests of the service provider or a user or prospective user.

The Commission's assessment of the access arrangement follows the code requirements and is based on the information provided by Epic and interested parties and information in the public domain. The Commission is obliged to make its draft decision on the access arrangement as originally lodged. Accordingly, this document

sets out the Commission's draft decision on the corrected version, of 16 April 1999, of Epic's proposed access arrangement. However, in drafting the amendments to the access arrangement that the Commission requires in order to approve it, the Commission has taken into consideration and discussed in this draft decision Epic's proposed revisions of 2 March 2000. In respect of those of Epic's proposed revisions not specifically discussed in this draft decision the Commission proceeds on the assumption that Epic will make the changes to the access arrangement proposed in its lodgement of 2 March 2000 and in supplementary correspondence with the Commission.

Existing haulage agreements

The parties to the existing haulage agreements provided copies of the agreements to the Commission on a confidential basis pursuant to sections 41 and 42 of the *Gas Pipelines Access (South Australia) Law.* This confidentiality condition potentially limits the specificity with which the Commission can discuss the agreements. It does not prevent the Commission from discussing information about the agreements that is already in the public domain (refer section 42(5) of Law). Nor does it prevent the Commission, pursuant to section 42 of the Law, from publicly releasing information about the agreements on public benefit grounds, provided no application for review of the Commission's decision to release the information has been lodged.

The Commission has taken the agreements into account in considering the access arrangement proposed by Epic and in preparing the Commission's proposed amendments. The Commission has prepared a confidential annexure, called 'Confidential Annexure 4', to set out its reasoning in respect of issues in which a confidentiality obligation arises, and to describe provisions of the existing agreements as far as relevant to that reasoning. This confidential annexure will be made available to the parties only. The Commission intends to follow the processes set out in section 42 of the Law (as far as required by the parties), with a view to making material in the confidential annexure publicly available.

Final decision and provisions for review

After considering submissions and any revised access arrangement submitted by the service provider following the draft decision, the Commission must, pursuant to section 2.16 of the code, issue a final decision. As indicated above, the final decision options are approval of the original access arrangement, approval of a revised arrangement, or disapproval with a statement of required amendments.

In the event that the Commission issues a final decision that (pursuant to section 2.16(b)) does not approve the access arrangement, the code (sections 2.18–2.19) requires the service provider to submit a revised access arrangement for consideration by the regulator. However, if the service provider does not submit a revised access arrangement by the required date, or does so and the regulator is not satisfied that it incorporates amendments specified in the final decision, the regulator must draft and approve its own access arrangement (section 2.20). Such a decision is subject to review on its merits by the Australian Competition Tribunal.

1.3 The South Australian gas industry structure and regulatory framework

1.3.1 Structure of the gas industry in South Australia

Exploration, production and processing

In 1954, Santos Limited was granted licences to search for oil in parts of the Cooper and other basins in the north-east of South Australia. In the process of looking for oil, natural gas was discovered at Gidgealpa in 1963. Another gas field at Moomba was discovered in 1966, leading to the establishment of a natural gas industry. Other companies subsequently acquired licences to explore and produce gas in that area of South Australia. These companies are known collectively as the 'Cooper Basin Producers'. Santos Limited now operates the producing gas fields and the processing plant at Moomba in that area on their behalf.

Since the first commercial discovery in 1963, more gas reserves have been discovered in the South Australian and South-West Queensland regions of the Cooper Basin and the Eromanga Basin, which overlies the Cooper Basin. The South Australian region of the Cooper/Eromanga Basin has 93 gas fields and 378 gas wells, declared discovered recoverable raw gas reserves of 8.2 TCF, and additional undiscovered recoverable reserves.[3] The Cooper Basin Producers of South Australia and South-West Queensland supply over 90 per cent of the demand for natural gas in South Australia, with the remaining demand supplied by the Katnook Producers in the Otway Basin.

The Cooper/Eromanga Basin also supplies gas to Queensland, New South Wales and, to a limited extent, Victoria. Gas is processed at the Producers' Moomba plant and is then piped to Sydney, to Adelaide, to country cities and towns in New South Wales and South Australia and, via the Interconnect between Wagga Wagga and Barnawartha, to Victoria.

The Australian Gas Association (AGA) stated that in 1996-97 wellhead production of gas in South Australia (before use in production, reinjection and interstate transfers) was 168.7PJ.[4]

The South Australian Government in 1998 opened Cooper Basin acreage for public bidding in anticipation of the expiry there of long-standing Santos joint venture exploration tenements. In the first round of bidding, eleven exploration licences were awarded to six companies, most of them new entrants to the Cooper Basin. Eight more blocks in the core of the Basin were put on offer for the second round of bidding. Significant exploration programmes are also currently running in the Otway, Officer, Stansbury, Arrowie and western Eromanga Basins.

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3 Department of Primary Industries and Resources South Australia, *Cooper-Eromanga Basin South Australia: Exploration Opportunities Blocks CO99A-H,* April 1999, p. 15.

4 The Australian Gas Association, *Gas Statistics Australia 1998,* Table 2.8, p. 38.

Transmission

Moomba to Adelaide Pipeline System

The MAPS trunkline stretches 781km from north to south, and, at the time of lodgement of the proposed access arrangement, provided about 90 per cent of transmission pipeline capacity in South Australia. The pipeline was built by the South Australian Government in 1969, and was operated by PASA until 30 June 1995. For most of its history, PASA purchased gas from the Producers and resold it to the gas retailer and the electricity authority in South Australia.

In 1995, the pipeline assets of PASA were sold to Tenneco Gas Australia, later to become Tenneco Energy Australia. In 1996, El Paso Energy, a US company, purchased the Australian assets of Tenneco Energy Australia. El Paso Energy later sold down its interest and Tenneco Energy Australia was renamed 'Epic Energy'.

The ultimate shareholders in Epic are: El Paso Energy (30 per cent), Consolidated Natural Gas Company Inc (30 per cent), AMP Asset Management Australia Limited (10 per cent), Axiom Funds Management Limited (10 per cent), Hastings Funds Management Limited (10 per cent) and Allgas Energy Ltd (10 per cent).

The Epic Energy group of companies has operations in Western Australia, Queensland and South Australia. The group owns 3,300km of pipeline in Australia, and operates another 891km on behalf of other owners.

South East (Katnook) Pipeline System

The South East Pipeline System owned and operated by Epic is not connected to MAPS and runs 48km from near Katnook to Mt Gambier. It has an uncompressed capacity to haul approximately 20TJ of natural gas per day. The Commission understands that the pipeline is not fully utilised at present. Coverage of this pipeline under the code was revoked with effect from 20 April 2000.

The Riverland Pipeline

The Riverland Pipeline, operated by Epic for Envestra Limited, connects to MAPS at Angaston and serves the Riverland and Murray Bridge regions. Envestra has extended this system from Berri to Mildura. An associate company of Origin Energy is the operator of the extension to Mildura. The Commission is considering applications by Envestra Limited for approval of access arrangements for the Riverland pipeline and for the Mildura extension.

Distribution

A substantial proportion of the gas hauled by Epic enters local distribution systems. Envestra Limited owns and operates gas distribution systems totalling 6,361km in Adelaide, Port Pirie, Whyalla and several South Australian and Murray Valley country towns (Mt Gambier not being connected to MAPS).

Wholesaling

A substantial part of gas from the Cooper Basin region destined for market in South Australia is purchased from the Producers by the Natural Gas Authority of South Australia (NGASA). NGASA is a statutory authority 'constituted of the Minister',[5] the Minister currently being the Minister for Minerals and Energy (SA). The gas sales agreements previously held by PASA were assigned to NGASA in preparation for the privatisation of the pipeline assets of PASA. The Commission understands that NGASA onsells the gas to TGT and to Origin Energy at its purchase price. The Commission also understands that NGASA's contracts with its customers 'mirror' the agreements it has with the Producers. NGASA does not have a role in respect of new supply contracts between the Cooper Basin Producers and South Australian buyers.

Retailing

Pursuant to agreement of the jurisdictions in COAG, the South Australian Government is implementing a policy to progressively make retail customers contestable. At present, users consuming 10TJ per annum or more fall within a 'deregulated market' in which gas prices are not regulated and customers are contestable. All remaining business consumers were due to be contestable by 1 July 2000 and all consumers are due to be contestable by 1 July 2001.

There are four licensed retailers in South Australia – Origin Energy, TGT and new entrants Eastern Energy Ltd and National Power Australia. The licences for all except Origin Energy (which serves all customers) apply to sales to contestable customers. Most gas consumers buy gas from Origin Energy, although the market is becoming progressively contestable.

1.3.2 Regulatory framework

The main legislation and relevant documents regulating access to gas transmission services in South Australia are as follows:

- the *Gas Pipelines Access (South Australia) Act 1997*[6] which implemented access under the code in South Australia and established template legislation nationally, known as the *Gas Pipelines Access Law* (Law). The Law governs conduct of pipeline service providers and other interested parties in respect of access issues and regulatory, dispute resolution and administrative processes.
- the code, which, amongst other things, provides avenues for transmission service providers to submit access arrangements to the Commission for approval. Pipelines covered by the code when it was implemented are obliged to lodge access arrangements. MAPS is one such 'covered pipeline'. Until the MAPS code access arrangement comes into effect, an access arrangement prepared under the repealed *Natural Gas Pipelines Access Act 1995* (SA) will continue to apply to MAPS.

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[5] *Natural Gas Authority Act 1967* (SA), section 6.

[6] South Australia acted as lead legislator for the national gas access legislation.

Code and appeals bodies in South Australia with respect to transmission pipelines are:

- the Commission – regulator and arbitrator; [7]
- the National Competition Council – coverage advisory body;
- the Minister for Minerals and Energy (SA) – coverage decision-maker for intrastate pipelines;
- the Gas Review Board (SA) – administrative review of decisions by the SA Minister;
- the Federal Court – judicial review body; and
- the Australian Competition Tribunal – merits review body.

The South Australian Independent Pricing and Access Regulator (SAIPAR) is regulator and arbitrator in South Australia with respect to distribution (reticulation) pipelines. SAIPAR is at present reviewing Envestra Limited's proposed access arrangement and on 13 April 2000 published a *Draft Decision*.

1.4 Period of MAPS access arrangement

Section 2 of the code requires the service provider to submit a proposed access arrangement (and associated access arrangement information) to the regulator for approval. The service provider is defined in the Law (section 2) as 'in relation to a pipeline or proposed pipeline, the person who is, or is to be, the owner or operator of the whole or any part of the pipeline or proposed pipeline'. Epic currently owns MAPS. The access arrangement provides for ownership of MAPS to change over time.[8] The Commission expects that it would be notified of any change in ownership or operation of MAPS as those changes occur.

The access arrangement proposed by Epic would run until 31 December 2005, coinciding with the termination date of its main contracts with existing users of the pipeline system. Epic has indicated that firm capacity is fully contracted until that date. Epic also proposes to offer an interruptible service, the form of which differs between Epic's original lodgement and its proposed revisions in the light of submissions. The question of the extent to which existing haulage agreements constrain the services that Epic may offer in the initial access arrangement period has been a significant issue in the assessment process, and is discussed in chapter 3 of this draft decision.

The Commission's current assessment process relates to the initial access arrangement period. However, it will also impact on subsequent access arrangement periods, notably by determining the initial capital base, which, with adjustments to reflect additions and depreciation during the initial period, sets the capital base for the next period. Further, Epic has proposed applying a CPI escalation factor to the capital base as a fixed principle. Although Epic has argued that determination of the capital base should be deferred until the second period, the code does not give the Commission discretion to do so.

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[7] The Commission is also regulator and arbitrator with respect to transmission pipelines in the other States and Territories with the exception of Western Australia.

[8] Access arrangement, clause 38.1.

1.5 Criteria for assessing an access arrangement

The Commission may approve a proposed access arrangement only if it is satisfied that it contains the elements and satisfies the principles set out in sections 3.1 to 3.20 of the code. Those principles are summarised below. The regulator cannot reject a proposed access arrangement on the basis that the arrangement does not address a matter that section 3 of the code does not require it to address. Otherwise, the Commission has broad discretion within the terms of the code in approving an access arrangement.

An access arrangement must include a policy on the service or services to be offered, which includes a description of the service(s) to be offered. The policy must include one or more services that are likely to be sought by a significant part of the market and any service(s) that, in the Commission's opinion, should be included in the policy. To the extent practicable and reasonable, users and prospective users must be able to obtain those portions of the service(s) that they require, and the policy must allow for a separate tariff for an element of a service so requested.

An access arrangement must contain one or more reference tariffs. A reference tariff operates as a benchmark for negotiation of terms of supply of a particular service and provides users with a right of access to the specific service at that tariff. The reference tariff will apply in the event an access dispute goes to arbitration. Reference tariffs must be determined according to the principles in section 8 of the code.

An access arrangement must include the following elements:

- terms and conditions on which the service provider will supply each reference service;
- a statement of whether a contract carriage or market carriage capacity management policy is applicable;
- a trading policy that enables a user to trade its right to obtain a service (on a contract carriage pipeline) to another person;
- a queuing policy to determine users' priorities in obtaining access to spare and developable capacity on a pipeline;
- an extensions/expansions policy to determine the treatment under the code of an extension or expansion of a pipeline;
- a date by which revisions to the arrangement must be submitted; and
- a date by which the revisions are intended to commence.

In considering whether an access arrangement complies with the code, the regulator must (pursuant to section 2 of the code) take into account:

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

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

1.6 Draft decision

The Commission has now made a draft decision under section 2.13(b) of the code that it proposes not to approve the proposed MAPS access arrangement in the form lodged with the Commission. In order for the Commission to approve a revised access arrangement under section 2.16(c), the Commission will have to be satisfied, in the light of further submissions, that the amendments specified in this draft decision are incorporated in a revised document. Pursuant to section 2.13(b), the proposed amendments are set out in the relevant sections of the draft decision and are brought together in the Executive Summary.

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

- the determination of reference tariffs (chapter 2);
- the non-tariff elements of service, that is, the service provider's proposed access policies, terms and conditions of service and arrangements for review of the access arrangement (chapter 3); and
- information provision and performance indicators (chapter 4).

Chapter 5 re-states the Commission's draft decision on the basis of the analysis preceding that chapter.

2. Reference tariff elements

The code specifies a set of elements that an access arrangement must include. This chapter considers Epic's compliance with the principles to be followed in determining the reference tariff. Specifically, the chapter covers the calculation of Epic's revenue requirement, including the weighted average cost of capital (WACC), depreciation and capital base. Chapters 3 and 4 discuss Epic's compliance with the remaining elements of an access arrangement.

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 Commission 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 section 8 of the code.

In addition to the access arrangement and access arrangement information, Epic has provided the Commission with confidential data such as volumes, revenues and costs, that it used to derive its proposed reference tariff. Aggregates have been publicly disclosed by Epic in the access arrangement information.

This chapter assesses Epic's reference tariff policy and proposed reference tariff using the structure below. The chapter identifies specific requirements of the code, proposals by Epic, and submissions from interested parties under the following headings:

2.1 Reference tariff methodology

2.2 The initial capital base

2.3 New facilities investment and capital redundancy

2.4 Depreciation and inflation

2.5 Rate of return

2.6 Non-capital costs

2.7 Forecast revenue

2.8 Cost allocation and tariff setting

2.9 Tariff path and incentive structure

2.10 Assessment of reference tariffs.

2.1 Reference tariff methodology

Section 8 of the code sets out the general principles for a reference tariff and certain factors about which the relevant regulator must be satisfied before the regulator may approve reference tariffs and the reference tariff policy. The general principles are contained in sections 8.1 and 8.2 of the code. Their application to Epic's proposed access arrangement is discussed in section 2.10 of this draft decision, after consideration of the parameters making up the revenue requirement and tariff.

Section 8.4 of the code permits a choice of three methodologies for determining the total revenue:

- Cost of service: total revenue is set to recover costs. These costs are calculated on the basis of a rate of return on:
  - the value of the capital assets that form the covered pipeline (termed the 'capital base'):
  - depreciation of the capital base; and
  - the operating, maintenance and other non-capital costs (collectively termed 'non-capital costs') incurred in providing all services over the covered pipeline.

  The rate of return is set to provide a return commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service (sections 8.30 and 8.31 of the code).
- IRR: total revenue is set to provide an internal rate of return (IRR) for the covered pipeline on the basis of forecast costs and sales, subject to the principles set out in sections 8.30 and 8.31 of the code.
- NPV: total revenue is set to deliver a net present value (NPV) for the covered pipeline (on the basis of forecast costs and sales) equal to zero, using a discount rate that would yield a return consistent with sections 8.30 and 8.31 of the code.

While these methodologies are different ways of assessing the total revenue, their outcomes should be consistent. For example, it is possible to express any NPV calculation in terms of a cost of service calculation by the choice of an appropriate depreciation schedule. In addition, other methodologies (such as a method that provides a real rate of return on an inflation-indexed capital base) are acceptable under section 8.5 of the code, provided they can be translated into one of these forms.

Epic has proposed a cost of service methodology. This methodology is consistent with the code.

Epic at present has haulage arrangements with only two shippers and has advised the Commission that there is no firm capacity available in the pipeline for third party access (see discussion in chapter 3). Consequently, applications for access to the pipeline may involve parties making a capital contribution for new facilities.

2.2 The initial capital base

2.2.1 Code requirements

The code requires the regulator to approve a value for an existing pipeline (an initial capital base) as part of the first access arrangement for that pipeline. This value carries over into subsequent access arrangement periods, subject to deduction of depreciation and redundant capital and addition of new facilities investment. The initial capital base will have a significant effect on the level of tariffs over a considerable period given the long life of assets, and a commensurate effect on the value of the business.

The principles for establishing the initial capital base of a pipeline system are set out in section 8 of the code. These principles distinguish between pipeline systems that come into existence after the commencement of the code (sections 8.12 and 8.13) and those that were in existence at the commencement of the code (sections 8.10 and 8.11).

The initial capital base – existing pipelines

For existing pipelines, the code states (section 8.11) that the value of the initial capital base normally should not fall outside the range of depreciated actual cost (DAC) and depreciated optimised replacement cost (DORC). In establishing the initial capital base, section 8.10 requires the regulator to consider:

- other well recognised asset valuation methodologies (section 8.10(c)) and the advantages and disadvantages of those methodologies (section 8.10(d));
- international best practice of pipelines and the impact on the international competitiveness of energy consuming industries (section 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 (section 8.10(f));
- the reasonable expectations of persons under the regulatory regime that applied to the pipeline prior to the commencement of the code (section 8.10(g));
- the impact on the economically efficient utilisation of gas resources (section 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) (section 8.10(i));
- the price paid for any asset recently purchased by the service provider and the circumstances of that purchase (section 8.10(j)); and
- any other matters considered relevant (section 8.10(k)).

General principles

In addition, the Commission is guided by the objectives for the design of a reference tariff and reference tariff policy outlined in section 8.1 of the code. These objectives are:

(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.

2.2.2 Epic's proposal

Epic has proposed a reference tariff that would equate reference service revenues to current contractual revenues (which it submitted are less than its total cost of service requirement). According to Epic, at this tariff level new users would pay the same capital contribution as existing customers.[9] Epic stated that it is not requesting the higher tariffs it would need to recover its total cost of service requirement.

Therefore, Epic submitted in the access arrangement information[10] (and in later correspondence) that as the pipeline capacity is fully contracted until 2006, the value of the initial capital base is not relevant to the current access arrangement period. Epic submitted that the calculation of an initial capital base could be postponed until 'such future date as the existing Capacity of the Pipeline System is available for sale at the Reference Tariff".[11] (In later correspondence, Epic proposed that the capital base be determined at the time of the review of the initial access arrangement, which it then proposed begin in July 2005.[12]) The Commission responds to Epic's submission on this point in section 2.2.7 below.

Notwithstanding the above, Epic prepared an access arrangement and access arrangement information in accordance with the code requirements.

Epic's stated view is that the correct basis for valuing an asset should be the cost for a competitor to fully replace the asset, that is, the ORC or deprival value.[13] Nevertheless, consistently with section 8.10(b) of the code, Epic evaluated the initial capital base using the DORC methodology. Epic stated that it had also considered the replacement value and book value of its capital assets.

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9 Access arrangement information, p. 10.
10 Access arrangement information, p. 10.
11 Access arrangement information, p. 10.
12 TGT, letter to Commission, 16 July 1999.
13 Access arrangement information, p. 11.

ORC and DORC

Epic based its ORC calculation on the parameters in the following table.[14]

Table 2.1: Parameters for Epic's ORC calculation

Receipt point pressure	6300 kPa
Maximum capacity	393 TJ per day
Firm capacity	323 TJ per day
Geographic extent of system	As per current
Market size and location	As per current

Epic stated that it made the following assumptions in calculating the ORC: [15]

- the best available technology of the day has been utilised for a 'fit for purpose' standard, not gold-plated or sub-standard;
- each line segment and facility is optimised for the flow at today's current contracted capacities, using standard sizing;
- the construction is a 'brownfields' construction, using the existing route but recognising that route conditions of today rather than at the time of first construction would apply;
- the costs of possible Native Title compensation and interest on capital during construction were considered; and
- Epic did not include any allowance for facilities to provide the service provider with greater control over customers' actions.

The four options in the following table were priced to provide capacity and redundancy similar to that for the existing system: [16]

Table 2.2: Epic's DORC options

Option A	The existing 559 mm diameter pipeline	\$643 million
Option B	559 mm diameter pipeline at 15 Mpa	\$572 million[17]
Option C	864 mm diameter, free flow pipeline	\$726 million
Option D	610 mm diameter pipeline at 10 MPa	\$598 million

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14 Access arrangement information, pp. 11, 23.

15 Access arrangement information, p. 23.

16 Refer access arrangement information, p. 30. The dollar values quoted here are directly from the document lodged by Epic on 1 April 1999, without adjustment for change in the general level of prices since then. Adjustments of this nature are made later in this chapter.

17 While Epic stated this value in the access arrangement information at pp. 11-12 and 30 of the access arrangement information, Epic in fact reduced the amount to \$570.1m by taking out amounts budgeted for expenditure on gas quality monitoring and remote valves in a later year.

Epic selected Option B as the ORC valuation on the basis that it represents the 'lowest initial capital cost'.[18]

For the purposes of evaluating DORC, Epic depreciated the pipeline system as a whole, assuming that the pipeline has a total life of 77 years, following 29 years' service at the time of valuation.

Epic's resulting DORC valuation of the initial capital base is $353.5 million, as shown in the following table.

Table 2.3: Epic's proposed accumulated depreciation of the MAPS

ODRC/Depreciation Analysis

Optimsed Replacement Cost	570,098
Pipeline Construction Complete	1969
Total Pipeline Life	77 years
ODRC @ 1/1/99	353,535

Straight-Line

Annual Dep'n (pre-indexation)

Year	**1969**	**1970**	**1971**	**1972**	**1973**	**1974**	**1975**
Opening Written Down Value	570,098	568,247	560,843	553,439	546,035	538,632	531,228
Depreciation	1,851	7,404	7,404	7,404	7,404	7,404	7,404
Closing Written Down Value	568,247	560,843	553,439	546,035	538,632	531,228	523,824

Year	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**
Opening Written Down Value	523,824	516,420	509,016	501,612	494,208	486,804	479,401	471,997	464,593	457,189
Depreciation	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404
Closing Written Down Value	516,420	509,016	501,612	494,208	486,804	479,401	471,997	464,593	457,189	449,785

Year	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Opening Written Down Value	449,785	442,381	434,977	427,574	420,170	412,766	405,362	397,958	390,554	383,150	375,746	368,343	360,939
Depreciation	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404
Closing Written Down Value	442,381	434,977	427,574	420,170	412,766	405,362	397,958	390,554	383,150	375,746	368,343	360,939	353,535

Source: Epic, consolidated response to Commission letter 30 April 1999, p. 3.

Epic's proposed DORC valuation (at 31 December 1998) was disaggregated into the asset classes shown in the following table. Weighted average accumulated depreciation was deducted from the total ORC to arrive at the DORC valuation of $353.5 million.

[18] Epic letter to Commission, 11 April 2000.

Table 2.4: Epic's DORC valuation of MAPS

Asset type	$ million (at 31 December 1998)[(a)]		
	ORC	Accum. Deprec'n	DORC
Pipeline	443.2		
Native title compensation	5.3		
Compressor stations	51.7		
Regulation and metering stations	16.4		
SCADA and communications	7.0		
Linepack	2.7		
O&M facilities[(b)]	13.0		
Interest on capital[(c)]	30.8		
Total asset value	**570.1**	**216.6**	**353.5**

Source: Access arrangement information, p. 30 and consolidated response to ACCC letter of 30 April 1999.

Notes:

(a) All cost information is at 31 December 1998.

(b) Includes maintenance depots, spares and head office/gas control.

(c) Assumes 90 per cent debt funding at 7 per cent interest, 25 per cent initial cost for materials with balance paid in equal drawdowns over 18 month construction period.

The total asset value figures have been updated later in this analysis to account for inflation and depreciation between 31 December 1998 and 30 June 2000.

GPA Engineering report

Epic commissioned a report by Mr Glen Parkinson of GPA Engineering Pty Ltd (GPA) to comment on the replacement cost of MAPS and the ORC costings prepared by Epic.

The report generally supported the unit costs for pipelines adopted by Epic although it suggested that the unit costs for the smaller compressors were understated. It suggested a price of $6 million for a complete SCADA/telecommunications system.

The report also commented that pipeline life could be as stated by Epic, on the basis that MAPS has been and will be operated in a professional manner and that adequate funds are provided for that purpose.

Imputed DAC, book value, depreciated sale price and residual value based on economic depreciation

Section 8.10 of the code states that in addition to the DORC, the depreciated actual cost (DAC) and other well-recognised asset valuation methodologies should be considered in establishing the initial capital base.

Epic did not provide a DAC valuation for MAPS in the access arrangement information. However, with the assistance of Epic, the Commission imputed a DAC

valuation for the pipeline system's assets at December 1998 of approximately $38 million on the basis of straight-line depreciation over the lives of the various classes of assets, based on the published annual accounts of PASA. The Commission considers that this estimate is reasonable given the age of the pipeline system.

The book value of MAPS at 31 December 1998 is estimated to be $319 million.[19] Epic calculated this value as the purchase price of the pipeline in June 1995 plus capital improvements, less disposals and accumulated depreciation since that time. The Commission has estimated the book value at 30 June 2000 to be $323 million after these adjustments.

Where assets have recently been exchanged, their sale price can also be used as a guide or check on their current value in use. In theory, a purchaser would pay an amount up to the net present value of future earnings expected from the assets. The purchaser may pay more if it sees scope to reduce the capital base or expected operating expenses. Therefore, in determining the initial capital base, the Commission will consider the amount that Epic's related predecessor, Tenneco, paid in 1995 to purchase MAPS, adjusted for inflation and depreciation.

Tenneco purchased the assets of PASA from the South Australian Government on 30 June 1995 at a cost of $304 million.[20] This included some assets not attributed to MAPS.[21] Adjusting the PASA purchase price for inflation and depreciation since June 1995 yields a valuation of approximately $294 million (at 30 June 2000). Because the starting value (purchase price) included assets not attributed to MAPS, the true depreciated sale price of MAPS is something less than $294 million. However, as the pipeline system has been changed since then by capital improvements and disposals, the book value may be a better indicator for regulatory valuation purposes.

Another factor that the code requires the regulator to consider when establishing the value of the initial capital base is the past performance of the entity. In particular, section 8.10(f) requires the regulator to consider 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.

By implication, the value of the assets might be reduced in the case of a service provider that has earned higher than normal returns in the past. Conversely, the value of the assets might be increased for a service provider that has earned less than normal returns.

To determine whether Epic has earned a normal rate of return on its investment in MAPS since it was purchased in 1995, the Commission has assessed economic depreciation based on actual revenues and returns likely to have been available to Epic since then. Economic depreciation and estimated capital expenditure have been used to

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[19] Access arrangement information, p. 12 and Epic, consolidated response to Commission letter of 30 April 1999, p. 1. The Commission has invited Epic to clarify the figure for book value by reference to other accounting information.

[20] Epic, consolidated response to Commission letter of 30 April 1999, p. 6.

[21] Epic has provided the Commission with the purchase price adjusted for non-MAPS assets on a confidential basis.

estimate a residual (closing) value of the assets of MAPS at 30 June 2000 of approximately $301 million. However, because the starting value (purchase price) included assets not attributed to MAPS, the residual value of MAPS is actually something less than $301 million.

2.2.3 Submissions by interested parties

Santos stated that Epic's capital cost estimates to determine the ORC of MAPS were too high. Santos particularly criticised the unit cost of $22,000 per inch kilometre used to estimate the cost of all mainline pipeline options.[22] Santos suggested that a more appropriate cost would be between $15,000 and $22,000 per inch kilometre. Santos also submitted that the cost of laterals and SCADA equipment had been over-stated. Santos provided its own estimates of those costs.

Santos estimated the cost of all options to be lower than Epic's estimates and nominated the cheapest option as Option D, with an estimated cost of $464 million, 22 per cent lower than Epic's estimate.[23] Santos based this estimate on the following:

- unit cost of $15,000 per inch km compared to Epic's $22,000;
- lateral costs of $29 million for low and medium pressure options and $32 million for high pressure options compared to Epic's $39 million and $47 million respectively;
- meter stations valued at $20 million compared to Epic's $16 million; and
- SCADA equipment valued at $4 million compared to $7 million.

Santos noted in its submission that 'the South Australian Hansard of 4 July 1995 records that Tenneco (subsequently Epic) paid $304 million to the South Australian Government for the pipeline plus a dividend of $17 million related to an earlier period'.[24] According to Santos, since 1995 the value of the system would have increased because of additional capital expenditure on compressors, offset by depreciation.[25]

TGT supported Epic's proposal[26] that the establishment of the initial capital base be deferred until the review of Epic's access arrangement beginning in July 2005. TGT submitted that, alternatively the initial capital base should be re-established, as at 1 January 2006, based on a revaluation of the DORC at that time.[27]

Turning to the capital base proposed by Epic, TGT submitted that Epic's pipeline costs were overestimated and quoted industry costs 8 per cent to 20 per cent lower than those proposed by Epic.[28] In particular, TGT noted inconsistencies in the stated dimensions of the Whyalla–Port Bonython lateral, the proposed construction costs of the lateral,

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22 Santos submission, 15 October 1999, p. 6.
23 Santos submission, 15 October 1999, p. 6.
24 Santos submission, 15 October 1999, p. 5.
25 Santos submission, 15 October 1999, p. 6.
26 TGT, letter to Commission, 16 July 1999.
27 TGT submission, 26 October 1999, p. 27.
28 TGT submission, 26 October 1999, p. 22.

and in the actual construction costs as reported in PASA's 1988/89 and 1989/90 annual reports.[29]

Further, TGT stated that the inclusion in Option B of a compressor station at Whyte Yarcowie for the Whyalla lateral (cost $5.7m), does not reflect an 'optimum' design for the pipeline system.[30] TGT also queried the inclusion of 'native title compensation' in the initial capital base, when the ORC calculation assumed a 'brownfields' classification for the pipeline.

TGT agreed that the DORC methodology is an appropriate asset valuation method, but suggested that other measures should also be considered. It suggested for consideration the price paid for the pipeline in 1995 adjusted for depreciation, capital expenditure and inflation.

2.2.4 Epic's response to submissions

Epic has responded to submissions about the ORC valuation made by TGT and Santos.[31] In its response, Epic stated that subsequently to its initial submission to the Commission, information on pipeline costing had emerged that strongly supported Epic's costing assumptions. Further, this information indicated that Epic could have understated costs, at least for the main pipeline system.

Epic referred to EAPL's submission to the Commission of 20 June 1999, which proposed an average unit cost for the Moomba–Sydney Pipeline System (MSPS) of $26,270 per inch kilometre.[32] Epic also cited the Eastern Gas Pipeline (EGP) as an example of a recent pipeline development similar to MAPS in terms of costs. Epic estimated unit costs for EGP of approximately $29,000 per inch kilometre. A further example of higher unit costs cited by Epic was the recently completed Southern Looping Project on the Dampier to Bunbury Natural Gas Pipeline (DBNGP). This was constructed by another member of the Epic Energy group of companies in Australia. Epic estimated a unit cost for this project of $24,000 per inch kilometre.[33]

In response to the comments made by Santos in relation to lateral costs being overstated, Epic expressed the view that Santos had priced the laterals at $15,000 per inch kilometre, which was too low and not comparable to recent small diameter lines. Similarly, in response to TGT's comments about the cost of the Whyalla lateral, Epic noted that the Whyalla line was built ten years previously by a government entity, quite possibly with some form of cross-subsidy to enhance regional development.[34]

In response to TGT's concern at the Whyte Yarcowie compressor station being included in the initial capital base, Epic noted that this station is still required for the higher-rated pipeline system option. Epic explained that lower pressures are still

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29 TGT submission, 26 October 1999, p. 22.
30 TGT submission, 26 October 1999, p. 24.
31 Letter to Commission, 14 December 1999.
32 EAPL's submission in respect of the MSPS access arrangement is still under assessment by the Commission.
33 Epic, MAP ORC response to submissions, 14 December 1999, p. 2.
34 Epic, MAP ORC response to submissions, 14 December 1999, p. 3.

possible at the Port Pirie−Whyalla off-take, because of pipeline pressure drops and operation or non-operation of compressors along the pipeline.[35]

In response to Santos' submission that SCADA equipment should have been valued at $4 million instead of Epic's $7 million, Epic noted that the latter estimate assumed that the entire system would be replaced rather than just those items owned by Epic.[36] The Commission notes that if this were accepted, an appropriate adjustment to actual expenses would be necessary, to the extent the SCADA assumption is a departure from current arrangements. Such an adjustment would ensure that Epic did not 'double dip' by receiving, under the cost of service methodology, recompense for its expenditure on utilities it does not own as well as a return of and on capital it does not have invested in the business.

Finally, in response to TGT's query about the appropriateness of including native title compensation in the initial capital base given that MAPS is a 'brownfield' pipeline, Epic stated that 'brownfield' was not used in relation to the construction cost estimates. Rather, the term related to the pipeline route encountering current day environmental/native title impacts.[37]

2.2.5 Desktop audit of DORC asset valuation

The Commission commissioned Connell Wagner Pty Ltd (Connell Wagner) to undertake a desktop audit of Epic's DORC valuation for MAPS.

Connell Wagner's report

The key findings can be summarised as follows:[38]

- Unit costs for the pipeline should be $19,350 per inch kilometre (up to 10.21MPa) and $21,250 (up to 15.0MPa) compared to Epic's $22,000 per inch kilometre (up to 15MPa).
- To determine the optimum ORC, Connell Wagner's assessment took into account initial capital cost and NPV calculation of the costs of operating the system. It arrived at a value of $539 million (Option D) compared to Epic's Option B valuation of $570 million.
- The laterals should be optimised to ensure that the optimal size and class of pipe is considered.
- Epic had not considered an 18-21 MPa pressure rated pipeline option for evaluation.
- Disaggregating the pipeline system for depreciation by asset class offers a more transparent and robust process. Epic's approach of applying depreciation to the

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35 Epic, MAP ORC response to submissions, 14 December 1999, p. 6.
36 Epic, MAP ORC response to submissions, 14 December 1999, p. 6.
37 Epic, MAP ORC response to submissions, 14 December 1999, p. 6.
38 Connell Wagner Pty Ltd, 'Review of DORC Valuation for the Moomba to Adelaide Pipeline', *Draft Report*, February 2000 and Connell Wagner Pty Ltd, 'Review of DORC Valuation for the Moomba to Adelaide Pipeline', *Final Report*, April 2000.

entire asset value for the system as a whole and assuming a total asset life of 77 years, could overstate the DORC asset valuation by as much as 21 per cent.

- Without further information and study of MAPS, the order of accuracy of Connell Wagner's estimates was +/- 25 per cent.

2.2.6 Epic's response to the Connell Wagner report

In response to the Connell Wagner draft report on Epic's proposed DORC valuation for MAPS, Epic commissioned Stephen Timms Consulting Pty Ltd ('Stephen Timms Consulting' or 'STC') to review the findings of the report. Epic provided the Commission with a copy of the STC review, and a written response to the draft Connell Wagner report.[39] Epic's response can be summarised as follows:

- The unit costs proposed by Connell Wagner are not reflective of current costs. Epic concluded that its rates are appropriate and may be a little on the low side relative to actual figures for recently constructed pipelines.
- Epic rejected Connell Wagner's suggestion that it should consider as an option a pipeline rated at 18-21 MPa pressure. Epic stated that, to its knowledge, no such transmission pipeline had been constructed in Australia, and there is a significant risk of increased costs associated with an unfamiliar construction.
- Although not optimised, the laterals need to be the same pressure rating as the optimised pressure rating for the mainline, or else there would need to be pressure-limiting facilities at the inlet of each lateral. Further, under the optimised design, the sizing would be similar to the current size for most laterals as the diameter would need to accommodate periods within a day when the lateral inlet pressure drops to near current levels.
- Epic noted that Connell Wagner selected Option D by taking account of the relative projected O&M costs of the four options. In comparison, Epic considered Option B to be the optimum purely on the basis of the lowest initial capital cost. Epic also noted that there was very little difference in an NPV assessment between Connell Wagner's costings of Option B and Option D.[40]
- Epic did not agree that depreciating the ORC by asset class provides a more transparent and robust process. Rather, according to Epic, the requirement of the DORC process to arbitrarily select asset lives can have a dramatic impact on the value of the asset base.

To demonstrate this last point, Epic reduced the assumed life of the compressor and meter stations by one year. This had the effect of increasing the DORC for Option B by 17 per cent or $50 million. This reduction arose from the fact that Connell Wagner had indicated a life of 30 years for such equipment, and MAPS is now at that age. Thus, the Connell Wagner approach assumed that asset replacement would already have taken place, or would take place over the next year. However, Epic stated that it had not included any major replacements in the pipeline system in its capital expenditure projections provided to the Commission. Therefore, Epic suggested that

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39 Epic letter to Commission, 11 April 2000.
40 Epic, letter to Commission, 11 April 2000, p. 2.

depreciating the ORC by asset class would require Epic to revisit the access arrangement to address the inconsistency between DORC asset lives and Epic's projected capital expenditure.

As an alternative, Epic proposed an approach suggested by Stephen Timms Consulting that involves calculating a weighted-average life of all assets. In this case, the value of those components of MAPS that could be depreciated at a higher rate compared to the pipeline is approximately $42 million, or 8 per cent of the replacement cost of the entire system. Using this approach, and the STC depreciation values and rates, a weighted whole-of-system asset life of 77 years is obtained by extending the life of the pipeline itself by 4 years to 81 years. This indicates a remaining pipeline life of 51 years. Epic argued that this is well within the justifiable technical and economic life, given Epic's past and future approach to asset maintenance.

Epic subsequently advised that if the depreciation by asset class methodology were to be adopted, the resulting DORC valuation would be $371 million ($383 million at 30 June 2000).[41] That valuation is higher than the original DORC proposal of $353.5 million ($354 million at 30 June 2000) contained in Epic's access arrangement information. In arriving at the new figure, Epic assumed that only a portion of assets other than the pipeline would be depreciated at a faster rate than the pipeline itself was depreciated. For instance, Epic assumed that 50 per cent by value of compressor assets have an effective life of 30 years, and the remaining 50 per cent an effective life of 81 years. This approach can be termed 'split asset lives'. It is not meant to imply that functionally integral assets, such as a compressor unit, are broken down into their constituent parts such as turbine fan blades, sensor equipment, etc. Rather, a distinction is drawn between the lives of turbine compressors, pipe fittings, control units, compressor buildings, etc.

2.2.7 Commission's considerations

The Commission understands Epic's suggestion to defer the establishment of the initial capital base until such future date as the existing capacity of the pipeline system is available for sale at the reference tariff.[42] However, the code requires that an access arrangement include a reference tariff determined according to the principles set out in section 8 of the code. The cost of service method used by Epic pursuant to section 8 mandates approval of an initial capital base, a rate of depreciation of that capital base and a rate of return on capital.

In any event, under Epic's proposal, the service provider may, at a future review, seek to add capital expenditure on extensions and expansions to the initial capital base. Therefore, that capital base must be established. As will be apparent from the discussion in this draft decision, evaluation and verification of the initial capital base is complex and arguably better dealt with now in advance of the review of the access arrangement, which will occur in a limited timeframe.

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[41] Epic, letter to Commission, 19 May 2000 and correction subsequently agreed with Epic.
[42] Access arrangement information, p. 10.

Further, the initial capital base and the weighted average cost of capital (WACC) are both necessary to derive the reference tariff and capital contribution applicable to new FT customers during this access arrangement period. (Clauses 10.3 and 10.4 in Epic's proposed revisions of March 2000 to the access arrangement incorporate a capital charge contribution for new facilities that derives from the reference tariff and WACC.)

The Commission has considered the information contained in Epic's access arrangement information, in the report for Epic by GPA Engineering Pty Ltd and in subsequent correspondence with the Commission. The Commission has also considered the Connell Wagner report on the DORC valuation of MAPS and the reviews by Stephen Timms Consulting and Epic of Connell Wagner's draft report. (Connell Wagner's final report is substantially the same as its draft.)

The key issues pertinent to the ORC valuation of MAPS are unit costs and optimisation. The key issue pertinent to deriving the DORC is depreciation methodology. Each of these is discussed in turn below.

Unit costs

Pipeline unit costs are dependent upon a range of variables including size, pipeline location, terrain, rock, tendering process, competition between pipeline suppliers, the exchange rate and project management. Therefore, whilst the unit cost approach for costing pipelines is reasonable, the Commission is cognisant of the difficulties involved in its application.

To illustrate the diversity of opinion and approach, a comparison of the various proposed unit costs for MAPS is provided in the following table.

Table 2.5: Pipeline unit cost figures

Source	Unit cost ($/in-km)	Comment
Epic	$22,000-$24,000	As at December 1998. Supported by STC and GPA reports.
Santos	$15,000-$22,000	At date of submission, October 1999.
TGT	$17,600-$20,200	Based on TGT's statement that industry pipeline costs were 8-20 per cent lower than those proposed by Epic.
Connell Wagner	$19,350-$21,250	At April 2000.
Commission	$18,000-$24,500	As at June 2000.

Epic has chosen to divide the system into essentially four pipeline segments, applying a common unit cost ($22,000 per inch kilometre) to the total length and diameter of the main and loop pipelines and other unit costs to the lateral and underwater pipelines. The unit costs for the lateral and underwater pipelines are increased by 20 per cent in Epic's preferred (higher pressure) Option B. As such, the four pipeline segments represent over 75 per cent of the total cost of the system. While other components of the system, such as compressor and meter stations, are considered separately, the

overall result is a considerably simplified approach that is highly sensitive to the unit costs adopted.

Santos and Connell Wagner used a similar approach, albeit with generally lower estimated unit costs. As noted previously, both preferred option D.

The Commission acknowledges the comparisons made by Epic in defence of its proposed unit costs per inch kilometre for MAPS.[43] Whilst the unit cost used by Epic for MAPS ($22,000 to $24,000 in December 1998 dollars) is less than the unit costs estimated for the Epic Energy DBNGP Southern Looping Project, the Commission is also aware of pipelines similar to MAPS with lower unit costs per inch kilometre. For example, the Ballera to Mt Isa Pipeline in Queensland is comparable to MAPS in terms of its size and location. An estimated unit cost for this pipeline is $18,000 per inch kilometre.[44] Similarly, the estimated unit cost for the Epic Energy Ballera to Wallumbilla pipeline is $17,900 per inch kilometre.[45] These unit costs are 20 to 25 per cent less than those proposed by Epic

Epic also compared unit costs of MAPS with those for the MSPS and EGP systems. The Commission does not consider that unit costs proposed by EAPL for the MSPS in its access arrangement information currently before the Commission are conclusive, as the Commission has still to reach a view on the information provided in that application. As the EGP has yet to be completed, the Commission is not able to verify the cost of that pipeline. Furthermore, the Commission does not believe EGP to be comparable to MAPS, having regard to geography and terrain.

Commission's own calculation of ORC

The Commission undertook an assessment of the overall costs of the two lowest-cost options (generally similar to Epic's Options B and D). It concluded, like Connell Wagner and Santos, that Option D was the least-cost option. This analysis is set out in Annexure 2.

The Commission's analysis looks in more detail at the components of the system than does Epic's approach.

Given the differences in the approach between Epic's and the Commission's estimates a direct comparison based on unit costs is not entirely relevant. However, in broad terms the range of average unit costs for Option D in the Commission's estimation[46] (expressed in June 2000 terms) is as follows:

- $18,000 per inch kilometre for small diameter laterals;
- $18,400 per inch kilometre for the bulk of the mainline; to

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[43] Stephen Timms Consulting Pty Ltd, *Review of Connell Wagner report on the Epic DORC valuation for the Moomba to Adelaide Pipeline,* April 2000, p. 7.

[44] Pipeline length 847km, its diameter is 12 inches . This pipeline reportedly cost $180 million, or $17,710 per inch km in 1998 dollars.

[45] The GPA report quotes a figure of $17,700 per in-km for the pipeline, which was commissioned in late 1996. This is $17,900 per in-km after adjusting for CPI to December 1998.

[46] This excludes compressors, meter and regulator stations, SCADA and communications, linepack, interest during construction and add-ons for facilities.

- $24,500 per inch kilometre for the loop line in Adelaide.

Table 2.6 identifies the respective unit cost elements and outcomes of the estimates of ORC devised by Epic and the Commission for option D. Epic's costs have been adjusted for inflation since December 1998.

Table 2.6: Comparison of ORC estimates for Option D

	Epic ORC – Option D ($ June 2000)				Commission ORC – Option D ($ June 2000)			
Item/description	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $
PIPELINE	**km**	**inch**			**km**	**inch**		
Main line	781	24	22,774	426,900,000	781	24	18,400	344,600,000
Loop line	42	20	22,774	19,100,000	42	20	24,500	20,600,000
Land laterals	218.8	6.8	20,704	30,700,000	218.8	7.5	18,000	29,600,000
Underwater laterals	14.1	6.5	103520	9,500,000	14.1	8.5	103000	12,300,000
Native title compensation				5,500,000				0
COMPRESSORS	**No**	**kW**	**$/kW**		**No**	**kW**	**$/kW**	
Compressor stn #1	3	3,000	2588	23,300,000	2	4,500	2,680	24,100,000
Compressor stn #3					2	4,500	2,680	24,100,000
Compressor stn #5	3	3,000	2588	23,300,000	2	2,000	3,420	13,700,000
Whyte Yarc comp stn	2	570	5176	5,900,000	0			
METER STATIONS								
Meter & regulator stns				17,000,000				17,400,000
SCADA & COMMS								
SCADA & communications				7,200,000				3,100,000
LINEPACK	**GJ**		**$/GJ**		**GJ**		**$/GJ**	
Linepack	800000		2.75	2,200,000	845000		2.75	2,300,000
OPERATIONS & MAINTENANCE								
Maintenance depot				6,200,000				6,200,000
Spares				3,600,000				included spare
Head office/gas control				3,600,000				3,600,000
SUB TOTAL				**584,000,000**				**501,600,000**

INTEREST			%				%	
Interest on capital			5.7	33,300,000			5.0	25,100,000
GRAND TOTAL				**617,300,000**				**526,700,000**

ORC valuations arising from application of unit costs

The Commission's optimisation models differ from Epic's mainly in the treatment of the Port Pirie−Whyalla lateral and in compression requirements.

- The Commission's Option D retains a maximum Port Pirie−Whyalla lateral operating pressure of 10MPa, but assumes an 8-inch lateral pipeline from the mainline offtake to Whyalla. This eliminates the need for the Whyte Yarcowie compressor station at the inlet to that lateral. The Commission's model further requires 3 mainline compressor stations - two with 2 x 4500kW and one 2 x 2000kW. (Epic's Option D requires two 3 x 3000kW unit stations and one 2 x 570kW unit station at Whyte Yarcowie. Epic has retained the existing 6 inch size of the Port Pirie-Whyalla lateral as far as Port Pirie.)
- Epic appears to have wrongly included an additional 11.57km of pipeline length in the Port Pirie−Whyalla lateral and to have understated the size of the 'Gulf crossing' as 4 inch. The main crossing is 8 inch. A 4-inch pipeline was also installed at the same time but is not required at current maximum capacities.

The results for each proposer's preferred option together with the ORC derived by the Commission are shown in Table 2.7.

Table 2.7: Pipeline ORC option comparisons

Source	$ million	Comment
Epic	$570	Option B, as at Dec 1998 generally.
Santos	$464	Option D (details not provided).
Connell Wagner	$539	Option D.
Commission	$527	Generally comparable to Epic's option D – June 2000 costs.

Optimisation technique and selection of ORC valuation

Of the four ORC options considered, Epic selected Option B ($570 million as at 31 December 1998) on the basis of its having the lowest initial capital cost. However, Connell Wagner was of the view that the whole-of-life costs associated with each option should be considered when selecting an optimum design for DORC purposes. This involves assessing both initial capital costs and the net present value (NPV) of O&M costs. Connell Wagner suggested that the effect of considering only the initial capital cost is to make free-flow pipeline configurations appear more expensive compared to compressed pipeline configurations. However, by considering O&M and other capital costs for these options, free-flow configurations may be identified as the

least-cost option because lower O&M and capital costs are associated with 'compressor-less' operation.[47]

Connell Wagner assessed the four options proposed by Epic on an initial capital basis, and then ranked these on an NPV basis. Under both methods, Option D (initial capital cost of $539 million) was found to be the least cost (i.e. optimum) option. Connell Wagner noted that the cost estimate for Option D provided by Santos appeared low, and through lack of supporting evidence did not offer detailed comparisons with Connell Wagner's own estimate.[48]

The Commission concurs with Connell Wagner's view that it is important to consider both initial capital cost and future costs when assessing development options over a reasonable assessment term.

The Commission has adopted the least cost option identified by its own analysis – generally comparable to Epic's Option D.

Depreciation

Section 8.33 of the code gives guidance on the depreciation schedule for regulatory purposes. The depreciation schedule for each asset or group of assets should be designed so that, to the maximum extent that is reasonable, it is adjusted over the life of that asset or group of assets to reflect changes in the expected economic life of the asset or group of assets.

In depreciating the ORC to arrive at a DORC valuation for a pipeline system, the Commission favours depreciation by asset class. The Commission concurs with Connell Wagner's view that this 'offers a more transparent and robust process'.[49]

For purposes of comparison, the Commission has also assessed the approach to depreciating the entire capital base using a 'weighted average asset life', as originally proposed by Epic. Although the resulting DORC might be the same, this approach does not provide the transparency necessary to track movements in assets over time and, in particular, makes it difficult to link capital expenditure to the expiry of assets. This could become an issue when service providers seek to roll actual new capital expenditure into the capital base at the commencement of the next regulatory period.

As noted previously, Epic signalled that it might seek an additional allowance for future capital expenditure if depreciation by asset class introduced asset class lives that, when depreciated, arbitrarily reduced the overall DORC value of the system.[50] Epic submitted that in many cases the Connell Wagner approach assumed that asset replacement would already have taken place, or would take place over the next year., Epic stated that it had not, however, included any major replacement of the pipeline in its capital expenditure projections provided to the Commission. Epic argued that if depreciation by asset class were applied to establish a DORC initial capital base, the

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[47] Connell Wagner, *Final Report*, April 2000, p. 12.
[48] Connell Wagner, *Final Report*, April 2000, p. 28.
[49] Connell Wagner, *Final Report*, April 2000, p. 5.
[50] Epic, letters to Commission 11 April 2000, pp. 4-6 and 19 May 2000, p. 2.

inconsistency between DORC asset lives and Epic's projected capital requirements in the access arrangement would need to be addressed.[51]

Epic reiterated its views on this issue in subsequent correspondence with the Commission. Epic stated that if depreciation by asset classes were to be used to determine the DORC, and if this influenced the Commission in respect of the initial capital base for MAPS, Epic would need to revisit its access arrangement. Epic stated that in doing so it would need to address any inconsistency between DORC asset lives and Epic's projected capital requirements.[52]

The Commission does not accept the corollary of this argument, that the capital base should be adjusted so as to take account of capital expenditure for asset replacement in the optimised system not included in the proposed access arrangement.

Pursuant to the code, only that part of projected capital expenditure that is (efficiently) spent during the access arrangement period can be rolled into the capital base at the commencement of the next regulatory review. Thus, any capital expenditure allowance provided for (hypothetical) asset replacement would not be maintained in the capital base beyond the access arrangement period. Similarly, where unexpected (efficient) capital expenditure is undertaken during the access arrangement period, that expenditure would be rolled into the capital base at the commencement of the next regulatory period. The amount rolled in would incorporate any return that would have accrued on that capital expenditure had it been automatically rolled into the capital base during the access arrangement period.

The purpose of arriving at the initial capital base is to strike an appropriate basis (in terms of code sections 8.1 and 8.10) on which the owners should be rewarded for their investment (rate of return). The initial capital base also determines a quantum of value in the business at the commencement of regulatory arrangements that should be returned to the owners over time (through depreciation).

The initial capital base is not causally tied to the allocation of funds for capital works for future replacement or expansion. Under the regulatory framework, future capital expenditure and the initial capital base are in most respects assessed quite separately to each other. Capital expenditure refers to that expenditure required by a business to replace, upgrade or expand existing assets over the regulatory period. It falls into two types: replacement capital expenditure and new facilities investment (investment in enhancements to capacity).

The Commission accepts that Epic needs to make appropriate O&M expenditure from its revenue stream to keep the pipeline operating to design capacity. The Stephen Timms Consulting review noted that the majority of rotating equipment, meter stations and compressor stations would last as long as the pipeline.[53] Epic itself commented in a letter in response to the Connell Wagner report: [54]

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[51] Epic, letters to Commission 11 April 2000, p. 5 and 19 May 2000, p. 2.

[52] Epic, letter to the Commission, 6 July 2000, p. 1.

[53] Stephen Timms Consultancy Pty Ltd, *Review of the Connell Wagner report on the Epic DORC valuation for the Moomba Adelaide Pipeline*, April 2000, p. 9.

[54] Epic, letter to Commission, 11 April 2000, p. 4.

> Epic has maintained its assets in a way that ensures they continue to fully meet their original design requirement. In this sense, the pipeline life continues to be 'reset' to zero as appropriate maintenance activity is carried out and individual components are replaced as their condition requires. As an illustration, for the last 5 years Epic has carried out an annual pipeline repair program which utilises information from the most recent 'intelligent pigging' metal loss survey. Epic targets and repairs defects which would, if unrepaired, ultimately reduce the allowable pressure and therefore capacity of the pipeline. In other words the pipeline is being maintained to continue to perform at its design condition. In this way the remaining life is constantly being pushed out.

Epic's proposal for 'split asset lives' is inconsistent with the conventional treatment of depreciation for DORC assessment purposes. Epic's approach may indeed reasonably reflect the actual physical condition of MAPS. However, it is unlikely that Epic's assumptions in depreciating the ORC by asset class could be verified and considered for regulatory purposes without a detailed physical audit of the pipeline system and more detailed physical and depreciation information line-by-line on the assets falling within broad asset classes.

Even if that were to be done, in the Commission's view it would miss the regulatory point of establishing an initial capital base. That is to take a 'snapshot', at a single point in time, of the value of a prudently-managed established business, recognising that the owners have achieved some return of value (capital depreciation) to that point, irrespective of the actual operating condition of the assets. In the Commission's view that is why the code requires the regulator to take account of a range of indicators of value, rather than to focus solely on a depreciated value of ORC. Regulators do not allow DORC depreciation as a fund for asset replacement. As described above, the 'snapshot', once taken, thereafter provides a basis of reward to the owners on that value and a basis for return of capital over time. The code provides explicit mechanisms to incorporate future capital expenditures on the existing system in the capital base. The Commission's approach to rolling capital expenditure into the capital base - including new facilities investment and replacement expenditure - is discussed in section 2.4.4 below.

The link between depreciation of the optimised and actual systems (which may differ in make-up) and the value that has been returned to the firm by depreciation at the date of the 'snapshot' is no stronger if the system is depreciated:

- as a whole; or
- having regard to expected working lives of individual assets; rather than
- assuming conventional lives for all assets falling within accepted asset classes.

An audit into split asset lives of the kind described above would simply be a refinement of estimates underlying an approach that has practical and conceptual difficulties. For the same reasons, Epic's whole-of-system approach to depreciating the ORC is conceptually no stronger.

In the circumstances, in arriving at its DORC valuation the Commission takes a conventional approach to depreciating by asset class so as to arrive at a particular value on a certain date (30 June 2000).

Effective asset life

As mentioned above, section 8.33(b) of the code states that an asset forming part of the covered pipeline should be depreciated over its economic life. A pipeline's economic life may differ substantially from its technical life, if there are factors other than the condition of the pipeline that limit its usefulness. The outcome of taking economic life into account should be greater correspondence between the return of capital and the utility of the asset in producing regulated revenues for the entity.

Epic did not, for purposes of its ORC valuation, distinguish between the technical and economic lives of the main pipeline. However, Epic did raise concerns[55] about the potential of several factors to increase the financial risks associated with operating MAPS.[56] Epic identified declining Cooper Basin gas reserves, increased electricity imports into South Australia and bypass/competition from new gas pipelines as such factors. The potential for partial bypass, in particular, has been supported by recent proposals, still at an early stage, to construct a pipeline from Victoria to Adelaide[57] and work identified by Epic representatives to upgrade electricity interconnections via the MurrayLink to commence operation in January 2001.[58]

A decrease in gas reserves has the potential to limit the remaining economic life of the pipeline. The Commission understands that advisers to the Victorian transmission systems owner took this factor into account in arriving at depreciated values (pre-privatisation) for the pipeline systems in that State.

Epic suggested that uncertainty about remaining gas reserves has the potential to reduce demand for access to the pipeline. Epic stated: [59]

> In recent times the success of the existing Cooper Basin JV has been only very modest despite a significant acceleration in exploration prior to the expiration of current PELs. The exploration success of new entrant producers taking part in the competitive tender of SA Cooper Basin acreage post the 1999 expiration of the PELs 5 and 6 is also uncertain.

As against this, there is the possibility of using MAPS to haul gas from northern Australia into South Australia.[60] The Commission notes the high level of demand in eastern Australia for gas sourced in Victoria, suggesting a possible constraint on its availability in the medium term. The Commission considers that while the factors outlined above have the potential to reduce the utilisation of MAPS at times in the future, they do not demonstrate that its economic life will be anything substantially less than the order of time assumed by Epic.

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55 Access arrangement information, p. 37 and Epic letter to Commission, 15 June 2000, p. 2.

56 Access arrangement information, pp. 37-39.

57 'Vic-SA Gas Pipeline mooted', 'Texas wants SA gas line', *The Australian Financial Review*, 5 May 2000 and PIMA Mining NL 'SAMAG signs MOU with South Australian Government', undated *Stock Exchange Announcement*, May 2000.

58 Refer www.transenergie.com.au/MurrayLink.

59 Access arrangement information, p. 38.

60 'Epic to build $1.6 billion pipeline to bring Timor gas to SA, QLD', *The Australian*, 28 June 2000, p. 23 and 'Epic's Timor gas could "kill" PNG project by reaching Townsville first, says project manager Dillon', *Courier-Mail,* 28 June 2000.

Therefore, the Commission has proceeded on the basis that the pipeline system will have an economic life of 80 years, having regard to technical lives proposed for various pipeline systems cited in the Connell Wagner report and Epic's views on the technical life of the system. The Commission has assumed that the various classes of assets making up the MAPS will have economic lives according to the technical life assumptions made by Epic in correspondence with the Commission,[61] with the exception of the pipeline. Epic assumes that it has a life of 81 years, whereas the Commission assumes 80 years.

The Commission has not made the 'split asset life' adjustments to the working life of assets within asset classes proposed by Epic. Epic's own calculations of asset lives using this technique produced a depreciated capital base value ($383 million in June 2000 prices) substantially greater than the whole-of-system value Epic proposed in the access arrangement information ($354 million in June 2000 prices). This outcome calls into question the utility of the technique in deriving values reflecting the economic lives of assets.

The Commission's economic life assumptions are shown in Table 2.8.

Table 2.8: Economic lives for MAPS assets

Asset class	Economic life
Pipeline	80 years
Compressors	30 years
Meter Stations	15 years
SCADA	15 years
Depot/Office	50 years
Spares	20 years

Deferred tax liability

Establishing capital base and return on capital in a post-tax framework

In a later section of this draft decision, 2.5.4, the Commission explains its preference for a post-tax framework for deriving reference tariffs of regulated entities. The Commission considers that a post-tax framework assists in the achievement of the section 8.1 code principles. Principles that are particularly relevant are that cost-of-service revenues should be attributable to efficient costs; revenues should be commensurate with the level of risk in providing the service; and the treatment of depreciation should foster market growth. (Refer to sections 8.30, 8.33 and 8.37.)

In assessing revenues for services of infrastructure assets it is essential to take account of the tax depreciation provisions linked to those assets so as to adequately provide in the revenues for tax expenses. This is the objective of the Commission's preferred post-tax cost of capital methodology. Accelerated tax depreciation not only defers the

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[61] Epic, letter to Commission, 18 May 2000.

timing of taxes but also means that the tax depreciation is exhausted in advance of economic or regulatory depreciation of the assets.

This raises the issue of how to account for the exhaustion of tax depreciation in establishing the regulatory asset base for established businesses at the commencement of an access arrangement period.

Taking first the taxation treatment, if the physical assets were transferred or sold, the Australian Tax Office (ATO) would permit the tax value to be re-established for tax depreciation purposes, based on the sale price. (This is what happens when government assets are privatised and is the basis for Epic's 1995 written-down tax valuations.) Where a company is not sold or is sold as a going concern, the ATO does not normally permit a re-establishment of the asset value for tax depreciation but relies on the earlier written-down tax value of the assets for future tax assessment.

There is a similar issue regarding the valuation of the regulatory asset (capital) base.

If ownership of the assets is transferred at the time the regulatory asset base is established, no adjustment needs to be made for what has happened in the past. Epic's situation at the commencement of this access arrangement period is that of an established, continuing business. The asset transfer is not taking place now; it occurred five years ago. Therefore, a substantial part of Epic's tax depreciation concessions may already have been utilised to defer tax.

As the tax liabilities deferred will have to be paid in the future, the value of future cash flows to the business is reduced. Accordingly, there is a reduction in the value of the physical assets to the continuing business.

The difference in value for the continuing business is closely approximated by the estimated value of cumulative deferred tax liabilities. This difference in value represents the savings in immediate tax expense that have already been realised by the business through accelerated depreciation.

The component of the firm's revenue requirement that these deferred taxes represent can be interpreted as compensation for the loss in value of future cash flows. That is, it is a return of capital, reflecting the reduction in the value of the physical assets to this business arising from its deferral of tax. It is therefore appropriate to reflect this return of capital in the regulatory asset base by reducing the valuation of the physical assets derived by other means, in this case, derived by a DORC estimation.

Where historic revenues have included a component to cover normal or prima facie taxes, users will already have compensated the business for the associated tax payments or loss of value of future cash flows by a corresponding amount. This issue is taken into account in modelling the post-tax revenue requirement.

To establish the initial MAPS capital base in accordance with the principles outlined above, the Commission proposes to adjust the valuation yielded by DORC for Epic's accumulated deferred income tax liability.

Unless an adjustment is made to the initial capital base, the quantum of capital that had been returned to date to the entity would be understated. Consequently its initial capital

base would be overstated, with the result that two components of cost of service would be overstated in each succeeding year. The components that would be overstated (one of them twice) are:

- ongoing depreciation cost, because the amount of the annual depreciation charge would be derived from the overstated capital base;
- the rate of return on capital, because analysis of the future revenue stream in a post-tax framework to identify WACC explicitly allows for taxes as they fall due; and
- the dollar value of the return on capital (though not the rate) would be overstated to the extent that the rate is applied to the overstated capital base.

Concerns identified by Epic

Following discussions with Commission representatives on 5 July 2000, Epic expressed its disagreement with the proposed treatment of deferred tax liability.[62]

Epic submitted that the proposed adjustment would be contrary to code principles for determining the capital base. Epic stated that the proposed adjustment is an ' "asset" created for financial accounting purposes'. Epic put the view that the regulator can assess in the capital base only the value of the physical assets and not the assets that Epic characterised as financial assets. Epic stated that an alternative treatment of deferred tax liability as a non-capital expense would be equally inadmissible, because the tax liability is not similar in nature to non-capital expenses.

Epic submitted that the adjustment of the deferred tax liability in the capital base or rate of return would be invalid because it would be a 'subjective' adjustment, specific to the pipeline. According to Epic, the code standard of assessment is that for an 'ideal' pipeline operated by a prudent service provider, with capital base and return determined 'objectively'. Epic submitted that the Commission had required this 'objective' approach in earlier decisions and in its recent decision on AGL Pipelines' Central West Pipeline.

In earlier correspondence, Epic submitted that any deferred tax liability pre-dates, and is therefore not relevant to the current access arrangement. [63] Further, Epic submitted that if this adjustment were to be uniformly adopted by the Commission, it would destroy any remaining element of incentive to the service provider.

Commission application of code and response to Epic concerns

Section 8.10 requirements

The Commission agrees with Epic that only the value of the physical facilities that make up the pipeline system can be assessed for purposes of approving the reference tariff. However, in the Commission's view, its proposed treatment of deferred tax liability is consistent with the terms of valuing the physical assets pursuant to sections 8.10 and 8.30 of the code. The Commission is to consider and (by inference) compare the various capital base valuations yielded by the approaches prescribed in section 8.10.

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[62] Epic, letter to Commission, 12 July 2000
[63] Epic, letter to Commission, 6 July 2000, p. 2.

Particularly relevant is section 8.10(f), which requires the regulator to consider the basis on which tariffs have been (or appear to have been) set in the past, the economic depreciation of the pipeline and the historical returns to the owner. The regulator should also consider any other factors it considers relevant (section 8.10(k)). Section 8.30 is relevant in that if the capital base is overstated, the effective rate of return will be greater than justified by the level of risk to which the service provider is exposed.

Epic has not been subject to capital expenditure and revenue regulation in the period since it purchased the PASA assets in 1995.[64] The Commission's analysis of historical (contract) returns to Epic between 1995 and 2000 suggests that a 'residual' valuation of $301 million (less non-MAPS assets) would be appropriate in 2000. This valuation of Epic's returns to date on the purchase price less economic depreciation assumes payment of taxes at Epic's effective rate of taxation. Because that analysis starts at the time of Tenneco's purchase of the system in 1995, it is unnecessary to consider an adjustment of that value for deferred tax liability.

By comparison, the Commission now proposes an adjustment for deferred tax liability on the Commission's calculated DORC of $316 million. For reasons stated earlier, by adjusting the DORC value for the reduction in value of the physical assets attributable to deferred taxes, the Commission places Epic, after the adjustment, in a comparable position to an entity that has yet to accumulate a liability for deferred taxes. Tenneco was in that position in June 1995.

Turning to Epic's point that parameter-setting for the building blocks should be based on an ideal system, the preferred approach of Epic and the Commission to capital base evaluation is a DORC methodology. Although respective techniques for the optimisation and depreciation steps are at odds, it is common ground that the depreciation adjustment of ORC is specific to characteristics of the physical assets of the entity. In Epic's terminology, it is a 'subjective' adjustment. For the reasons stated earlier, the Commission considers that it is necessary to go a step further, by making the proposed adjustment, on transition to a cost of service approach that recognises actual tax liabilities of an entity arising from its interest in the physical assets.

The Commission's preferred general approach to determining the value of network industry capital bases is expressed in the *Draft Regulatory Principles.* The approach is one that involves optimisation using an ORC methodology and the application of 'competition depreciation'. The latter term signifies a form of economic depreciation in which asset values are depreciated in line with changes in the replacement cost of assets or in the cost of alternative technologies where they exist. Such an approach best approximates the workings of a competitive market in which service tariffs are independent of the age and residual value of assets employed in the business. A supplementary working paper to the *Draft Regulatory Principles* commented: [65]

> In effect the approach is one where the asset base is based on a continuously updated DORC valuation, at least conceptually.

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[64] Refer *Natural Gas Pipelines Access Act 1995* (SA), Part 6.

[65] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues,* 'Supplementary Papers', 27 May 2000, p. A21.

It remains the case, however, that the initial depreciation adjustment of ORC to arrive at DORC is specific to the regulated entity and attempts to reflect the quantum of capital already returned to the owners of that pipeline system. The Commission took that approach in its first decision on an access arrangement for the gas transmission industry, for the Victorian systems.[66]

The adjustment for deferred tax liability is similar in character. The gas code rules out 're-DORC-ing' the initial capital base in subsequent periods to achieve a capital base closer to the model advocated in the *Draft Regulatory Principles*.

In the Central West *Final Decision,* the Commission adopted as the capital base an optimised valuation of actual construction expenditure on the pipeline. The Commission accepted AGL Pipelines' view that the capital base should be reduced by the value of government funding of the pipeline and, with qualifications, increased over time to reflect economic depreciation. In that case the latter was a form of tariff normalisation to eventually recoup under-recoveries of revenue accrued in the early life of the pipeline system.

Appendix C to the *Final Decision* explained the rationale for adopting a post-tax nominal rate of return framework in place of the pre-tax real framework proposed by AGL Pipelines. The Appendix specifically discussed the issues arising, at time of transition to a post-tax framework, from the difference between actual tax payments (usually zero) and the assumption by businesses setting tariffs that tax payments equate to the corporate tax rate. The Appendix continued: [67]

> The pre-compensation for future taxes that needs to be taken into account when moving to a post-tax regime can be acknowledged (to the extent that there remains an amount of tax pre-compensation which has not yet been utilised). The compensation for future tax liabilities needs to be reduced so that, by the end of the life of the asset, the compensation for tax liabilities allowed for in the revenue stream has exactly offset (in present value terms) the estimated impost of taxes.
>
> …
>
> Where there are mature existing assets service providers have vigorously argued that the assets should be notionally depreciated for tax purposes. That is, available tax concessions should not be taken into account when determining the pre-tax rate of return which will achieve the desired post-tax return. Ignoring these concessions leads to a higher pre-tax WACC estimate. Such a stance displays a misunderstanding of what the pre-tax WACC actually is, namely a WACC that gives a post-tax return over the life of the asset. However, such a stance is reasonable if the service provider has not received pre-compensation for future tax liabilities in earlier revenues. This is essentially an empirical question.
>
> …
>
> The first solution is that the earlier pre-payments of tax can be assessed and treated as a return of capital (in the same way as depreciation allowance). This involves a reduction in the initial regulatory asset value by an amount corresponding to the net prepayment of tax liabilities.

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[66] Refer ACCC, Access Arrangements by Transmission Pipelines Australia Pty Ltd and others, *Final Decision,* 6 October 1998.

[67] ACCC, 'Access Arrangement by AGL Pipelines (NSW) Pty Ltd for the Central West Pipelines, *Final Decision,* 30 June 2000, p. 145.

The Appendix went on to discuss an alternative solution applicable only when the new framework uses a pre-tax real rate of return.

In summary, it is common ground between the Commission and Epic that assessment of the depreciation reduction of the optimised capital base (ORC) and non-capital costs should be specific to the pipeline. In the Commission's view, the proposed deferred tax adjustment is an adjustment to the initial capital base that is similarly specific in character.

As discussed in chapter 4 of this draft decision, the Commission applies the 'prudent service provider' concept in assessing non-capital costs. In brief, the Commission considers industry yardsticks and makes comparisons with other pipeline service providers. Return on capital is assessed using CAPM, which incorporates parameters reflecting the return for diversifiable risk expected by financial markets. To address the known shortcomings of formulae to convert CAPM parameters to pre-tax WACC values, the Commission models cash flows for the entity to arrive at the WACC consistent with the service provider's nominal cost of equity yielded by CAPM.

Possible treatment as a non-capital cost

The Commission agrees with Epic that the liability for deferred tax expenses cannot be characterised as a non-capital cost and has not proposed that it be treated as such.

That deferred tax liability is not relevant to the current access arrangement

Contrary to Epic's view that tax liabilities accumulated in the past are irrelevant to this access arrangement, the deferred tax liability has been accumulated by Epic as recently as over the past five years. Therefore, adjusting the initial capital base for the deferred tax liability now notionally 'refunds' those customers who, under a substantially unregulated tariff regime, paid tariffs with a tax component in excess of that required by Epic to meet its actual tax liabilities over the last five years. (Contractual commitments in fact substantially prevent this 'refund' from being made to reference tariff customers in the first access arrangement period.)

That the adjustment impacts negatively on incentive

In response to Epic's concern about the potential for this adjustment to impact on the incentives of service providers, the Commission emphasises that the adjustment does not remove the benefit of accelerated depreciation provisions accumulated by Epic in the past. Rather, it ensures that under the post-tax regulatory framework, Epic does not receive that same benefit again via full post-tax compensation for tax obligations as they become payable in the future.

An alternative might be to reduce the level of compensation for taxes provided in future regulated revenues by the amount of (payable) deferred tax liabilities, on the basis that Epic received full compensation for these liabilities in earlier revenues. The Commission considers that this would compromise the objective of the post-tax regulatory framework, that is, to assess and provide full compensation for tax obligations as they arise. Anything that departs from this approach would, in the Commission's view, compromise the transparency and robustness of the post-tax framework.

Another option might be to make the adjustment for deferred liabilities by reducing the allowance for depreciation in all years following the transition to a post-tax framework. The difficulty in this approach is that it would take some years for higher depreciation allowances to offset the over-recovery of capital returns on the unadjusted initial capital base in the years following transition.

The Commission's preference is to make an up-front adjustment that takes into consideration any matters that will impact on future post-tax returns to the business, including deferred tax liabilities. Adjusting the capital base for deferred tax liabilities at the commencement of the access arrangement period is the simplest and most transparent way to achieve this objective.

In the Commission's view, this adjustment will not impact negatively on incentives for new pipeline investment. As mentioned previously, the adjustment applies only to existing pipelines that have received pre-compensation for taxes in the past, where this has not been reversed. New pipelines regulated under a post-tax framework would receive full compensation for tax liabilities as they fall due.

That leaves the issue of incentives for Epic as an investor in an established pipeline system. In the Commission's view, the adjusted value of Epic's initial capital base is justified by comparison with alternative valuation methodologies required by section 8.10(f). The pipeline system is fully contracted during the access arrangement period and the code permits service providers to seek early review of an access arrangement should unforeseen events impact on the revenue stream and appropriate tariff path.

Finally, the Commission understands that an adjustment of this kind for the effects of accelerated depreciation arising on the purchase of utility assets has a regulatory history dating back nearly twenty years in the United States.[68] The Commission understands that US expenditure on pipelines has been at a significant level over that period and has been demand-driven, particularly during the 1990s to increase access to Canadian gas.

In the United States, accumulated deferred income taxes are usually deducted from the utility's rate (capital) base during the rate-making process. However, US Treasury regulations permit regulatory commissions, in arriving at the company's total cost of capital, to treat the reserve either as a deduction from the rate base, or equivalently as interest-free capital. The rationale for the latter approach is that deferred income taxes provide a source of interest-free funding, and because the reserve is growing, it is convenient to treat that reserve in the capital structure rather than as a deduction from the rate base.[69]

Although most US regulatory commissions have deducted accumulated income tax reserves directly from the rate base, some have included the reserves as a capital

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[68] 'Normalisation' accounting was encouraged by the *Tax Reform Act of 1969* (TRA). The normalisation requirements of the *Economic Recovery Tax Act of 1981* (ERTA) specified the amounts of deferred tax reserves that regulators may treat as zero-cost capital or as a reduction in the rate base. (Source: Hahne, R. et al, *Accounting for Public Utilities,* Matthew Bender, New York, 1999, s.17.02[2]-[4].)

[69] Hahne, R et. al., *Accounting for Public Utilities*, Matthew Bender, New York, 1999, s. 17.01[3].

component of the capital base at a zero cost. Both approaches produce similar revenue requirements. While the rate base reduction results in a higher rate of return on a lower rate base, the zero capital cost method produces a larger rate base with a lower rate of return requirement.[70]

Commission's overall assessment

For the above reasons, in the Commission's view an adjustment of the initial capital base for deferred tax liability is consistent with the code, relevant to the proposed access arrangement and not contrary to incentives for investment in pipelines.

In preparing its final decision, the Commission will be assisted by the further submissions of the service provider and the submissions of other interested parties on the issues discussed.

Amount of the proposed adjustment applicable to Epic

When no tax is payable because of accelerated depreciation concessions, the allowance in revenue for tax is approximated by the prima facie tax expense.[71] The deferred tax liability (and corresponding adjustment to the capital base) is therefore the sum of prima facie tax expenses incurred to date.

Epic's reported deferred tax liability is approximately $14 million.[72] A problem that sometimes occurs in making adjustments for deferred tax liabilities involves changes in the statutory tax rate. In Epic's case, an adjustment must be made to account for the change in the corporate tax rate from 36 per cent to 34 per cent on 1 July 2000 and to 30 per cent on 1 July 2001. As a result, deferred taxes that were accumulated on the assumption that tax rates would remain at 36 per cent will actually be paid at a lower rate. While the corporate tax rate is beyond the control of any single entity, the change in tax rate means that customers have, in effect, paid more for future tax liabilities than the actual liability. To put it another way, deferred tax reserves set up at the old tax rate will never completely reverse.[73]

Regulatory commissions in the US have tended to treat adjustments to the deferred tax liability resulting from changes in the statutory tax rate on a case by case basis. In the past, any additional tax reserves generated by reductions in the statutory tax rate have been amortised either over the life of the asset or a shorter period of time.[74]

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[70] Hahne, R et al, *Accounting for Public Utilities*, Matthew Bender, New York, 1999, s. 4.04[9].

[71] The allowance is strictly equal to the prima facie tax expense when revenues are equivalent to those emerging from a pre-tax framework where the tax wedge has been set to compensate for future taxes.

[72] The Commission has estimated this as the sum of prima facie tax expenses at 30 June 2000, where the tax expense for the period 1 January 2000 to 30 June 2000 was assumed to be half of the prima facie tax expense for the year ending 31 December 1999. This is calculated to be $14.5 million. Epic's reported net provision for deferred income tax at 31 December 1999 was $14.3 million. (Source: Epic Energy South Australia Pty Ltd, *Notes to and forming part of the financial statements,* 31 December 1999, p.17.)

[73] Hahne, R et al, *Accounting for Public Utilities*, Matthew Bender, New York, 1999, s. 4.04[9].

[74] Proponents of a short amortisation period claim that this ensures that those ratepayers originally funding the excess reserve would be the ones receiving the 'refunds'. Amortisation over the remaining life of the assets involves turning the timing differences around at the rate at which the deferred taxes were accumulated.

Alternatively, they have been reversed at the 'average' tax rate at which the deferred income taxes were previously provided.[75]

In this instance, the Commission considers that the deferred tax liability should reflect the rate at which deferred taxes will be repaid in the future, that is, 30 per cent. Accordingly the deferred tax liability has been re-estimated at 30/36[ths] of its reported value, or approximately $12 million.

However, regulatory revenues do not need to provide full compensation for tax liabilities because investors receive the value of imputation credits associated with payment of those tax liabilities. The deferral of tax through accelerated depreciation gives imputation credits diminished value in the hands of shareholders. Hence the capital base is adjusted by a lesser amount than the deferred tax liability, equal to:

(1 - gamma) x deferred tax liability.

Assuming a gamma (γ) of 50 per cent (see discussion on gamma in section 2.5.4 of this draft decision), the appropriate adjustment to the initial capital base is therefore approximately equal to $6 million.

The Commission acknowledges that Epic's reported deferred tax liability might include deferred tax liabilities in respect of assets that are unrelated to MAPS, and therefore outside the scope of this access arrangement. Where Epic is able to demonstrate that this is the case, the Commission will revise the deferred tax adjustment accordingly.

2.2.8 Conclusion

In assessing the initial capital base, the Commission has had regard to Epic's DORC calculations based on both the weighted average asset life and depreciation by asset class approaches. In addition, the Commission has been guided by the results of the Connell Wagner desk-top audit, the depreciated sale price, book value, and the residual value based on economic depreciation.

The range of values is summarised in Table 2.9 below.

Table 2.9: Initial capital base valuations (at 30 June 2000)

ICB ($ million)	Epic	Connell Wagner	ACCC
DORC – depreciation by asset class, split lives	$383		
DORC – weighted average asset life	$354		
DORC – depreciation by asset class, conventional class lives		$279 - $300[(a)]	**$316**
Book value			$323
Residual value[(b)(c)]			$301
Depreciated sale price[(c)]			$294

75 Hahne, R. et. al., *Accounting for Public Utilities*, Matthew Bender, New York, 1999, s.4.04[9].

Notes:

(a) Range of DORC valuations prepared by Connell Wagner, updated for inflation and depreciation since 30 December 1998.
(b) Based on analysis of historical returns and economic depreciation.
(c) As discussed in section 2.2.2, this includes assets not attributed to MAPS.

The DAC value of $38 million has not been included in the above table. In the Commission's view, this aggregation of depreciated capital expenditures mostly made over a long period while the pipeline was in government ownership does not provide a useful indicator in this instance of the return on capital that a private sector operator could reasonably expect.

The Commission has taken into account the code's requirements when assessing Epic's proposed capital base valuation in the light of the Connell Wagner report, submissions by interested parties, the Commission's own analysis, its previous practice, the *Draft Regulatory Principles*[76] and its developing principles. In selecting a DORC value over other valuation methods, the Commission has given weight to the *Draft Regulatory Principles* and to Epic's own preference for a DORC approach. The Commission considers that its own calculation of DORC is more robust than that of Epic. As noted previously, Epic's calculation of book value requires clarification. The Commission's response to the factors that section 8.10 of the code requires the regulator to take into account is given in 2.10.3 following.

For the above reasons, the Commission has determined an initial capital base for MAPS (before the adjustment for deferred tax liabilities) corresponding with the DORC valuation of $316 million. The initial capital base adjusted for deferred tax liabilities is therefore **$310 million.**

Proposed amendment – A2.1

In order for Epic's access arrangement for MAPS to be approved, the value of the initial capital base must be adjusted to the value derived by the Commission, **$310** million.

2.3 New facilities investment and capital redundancy

2.3.1 Code requirements

The code (section 8.9) states that the capital base at the commencement of each access arrangement period subsequent to the first is determined, to summarise, as:

(a) the capital base at the start of the immediately preceding access arrangement period; plus

(b) the new facilities investment or recoverable portion in the immediately preceding access arrangement period; less

[76] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999.

(c) depreciation for the immediately preceding access arrangement period; less

(d) redundant capital identified prior to the commencement of that access arrangement period.

This leads to the question of how capital expenditure and capital redundancies are to be treated under the access arrangement for the present period. These issues are discussed below.

New facilities investment

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

Unless the incremental revenue is expected to exceed the cost of the investment, the service provider (and/or users) must satisfy the regulator that the new facility has system-wide benefits justifying a higher reference tariff for all users. Alternatively, the service provider must show that the new facility is necessary to maintain the safety, integrity or contracted capacity of services.

Under sections 8.18 and 8.19 of the code, a service provider may also undertake new facilities investment if the foregoing criteria are not met. To the extent that an investment does not meet the section 8.16 criteria or is speculative in character, the augmentation of the capital base is to be correspondingly reduced.[77]

Reference tariffs may be determined on the basis of forecast investment during the access arrangement period provided such investment is reasonably expected to pass the section 8.16 requirements when the investment is forecast to occur (section 8.20). However, the inclusion of forecast investment does not imply that the section 8.16 criteria have been satisfied. The regulator may reserve its judgment until the investment is undertaken or until the next review. The code (section 8.22) also provides that the reference tariff policy should specify how discrepancies between forecast and actual investment are to be reflected in the capital base at the commencement of the next regulatory period (so as to meet the objectives of section 8.1 of the code). Alternatively, the regulator may determine how the expenditure will be treated for the purpose of section 8.9 (changes to the capital base) at the time the regulator considers revisions to an access arrangement.

Capital redundancy

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 is to take effect at the commencement of the next access arrangement period so as to:

[77] Pursuant to section 8.19, the part of the investment that is of a speculative nature is to be held in a speculative investment fund and may be added to the asset base at a later date when it meets the section 8.16 criteria.

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

Before approving such a mechanism, the regulator must consider the potential uncertainty such a mechanism would cause and the effect that uncertainty would have on the service provider, users and prospective users.

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

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 (section 8.29).

2.3.2 Epic's proposal

New facilities investment

Epic's proposal for new facilities investment is outlined in conjunction with the queuing policy. Epic stated that it does not propose to undertake any independent new facilities investment, but that it will consider proposals to extend or expand facilities if the proposed user makes a capital contribution.[78] Epic does not intend to add any amount of a capital contribution to the capital base, but does propose to include the amount of the actual investment. This policy is discussed at length in the following chapter 3.

Epic stated in clause 5.2(a)(vii) of the proposed access arrangement that it has no speculative investment fund. In a proposed revision to that clause, now renumbered 5.2(a)(vi), Epic proposes to add the word 'currently' before the word 'no'.

Capital redundancy

Epic stated in clause 5.2(a)(iv) of its original access arrangement proposal that it has no redundant capital. That remains the case in the renumbered clause 5.2(a)(iii) of the proposed revised access arrangement.

2.3.3 Submissions by interested parties

Submissions with respect to new facilities investment dealt with the issues in the context of Epic's proposed extensions and expansions policy. There were no submissions in relation to capital redundancy.

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[78] Refer Epic access arrangement information, p. 12 and revised proposed access arrangement, 2 March 2000, clause 10.5(d).

2.3.4 Commission's considerations

The Commission has considered Epic's proposal for new facilities investment in the context of Epic's expansions and extensions policy. This is discussed in sections 3.5 and 3.6 of this draft decision.

2.4 Depreciation of capital

2.4.1 Code requirements

Sections 8.32 and 8.33 of the code set out the principles for calculating depreciation for the purposes of determining a reference tariff. In brief, the depreciation schedule should meet the following principles:

- It should result in the reference tariff changing over time consistently with the efficient growth of the market for the services provided.
- Depreciation should occur over the economic life of each asset or group of assets, with progressive adjustments to the maximum extent that is reasonable to reflect changes in expected economic lives.
- Subject to the capital redundancy provisions (section 8.27), an asset is to be depreciated only once. Thus the total accumulated depreciation of an asset will not exceed the value of the asset at the time the asset or group of assets was first incorporated in the capital base.

Section 8.5 permits any methodology to be used provided it can be expressed in terms of one of the methodologies described in section 8.4 of the code. One of the code's design criteria for the depreciation schedule is that it should result in the reference tariff changing over time consistently with the efficient growth of the market.

The code's general principles are again pertinent. Section 8.1(a) provides that the service provider should have 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.

2.4.2 Epic's proposal

Depreciation and change in the general level of prices

The original proposed access arrangement stated that accumulated depreciation was calculated based upon the estimated remaining asset life consistently with sections 8.32 and 8.33 of the code. This value was used to reduce the ORC to establish the starting point for the initial capital base.

Epic stated that at the time of application, the pipeline was 29 years old. Epic estimated that, given appropriate ongoing maintenance, it should operate for at least another 50 years. Epic depreciated the whole pipeline system on a straight-line basis

over 77 years to calculate a DORC of $353.5 million.[79] Taking the difference between the ORC and DORC estimates provided by Epic, the Commission inferred depreciation of $216 million as at 31 December 1998. Adjusting for change in the general level of prices and for depreciation since then, the Commission has inferred accumulated depreciation under Epic's proposal of $227 million as at 30 June 2000. The Commission's views on Epic's approach to calculating accumulated depreciation are set out in section 2.2.7 above.

In calculating the depreciation component of cost of service revenue to apply in each year of the access arrangement period, Epic again depreciated the whole pipeline system on a straight-line basis. Epic's calculations are shown in Table 2.10.

Table 2.10: Pipeline assets, depreciation and indexation

			1999	2000	2001	2002	2003	2004
1	Opening asset Base		353,535	349,082	352,476	355,753	360,024	363,569
2	Capital Cost Revaluation	Line 1 x 2.5%		8,727	8,812	8,894	9,001	9,089
3	Stay in Business Capital		3,136	2,500	2,550	3,750	3,200	2,550
4	Years Remaining Life		47	46	45	44	43	42
5	Regulatory Depreciation	(1+2+3)/4	7,589	7,833	8,085	8,373	8,656	8,934
6	Written Down Value	1+2+3-5	349,082	352,476	355,753	360,024	363,569	366,274

Source: Epic response to ACCC letter of 30 April 1999, p. 4 and e-mail to Commission, 4 July 2000.

In the access arrangement, Epic stated that the capital base would be adjusted annually by a 'capital cost revaluation' that would be equal to the CPI and would be a 'fixed principle'.[80] Epic estimated annual inflation of 2.5 per cent for the duration of the regulatory period.[81] Epic's proposed annual capital cost revaluation proposals are shown above in Table 2.10**.** The proposed depreciation charges are applied to a capital base adjusted annually for the inflation rate assumed by Epic.

Stay in business capital

Epic's proposed depreciation schedule and capital charge incorporate an allowance for 'stay-in-business capital' (ie. capital expenditure).[82] In confidential data lodged in support of its depreciation schedule and capital charge, Epic stated details of the assumed asset lives and amounts it had allowed in the calculation of the capital base for the items of stay-in-business capital (which it publicly disclosed as an aggregate).

Epic has made provision, in the extensions and expansions policy of its proposed access arrangement, for the funding of new facilities capital expenditure.

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[79] Access arrangement information, p. 12, as modified by consolidated response to ACCC letter of 30 April 1999.

[80] Access arrangement, clause 5.2(a)(v).

[81] Access arrangement information, p. 19.

[82] Access arrangement information, p. 19.

Working capital

In calculating the capital charge (return on assets), Epic included an allowance in the capital base for working capital, calculated as 20 days of the annual managed costs.[83]

2.4.3 Submissions by interested parties

Depreciation and change in the general level of prices

TGT argued in its submission that Epic had not provided any support for its assumption of a remaining life of the pipeline of 50 years, and thus, a total life of 79 years. TGT submitted that for pipelines the age and condition of MAPS, other owners had assumed an original life of up to 60 years. TGT stated that the access arrangement information[84] for the principal transmission system in Victoria assumed an economic life for its pipelines of 38 to 60 years. TGT further stated: [85]

> The revenue requirement is quite sensitive to the assumed life of the pipeline: a longer assumed life increases the capital base and therefore the return on the capital base.

In its submission TGT expressed support for the 'geometric' depreciation methodology applied by EAPL[86] and supported by the Victorian Office of the Regulator General.[87] The Commission notes that EAPL in fact called its methodology a '5/8:3/8 kinked' depreciation schedule and distinguished it from geometric depreciation, which it said it approximated.

TGT commented that the impact of the GST on the rate of inflation should be taken into account, but argued that there are sound economic arguments for not adjusting the capital base (or the tariffs) by the amount of the GST impact on the rate of inflation. TGT expressed concern that that would escalate the capital base above a value corresponding to the DORC.

Based on its concerns about the DORC, asset life, stay-in-business capital expenditure (see following) and depreciation, TGT submitted that it would be appropriate for the capital cost revaluation not to be a fixed principle.

Stay in business capital

TGT submitted that it is unclear from the access arrangement information whether the forecast capital expenditure meets the requirements of 'new facilities' as defined by the code,[88] and therefore, whether the expenditure should be added to the capital base. In particular, TGT expressed concern that Epic could potentially justify an (unrealistic) indefinite life for MAPS by progressively replacing the pipeline through on-going high

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83 Access arrangement information, pp. 12, 19.

84 Transmission Pipelines Australia (TPA), *Access Arrangement Information*, 30 November 1998, Table 1, p. 2.

85 TGT submission, p. 24.

86 EAPL, *Access Arrangement Information*, 5 May 1999, section 3.5, pp. 35-37.

87 Office of the Regulator General, 'Access Arrangement - Multinet Energy Pty Ltd & Multinet (Assets) Pty Ltd. et al', *Final Decision*, 10 October 1998, p. 96.

88 Sections 8.15, 8.16 and 8.20.

levels of capital expenditure.[89] As a solution, TGT suggested that in addition to assuming a reasonable useful life for MAPS, either:

- the capital expenditure should not be added into the capital base (on the grounds that is not 'new facilities' expenditure); or
- in deriving the initial capital base, the DORC should be discounted by the present value of the forecast capital expenditure.[90]

Working capital

TGT submitted that the proposed level of working capital (ie. 20 days of annual managed costs) appears reasonable. However, TGT stated that Epic appeared to have added total working capital into the capital base each year on a cumulative basis, when only changes in working capital should be reflected in the capital base.[91]

Epic agreed with TGT's concerns and subsequently provided the Commission with revised working capital projections. In addition, Epic provided its capital charge calculations for 2004. These have been included in Table 2.11 below.

Table 2.11: Epic's proposed capital charge

Year end 31 December	1999	2000	2001	2002	2002	2004
Opening Asset Value	353,535	349,903	354,111	358,230	363,328	364,423
Add:						
Working Capital	820	-6	27	-15	28	32
Stay in Business Capital	3,136	2,500	2,550	3,750	3,200	2,550
Capital Cost Revaluation		8,727	8,812	8,894	9,001	9,089
Less:						
Depreciation	7,589	7,833	8,085	8,373	8,656	8,934
Year End Capital Base	349,903	353,291	356,595	360,851	364,423	367,161
Average Annual Capital Base	351,719	351,597	354,943	358,723	362,637	365,792
Annual Capital Charge @ 9.5%	33,413	33,402	33,720	34,079	34,451	34,750

Source: Epic e-mail to Commission, 4 July 2000.

2.4.4 Commission's considerations

Depreciation and change in the general level of prices

As outlined in section 2.2.7 above, the Commission notes Epic's method in the DORC calculation of applying weighted average depreciation to the optimised value of the pipeline system as a whole, rather than by asset class. Provided the weighting is correctly established both methods should provide the same DORC value.

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[89] TGT submission, 26 October 1999, p. 26.
[90] TGT submission, 26 October 1999, p. 26.
[91] TGT submission, 26 October 1999, p. 25.

The Commission prefers the use of the more transparent straight-line depreciation by asset class to calculate the depreciation component of the cost of service revenue requirement. The Commission has calculated Epic's (nominal) depreciation allowance in each year of the access arrangement to be $9.4 million in 2000 and $9.8 million, $10.2 million, $9.5 million, $9.9 million and $10.3 million in each of the following years of the access arrangement period.

It should be noted that the calculation of Epic's rolled-forward asset base set out in Table 2.12 below involves a set of depreciation numbers that are different to those just noted. The nominal book depreciation numbers set out in Table 2.12 net together the straight-line depreciation charge set out above with the inflation adjustment to the capital base in each year. That is, nominal book depreciation summarises the net change in the value of the asset base from period to period. In this way it can be thought of as similar to combining the 'depreciation' and 'capital cost revaluation' terms used by Epic inTable 2.11 above. For reasons stated in the Commission's Victoria *Final Decision*, the Commission regards use of an inflation-indexed depreciation schedule in establishing a revenue requirement in a CCA framework as complying with section 8.33(d) of the code.[92] The sum of the depreciation yielded by the indexed schedule is, in the Commission's view, 'equivalent' in terms of the code to:

> … the value of that asset or group of assets at the time at which the value of that asset or group of assets was first included in the Capital Base.

An additional depreciation amount has been included to reflect the Commission's approach to normalising tax payments in the post-tax regulatory framework. This approach is discussed in more detail in section 2.7.4 below. Briefly, normalisation involves spreading tax payments over the life of the asset to avoid discontinuity in the revenue requirement, and therefore in reference tariffs, as taxes become payable in the future. The normalisation factor represents an additional depreciation allowance (return of capital) in Epic's revenue requirement in earlier years to offset expected future tax liabilities.

The Commission's assessment of Epic's proposed fixed principle for indexation of the capital base is set out in section 2.9.5. The Commission accepts adjustment of the capital base in the access arrangement period for CPI movements (where CPI is the actual change in the general level of prices), but does not accept the proposed fixed principle.

Stay in business capital

In its *Draft Regulatory Principles*[93] the Commission raised the information asymmetry problems associated with capital expenditure forecasts. In particular, the regulator does not accurately know the appropriate amount of capital expenditure required during the access arrangement period, and relies on the service provider to provide this information. As a result, there may be incentives for the service provider to inflate the reported capital expenditure relative to its true cost.

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[92] ACCC, Access arrangements by Transmission Pipelines Australia Pty Ltd and others, *Final Decision*, 6 October 1998, pp. 44-45.

[93] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 55.

As stated in the *Draft Regulatory Principles*, the Commission prefers to roll forecast capital expenditure into the asset base when it is scheduled to become operational.[94] At the commencement of the next regulatory period, the Commission would only include in the asset base the actual capital expenditure that had occurred during the previous regulatory period.

This treatment creates another incentive problem, in that it encourages the service provider to spend the total (forecast) capital expenditure allowed by the regulator, irrespective of whether that expenditure is efficient. Where the asset base can be re-optimised at the commencement of the next regulatory period, there is an incentive for service providers to only undertake efficient investment. This is because any inefficient investment would be excluded from the capital base as part of the optimisation process. Although the gas code does not provide for re-optimisation of the capital base at the commencement of each regulatory period, section 8.16 of the code requires that new facilities investment pass a prudent investment test before it can be included in the capital base.[95]

The Commission also noted in the *Draft Regulatory Principles* that it may consider undertaking benchmark analysis of capital investment.[96] The objective of such an exercise can include checking that proposed investments are efficient. If so, they should represent the minimum investment required to maintain required service levels and best practice technology and costs.[97]

The Commission proposes that the capital expenditure (stay-in-business capital) proposed by Epic be included in the asset base when it is scheduled to occur, as shown in Table 2.12. The depreciation schedule should be reduced by the proceeds of sale of any assets taken out of service and not replaced. At the commencement of the next regulatory period, the Commission will assess whether the actual capital expenditure undertaken during this access arrangement period should be included in the capital base.

Working capital

The Commission acknowledges Epic's proposal to include an initial allowance ($815,000 in 2000) and then annual changes in working capital in the capital base for the purposes of calculating the return on capital (capital charge). Epic explained that working capital is defined as 20 days of annual managed costs. A US authority quoted by EAPL[98] defined working capital as follows: [99]

> … the average amount of capital provided by investors … over and above the investment in plant … required to bridge the gap between the time that expenditures are required to provide service and the time collections are received for that service.

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94 ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 55.

95 *National Third Party Access Code for Natural Gas Pipeline Systems*, sections 8.15 – 8.18.

96 ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 57.

97 ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 57.

98 EAPL, *Access Arrangement Information*, 5 May 1999, p. 28.

99 Ohio PUC, *Re Columbus Southern Power Co*, 1992 133 PUR4th 525, 550, quoted by EAPL in *Access Arrangement Information*, 5 May 1999, p. 28.

The Commission has not explicitly modelled the timing of Epic's cash flows throughout the year. Rather, the Commission's cash-flow analysis assumes that all costs and revenues are incurred on the last day of the financial year (31 December in Epic's case). In reality, Epic's cash flows would occur at regular intervals throughout the year, giving the company a benefit over and above the regulated revenue. That benefit is equal to the time value of money on all cash flows prior to 31 December each year. The Commission considers that this benefit more than compensates Epic for any 'gap' between payments and collections that may occur throughout the year.

Consequently, the Commission proposes not to include the initial allowance for working capital, and changes in the level of working capital thereafter, in the capital base for the purposes of calculating Epic's return on capital. The Commission invites further submissions on this matter to assist it in its final decision.

The Commission proposes the following amendment to Epic's proposed access arrangement to exclude working capital from the capital base for the purposes of calculating Epic's return on capital.

Proposed amendment A2.2

In order for Epic's access arrangement for MAPS to be approved, for the purpose of calculating Epic's capital charge (return on capital assets) the working capital component must not be included in the value of the capital base.

Commission's proposed capital base roll-forward

As mentioned above, the Commission's approach to adjusting the initial capital base for forecast capital expenditure, as stated in its *Draft Regulatory Principles,*[100] is to roll that expenditure into the capital base as it is scheduled to occur over the access arrangement period. At the commencement of the next access arrangement period, only that part of forecast capital expenditure that was actually spent in the previous period would be included in the capital base.

In addition to rolling in capital expenditure, the book value of the capital base is adjusted for forecast inflation and depreciation over the access arrangement period. Adjusting the capital base for capital expenditure, inflation and depreciation over the access arrangement period is referred to as 'rolling forward' the capital base.

The Commission's calculation of the net change in the value of the asset base from year to year over the access arrangement period is shown in the following table.

[100] ACCC, *Statement of principles for the regulation of transmission revenues*, 27 May 1999, p. 56.

Table 2.12: Commission's proposed capital base roll-forward ($million)

As at 31 December	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Opening asset	309.8	311.0	311.9	313.5	315.2	315.9
Nominal book depreciation[(a)]	0.2	0.5	0.8	0.0	0.3	0.6
Additional depreciation (return of capital)	1.1	1.2	1.3	1.4	1.6	1.7
Capital expenditure	2.5	2.6	3.8	3.2	2.6	2.6
Asset value carried forward	311.0	311.9	313.5	315.2	315.9	313.1
Return on capital @ 9.59%[(b)]	29.7	29.8	29.9	30.1	30.2	30.3

Notes:

(a) Nominal book depreciation combines the nominal straight-line depreciation charge and the inflation adjustment to the capital base in each year.

(b) Post-tax nominal WACC calculated by the Commission. See section 2.5.4 below.

The Commission has adopted these figures in its calculation of Epic's cost-of-service revenue requirement.

2.5 Rate of return

2.5.1 Code requirements

As noted earlier, the code (sections 8.30 and 8.31) states that the rate of return used should provide a return that is commensurate with prevailing conditions in the market for funds and with the commercial risk associated with providing the reference service. The code suggests as an example using a weighted average of the returns applicable to each type of capital (equity, debt and any other source of funds), commonly known as the 'weighted average return on (cost of) capital' or 'WACC'. Such returns would be determined on the basis of a well-accepted financial model such as the capital asset pricing model (CAPM). The financing structure assumed should also reflect standard industry structures and best practice. However, a service provider may adopt other approaches if the regulator is satisfied that the objectives regarding the design of the reference tariff and reference tariff policy set out in section 8.1 of the code are met.

2.5.2 Epic's proposal

Epic submitted that the Commission's final decision on the allowed rate of return for TPA's gas transmission systems in Victoria is an appropriate starting point in the establishment of a rate of return for MAPS.[101] However, Epic submitted that the required rate of return for equity investment to be undertaken in MAPS should be significantly greater, resulting in a higher WACC than that approved for the Victorian pipeline system.

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[101] Access arrangement information, p. 31.

Epic submitted that a pre-tax real WACC in the range 9-10 per cent is appropriate for MAPS, in comparison with the pre-tax real WACC of 7.75 per cent approved for the Victorian transmission system.[102]

Epic stated that the following characteristics of MAPS should be factored into the calculation of the required rate of return: [103]

- South Australian market growth is static, with limited opportunities available;
- the pipeline is dependent on two customers and is exposed to volatile electricity generation load;
- pipeline sales to generators must compete with imported and coal-fired electricity generation;
- long term gas resources are uncertain;
- it is more likely that the system could be bypassed; and
- no annual revenue adjustment for material changes in operating costs is being requested.

The underlying parameters, equations and other assumptions used by Epic in the CAPM framework to develop the proposed post-tax nominal return on equity and other WACC derivatives are summarised below in Table 2.13.

Table 2.13: Parameter ranges proposed by Epic for WACC calculations

Parameter	**Input variable**	**Ranges**	
		Low	High
General economic parameters	Change in the general level of prices given by CPI	2.5%	2.5%
	Corporate tax rate	36%	36%
	Imputation take-up rate	50%	25%
Gearing	Debt	60%	60%
	Equity	40%	40%
Cost of debt	Base rate	6%	6%
	Debt margin	1.2%	1.5%
Cost of equity	Market risk premium	6%	7%
	Asset beta	0.55	0.70
	Equity beta	1.18	1.55

Source: access arrangement information, p. 32.

The nominal cost of equity is a key variable in determining the rate of return. Based on the parameters above, Epic determined a nominal cost of equity (r_e) of between 13.08 and 16.84 per cent.

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[102] Acess arrangement information, pp. 31 and 34.
[103] Access arrangement information, p. 31.

Epic defined the post-tax nominal WACC (W) by the following formula:

$$W = r_e \frac{(1-T)}{(1-T(1-\gamma))} \frac{E}{V} + r_d (1-T) \frac{D}{V}$$

Where: V = Debt (D) + Equity (E)

R_d = Base rate + debt margin

T = Corporate tax rate

Epic's conversion from post-tax nominal to pre-tax real WACC was achieved by adjusting for tax first and then for the rate of change in the general level of prices (or inflation). This conversion is known as the 'forward transformation'. A reverse transformation adjusts for inflation first and then for tax. The WACC results using both conversion approaches are summarised in Table 2.14 below.

Table 2.14: Epic's proposed ranges for WACC

WACC	Low	High
Nominal post-tax	6.85%	8.78%
Nominal pre-tax	10.7%	13.73%
Real pre-tax (forward transformation)	8.0%	10.95%
Real pre-tax (reverse transformation)	6.63%	9.58%

Source: access arrangement information, p. 34.

Choosing a real pre-tax WACC range of 9-10 per cent, Epic submitted that this range reflected the additional risk characteristics of the pipeline system outlined above.[104]

2.5.3 Submissions by interested parties

Risk characteristics of system

Osborne and TGT responded to each argument put forward by Epic in support of its claim to a higher allowance for risk than that for the TPA system. The Epic submissions and counter-arguments are shown in Table 2.15.

[104] Access arrangement information, p. 34.

Table 2.15: Responses by TGT and Osborne to Epic's submissions as to risk

Epic's argument	TGT response	Osborne response
SA market growth is static; limited opportunities available	The recent increase in MAPS' capacity (reserved by TGT) and current development of new gas-fired electricity generation capacity indicate that the market is not static. The greatest limitation on growth is, in fact, the capacity of MAPS, given that the current capacity is fully reserved until 2005.	Market growth is an upside of the opportunity for investing in the pipeline. An investor cannot claim a higher return based on limited growth opportunities because growth is the upside to the business.
Pipeline dependent on two customers	The number of customers would not appear to increase risk – it is the extent to which customers reserve capacity that is more relevant. With two major organisations as customers, the credit risk for Epic is likely to be lower than with multiple small customers. Also, fewer customers mean lower costs for Epic and less risk of higher costs of administration.	This is a result of the historical use of the pipeline. Instead of requesting a higher return, the service provider should consider changing the structure of the access arrangement to promote more than two users.
Pipeline exposed to volatile electricity generation load; gas-fired electricity generators must compete with coal-fired generation	100 per cent of pipeline capacity is reserved to 2005 and capacity charges represent a high proportion of revenue, i.e., only a small proportion of revenue to 2005 is at risk from changes in volume of gas transported. Therefore, Epic can forecast with confidence a high proportion of MAPS' revenue. In addition, the proposed 'Incentive and Risk Sharing Mechanism' (clause 5.3 of the access arrangement) limits Epic's revenue risk to $5m p.a.	If gas-fired electricity generators are to compete more effectively with coal-fired generators, then cheaper access charges and more flexible nomination criteria would directly benefit this. A higher return would in effect reduce the competitiveness of new players.
Long-term gas resources are uncertain	If, in the longer term less gas is to be transported through MAPS, future access arrangement reviews should result in the same revenue requirement but lower forecast gas throughput and therefore higher tariffs; i.e., users, not Epic, are at risk from gas resource uncertainty and bypass risk.	Cooper and Eromanga Basin gas supplies are sufficient to support the operation for at least 25 years. Even with the onset of PNG or offshore NT gas, the Moomba to Adelaide pipeline would be seen as a very strategic asset in bringing the supplies to southern Australia.

Epic's argument	TGT response	Osborne response
The system could be bypassed	The risk of bypass would be minimised if tariffs were kept as low as possible (e.g., through acceptance of the arguments made in this submission). If Epic is concerned with this risk, the assumed remaining life of the MAPS should be lower; also a good reason for a 'geometric' depreciation methodology.	The system would be bypassed only if it were uncompetitive. With a requested rate of 9.5 per cent, 1.75 per cent in excess of other pipeline returns, it would have the effect of promoting new entrants to the haulage market.
No annual adjustment for material changes in operating costs	Epic should have confidence in the forecast operating costs because of its years of experience with the MAPS. O&M cost reductions rather than increases are more likely following the recent installation of new compressors.	The operating costs of a pipeline system such as this should be reasonably predictable and able to be forecast with reasonable accuracy by a prudent operator. Along with regular access arrangement adjustments every five years, the service provider's exposure is limited, and should not therefore require a return higher than that requested by other operators.

Throughput issues

In its submission, Santos stated that MAPS would continue to be used in the long term because there is a sustained gas market in South Australia with no alternative pipeline. Further, Santos submitted that if firm capacity were available more customers would convert to gas.[105]

Santos also suggested that in the event reserves in the Cooper Basin decline, it is likely that MAPS would be utilised by new suppliers wishing to transport gas from Papua New Guinea and offshore Northern Territory: [106]

> Reduced gas supply from the Cooper Basin is unlikely to be a problem for MAPS because gas from new suppliers such as the North West Shelf would most likely use Moomba as a hub for delivery into South Australia, thus connecting into MAPS. Gas from Papua New Guinea may be piped directly down the East Coast, swapped with South West Queensland gas to supply Brisbane and so allowing SWQ gas to flow to the Southern states via Moomba.

Santos supported Epic's position that the South Australian gas market is relatively static, is dependent upon two buyers and is exposed to some volatility in the electricity generation load.

TGT submitted that any reduction in the throughput of MAPS is likely to result in higher tariffs (via access arrangement reviews) rather than in placing Epic Energy's revenue at risk.[107] Further, TGT suggested that the risks for TPA in Victoria are

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[105] Santos submission, 15 October 1999, p. 5.
[106] Santos submission, 15 October 1999, p.5
[107] TGT submission, 26 October 1999, p. 30.

possibly higher than for the operator of MAPS because of near-term developments such as the Duke Energy pipeline and potential alternative sources of gas, such as the Otway Basin. Therefore, in TGT's view, a higher asset beta than for the Victorian gas transmission system is not justified.[108]

Risk, existing agreements and access arrangement design

Osborne commented to the effect that the proposed access arrangement itself contains risk-minimising features. Osborne stated: [109]

> This [WACC] rate appears to be excessive and is made unrealistic by numerous mechanisms within the Access Arrangements aimed at either creating further revenue for the Service Provider or reducing any risk that may exist in the haulage market.

Osborne stated: [110]

> It can be readily concluded that within the scope of the current system capacity, the service provider is exposed to minimal risk given the consistent financial return already made and which will continue to be made into the future. The mere fact that there is no available firm capacity until at least 2006 is indicative of the level of security enjoyed by the service provider. In respect of any future capacity expansion requirements, the mechanisms proposed for capital recovery will ensure that the Service Provider is not exposed to risk on that investment.

Osborne concluded: [111]

> It appears that Epic have used this opportunity to attempt to put in place arrangements that will provide them with handsome financial returns with minimal risk but do little for the competitiveness of power generation and other gas use businesses in South Australia.

Santos, TGT and Osborne submitted that the capacity haulage arrangements with the two users, TGT and Boral, transferred Epic's risk to the users. Santos submitted that reliance on only two customers is not a risk in this situation. Like TGT and Osborne, Santos submitted that 'the best cashflow insurance for TGT, Boral and the Producers is for gas transport costs to be priced competitively to allow usage of gas to rise'.[112] Santos concluded that, given these considerations, the rate of return for MAPS should be lower than that (eventually to be) approved for EAPL from Moomba to Sydney.[113]

2.5.4 Commission's considerations

Calculation of WACC

Given the critical nature and complexity of the WACC in determining revenue, hence profits, there is a substantial degree of sensitivity regarding the value of the WACC. Consistently with section 8.30 of the code, the Commission's approach is to determine the WACC with due consideration of prevailing financial market benchmarks[114] and

[108] TGT submission, 26 October 1999, p. 30.
[109] Osborne submission, 7 October 1999, p. 4.
[110] Osborne submission, 7 October 1999, p. 5.
[111] Osborne submission, 7 October 1999, p. 5.
[112] Santos submission, 15 October 1999, pp. 5-6.
[113] Santos submission, 15 October 1999, p. 6.
[114] The Commission has used financial market data as at 8 August 2000 to determine the WACC in this draft decision. This will be updated for the most recent market data available at final decision stage.

the level of commercial risk involved in maintaining the service infrastructure through which the reference service is delivered.

The Commission extensively discussed the determinants of the WACC in its *Final Decision* on the access arrangements for the Victorian gas transmission systems.[115] At the time of that decision, the Commission indicated that on some issues it preferred a different approach to that adopted in the Victorian decision. However, the Commission recognised that an alternative approach should be subject to wide examination and as such was reluctant to make changes without this further work. It noted that these issues would be pursued, in part, in the context of its later statement of *Draft Regulatory Principles*[116] for the electricity sector. Since that statement was released the Commission has been considering submissions and comments on the regulatory framework proposed in that document.

The *Draft Regulatory Principles* was developed for, and in accordance with, the National Electricity Code (NEC). Some issues discussed in the *Draft Regulatory Principles* are specific to the electricity market. However, others, such as those relating to the rate of return, are relevant to the Commission's regulatory work in other industries. While Epic has used the Commission's Victorian decision as a guide in developing a rate of return for MAPS, the Commission is also guided by the principles developed in the *Draft Regulatory Principles*.

As stated above, Epic has converted the post-tax nominal WACC to a pre-tax real WACC by adjusting for tax and then for inflation. As noted in its Victorian decision, the Commission considers that such conversions to the pre-tax real WACC give rise to errors. As a response in that case, the Commission used cash-flow modelling to derive the pre-tax real WACC that yielded the post-tax nominal cost of equity indicated by the CAPM. The latter rate is the return over the lifetime of the assets if the forecasts and assumptions used for WACC are fulfilled.

The Commission indicated in its Victoria *Final Decision* that a post-tax WACC framework is preferred to a pre-tax WACC framework.

Commercial returns to investors, including those indicated by CAPM, are invariably expressed in post-tax nominal terms. If two investments involving similar risks provide the owner with the same return before tax but a different net return after tax, an investor will prefer the investment that gives the higher net after-tax return. Indeed, if the investments are available as shares listed on the stock exchange the price of the latter will be bid up relative to the other so that the post-tax returns to investors will be equalised.

It follows that if, in regulating a service provider's revenues, the regulator takes account of the taxes likely to be paid by the service provider given its financial structure, the output from application of CAPM to the regulatory accounts will be the appropriate commercial return for the business.

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[115] ACCC, Access arrangements proposed by Transmission Pipelines Australia Pty Ltd and others, *Final Decision,* 6 October 1998.

[116] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999.

If there are features of the taxation system that give benefits to shareholders in addition to dividend cash-flow, for completeness these need to be taken into account when assessing the prospective return to shareholders. The value of imputation credits to shareholders is one such benefit to be accounted for in the Australian context.

Further discussion can be found in the Commission's *Draft Regulatory Principles.* The Commission applied post-tax methodology in its Transgrid *Final Decision*[117]and in the Central West Pipeline *Final Decision.* [118]

IPART has recognised that there are strong arguments for using a post-tax approach and in 1999 indicated an intention to consider the merits of moving to a post-tax rate of return in later determinations.[119] The Office of the Regulator General (Victoria) used the post-tax framework to determine a post-tax real WACC for the five electricity distributors in Victoria.[120] Regulatory commissions in the United States have adopted a post-tax cost of capital formulation, albeit with a different line of reasoning. The Supreme Court ruled in 1922 that taxes, including federal income taxes, were operating costs, rather than reductions in investors' returns.[121]

Epic put the view to the Commission that section 8.4 of the code requires in effect that reference tariff determination be on a before-tax basis.[122] Epic stated that income tax has no place in the code's cost of service methodology, which has only three components – return on the capital base, depreciation and non-capital costs. Epic submitted that an adjustment for deferred income tax liability was inadmissible under these headings.

The Commission's response to Epic's comments on the proposed adjustment for deferred income tax liability is set out in section 2.2.7 of this draft decision. In the Commission's view, the code does not mandate a pre-tax framework. The parameters that the Commission applies to calculations of WACC do indeed assume a standard industry financing structure and best practice, as required by section 8.31 of the code.

However, section 8.30 of the code states that the rate of return used in determining the reference tariff should provide a return that is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the reference service. Clearly, a WACC derived from CAPM is to be applied to deliver an appropriate commercial return to the applicant service provider. In the Commission's view, a post-tax WACC better achieves that objective than does a pre-tax WACC. Applying a pre-tax WACC without consideration of the service provider's financial needs in the light

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[117] ACCC, 'NSW and ACT Transmission Network Revenue Caps 1999/00 – 2003/04', *Final Decision*, 25 January 2000.

[118] ACCC, 'Access Arrangement by AGL Pipelines (NSW) Pty Ltd for the Central West Pipeline', *Final Decision,* 30 June 2000.

[119] IPART, *Regulation of New South Wales Electricity Distribution Networks*, December 1999, p. 35 and 'Access Arrangement for AGL Gas Networks Limited Natural Gas System in NSW', *Draft Decision* 28 October 1999, p. 66.

[120] ORG, '2001 Electricity Distribution Price Review', *Draft Decision* May 2000, p. 139.

[121] ACCC, *Draft Statement of Regulatory Principles for the Regulation of Transmission Revenues – Supplementary Papers*, Report prepared for the Commission by NERA, 27 May 1999, p. B11.

[122] Epic, letter to Commission, 12 July 2000, p.3.

of its tax liabilities would risk under or over-providing for revenues over the life of the capital asset base.

Significance of return on equity

Whether service providers or the Commission use a pre-tax real or post-tax nominal WACC, the critical rate of return in the regulatory framework is the post-tax nominal cost of (return on) equity derived from the CAPM. The post-tax nominal return on equity is better understood by financial markets than the pre-tax real WACC, as shareholder returns are typically expressed in nominal, post-tax terms. Furthermore, the post-tax nominal return on equity determines whether investors are willing to advance equity to finance the capital infrastructure required to provide services.[123]

WACC parameters

The development of a WACC figure from the cost of equity requires certain parameters and assumptions. The values assigned to the financial parameters remain contentious and warrant discussion in some detail since they form the basis for determining the permitted rate of return on the regulated assets. Accordingly, each parameter will be dealt with in turn in the remainder of this section.

The key parameters are:

1. the risk-free interest rate (r_f), the real risk-free rate (rr_f) and, by implication, the anticipated rate of inflation (f) and the interest rate applicable to debt (r_d);
2. the market risk premium (MRP);
3. the likely level of debt funding (D/V);
4. the likely utilisation of imputation credits (γ);
5. the effective tax rate (T_e); and
6. the equity beta (β_e) relevant to stand-alone operation within the proposed regulatory framework.

Interest rates and inflation

The code (section 8.30) states that the rate of return should be 'commensurate with prevailing conditions in the market for funds'. This implies that all information for deriving the rate of return should be as up to date as possible at the point the access arrangement comes into effect. It also means that the rate (for example, term) should match the circumstances (economic conditions) of the regulatory framework. Interest rates and inflation expectations are parameters set by the financial markets on a daily basis and are readily determined.

Generally, the relevant WACC for regulatory purposes should be a forward-looking concept, giving an indication of the minimum average expected commercial return on debt and equity. Selected interest rates and inflation estimates relevant to the setting of the WACC have been derived from financial market data and are shown below in Table

[123] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 73.

2.16. These figures will be recalculated using the most recent financial data at final decision stage.

Table 2.16: Current financial market interest rates and inflation expectations

Financial Indicator	Proposed by Epic (% p.a.)	40-day moving average ending 8 August 2000 (% p.a.)[(a)]
5 year government bond rate		6.10
Indexed bonds (August 2005 series)	3.39[(b)]	2.97
Estimated 5 year real rate[(c)]		2.97
Implied 5 year inflation expectation[(d)]		3.04

Notes:

(a) Based on daily closing quotations as published in *The Australian Financial Review.* The Commission finalised its calculations of WACC for purposes of this draft decision on 9 August 2000.

(b) Epic calculated this as the average rate for the eight weeks to 1 March 1999.

(c) Interpolations based on indexed bond figures.

(d) Inferred from the difference between nominal and real interest rates over the corresponding period using the Fisher Equation, $(1+i^r) = (1+i^n)/(1+CPI)$, where: i^r = real interest rate, i^n= nominal interest rate and CPI = inflation rate.

Epic adopted the average of 5-year indexed bonds over the eight-week period to 1 March 1999 (3.39 per cent) grossed up for inflation (2.5 per cent) to establish a risk-free rate of 6 per cent. Epic noted that this was the same as the approach taken by the Commission in the Victoria Final Decision.

As argued in the Victoria Final Decision, the Commission considers that the term associated with the risk-free rate should coincide with the five-year duration of the initial access arrangement period.[124] Although, in theory, an on-the-day rate is considered the best indication of the opportunity cost of capital at any point in time, the Commission accepts that there is some merit in averaging rates over a short period to abstract from day-to-day market volatility. In the Victoria Final Decision the Commission used the average of the eight weeks prior to the decision date. An alternative, which has been adopted by IPART, is the average over the last 20 business days. Since the release of the Victoria Final Decision in October 1998, the Commission has carried out further work and analysis in this area. As a result, the Draft Regulatory Principles proposes the use of a 40-day moving average of the relevant bond rates covering the period prior to the decision analysis. The Commission has adopted this approach for the present analysis. The results at draft decision stage are a risk-free rate of **6.10 per cent** and a real risk-free rate of **2.97 per cent.** These rates will be revised at final decision stage.

While the inflation rate is not an explicit parameter in the WACC estimation, it is an inherent aspect of the nominal risk-free rate and cost of debt parameters. It is fundamental to deriving real rates of return, which are used in the target revenue and

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[124] ACCC, Access arrangements proposed by Transmission Pipelines Australia Pty Ltd and others, *Final Decision*, 6 October 1998, p. 51.

economic depreciation calculations. It is also an important determinant of the effective tax liability. Epic has applied a rate of 2.5 per cent in all of its analysis.

An indication of the rate of inflation anticipated by financial markets is provided by the difference between the nominal bond rates and rates for inflation-indexed bonds for the same term. The indexed bond series have maturity dates that do not correspond to current five or ten-year bond rates but the corresponding figures are readily derived by interpolation and are shown in Table 2.16 above. These figures represent the real risk-free rate corresponding to the current nominal risk-free rate, based on the five-year bond yield. They indicate that the current expectation of inflation (f) over the initial regulatory period is **3.04 per cent**.

In its calculations, the Commission will use this market-derived inflation rate, which has the additional benefit of being up to date. Official forecasts of inflation can become out of date and may reflect the policy perspective of the institution and not necessarily relate to the access arrangement period under consideration.[125] In addition, part of the modelling undertaken by Epic to derive the tariffs included applying the assumed forecast inflation to historical circumstances, in particular the written-down capital base for the year ending 31 December 1999. The Commission considers it more appropriate to use actual observed inflation in these circumstances.

Actual inflation for the year ending 31 December 1999 was 1.8 per cent.[126] Accordingly, the Commission considers that Epic's revenue requirement for the access arrangement period should be recalculated using a forecast rate of inflation of 3.04 per cent and observed inflation rates where this is appropriate. The Commission will revise the forecast rate of inflation based on the most up-to-date information available at the date of final decision.

Debt margin and cost of debt

Epic suggested that the appropriate margin for the cost of debt is 120-150 basis points above the relevant risk-free rate and noted that the Commission had adopted 120 basis points in the Victoria *Final Decision*.[127]

The lending margin is essentially an empirical matter. In the Victoria *Draft Decision* the Commission proposed a debt margin of 80 basis points. However, in the period following the release of the *Draft Decision* there was evidence that margins might have increased because of the then growing uncertainties in global financial markets. On the basis of comments by financial institutions, the Commission adopted an assumed debt margin of 120 basis points in the *Final Decision*. This assumed an A- credit rating and 60 per cent gearing for the Victorian gas transmission businesses.

More recently, recent refinancing of Duke Energy International (DEI) debt used to purchase BHP's power assets was reported to have been priced in three tranches. The first tranche, for five years, was priced at 110 basis points. The second five-year period was financed at 130 basis points and the third at 150 basis points. While DEI is

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[125] NERA, *A critique of the WACC parameters proposed for Transgrid – a report for the Commission*, March 1999, p. 7.

[126] Australian Bureau of Statistics, Publication 6401.0 *Consumer Price Index*, 26 July 2000, Table 1.

[127] Access arrangement information, p. 33.

reported to have a solid credit rating, the financing of this debt may indicate that debt margins have increased.[128] This observation is supported by a recent report that states: [129]

> … spreads have widened sharply this year and issuance has virtually ceased during the past few weeks because of concerns about rising interest rates and the possibility of further credit ratings downgrades.

The Commission proposes to use a debt margin of **120 basis points** for its calculations on the MAPS.

The 120 basis point margin in combination with the nominal risk-free rate of 6.10 per cent suggests a nominal cost of debt (r_d) figure of **7.30 per cent** for use in the WACC estimate. With an inflation rate of 3.04 per cent, the corresponding real cost of debt (rr_d) is **4.14 per cent**.

The market risk premium

The market risk premium is a parameter in the CAPM that, together with the risk-free rate and firm-specific equity beta, determines the expected cost of equity in the business. Epic proposed a range of 6.0-7.0 per cent for the market risk premium. This range has been the conventionally accepted range under the classical tax system. However, as reported in the Commission's Victoria *Final Decision*, Professor Kevin Davis has suggested that this may not be in keeping with the forward-looking CAPM framework favoured by the Commission. For example, the more stable inflationary environment now prevailing may mean that the relevant market risk premium is less than has been observed in the past. In the Victoria *Final Decision* the Commission considered the probable range to be 4.5-7.5 per cent and chose to use a mid-value of 6.0 per cent.[130]

In its *Final Decision* on GSN,[131] IPART noted further observations (both Australian and overseas) that the market risk premium had fallen in recent years. One indicator considered by IPART was a study by Tro Kortian that estimated the equity premium to be 3.9 per cent over the period 1928-1996. Kortian's study noted that the premium had been falling over time and estimated the current equity premium to be around 3 per cent.[132] In view of this trend, IPART revised downward the market risk premium range from 6-7 per cent in the *Draft Decision* to 5-6 per cent in the *Final Decision*.[133]

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[128] 'BankAmerica wins Duke deal' *The Australian Financial Review*, 1 November 1999, p. 62.

[129] 'Brisbane Airport to rejig debt' *The Australian Financial Review*, 18 May 2000, p. 34.

[130] ACCC, Access arrangements proposed by Transmission Pipelines Australia Pty Ltd and others, *Final Decision*, 6 October 1998, p. 53. See also 'Welcome to bull country', *The Economist,* 18 July 1998, pp. 17-19.

[131] IPART, 'Access arrangement Great Southern Energy Gas Networks Pty Limited', *Final Decision*, March 1999, p. 24. See also IPART, 'Access arrangement Albury Gas Company Limited', *Draft Decision*, June 1999, pp. 24-25.

[132] Tro Kortian, *Australian Sharemarket Valuation and the Equity Premium*, September 1998, Department of Finance, University of Sydney.

[133] IPART, 'Access arrangement Great Southern Energy Gas Networks Pty Limited', *Final Decision*, March 1999, p. 24. See also IPART, *'Access arrangement Albury Gas Company Limited', Draft Decision,* June 1999, pp. 24-25.

The Commission accepts that there is considerable information from recent studies of financial markets suggesting that the market risk premium is now lower than it has been in past decades. The Commission considers the studies sufficiently compelling to lower the bottom end of the probable range of the market risk premium, giving a probable range of 3.5–7.5 per cent. This is a particularly large range, reflecting the uncertainty (experienced both in Australia and overseas) associated with estimating the market risk premium. The Commission favours the lower numbers suggested by the recent studies.

The Commission has used **6.0 per cent** in its WACC calculations for MAPS. This figure is at the bottom end of the range proposed by Epic. The Commission will reconsider the appropriate level of the market risk premium over time as each regulatory decision is made.

Level of debt funding (gearing)

Epic suggested that the proportion of debt funding applicable to MAPS be 60 per cent.

In its submission, TGT stated that the 60:40 debt to equity ratio is no longer industry best practice. Instead, TGT submitted that a gearing ratio of 70:30 had become the appropriate 'standard industry structure' and 'best practice'.[134]

The Commission notes that the Modigliani-Miller theorem suggests that the relevant cost of capital should be invariant over a broad range of gearing possibilities. Therefore the gearing assumption used for WACC purposes should not be a critical one.[135]

For the purpose of deriving the WACC for the MAPS, the Commission considers a gearing ratio of **60:40** to be reasonable.

Utilisation of imputation credits

The availability of tax imputation credits requires a modification to the standard CAPM/WACC model to reflect the return to shareholders of tax credits associated with their share dividends. Thus, gamma (γ) is included in the WACC calculation to represent the proportion of franking credits that can, on average, be used by shareholders of the company to offset tax payable on other income. The higher the gamma, the lower the required return to equity holders and therefore the lower the estimated WACC. Consequently, gamma becomes a significant parameter.

Epic proposed a range of 25-50 per cent for gamma. Submissions to the Commission did not deal with this issue. The Commission's Victoria *Final Decision* and the *Draft Regulatory Principles* note that the analysis of imputation credits is a controversial issue and that there is considerable debate as to the value that should be ascribed.

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[134] TGT submission, 26 October 1999, p. 5.

[135] Modigliani and Miller establish that the value of the company is unaffected by its choice of capital structure using the principle of 'no arbitrage'. This principle states that assets that offer the same cash flows must sell for the same price. Thus, a company's borrowing decision does not affect either the expected return on the company's assets or the required return on those assets.

Ultimately, the Commission's choice of gamma will be a matter of judgement based on available empirical evidence.

IPART has reported empirical evidence suggesting that the average values for Australian imputation credits lie between 68 and 82 per cent of their face value, with market studies undertaken by the Melbourne Business School indicating that gamma may be approximately 50 per cent.[136] The Commission has used the adjustments to gamma recommended by Professor Kevin Davis for a less than 100 per cent pay-out ratio and has used a stylised model of cash flows. The discounted value of credits relative to their nominal value suggests a modified range for gamma of between 40 and 70 per cent, with a middle value of 55 per cent. As there are likely to be other tax concessions not considered in this analysis, a somewhat reduced range of between 40 and 60 per cent is more appropriate.

For the purposes of this access arrangement, the Commission takes the view that a gamma (γ) of **50 per cent** is an appropriate assumption for calculating the WACC for regulated businesses. As noted in the Transgrid final decision, this is consistent with the Commission's view that it should not infer that regulated entities have a particular ownership structure.[137] A gamma of 50 per cent is also consistent with other regulatory decisions.

Effective tax rate

Epic used a corporate tax rate of 36 per cent in its WACC conversion formulae. Under the New Tax System, this rate fell to 34 per cent on 1 July 2000 and is to fall to 30 per cent on 1 July 2001.

In its submission, TGT proposed that a corporate tax rate of 30 per cent be applied in the WACC calculation. TGT submitted that unless Epic expects to pay significant tax in the period prior to the implementation of the 30 per cent tax rate, the stepped change in the tax rate should not be relevant.[138]

The corporate tax rate is an input to the Commission's cash flow model, which calculates the returns to Epic over the life of the pipeline system. The model assumes corporate tax rates of 36 per cent between 1 January and 30 June 2000, 34 per cent between 1 July 2000 and 30 June 2001 and 30 per cent thereafter.

Because infrastructure owners are permitted to accelerate depreciation for tax purposes, tax depreciation may be significantly higher than economic depreciation. This difference between tax depreciation and economic depreciation means that there is an excess tax allowance for depreciation in the early years of a project or pipeline service, resulting in a considerable deferral of any tax liabilities associated with the project. These deferred liabilities serve to improve early cash flows to the investment and improve the internal rate of return of the project above that indicated by the assumed WACC parameters. This effect may be interpreted as an effective tax rate for the return

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[136] IPART, 'The rate of return for electricity distribution networks', *Discussion Paper*, November 1998, p. 21.

[137] ACCC, 'NSW and ACT transmission network revenue caps 1999/00-2003/04', *Decision*, 25 January 2000, p. 24.

[138] TGT submission, 26 October 1999, p. 27.

on equity (T_e) that is less than the statutory rate (T) assumed by Epic for the CAPM/WACC framework.

In the CAPM/WACC equations there is an issue as to whether to use the statutory tax rate or effective tax rate. This issue becomes irrelevant in the post-tax regulatory framework adopted by the Commission, as taxes are calculated on an 'as you go' basis. However, the Commission is of the view that where a formula-based approach is used to estimate the WACC, an effective tax rate should be used in place of the statutory corporate tax rate. The effective tax rate for Epic derived from the Commission's cash flow model is approximately **9 per cent**.

At the WACC forum associated with the Victorian decision, a number of experts argued that their preferred regulatory approach was to avoid the use of a pre-tax WACC altogether. Subsequent discussions with these experts suggested how this could be done. This involves using a post-tax WACC directly available from CAPM estimates to reflect the return on assets and to capture the impact of taxes in the cash flows. Such taxes are simply added, along with other capital costs and operations and maintenance costs, to calculate the target revenue requirement for the business. This approach avoids the need for a special conversion formula, which is discussed later, and handles tax in a very transparent way.

The fact that the post-tax approach provides full compensation for actual tax liabilities as they occur avoids both the need to calculate a long-term effective tax rate and problems generated by post-tax returns diverging from market rates over time. As far as the business is concerned, the post-tax approach would remove any risks associated with future tax liabilities and provide a return always commensurate with market requirements.

The Commission reports the post-tax nominal return on equity in this draft decision, along with the pre-tax real WACC consistent with that return on equity. The pre-tax real WACC is derived from the post-tax nominal cash flows.

Because the Commission has adopted a post-tax regulatory framework, it is necessary to carry over aspects of historic financial accounts that impact on post-tax returns likely to be achieved in the future. Therefore, it is important that the residual asset value for tax depreciation be transferred to the post-tax framework and that tax depreciation concessions that can be used to offset future taxes are accounted for in regulated revenues.

To the extent that tax depreciation claimed in previous years may not have been fully exhausted in the reduction of tax liabilities, the amount will still be available (as a carried-forward tax loss) to reduce future taxable income. This carried-forward tax loss is calculated as the difference between depreciation for tax purposes (tax depreciation) and depreciation for accounting purposes (book depreciation) since 1995.

Identifying available tax concessions (as a carried-forward tax loss) in Epic's cash flows ensures that Epic receives an allowance for taxes over the access arrangement period in accordance with its (concession-inclusive) tax liability for the period.

This adjustment should be considered quite separately from the adjustment to the initial capital base that was discussed earlier, in section 2.2.7.

That adjustment is a direct deduction from the initial capital base of the deferred tax liability (measured as the accumulated prima facie tax expenses). Its purpose is to recognise that Epic set revenues in the past sufficient to cover tax liabilities that it was not obliged to pay at that time. It recognises that, under the post-tax regulatory framework, Epic will be fully compensated in regulated revenues for expenditure to meet those liabilities as they become due. In other words, the adjustment ensures that the service provider is not compensated twice for its tax liabilities.

Beta and risk

The equity beta is a measure of the expected volatility of a particular stock relative to the market as a whole. It measures the systematic risk of the stock, that is, the risk that cannot be eliminated in a balanced, diversified portfolio. Generally, the Australian Stock Exchange (ASX) is used as a proxy for the whole market. The market average being equal to 1, an equity beta of less than 1 indicates that the stock has a low systematic risk relative to the market as a whole. Conversely, an equity beta of more than 1 indicates that the stock has a relatively high risk.

Where an equity beta is calculated for a particular company, it is only applicable for the particular capital structure of the firm. A change in the gearing will change the level of financial risk borne by the equity holders. Hence the equity beta will change. There is a common method to enable beta to be compared across companies with different capital structures. The approach is to derive the beta that would apply if the firm were financed with 100 per cent equity, known as the 'asset' or 'unlevered beta'. The analyst can then calculate the equivalent equity beta for the level of gearing. This technique is known as 're-levering' the asset beta.

The Victoria *Final Decision* adopted an asset beta of 0.55 and an equity beta of 1.20. For MAPS, Epic proposed an asset beta (β_a) range of 0.55–0.70. Epic argued that it had based this on a 1997 Monopolies and Mergers Commission (MMC) decision that set an asset beta for British Gas Transco (BG) at 0.70. Epic stated that, given the similar regulatory regime and competitive environments, this figure was the most appropriate comparison available.[139] Epic stated that it had applied the Monkhouse formula to the asset beta range to derive an equity beta (β_e) range of 1.18–1.55.

Advice to the Commission from the office of the Competition Commission (Great Britain)[140] is that the MMC did not determine an asset beta for BG. Rather, it estimated a WACC based in part on the conclusions of its previous 1993 British Gas report and on consideration of whether there was any evidence of material changes subsequently. The WACC proposed by MMC was consistent with WACC figures put forward by the Director General of Gas Supply (known as 'Ofgas', now absorbed in Ofgem). These figures were based on asset betas of between 0.45 and 0.60, which, the Competition Commission stated, were consistent with equity betas of about 0.55–0.73.[141]

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[139] Access arrangement information , p. 39.
[140] Formerly known as the Monopolies and Mergers Commission.
[141] Competition Commission (Great Britain), e-mail message, 28 April 1999, referring to Table 6.11 at p. 116 of MMC's *BG plc*, May 1997.

In correspondence with the Commission,[142] Epic acknowledged that the MMC did not specifically calculate an asset beta for BG. Epic also acknowledged the asset and equity beta ranges stated by the Competition Commission, which dated from an October 1996 proposal by Ofgas to BG. However, Epic submitted that the MMC had relied heavily on its 1993 decision, which referred to information from BG and Ofgas corresponding to an asset beta of around 0.70. Epic put forward a consultant's view cautioning against inter-country comparisons.

Epic made several observations relating to its perception of the higher risk of MAPS compared to the Victorian gas transmission system, as outlined in section 2.5.2. Responses by TGT and Osborne to those risk arguments were outlined in Table 2.15 above.

For reasons set out below, the Commission does not consider that the factors outlined by Epic impact on beta, which measures systematic risk.

Under the CAPM assumptions, the equity beta is meant to reflect only market-related or non-diversifiable risks. However, in the assessment process for the Victorian transmission systems, it was suggested in the public debate that increasing the value of beta could accommodate an allowance for unique (diversifiable) risks. An increase in the equity beta would only be justified if there were a downside bias in the unique risks faced by the business. Arguing for such a bias, TPA in Victoria noted the possibility of by-pass or redundancy of assets. Epic also raised possible by-pass as a unique risk characteristic of MAPS.[143]

Epic provided forecast gas deliveries for MAPS in the access arrangement information. (The forecast was subsequently revised by Epic and included in the Commission's *Issues Paper*.[144]) The forecast suggested a decline in demand for gas deliveries in 1999 followed by an increase in demand in each of the following years of the access arrangement period. Epic later provided the Commission with actual figures for 1999. These figures showed that gas deliveries had increased by some 6 per cent in 1999.[145] In addition, Epic provided the Commission with confidential figures that show a downward trend in gas deliveries since 1980. Epic considers that this decline is attributable at least in part to coal-fired electricity generation and imports of electricity to the State.[146]

It is difficult to accept the submissions by Epic that the pipeline faces higher risks than the TPA in Victoria, given that pipeline capacity is fully contracted until 2006. Although the South Australian Government is investigating the augmentation of interstate sources of gas, with options including a pipeline from Victoria, at this stage there is no commitment to such a project. Further, the way reduced utilisation would

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[142] Epic, consolidated response to Commission queries of 30 April 1999.

[143] Access arrangement information, p. 38.

[144] ACCC, 'Proposed Access Arrangement lodged by Epic Energy South Australia Pty Ltd for the Moomba to Adelaide Pipeline System', *Issues Paper*, 6 September 1999, Attachment B.

[145] Epic, letter to Commission, 15 June 2000, p. 2.

[146] Epic, letter to Commission, 15 June 2000, p. 2.

be handled under the regulatory arrangements would tend to ameliorate any adverse impact of demand reductions that may arise before or after 2006.[147]

The Commission notes the findings of a report prepared by Professor Kevin Davis for the South Australian Independent Pricing and Access Regulator (SAIPAR) on the WACC proposed by Envestra Limited for its distribution network in South Australia. Like Epic, Envestra[148] argued for a higher WACC than that for the Victorian distribution network on the basis of:

- slower market growth;
- a more concentrated customer base and therefore greater variability of demand; and
- greater competition from alternative fuel sources.

Professor Davis considered that none of these arguments provides any rationale for assuming greater systematic (non-diversifiable) risk.[149] According to Professor Davis, slower market growth does not imply any higher systematic risk. Rather, it will imply, through the determination of target revenues that return a stated rate of return on capital, that the average price received will be higher for a given asset base.[150] Further, there is no *a priori* reason to expect that a more concentrated customer base, and therefore greater variability of demand, leads to a greater correlation of demand with market returns.[151] Finally, greater competition from alternative fuel sources has no obvious implications for the assessment of systematic risk.[152] Professor Davis concluded that there would appear to be no obvious reason to assume a higher asset beta for the South Australian market than for Victoria.[153]

Submissions on the Victorian access arrangements argued that regulatory arrangements that are based on revenue or price caps are inherently more risky than the rate of return regulation practised in the United States. Such US regulation has been the main source of data on benchmark firms for beta determination. The UK gas and electricity regulator, Ofgem, oversees a price-cap regime. As mentioned above, its predecessor, Ofgas, assessed the asset beta range for British Gas Transco, a gas transmission business, as between 0.45 and 0.60.[154]

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[147] If such a risk is significant the preferred method of compensation would be by the introduction of a faster rate of economic depreciation upon review of the access arrangement. The service provider is at liberty to seek an early review of an access arrangement (code section 28).

[148] Envestra Limited, *Access Arrangement Information for the South Australian Distribution System*, 22 February 1999, Appendix B, p. 4.

[149] Kevin Davis, *The Weighted Average Cost of Capital for Access Arrangements for Envestra – A Report prepared for the SAIPAR*, 20 October 1999, p. 7.

[150] If two assets with the same initial cost and equivalent risk are to both be zero NPV projects, the one with a lower output level must generate a higher price per unit of output.

[151] An increase in total risk can occur from an increase in non-systematic risk without there being any change in beta.

[152] Kevin Davis, *The Weighted Average Cost of Capital for Access Arrangements for Envestra – A Report prepared for the SAIPAR*, 20 October 1999, p. 7.

[153] Kevin Davis, *The Weighted Average Cost of Capital for Access Arrangements for Envestra – A Report prepared for the SAIPAR*, 20 October 1999, p. 7.

[154] In its review of this assessment, the Monopolies and Mergers Commission did not estimate a beta. However, it considered a WACC of 7 per cent to be appropriate and this is consistent with the

In addition, submissions in Victoria suggested that the 'newness' of the regulatory framework introduced perceived uncertainties on the part of investors. Submissions suggested that these uncertainties be taken into account via an increase in the beta value in setting the cost of capital. Whilst this treatment is no longer considered appropriate, the Commission took this argument into account at the time and assessed an asset beta of 0.55 as being appropriate for the Victorian system.

In view of these considerations, the Commission proposes an asset beta of **0.50** as appropriate for MAPS.

The Victoria *Final Decision* included an equation to determine the debt beta. This equation was:

$$\beta_d = \frac{r_d - r_f - 0.5}{r_m - r_f}$$

where r_d = cost of debt

r_f = the risk-free rate

$r_m - rf$ = the market risk premium

This equation includes a deduction for bank costs assumed to account for approximately 50 basis points of the debt margin.[155] These costs need to be deducted from the debt margin to determine the debt beta.[156]

Since the release of the Victoria *Final Decision*, the Commission has undertaken, and is aware of, further work in this area. As a result of these developments, the Commission considers that the appropriate level for the debt beta is **0.06**. This has been factored into the Commission's calculations for the equity beta for MAPS. As a result, the equity beta (β_e) for MAPS is **1.16**.

Calculation of the rate of return

Table 2.17 summarises the parameter values proposed by Epic in its access arrangement information and by the Commission in this draft decision.

WACC range proposed by Ofgas. Source: e-mail message from office of the Competition Commission (Great Britain), 28 April 1999.

[155] This is to reflect the fact that the return to debt holders will equal the return to equity holders only where the debt margin reflects a full return to lenders. However, lenders do not receive a full return, as part of the return will go toward covering costs incurred by the bank.

[156] ACCC, Access arrangements proposed by Transmission Pipelines Australia Pty Ltd and others, *Final Decision,* 6 October 1998, p. 62.

Table 2.17: Comparison of WACC parameters used by Epic and Commission

CAPM parameter	Epic proposal	Commission draft decision
Real risk-free rate (rr_f) %	3.39	2.97
Expected inflation rate (f) %	2.5	3.04
Nominal risk-free rate (r_f) %	6.0	6.10
Cost of debt margin (DM) %	1.2-1.50	1.20
Cost of debt (r_d) %	7.2-7.5	7.30
Real cost of debt (rr_d) %		4.14
Market risk premium (r_m-r_f) %	6.0-7.0	6.0
Debt funding (D/V) %	60	60
Usage of imputation credits (γ) %	25-50	50
Corporate tax rate (T) % [(a)]	36	30
Asset beta (β_a)	0.55-0.70	0.5
Debt beta (β_d)	0.12	0.06
Equity beta (β_e) [(b)]	1.18-1.55	1.16

Source: access arrangement information, pp. 39-41 and Commission analysis.

Note:

(a) The corporate tax rate of 30 per cent is an input to the Commission's cash-flow analysis. The effective tax rate is estimated at approximately 9 per cent.

(b) The Commission uses the Monkhouse formula as follows:

$\beta_e = \beta_a + (\beta_a - \beta_d)(1 - r_d/(1+r_d)T).D/E.$

This formula assumes an active debt policy aimed at maintaining a specific gearing ratio.

The parameter values used by the Commission are those considered most appropriate for MAPS as a stand-alone business. These generally fall near the middle of a narrow range based on the information available.

Table 2.18 below shows the WACC figures proposed by Epic in its access arrangement and the Commission in this draft decision, using both the forward and reverse transformations mentioned earlier, and cash flow analysis by the Commission.

Table 2.18: WACC estimates based on parameters given in Table 2.17.

	per cent	
	EPIC proposal	**Commission draft decision**
Nominal cost of equity $r_e = r_f + \beta_e (r_m - r_f)$	13.08-16.84	13.05
Nominal pre-tax cost of debt (r_d)	7.2-7.5	7.30
Nominal vanilla WACC $W_n = r_e.E/V + r_d.D/V$	n/a	9.60
Post-tax nominal WACC $W = r_e [(1-Te)/(1-Te(1-\gamma))].E/V + r_d (1-T).D/V$	6.85-8.78	8.04
Post-tax real WACC $W_r = (1+W)/(1+f) - 1$	4.24-6.13	4.85
Pre-tax nominal WACC $W_t = r_e/(1-Te(1-\gamma)).E/V + r_d .D/V$	10.7-13.73	9.85
Pre-tax real WACC $W_{tr} = (1+W_t)/(1+f)-1$ (forward transformation)	8.0-10.95	n/a
Pre-tax real WACC $W_{tr} = W_r/(1-T)$ (reverse transformation)	6.63-9.58	n/a
Pre-tax real WACC (W_{trc}) (cash-flow analysis by the Commission)	n/a	**6.70**
Pre-tax nominal WACC (W_{trci}) (cash-flow analysis by the Commission) $W_{trci} = (1+W_{trc}).(1+f)-1$	n/a	9.94
Implied tax wedge $= W_{trci} - W_n$	n/a	0.34

Source: access arrangement information, p. 34 and Commission analysis.

In calculating the post-tax revenue requirement that is consistent with the nominal cost of equity established by the CAPM, the return on capital has been calculated using the nominal vanilla WACC. Taxes have been addressed specifically in the cash flows as they arise.

The nominal vanilla WACC can be defined as the weighted-average cost of debt and equity before any adjustments for tax and inflation. In other words, it represents the most basic post-tax return required by the business after all costs have been paid, including the post-tax cash flow required by equity holders and interest payments on debt. If the business were not subject to tax this would be the total return required to cover all expenses, other than operating costs.

The difference between the nominal pre-tax WACC and the nominal vanilla (post-tax) WACC is represented by the 'tax wedge'. The tax wedge has been used by the

Commission to normalise tax payments over the life of the assets. This approach is discussed below in section 2.7.4.

Given the known shortcomings of the conversion formulae, the Commission has replicated the post-tax cash flows in a pre-tax framework to find the pre-tax real WACC that is consistent with the nominal cost of equity. Cash flow analysis has been used by the Commission in this way for the Victoria *Final Decision*, the Transgrid *Final Decision*, for decisions relating to Adelaide, Brisbane and Perth airports and for the Central West Pipeline *Final Decision*. The Commission has found that cash flow modelling provides a more robust and accurate pre-tax WACC figure than the formulae approaches.

The Commission has found that a pre-tax real WACC of **6.70 per cent** is consistent with a post-tax nominal cost of equity of 13.05 per cent.[157]

The interplay between the assumed tax arrangements, tax depreciation, economic depreciation, the mix of asset classes, level of debt (and how it is funded) and the assumed inflation rates alters the relationship between the different rates of return.

While 13 per cent is the expected post-tax cost of equity under the assumptions of the regulatory framework, this is a long-term expectation. In reality, returns may vary from year to year and can be expected to exceed this benchmark under the incentive provisions of the access arrangement.

Proposed amendment A2.3

In order for Epic's access arrangement for MAPS to be approved:

- the WACC estimates and associated parameters forming part of the access arrangement must be amended to reflect the current financial market settings, by adopting the parameters set out by the Commission in Tables 2.17 and 2.18 above; and
- the target revenues and forecast revenues must be based on these new parameters.

Given the resulting scope for variation between the key rates of return, it is important to note the assumptions made to arrive at the Commission's outcome. The model used is strictly in line with the regulatory framework proposed by the Commission. Post-tax cash flows have been assessed over the remaining life of the MAPS, that is 50 years. Asset values, O&M costs, capital expenditure and financial parameters are as specified in this draft decision. Capital expenditure beyond the access arrangement period has not been included in the model because the code requires the Commission to set a rate of return on the value of the assets that form the covered pipeline (capital base), that is,

[157] While these amounts have been applied to the revenue model, they have been referred to in rounded terms (6.7 and 13 per cent respectively) elsewhere in this draft decision.

on the value of the existing assets.[158] O&M costs and asset values beyond the access arrangement period have been indexed by the estimated rate of inflation.

2.6 Non-capital costs

2.6.1 Code requirements

The code (sections 8.36 and 8.37) allows 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.

Attachment A to the code requires the service provider to disclose certain costs in the access arrangement information, unless it would be unduly harmful to the legitimate business interests of the service provider, a user or a prospective user. The costs to be disclosed include those for wages and salaries, contract services including rental equipment, materials and supply and corporate overheads and marketing. The service provider must disclose gas used in operations. Some disaggregation by zones, services or categories of assets is also required.

2.6.2 Epic's proposal

Epic provided forecast operating costs for the period 1999-2003. The years 2004 and 2005 were not included as Epic initially proposed that the access arrangement period end in 2003. For cash-flow modelling purposes, the Commission has established figures for 2004 and 2005 by CPI indexation.

[158] Code section 8.4(a).

Table 2.19: Total operating costs, 1999-2003

Year ending 31 December ($ '000)	1999	2000	2001	2002	2003
Salaries and wages	6386	6642	6908	7183	7471
Other employee costs	607	623	638	654	670
Consultants	695	712	730	748	767
Operations & maintenance	4465	4878	5158	4668	4867
Administration expenses	377	387	396	406	417
Utilities	676	693	711	728	747
Inter-company expenses	2848	2049	1981	1898	1888
Employee incentive scheme	480	499	519	540	562
Less					
Capitalised overhead	378	387	397	407	417
Non-jurisdictional costs	1185	1230	1277	1325	1376
Total operating costs	**14,972**	**14,866**	**15,368**	**15,094**	**15,596**

Source: Access arrangement information, p. 18.

Epic noted that with the exception of fuel gas, costs incurred by Epic in respect of MAPS are fixed in nature over the short term. Although all fixed costs are to be recovered under the reference tariff, Epic proposed to recover a high proportion of costs through the capacity charge.

Epic noted that it is currently not authorised by its Board of Directors to participate in any marketing or trading activities that would require ring-fencing.[159] Thus, there are no costs associated with these activities.

Epic also stated that it currently operates two pipelines for other parties - the Riverland pipeline (operated on behalf of Boral, now Origin Energy) and the Liquids Line (operated on behalf of Santos). Epic also owns and operates the Katnook pipeline in south-eastern South Australia. The costs associated with these ventures are captured separately in Epic's accounting system. In addition, Epic stated that it provided gas control centre support services to the Epic Energy Queensland business unit. The costs associated with this service are not captured separately in Epic's accounting system. Epic stated that instead all revenues recovered from the Queensland business unit had been deducted from the operations and maintenance expenses in Epic's revenue requirement calculation for MAPS.[160]

Epic underwent an organisational restructure from December 1999, resulting in gas control for its various pipelines and certain managerial functions being relocated to Western Australia. The cost estimates provided by Epic pre-date that restructuring.[161]

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[159] Access arrangement information, p. 13.
[160] Access arrangement information, p. 13.
[161] Refer Epic letter to customers, 1 December 1999.

2.6.3 Submissions by interested parties

TGT made the following submission[162] with respect to Epic's proposed operating and maintenance costs:

> Epic Energy's forecast O&M costs for 1999 of $15.0m are equivalent to $14.2m per 1000km of pipe.163 This compares with 'other Australian transmission pipelines which have costs in the range of $9.0 - $12.8 million / 1000km'.164
>
> TGT accepts that 'short' highly compressed pipelines are likely to compare unfavourably against benchmarks such as O&M costs per 1000 km,165 because of the significant fixed costs that do not vary with pipeline length. Also, 'older' pipelines are likely to require more maintenance than newer pipelines.
>
> However, the variation between these benchmarks and Epic Energy's forecast is not likely to be fully explained by these factors.166 Also, it is difficult to understand why the O&M costs (in absolute terms) for the MAPS are significantly higher than EAPL's forecast O&M costs for the Moomba-Sydney pipeline ('MSP'): $14.9m for 2000 for the MAPS, compared to $12.3m (2000$) for the year ending 30 June 2001 for the MSP;167 both pipelines are of a similar age, the main difference (other than length) being the number of compressor stations.
>
> A further benchmark or comparison is the O&M costs incurred by the Pipeline Authority of South Australia (PASA) which owned the MAPS until 30 June 1995. PASA's O&M costs for 1994/95 were $11.3 million.[168] This included the costs of operating the Moomba-Port Bonython liquids pipeline and the south-east (Katnook) gas pipeline. Given that the income from operating the liquids pipeline was $1.6 million,[169] it is likely that the O&M costs of the MAPS in 1994/95 were $10.0 - 10.5 million. Adjusting this cost (by the CPI) to current dollars implies that the O&M costs incurred by PASA were in the order of $11.0 - 11.5 million pa (1999$). This is substantially lower than Epic Energy's forecast O&M costs for 1999 of $15.0 million.
>
> Based on these comparisons, Epic Energy's forecast O&M costs appear excessive. In addition, between September 1998 and January 1999 the majority of the MAPS' compressor stations were replaced by new plant. The new compressor stations should result in a significant decrease in O&M costs (compared to historical costs).

TGT also submitted that the 'ring-fencing' of costs associated with gas control services for the Epic Queensland business unit may not be effective. TGT expressed concern that the South Australian unit could be cross-subsidising the Queensland unit.[170]

Santos referred to Epic's comparison of operating costs between pipeline systems in Australia. Santos submitted that the data provided by Epic had been distorted by the inclusion of small diameter gas and oil pipelines. Santos suggested that if these were

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[162] TGT submission, 26 October 1999, pp. 19-20.

[163] According to TGT, total pipeline length, including laterals, is 1056 km (referring to access arrangement, Schedule 1, Attachment A).

[164] TGT cited the ACCC's Victoria *Final Decision*.

[165] According to TGT, however, the MAPS, in the Australian context, is not a 'short' pipeline.

[166] According to TGT, some explanation may reside in the substantial increase in 'Operations and Maintenance Expenses' (line 4 of Table 2, Attachment 1, access arrangement information, p. 18) from 1998 to 1999, and in the significant 'Intercompany Expenditures' (line 7).

[167] TGT cited EAPL access arrangement information, 5 May 1999, Table 3.9.

[168] TGT cited PASA *Annual Report* 1994/95, p. 25; total O&M costs ($15.5m) less gas use ($3.5m) and less carrying amount of disposed non-current assets ($0.7m).

[169] TGT cited PASA *Annual Report* 1994/95, p. 21 and note 2 (p. 24).

[170] TGT submission, 26 October 1999, p. 18.

excluded, Epic's ranking relative to other Australian pipelines is lowered, suggesting scope for improvement in operating costs.[171]

2.6.4 Commission's considerations

A widely accepted benchmark for operations and maintenance costs is cost per pipeline length. This indicator was not provided by Epic, but has been derived by the Commission and is compared with those for other pipelines in Table 2.20 below.

Table 2.20: Comparison of transmission pipeline non-capital costs

	$/1 000km ($ million)
NT Gas – ABDP (1999)[(a)]	3.9
EAPL – MSPS (2001)[(b)]	6.1
Epic – Moomba to Adelaide Pipeline System (1999)[(c)]	14.2
TPA – Victorian transmission systems (1998)[(d)]	11.0-16.0

Notes:

(a) NT Gas, *Access Arrangement Information,* 25 June 1999, p. 46.
(b) EAPL, *Access Arrangement Information,* 5 May 1999, p. 65.
(c) Epic, access arrangement, Schedule 1, Attachment A, which provides total pipeline length as 1055.8 in 1998, and from access arrangement information Attachment 1, which states total O&M costs for 1999 as $14.972 million.
(d) NT Gas, *Access Arrangement Information*, 25 June 1999, p.46.

Epic's operating costs are at the high end of the range of costs presented in Table 2.20. However, this is largely attributable to the fact that MAPS is a shorter and more highly compressed pipeline, particularly in comparison with the MSPS.

Epic has provided the Commission, on a confidential basis, with a disaggregation of its non-capital costs, including identifying the separate costs of Epic's other pipelines.

Another measure that is sometimes employed is to determine forecast operating costs as a percentage of the overall capital assets employed.[172] Typically, this measure ranges from 2 per cent for an uncompressed pipeline to 5 per cent for a fully compressed pipeline. In Epic's case forecast operating costs are approximately 2.8 per cent of the ORC value calculated by the Commission. On this measure, Epic's costs are reasonable. This measure does not include gas used in operations. If that were included this figure would increase to 3.5 per cent.

Chapter 4 of this draft decision discusses the use of key performance indicators (KPIs) and performance benchmarks in more detail. It concludes that, on the basis of the available information and based on the KPIs, the operating, maintenance and other non-capital costs for MAPS are reasonable.

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[171] Santos submission, 15 October 1999, p. 8.
[172] In the interests of comparison between pipeline systems, the ORC figure may be used as a measure of the value of the capital assets employed.

When it reviews the access arrangement, the Commission will consider whether the level of costs continues to be appropriate in the light of the company's restructuring.

2.7 Forecast revenue

2.7.1 Code requirements

As noted previously, the code sets out (section 8.4) three alternative methodologies for determining total revenue. The service provider proposed to use a cost-of-service methodology. Total revenue is calculated as the return on the value of the capital base plus depreciation of the capital base plus the operating and maintenance and other non-capital costs incurred in providing its services over the covered pipeline.

2.7.2 Epic's proposal

Epic stated that it did not anticipate that any revenue would be generated by the sale of the reference service because the capacity of the MAPS is fully committed to users under existing haulage contracts.[173] Epic contended that sales of IT service would be subject to so many external contingencies that it was not possible to predict IT revenues during the initial access arrangement period. Furthermore, Epic submitted that the revenue to be earned under the existing contracts is less than its proposed total cost-of-service requirement.[174]

Epic stated that it is not proposing cost-based reference tariffs, except in the context of the extensions/expansions policy. Epic submitted that the implied cost of service demonstrated that its use of the lower reference tariff, based on contract revenue, is reasonable.[175]

Table 2.21 below compares Epic's contract-based revenue requirement with its proposed cost-of-service revenue requirement.

Table 2.21: Forecast revenue, Epic proposal, 1999 to 2003

	Forecast revenue ($m nominal)	
Year ending 30 June	**Contracted revenue**	**Cost of service revenue requirement**
1999	49.9	56.0
2000	51.2	56.1
2001	52.5	57.3
2002	53.9	57.7
2003	55.2	59.0

Source: Table 1 of the access arrangement information, p. 18, as amended in consolidated response to ACCC letter of 30 April 1999.

[173] Access arrangement information, p. 10.
[174] Access arrangement information, p. 10.
[175] Access arrangement information, p. 12.

Two other considerations are relevant to Epic's forecast cost-of-service revenue requirement, as follows:

- Pursuant to clause 30.2 of its access arrangement, Epic proposes to escalate tariffs after the first year of the access arrangement period by 95 per cent of the change in CPI in the previous year (to September). As a result, prices to apply after the first year of the access arrangement period would be determined by movements in the general level of prices.

  The proposed tariff adjustment mechanism is discussed in section 2.9.2 below.

- The proposed access arrangement provides for full pass-through of the GST and any other new impost. Clause 30.4 of the original access arrangement stated that if, during a month, there is a new impost or increase in an existing impost, the user must pay all, or its share of that impost to the service provider.[176]

  The proposed pass-through provisions are discussed in 2.7.3 and 2.7.4 below.

2.7.3 Submissions by interested parties

Santos made the following submission: [177]

> In Attachment B of the Issues Paper, Epic provided a graph of actual and forecast annual deliveries through MAPS. It gave Epic's and AGA's forecasts. Like Epic, we think that the AGA forecast is too high. However, Santos believes that the Epic forecast is too low. The effect of Epic's low forecast is to raise the tariff required to recover their allowable costs.

There were no other submissions on forecast revenue.

TGT[178] submitted that in addition to passing through any new or increased imposts (such as the GST), Epic's access arrangement should also provide for the removal or reduction of [existing] imposts. AGLES&M similarly noted that the access arrangement neglected to contemplate decreases in imposts.[179]

In response, Epic agreed with these concerns and indicated that it was preparing revised provisions to achieve consistency with other Epic documentation dealing with imposts and the GST.[180] Subsequently Epic forwarded proposed clauses numbered 30.4 and 30.5, and a proposed revision to the definition of 'imposts' (in clause 43).[181]

2.7.4 Commission's considerations

As stated above, Epic did not predict IT revenues during the initial access arrangement period and has not included its share of net revenues from that service in the total

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176 Access arrangement, clause 30.4, p.68.
177 Santos submission, 15 October 1999, p. 7.
178 TGT submission, 26 October 1999, p. 17.
179 AGLES&M submission, 25 October 1999, p. 4.
180 Epic, response to submissions, 2 February 2000, p. 29 and proposed revised access arrangement, note to clause 30.4, 2 March 2000.
181 Epic, letter to Commission, 15 June 2000.

revenue. There is a difference between the stated pipeline primary capacity (323TJ per day), which is firm (i.e. reliable) capacity, and its stated maximum capacity (393TJ per day). The difference between the two provides an indication of the margin of capacity available to the service provider to ultimately make available for interruptible use.

In determining the initial capital base, both Epic and the Commission costed the MAPS according to its maximum capacity, not firm capacity. The Commission has not formed a view on whether Epic may have been overly conservative in establishing that margin and whether therefore the capacity for Epic to earn additional revenues from IT service has been understated. The Commission intends to review this issue at the commencement of the next access arrangement period on the basis of IT capacity sales between now and then.

The Commission has calculated the total cost-of-service revenue that Epic would earn, based on the amendments proposed in this draft decision, as if FT service were 100 per cent of the services Epic would supply in the initial access arrangement period.

In relation to Santos' concern about the relationship between total revenue and forecast demand, Epic's proposed initial tariff in Schedule 4 of the access arrangement is based on existing levels (year ending December 1998) of contract revenue and capacity, rather than demand forecasts.

Epic's proposed method of tariff-setting and the Commission's proposal to link Epic's reference tariff to cost of service are discussed in section 2.8.

The proposed new clauses dealing with GST and imposts have been further amended by Epic in the light of Commission comments that drew on its GST pricing guidelines,[182] as well as its GST pricing oversight role until 30 June 2002. Epic now proposes that the clauses read as set out in Annexure 3.[183]

The Commission is generally satisfied with Epic's revised clauses 30.4 and 30.5 and with the proposed new definition of 'imposts'. However, the Commission considers the terminology 'GST Recipient' and 'GST Supplier' in clause 30.4(b) hard to understand. Clause 30.4(b) states:

> Where any payment to be made by one party ('GST Recipient') to the other party ('GST Supplier') pursuant to the Agreement constitutes (in whole or in part) Consideration for a taxable Supply by the GST Supplier, then the amount of that payment will be increased by the prevailing GST Rate (to the intent that the GST Supplier will retain, after paying GST in respect of that payment, the same amount that it would have received and retained had that GST not been payable)

The service provider or supplier of haulage services, not the user, receives the GST payment. Consequently, the Commission proposes that the words 'GST Recipient' and 'GST Supplier' be replaced with 'Recipient' and 'Supplier'. An amendment to this effect is proposed below.

The Commission will adjust Epic's regulated revenues to account for the impact of the GST on inflation. This adjustment will ensure that net dollar margins do not increase

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[182] ACCC, *Price Exploitation and the New Tax System*, March 2000.
[183] Epic, letter to Commission, 15 June 2000, pp. 4, 7-8.

as a result of GST.[184] This adjustment will require the impact of the GST on CPI to be estimated and deducted from the CPI applied to Epic's regulated revenues. This deduction is made because the 'raw' CPI reflects economy-wide changes in cost structures. Regulated businesses like Epic are permitted by regulatory approval to fully recover these changes by passing through the GST in their fees and charges.

There would be 'double-dipping' if the full, raw CPI increase were applied to regulated revenues. Any adjustment by the Commission would not affect relevant rights of users under the existing haulage agreements. An adjustment of this kind will be made to all businesses regulated by the Commission.

The adjustment will be made after the year of the GST's introduction, as the estimation of the GST impact will be based on actual CPI figures available at that time. The Commission will communicate the adjustment to Epic when it is made so that Epic can factor that into its CPI – 1.6 per cent tariff adjustment.

Proposed amendment A2.4

In order for the access arrangement for MAPS to be approved, Epic must:

- incorporate the new clauses 30.4 and 30.5 proposed by Epic in its letter of 15 June 2000 in place of clause 30.4 of the original access arrangement;
- incorporate the new definition of 'imposts' proposed by Epic in its letter of 15 June 2000 in place of the original definition in clause 43.1(b); and
- replace the words 'GST Recipient' and 'GST Supplier' in the new clause 30.4(b) with the words 'Recipient' and 'Supplier' respectively.

Further, in the CPI-X revenue adjustment that occurs in the year following the introduction of GST, Epic must incorporate the measure of CPI that is exclusive of GST impacts, as stated by the Commission at that time.

In order to comply with the Commission's GST pricing guidelines,[185] Epic must ensure that its net dollar margins do not increase as a result of the New Tax System i.e., that all cost savings are passed on to customers. Epic has undertaken a preliminary review of cost savings resulting from the introduction of the New Tax System in respect of each of its customers. Based on these savings, Epic has calculated an indicative GST pass-through of around 9.7 per cent (i.e., charges are expected to increase by 9.7 per cent on 1 July 2000).[186] Subject to Epic's substantiating an increase in charges of that order when its review of cost increases and savings is finalised, the Commission would expect charges to increase by the dollar value of that change.

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[184] ACCC, *Price Exploitation and the New Tax System*, March 2000.
[185] ACCC, *Price Exploitation and the New Tax System*, March 2000.
[186] Epic, facsimile to Commission, 14 June 2000, enclosing example of letter of 2 June 2000 sent to shippers.

Because Epic has yet to finalise its GST pass-through arrangements, the following revenue forecasts are presented below, exclusive of any GST pass-through to apply from 1 July 2000.

The Commission's views on Epic's proposed tariff adjustment mechanism are presented in section 2.9.5 of this draft decision. In summary, the Commission proposes to reject Epic's proposal at this stage on the basis that a case for escalation of non-FT service charges has not been put by Epic. Given the fully contracted state of the pipeline, the Commission also has difficulty in seeing that the proposed tariff escalator is a necessary condition for fulfilling Epic's stated revenue requirement objective of putting FT users on parity with existing users.

Normalisation of tax payments and 'CPI-X' revenue smoothing

In establishing the cost-of-service revenue requirement, the Commission has normalised Epic's tax payments over the life cycle of the assets to remove the 's-bend' phenomenon.[187] This arises under the post-tax framework because the regulatory revenue stream provides compensation for actual tax liabilities as they occur. As a result, the profile of that revenue stream will initially be low when the firm takes advantage of available tax concessions such as accelerated depreciation, and will become much higher as those concessions expire and tax liabilities become payable. Therefore the objective of normalisation is to ensure that customers do not, as the result of higher tax payments that will need to be made in a later period, have to pay a disproportionately higher charge for services produced by the assets at that time. To normalise tax liabilities the Commission has included in the post-tax revenue requirement a factor that, in effect, represents additional depreciation (return of capital) that accumulates initially and subsequently reduces when taxes become payable and enter the cash flows. This allowance is calculated as the tax wedge[188] multiplied by the asset base less the net tax liability in each year. This ensures that when taxes enter the cash flows there is no sudden increase in the revenue requirement and therefore reference tariff.

Tax normalisation is represented in the following diagram. The top line in the diagram represents the normalised post-tax revenue stream.

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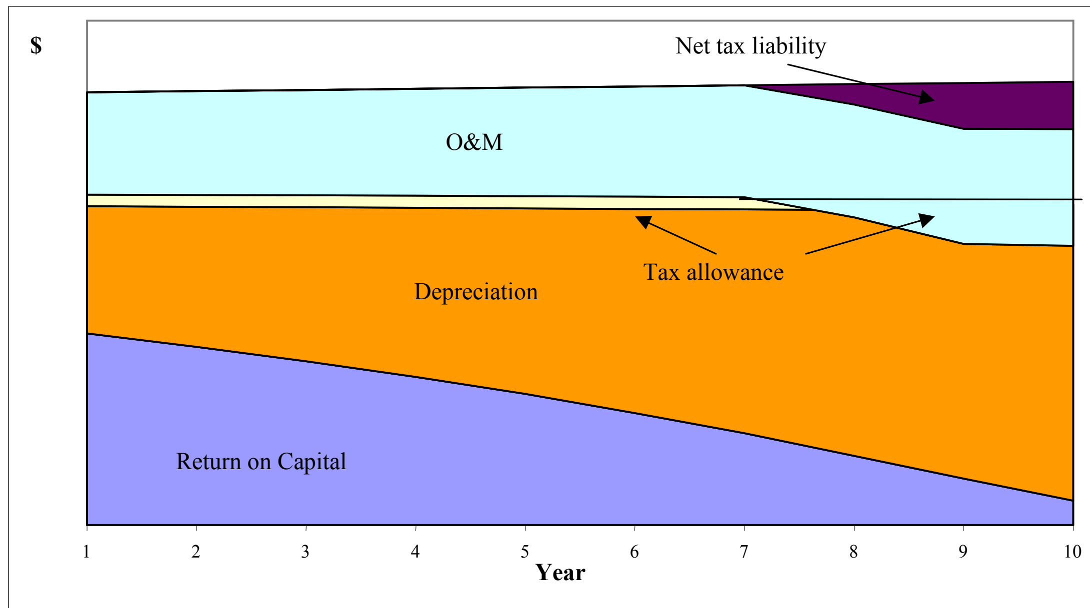
[187] A detailed discussion of the 's-bend' problem is provided in Attachment B to ACCC, 'NSW and ACT Transmission Network Revenue Caps 1999/00-2003/04', *Final Decision* January 2000, and Attachment C to ACCC, 'Access Arrangement by AGC, Pipelines (NSW) Pty Ltd for the Central West Pipeline, *Final Decision*, June 2000.

[188] Equal to the difference between the nominal vanilla WACC and the nominal pre-tax WACC that has been derived from the Commission's cash flow analysis.

Figure 2.1 Normalised post-tax revenue stream



The cost-of-service revenue stream proposed by the Commission (presented in Table 2.22 below) has been smoothed using a CPI-X mechanism to prevent volatility in the reference tariff over the access arrangement period. Under this approach, revenues are increased annually by CPI-X where the 'X' factor is set such that the NPV of the 'smoothed' revenue stream is equivalent to the NPV of the 'unsmoothed' revenue stream over the access arrangement period (holding revenue in the first year constant). The 'CPI-X' approach to revenue smoothing has been used by the Commission in its other regulatory decisions and has been widely used by other regulators in Australia and overseas. The Commission has calculated that an X factor of 1.6 per cent is required to smooth Epic's revenue requirement (and therefore the reference tariff) over the access arrangement period.

Table 2.22: Forecast revenue, Commission draft decision, 2000 to 2005

	Forecast revenue ($m nominal)		
Year ending 31 December	**Cost of service revenue requirement proposed by the Commission[a]**	**Epic's contracted revenue**	**Cost of service revenue requirement proposed by Epic**
2000[b]	22.9 (1/2 yr)	51.2	56.1
2001	46.3	52.5	57.3
2002	47.0	53.9	57.7
2003	47.6	55.2	58.9
2004[c]	48.3	56.7	60.7
2005	49.0	58.4	62.4

Source: consolidated response to ACCC letter of 30 April 1999, and Commission calculations

Notes:

(a) Cost-of-service revenue requirement has been smoothed using a CPI-X mechanism, where X = 1.6 per cent.

(b) Whilst Epic's forecast for 2000 refers to the full year (1 January 2000 to 31 December 2000), the Commission's forecast for 2000 refers to the period 1 July 2000 to 31 December 2000 only. Revenue forecasts will be revised at final decision stage.

(c) Epic did not provide revenue forecasts for 2004 and 2005. The Commission has established forecasts for 2004 and 2005 by applying Epic's proposed revenue escalation formula (i. e., 95 per cent of CPI), assuming inflation of 3.04 per cent.

2.8 Cost allocation and tariff setting

2.8.1 Code requirements

Section 8.38 of the code requires that, to the maximum extent that is commercially and technically reasonable, reference tariffs recover all costs directly attributable to the reference service and a fair and reasonable share of joint costs. The code (section 8.42) requires that a particular user's share of reference service revenues recover costs according to the same principles.

2.8.2 Epic's proposal

Epic did not propose reference tariffs based on cost of service. Rather, the tariffs proposed in Schedule 4 of the access arrangement were derived from revenue received under existing contracts. To illustrate how the tariffs had been derived, Epic provided the Commission with confidential data on the revenue received under existing contracts.

In its access arrangement information, Epic stated that the majority of total revenue, excluding gas cost, under existing contracts is recovered through fixed capacity charges with the remainder recovered through a commodity charge. Epic proposed that the same proportion be reflected in the proposed reference tariff.

A Whyalla lateral surcharge (fixed charge) was calculated by Epic to recover from users of the lateral the total current revenues recovered under existing contracts for capacity on these facilities.

Epic also proposed a rebatable (IT) service, which was altered in the revised access arrangement proposal in favour of a redesigned IT service linked to the incentive mechanism. Epic has indicated that it does not consider that the revised IT service will alter its current allocation of costs (revenues). Epic's stated view is that revenues from IT service cannot be accurately predicted for the initial access arrangement period.

As noted in section 2.7.4 above, the Commission has not formed a view on whether the capacity for Epic to earn additional revenues from IT service may have been understated. The Commission intends to review this situation at the commencement of the next regulatory period on the basis of IT capacity sales between now and then.

2.8.3 Submissions from interested parties

TGT submitted that it would expect the total revenue requirement to be lower than the revenue Epic currently receives under existing haulage contracts, once appropriate O&M cost forecasts, depreciation, initial capital base, asset life and WACC have been put in place.[189]

Since submissions closed, the Commission has recently received representations in support of a distance-based approach to allocating costs and setting tariffs. Parties who lodged submissions had not raised this issue. In response, Epic observed that in excess of 90 per cent of its market is in Adelaide and customers on the Whyalla lateral are not disadvantaged by comparison with Adelaide users in having a single-zone approach to pricing the mainline rather than a distance-based approach. Further, Epic indicated that to the extent services may be required at some time for gas sourced other than at Moomba, that could be addressed by commercial negotiation with the interested party rather than by devising a new reference service now.

2.8.4 Commission's considerations

The Commission is satisfied that the reference tariff proposed by Epic is consistent with the allocation of revenues Epic currently receives under existing contracts. Further, the Commission accepts Epic's view that at this stage it is unnecessary to contemplate, as a reference service, a distance-based approach to pricing services.

In adopting this view, the Commission assumes that any charge made by Epic for access to the 'EAPL Interconnector' delivery point at Moomba, for purposes of transferring gas to MSPS, would not involve payment of the 'postage stamp' capacity and haulage charges generally applicable to users of MAPS. The Commission understands that only a nominal charge is currently applicable. Epic has not put forward for approval any charge in connection with use of the EAPL Interconnector delivery point.

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[189] TGT submission, 26 October 1999, p. 30.

Distance-based charging may become appropriate in the future depending on the outcome of commercial negotiations and shifts in the sources of demand and supply. It is something the Commission would wish to keep under review – see discussion in 2.10 and 3.7. However, it is important that the reference tariff faced by access seekers in each year of the access arrangement period reflect the cost-of-service revenue requirement established by this draft decision. Therefore, the Commission requires the following amendment to link the reference tariff to the cost-of-service revenue requirement.

Proposed amendment A2.5

For the access arrangement to be approved, Epic must amend the reference tariff proposed in Schedule 4 of the access arrangement. The amendment must have the effect that the reference tariff is derived by applying, to the system primary capacity:

- to derive the initial tariff, the cost-of-service revenue resulting from the amendments proposed by the Commission in this draft decision;
- in each subsequent year, the smoothed cost-of-service revenue resulting from the amendments proposed by the Commission in this draft decision.

Refer Table 2.22.

2.9 Tariff path and incentive structure

2.9.1 Code requirements

The code (section 8.3) gives discretion to service providers in how to vary reference tariffs during an access arrangement period. For example, tariffs may change according to a 'price path' approach where tariffs follow a path determined at the start of the period. The price path is adjusted at the start of the next period. The alternative method specified in the code is the 'cost of service' approach. Tariffs are set according to forecast costs and are adjusted throughout the access arrangement period in the light of actual outcomes. The code allows variations or combinations of these approaches.

The code (section 8.44) provides for the regulator to require or approve an incentive mechanism. Such a mechanism enables a service provider to retain all or a share of any returns from the sale of a reference service that exceeds the level expected at the beginning of the access arrangement period. This mechanism is particularly to operate where the increased returns are attributable, at least in part, to the service provider's efforts. The incentive mechanism should encourage the service provider to increase sales volumes, minimise costs, develop new services, and undertake only prudent investment (section 8.46). The mechanism should be designed to ensure that users gain from any increased efficiency, innovation and improved sales volumes. The mechanism may include:

- specifying that tariffs are based on forecast, not realised, values of variables;

- setting a target revenue and specifying how revenue in excess of this is to be shared between the service provider and users; and
- establishing a rebate mechanism for rebatable services that does not provide a full rebate to users.

Sections 8.47 and 8.48 of the code allow a reference tariff policy to include certain principles that remain fixed for a set period (referred to as the 'fixed period'). These fixed principles cannot be changed without the agreement of the service provider and may only include structural elements and not 'market variable' elements.

While a fixed period may apply for all or part of the duration of an access arrangement, the regulator is required to consider the interests of users and prospective users in determining the period.

Section 10.8 of the code defines a 'market variable element' as:

> … a factor that has a value assumed in the calculation of a Reference Tariff, where the value of that factor will vary with changing market conditions during the Access Arrangement Period or in future Access Arrangement Periods, and includes the sales or forecast sales of Services, any index used to estimate the general price level, real interest rates, Non Capital Cost and any costs in the nature of capital costs.

2.9.2 Epic's proposal

Tariff path

Epic proposed an initial tariff to apply in the first year of the access arrangement period, as set out in Schedule 4 of the access arrangement.

According to clause 5.2(a)(xii):

> The Total Revenue Requirement and the resulting Reference Tariffs will escalate annually with inflation pursuant to clause 30.2 of this Access Arrangement consistent with the provisions of the Existing Transportation Agreements.

Clause 30.2 states:

> On each January (commencing in 2000) all of the charges set out in the Tariff Schedule will be adjusted by 95% of the variation (expressed as a percentage) in the CPI for the 12 month period ending on the previous 30 September.

The charges set out in the Tariff Schedule are in three groups, comprising 'Reference Service – FT Service', 'Rebatable Service – IT Service' and 'Other Charges'. The FT charges comprise capacity and commodity charges, the 'Whyalla Lateral Surcharge', the monthly 'FT Customer Charge' and excess imbalance, zone variation and default charges. The IT charges comprise the commodity charge, the monthly 'IT Customer Charge' and excess imbalance and default charges. The 'Other Charges' comprise FT and IT service application fees and three EBB charges.

Incentive mechanism

Epic's original proposed incentive mechanism required aggregation of FT and IT revenue. If the aggregated amount exceeded the total revenue requirement for that year plus $5 million, the amount of the excess up to a maximum amount of the IT revenue minus $1 million would be credited to a deferred account. If the sum were less than the

total revenue requirement by $5 million or more, the service provider would debit the amount of the deficiency that exceeded $5 million to the deferred account.

If, at the end of the access arrangement period, the deferred account were in credit, the balance would be rebated to persons having contracts for FT service during the following access arrangement period by way of a reduction in the reference tariff. If it were in debit, the service provider would recover the amount by an increase in the reference tariff.

Fixed principle

Clause 5.2(a)(vi) of the access arrangement (now proposed to be renumbered 5.2(a)(v)) states that the capital base is to be adjusted annually by the capital cost revaluation, which would be equal to the CPI and would be a fixed principle.

2.9.3 Submissions from interested parties

TGT submitted that the revenue requirement is unlikely to require escalation at 95 per cent of the CPI. TGT suggested that the escalation applying to many other pipelines is lower, and cited as an example, EAPL's proposal to escalate its mainline reference tariff by CPI-1.25 per cent.[190]

Three parties - Santos,[191] Boral[192] and TGT[193] - raised objections to the proposed incentive mechanism. The first objection was that the mechanism significantly reduced risk to Epic without delivering similar benefits to users; the second was that benefits to users were deferred until the next access arrangement period, and would not accrue to current users unless they continued their contracts into that period.

TGT expressed concern about making capital cost revaluation a fixed principle, given its concerns about Epic's proposed DORC, asset life, stay-in-business capital and depreciation.

2.9.4 Epic's response to submissions

Epic responded to comments on the CPI escalator on a confidential basis.[194] Epic did not respond to TGT's submission that it would be inappropriate for the capital cost revaluation to be a fixed principle.

The proposed revised access arrangement includes the incentive mechanism described in the following paragraphs.

Each month the service provider would apply a rebate to each existing user and FT user who entered into an existing facilities access agreement with an IT user. The rebate would be applied as a deduction from the amount invoiced to the FT user or existing user under their respective agreements, and would only apply to the amount of capacity

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[190] TGT submission, 26 October 1999, p. 30.
[191] Santos submission, 15 October 1999, p. 9.
[192] Boral submission, 12 October 1999, p. 3.
[193] TGT submission, 26 October 1999, p. 30.
[194] Epic, response to submissions, 1 February 2000, p. 35.

in the existing delivery facilities that is actually utilised. It would not apply to utilisation of capacity in the main trunkline or to the use of spare capacity.

Calculation of the rebate

The rebate for an existing user would be the aggregate of the lateral fixed cost component, the delivery point fixed cost component and the incentive component, each of which would be calculated as follows:

Lateral Fixed Cost Component in respect of a lateral:

$$LFCC = \frac{VIT}{TVL}.LFC$$

where:

- VIT is the volume of gas delivered to the IT user from that lateral during the month;
- TVL is the total volume of gas that is delivered from that lateral during the month;
- LFC is the specific tariff paid by the existing user to the service provider in respect of that lateral during the month.

Delivery Point Fixed Cost Component in respect of a delivery point:

$$DPFCC = \frac{VIT}{TVDP}.DPFC$$

where:

- VIT is the volume of gas delivered to the IT user from that delivery point during the month;
- TVDP is the total volume of gas that is delivered from that delivery point during the month;
- DPFC is the specific tariff paid by the existing user in respect of that delivery point during the month.

Incentive Component:

$$IC = \frac{ITR - [LFCC + DPFCC]}{2}$$

where:

- ITR is the total revenue received by the service provider from the IT user for IT service using the relevant facilities during the month;
- LFCC is the lateral fixed cost component for the month;
- DPFCC is the delivery point fixed cost component for the month.

If the incentive component had a negative value, it would be taken to be zero.

The rebate for a FT user would be an amount equal to FTIC in the following formula:

$$FTIC = \frac{FTITR}{2} . \frac{FTVIT}{FTTVDP}$$

where:

- FTITR is the total revenue from IT service using the relevant existing delivery facilities;
- FTVIT is the volume of gas delivered to the IT user from the delivery point that comprises part of the relevant existing delivery facilities during the month; and
- FTTVDP is the total volume of gas that is delivered from that delivery point during the month.

No rebate would be payable in respect of any other user that had contracted for a service prior to the commencement date, or where the FT user or the existing user (as appropriate) and the IT user are the same party or are related bodies corporate.

Epic stated that the intention of the rebate to existing users is to reward the existing user who has most contributed to facilitate the IT service, by reimbursing the fixed tariff component paid by the service provider. The following is a hypothetical example of the application of the formula.

Assume the two existing users receive the same volume of gas (100 units) through the lateral. User 1 allows 20 per cent of that capacity to be used by the service provider to supply IT service, User 2, 50 per cent. They provide capacity in the same proportions through the delivery point and the fixed costs are $100 for both lateral and delivery points.

Assume an ITR of $250, comprising 20 TJ from User 1 plus 50 TJ from User 2 at $2.50 TJ. The respective rebates to the users would be calculated according to the following formula:

$$LFCC + DPFCC + IC = \left(\frac{VIT}{TVL} LFC \right) + \left(\frac{VIT}{TVDP} DPFC \right) + \left(\frac{ITR - \left[LFCC + DPFCC \right]}{2} \right)$$

$$R(1) = \left(\frac{20}{100}100\right) + \left(\frac{20}{100}100\right) + \left(\frac{20/70*[70*2.50] - [20+20]}{2}\right)$$

$$R(1) = 20 + 20 + \left(\frac{50 - [20+20]}{2}\right)$$

$$R(1) = 20 + 20 + 5$$

$$R(1) = 45$$

$$R(2) = \left(\frac{50}{100}100\right) + \left(\frac{50}{100}100\right) + \left(\frac{50/70*[70*2.50] - [50+50]}{2}\right)$$

$$R(2) = 50 + 50 + \left(\frac{125 - [50+50]}{2}\right)$$

$$R(2) = 50 + 50 + 12.5$$

$$R(2) = 112.5$$

2.9.5 Commission's considerations

Tariff path

The Commission *does not* at this stage approve Epic's proposed tariff escalator.

- First, Epic has endeavoured in its proposed access arrangement to have its revenue requirement for FT service in the initial access arrangement period reflect the level of revenues it currently secures under its existing firm service haulage contracts.[195] Epic's stated objective is that FT users be at parity with existing users in their capital contribution for new facilities (see following point).

  The Commission therefore cannot see a basis on which IT service fees, which Epic states are unpredictable, or charges for services other than FT service should necessarily escalate at the same rate as proposed for FT firm service charges.

- Second, the only anticipated sales of FT service would be in conjunction with new facilities agreements. The proposed reference tariff escalator would determine the level of that tariff after the access arrangement comes into operation. It would also determine the level of capital contribution required pursuant to the formula in the extensions and expansions policy set out in clause 10.4(l) of the lodgement of 2 March 2000.

  The Commission has difficulty in seeing that the proposed tariff escalator is a necessary condition for fulfilling the objective of Epic's stated revenue requirement. As the pipeline is fully contracted, existing and new users' capital contributions for new facilities could be on a par irrespective of the level of escalator.

[195] Epic, access arrangement information, p. 10.

- Third, Epic has not in any event established the merits of linking its revenue requirement to the existing haulage agreements.

Depending on the level of CPI, an increase of 95 per cent of the change in CPI would be roughly equivalent to an 'X' factor of close to zero under a CPI-X tariff adjustment mechanism. As discussed above in section 2.7.4, the objective of the CPI-X mechanism is to smooth the cost-of-service revenue stream to avoid volatility in the reference tariff over the access arrangement period. CPI-X smoothing involves setting an 'X factor' such that the NPV of the 'unsmoothed' cost-of-service revenue stream is equal to the NPV of the CPI-X 'smoothed' revenue stream. This ensures that the post-tax nominal return on equity to the business is maintained. The Commission has calculated that an X factor of 1.6 per cent is required to smooth Epic's revenue requirement over the access arrangement period, whilst maintaining Epic's 13 per cent post-tax nominal return on equity.

Similarly, if Epic's proposed tariff adjustment mechanism were to apply in place of a CPI-X mechanism, the revenue requirement in the first year of the access arrangement period would need to be reset such that the NPV of the cost-of-service and escalated revenue streams were equated. This would maintain Epic's post-tax nominal return on equity at 13 per cent. The Commission has estimated that the revenue requirement in 2000 would need to be reduced from $45.7 million ($22.9m stated on a half-yearly basis) to $44.2 million ($22.1m stated on a half-yearly basis) if revenues were to increase according to Epic's proposed tariff escalator.

Epic proposed extensive revisions to its extensions and expansions policy in its lodgement of 2 March 2000. That policy encompasses Epic's proposed formula for capital contributions for new facilities. Interested third parties have not yet had the opportunity to comment on Epic's proposed revisions. The Commission would be assisted by their submissions and further submissions from the applicant on the question of whether a tariff escalator of 95 per cent CPI should be permitted for:

- the reference service;
- IT service;
- other charges;

and, in each case:

- if not, the level(s) that is (are) appropriate.

For the reasons outlined above, the Commission proposes the following amendment to the access arrangement. The Commission intends to review this amendment in the light of submissions on this issue.

Proposed amendment A2.6

In order for Epic's access arrangement to be approved, the Commission requires that Epic delete clause 30.2 of the access arrangement (that clause being entitled 'CPI Adjustment') and amend clause 5.2(a)(xii) of the access arrangement to read as follows:

> The initial Reference Tariff (including the Whyalla Lateral Surcharge) is set out in Schedule 4. The Total Revenue Requirement and the resulting Reference Tariff will thereafter vary on 1 January in each year of the initial Access Arrangement period in accordance with the formula CPI – 1.6 per cent. Charges in respect of other services are also shown in Schedule 4. These charges will remain unchanged during the initial Access Arrangement period.

Incentive mechanism

The Commission would wish to encourage any realistic refinement of or revision to the incentive mechanism that would bring about greater flexibility in the services offered. However, based on submissions to date, the Commission is satisfied that the revised incentive mechanism meets the terms of section 8.46 of the code. Accordingly, the Commission requires the following amendment to the access arrangement.

Proposed amendment A2.7

In order for Epic's access arrangement to be approved, the Commission requires that Epic incorporate in the access arrangement the incentive and risk-sharing mechanism proposed by Epic set out in clause 5.3 of the revised access arrangement of 2 March 2000.

Fixed principle

The Commission does not object to Epic's proposal to adjust the capital base annually by a CPI index, provided CPI is an actual measure of the change in the general level of prices. However, the Commission does object to making this adjustment a fixed principle. Under section 8.48 of the Code, a market variable element cannot be a fixed principle. In correspondence with the Commission, Epic submitted that the 'fixed principle' referred to in the access arrangement is the adjustment mechanism itself and not the CPI.[196] However, the Commission is of the view that because the mechanism includes a market variable element (CPI) it cannot be a fixed principle.

The Commission notes that the access arrangement for the Victorian transmission system contains a fixed principle that provides for the capital base at the start of the next regulatory period to be the 'capital base for TPA at the start of the initial regulatory period, adjusted to take account of inflation since 1 January 1998 ...'[197] This fixed principle was established by the *Victorian Gas Industry Tariff Order* and was not subject to decision by the Commission.

[196] Epic, facsimile to Commission, 6 August 1999.

[197] *Access Arrangement by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd for Principal Transmission System*, November 1998, clause 5.3.5 and the *Victorian Gas Industry Tariff Order 1998*, clause 9.2(a)(3).

Proposed amendment A2.8

In order for the access arrangement to be approved, the Commission requires that Epic amend clause 5.2(a)(vi) of the original lodgement (renumbered as '5.2(a)(v)' in the lodgement of 2 March 2000) so that it reads as follows:

> The Capital Base is to be adjusted annually on 1 January by the Capital Cost Revaluation, which will be equal to the CPI for the 12-month period ending on the previous 30 September.

2.10 Assessment of reference tariffs and reference tariff policy

2.10.1 Code requirements

Section 3.4 of the code requires the regulator to be satisfied that the access arrangement and any reference tariff included in the access arrangement comply with the reference tariff principles described in section 8 of the code.

Section 3.5 of the code requires the access arrangement to include a policy describing the principles that are to be used to determine a reference tariff. This reference tariff policy must, in the regulator's opinion, comply with the reference tariff principles set out in section 8 of the code.

The reference tariff policy and all reference tariffs should be designed to achieve the objectives set out in section 8.1. These cover efficient service delivery, replicating a competitive market outcome, safe and reliable pipeline operation, signals for investment, efficient tariff design and incentives for cost reduction and market growth.

To the extent that these objectives may conflict in their application, the regulator is to determine how they can best be reconciled, or which of them should prevail.

Similarly, the relevant regulator is to be satisfied that the reference tariff and reference tariff policy is consistent with the criteria set out in section 8.2. These cover the revenue to be generated from the sales (or forecast sales) of all services, the portion of total revenue that a reference tariff is designed to recover and the portion of total revenue to be recovered from users of various services. The criteria require that appropriate incentive mechanisms be incorporated in the access arrangement and that any forecasts used in setting the reference tariff represent best estimates arrived at on a reasonable basis.

In assessing all of these matters, the Commission must take into account the matters set out in section 2.24 of the code. Stated briefly, the matters set out in that section are: the service provider's legitimate business interests and investment in the pipeline; firm and binding contractual obligations; the safe and reliable operation of the pipeline; the economically efficient operation of the pipeline; the public interest; the interests of users and prospective users; and any other matter that the regulator considers relevant.

2.10.2 Epic's proposal

Clause 5.1 of the access arrangement defines the constituents of the reference tariff. These are all charges that relate to the provision of FT service, together with any applicable capital contribution calculated pursuant to clause 10, and any contribution to imposts under clause 30.4 (which Epic now proposes to renumber as '30.5').

At this stage the Commission does not have an issue with the initial level of application fee for FT service although it is concerned by its proposed use in some circumstances (see 3.5.5). The Commission does not accept the proposed application fee for IT service (see 3.5.5).

In relation to Epic's proposed method of calculating the capital contribution (see 3.6.5), the Commission proposes that consistent with its post-tax regulatory framework, the WACC used as the discount rate in the formula for calculating the capital contribution should be the post-tax nominal vanilla WACC.

The Commission has concerns about the impact of the tariff escalator on the level of capital contribution for new facilities and charges for reference and IT services, and has invited submissions to address those issues. The Commission does not have an issue with Epic's proposed treatment of imposts (see 2.7.4).

Epic's reference tariff policy (clause 5.2) describes the principles used by Epic to determine the reference tariff, including the initial capital base, depreciation, capital expenditure, rate of return, capital cost revaluation and total revenue requirement.

Epic states in clause 5.2(a)(i) of its lodgement of 2 March 2000 that the service provider calculated the total revenue requirement 'based on forecast costs for each year of the Access Arrangement Period using the "cost of service" methodology'. In fact it did not generally provide forecasts for the years 2004 and 2005. This is because the access arrangement when lodged predicated a termination date of 31 December 2003, extended in the proposed revisions of March 2000 to 31 December 2005, in accordance with previous correspondence.[198] The Commission has modelled costs for the years 2004 and 2005 using the available data.

Clause 5.3 outlines Epic's incentive mechanism to encourage existing and FT users to make capacity available for IT service.

The foregoing sections of this chapter describe Epic's proposals in respect of each element of the reference tariff, submissions in response and the Commission's assessment of the issues. The following discussion draws together, in terms of sections 8.1 and 8.2 of the code, the Commission's overall conclusions on Epic's proposed reference tariff policy. It gives an overview of why the Commission requires Epic to amend its reference tariff and reference tariff policy in the ways described earlier in this chapter.

[198] Epic, letter to Commission, 16 July 1999.

2.10.3 Commission's considerations

In this draft decision the Commission's consideration of the proposed access arrangement has been influenced by the existing haulage agreements to which Epic is a party. Epic has argued that its existing capacity is fully committed and operational flexibility impacted by the terms of its existing haulage agreements and it therefore has limited scope to offer the reference service during the first access arrangement period without enhancement of the pipeline system. Epic proposes that services involving more than a threshold level of capital expenditure or expansion would not, in any event, be reference services.

The Commission has largely accepted this view in respect of the initial access arrangement period and has not pursued a broader range of reference tariffs in this access arrangement. The Commission intends to re-examine, at the next review, the relevant services and extensions and expansions policies in association with reference tariff policy. This review will assist it to determine whether a wider range of services should be included in the access arrangement for the next period.

However, in the following chapter the Commission signals its concern that a combination of the tight capacity on the system, Epic's extensions and expansions policy and applicable code provisions mean that firm capacity is likely to be fully committed well into the future. For the same reasons, the level of direct regulatory oversight of tariffs is somewhat less than in a system that is less than fully contracted. Epic's additions to capacity fall outside the scope of the covered pipeline and access arrangement pending future review. This gives the service provider some latitude to negotiate and lock in tariffs to apply for as long as agreements based on that enhancement of capacity run.

In the following chapter the Commission also indicates that certain provisions of the access arrangement, notably in the queuing policy, would, unless amended, deter new entry.

Section 8.1 objectives

Recovery of efficient costs associated with the provision of the reference service – section 8.1(a)

Epic proposes a cost-of-service methodology to derive its revenue requirement. However, in setting the reference tariff for the initial access arrangement period, it proposes to recover only the revenues earned from the existing haulage agreements.

The Commission considers that the cost of service proposed by Epic would provide Epic with a return that is in excess of the recovery of efficient costs associated with the reference service. In the Commission's view the WACC and associated parameters, the initial capital base and the depreciation schedule proposed by Epic are not consistent with the principle of recovering efficient costs. The Commission is not satisfied that a tariff based on revenues under the existing haulage agreements would satisfy the principle in section 8.1(a).

It is unlikely that the reference service will be sold in this period. However, the reference tariff resulting from the parameters proposed by the Commission would

provide the service provider with the opportunity, if it were supplying the reference service, to earn a stream of revenue that would recover efficient costs associated with that service.

In reaching these conclusions for this draft decision, the Commission has satisfied itself of the following matters.

- The WACC and associated parameters proposed by the Commission in this draft decision, in particular, the post-tax nominal return on equity, are commensurate with conditions prevailing in markets for funds and the risk involved in delivering the reference service (as required by section 8.30).

  The Commission's methodology to derive pre-tax WACC applies the WACC parameters to the estimated cash flows of the regulated entity in a post-tax nominal framework. That framework better reflects the objectives of section 8.30 and achieves an appropriate commercial return on capital.

- In calculating the initial capital base proposed in the draft decision, the Commission has had regard to the factors identified in section 8.10 of the code.

  The Commission has given particular weight to deriving an ORC valuation based on analysis of the factors, such as the price of pipe and the difficulty of construction over individual sections of terrain, impacting on the current costs of constructing an optimised system. The Commission has then depreciated that valuation using conventionally-assumed asset lives, on the basis that this would make for accountability in tracking the value of the capital base over time for tariff purposes. The amount of depreciation based on the Commission's ORC valuation is of an appropriate order of magnitude, having regard to methodology and comparison with pipeline net valuations given by the alternative approaches suggested by section 8.10.

  The Commission considers that international best practice (section 8.10(f)) is implicit in the approach it has taken. Some of the other factors listed in section 8.10, such as the reasonable expectations of persons under the previous regulatory regime (section 8.10(g)), do not in themselves yield verifiable numbers. In fact, the South Australian regulator's tariff monitoring powers under the regime applying to Epic pending implementation of its national code access arrangement do not require the regulator to establish a reference tariff or capital base.[199]

  However, in the Commission's view other section 8.10 factors, including impact on the economically efficient utilisation of gas resources, are addressed by the relevance of the Commission's costings to the operations of an efficient commercial service provider in market conditions approximating competition (see further discussion below).

  The Commission has assessed Epic figures and calculated its own figures to address the requirements specifically of sections 8.10 (a), (b), (c) and (f). In the Commission's view, its optimisation methodology is consistent with the

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[199] *Natural Gas Pipelines Access Act 1995* (SA), Part 6.

requirements of section 8.10(e). The alternative net valuation methods considered included depreciated value of the price paid by Tenneco (now Epic) to purchase the pipeline system; residual asset value after economic depreciation; and book value adjusted for CPI, capital expenditure and depreciation.

The Commission has accepted that the capital base should be indexed so as to retain its real value.

- The return of capital (depreciation) flowing from depreciation on a straight-line basis of the capital base proposed by the Commission is consistent with the requirements of section 8.33 of the code. The proposed adjustment of the capital base for deferred tax liability is to ensure that, following transition to a post-tax framework, depreciation is at a level at which capital is returned to the service provider only once.
- The Commission has satisfied itself, using accepted industry yardsticks, that Epic's proposed operations and maintenance expenses during the initial access arrangement period are reasonable and consistent with the requirements of section 8.37.

Replicating the outcome of a competitive market – section 8.1(b)

It can be expected that in a competitive market the tariffs charged by a firm would achieve for it a return of capital and a return on capital after costs at levels commensurate with the returns, and no more, achieved by firms facing similar commercial risks.

Methodologies for optimising the capital base and setting rate of return parameters endeavour to determine for the regulated entity the values achievable in competitive capital, materials and services markets by a comparable business. The cost of service approach to pricing caps the firm's reference tariffs in relation to the capital base and capital costs so identified. Pipeline service providers emphasise that the value of their enterprise is very much tied up in their invested capital - reasonable operating and maintenance expenses are relatively non-contentious issues. Deriving prices in this fashion, the code endeavours to mimic prices that would be achieved in a competitive market for the entity's services.

For the reasons stated above, in the Commission's view the WACC and initial capital base proposed by Epic are inconsistent with the principle of recovering only efficient costs. Therefore, the Commission concludes that the reference tariff proposed by Epic does not replicate the outcome of a competitive market.

Ensuring the safe and reliable operation of the pipeline – section 8.1(c)

Clause 5.2(a)(iv) of Epic's revised lodgement of March 2000 states 'the initial Capital Base was increased by forecasted capital expenditures required to implement the proposed Reference Service and maintain the safety, integrity and reliability of currently contracted Capacity of the Pipeline System'.

In the Commission's view the reference tariff proposed by Epic is more than sufficient to ensure the safe and reliable operation of the pipeline. While the Commission requires that the WACC and initial capital base proposed by Epic be reduced, the

Commission has accepted the estimates of operating and maintenance expenses and of stay-in-business capital expenditure proposed by Epic (subject, of course, to review of expenditure at the next regulatory period). Ongoing expenditure on maintenance and on replacement of assets in accordance with competent professional opinion is important to safe and reliable operations.

Epic provided the following information to describe the regulatory obligations and internal company procedures in place to achieve safe and reliable pipeline operation.[200]

> Epic's regulatory obligations are included in the following documents:
>
> - Petroleum Act - SA 1940
> - Relevant Pipeline Licences
> - AS 2885 - Pipelines - Gas and liquid petroleum
>
> Epic's compliance is monitored by the Department of Primary Industries and Resources, South Australia and the following requirements are provided for:
>
> - Safety Risk Assessment - report to the Minister every 5 years.
> - Risk Analysis, Environmental - report on measures proposed in case of a leak to the Minister every five years.
> - Procedure for Safe Operation and Security - Submit operating and emergency procedures to the Minister every five years.
> - Emergency response drills - to be carried every two years with a report to the Minister.
> - Fitness for Purpose - report to the Minister every 5 years.
> - Submit an annual operating report to the Minister.
> - As constructed drawings - submit drawings on alterations and modifications to the Minister within 30 days.
>
> Epic has given the responsibility of monitoring compliance with these requirements to a senior engineer.
>
> Epic has established a Safety, Quality and Environmental Management System to assist in complying with these requirements. This has been certified to AS/ISO 9001 (Quality) and AS 14001 (Environmental). Epic is working towards obtaining certification for its Safety systems as well.
>
> Procedures and work instructions include:
>
> - Safety
> - Emergency response
> - Operations and maintenance, and
> - Environmental management.

A number of the statutory safety reporting requirements identified by Epic follow 5-year cycles, a frequency comparable to the period of the access arrangement.

In these circumstances, the Commission considers that the revised reference tariff policy and reference tariff that the Commission proposes are consistent with safe and reliable operation of the pipeline system. The Commission should be informed by Epic in the event that any of the circumstances it describes change.

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[200] Epic, consolidated response to Commission's letter of 30 April 1999, p. 10.

Not distorting investment decisions in pipeline transmission systems nor in upstream or downstream industries – section 8.1(d)

Efficient upstream and downstream investment decisions will be fostered by pricing based on an allocation of costs to users that approximates the long-run costs of providing the service.

If price levels exceed long-run costs, there is an incentive to bypass the pipeline system. Such investment would not otherwise be warranted. Prices that exceed long-run costs will also discourage efficient upstream and downstream investment.

On the other hand, if price levels are below long-run costs, efficient investment is discouraged and the pipeline system owner will not have an incentive to make further investments in the system to maintain or increase its efficiency of operation.

In the Commission's view the DORC and rate of return methodologies used by Epic overstate the initial capital base, depreciation schedule and return on capital. Epic proposes to recover only the portion of its estimated cost of service that is equivalent to the revenues yielded by existing haulage agreements. Even so, if the DORC and rate of return methodologies are correctly applied in accordance with the principles outlined in this chapter, the result is a yet lower reference tariff at a level that, in the Commission's view, would still meet the revenue requirement of an efficient operator.

In reaching this view about the initial capital base (and similarly, about proposed depreciation), the Commission notes that the initial capital base proposed in this draft decision is broadly consistent with (though lower than) the value, in real terms, of Epic's actual investment in the system. In respect of rate of return on capital, as noted in 2.5.4 the critical rate in the regulatory framework is the post-tax nominal cost of equity derived from the CAPM. The post-tax nominal return on equity in an optimised capital base determines whether investors are willing to advance equity to finance the capital infrastructure required to provide services. The post-tax nominal return on equity proposed by the Commission is comparable to that proposed by Epic, albeit at the lower end of the range proposed by Epic.

These outcomes suggest that the amendments the Commission proposes to Epic's reference tariff policy and reference tariff are consistent with the objective of not distorting investment decisions.

Efficiency in the level and structure of the reference tariff(s) – section 8.1(e)

It follows from the Commission's conclusions in respect of the previous section 8.1 factors, that the Commission is not satisfied that the *level* of the reference tariff proposed by Epic is efficient.

The Commission proposes to reject Epic's proposal for a 95 per cent of CPI tariff escalator because a case for escalation of non-FT service charges has not been put by Epic. Given the fully contracted state of the pipeline, the Commission also has difficulty in seeing that the proposed tariff escalator is a necessary condition for fulfilling Epic's stated revenue requirement objective of putting FT users on parity with existing users.

In respect of the *structure* of the reference tariff, the views of market participants suggest the following issues for consideration.

The relationship between capacity and commodity charge rates

Epic proposes that its FT tariff comprise two parts: a capacity charge that will apply to the MDQ reserved for each user, and a commodity charge that will apply to each GJ of gas actually hauled. Epic stated in the access arrangement: [201]

> The Capacity Charge Rate has been developed to reflect those parts of the Pipeline System that are committed to the delivery of the particular Primary Capacity Quantities of the User. This results in a surcharge being payable (in addition to the Capacity Charge Rate) by the User where the Whyalla Lateral is to be used to deliver Primary Capacity Quantities to one or more Delivery Points in the Iron Triangle Zone (excluding Port Pirie).

In general, there are a number of efficiency arguments in support of two-part tariffs. The capacity charge gives each user an incentive to forecast as accurately as possible its likely haulage requirements, especially maximum haulage requirements. The accuracy of these forecasts is an important element in the service provider's planning of pipeline operations and future expansion projects.

Second, each user has a strong incentive to maximise the use of capacity once contracted, since the user must pay a charge based on MDQ whether or not MDQ is used. Adopting practices that improve the utilisation of the pipeline and reduce the variation between peak and minimum load requirements can do this. Examples are trading in capacity and diversification of the customer base.

The Commission is satisfied that the relationship between the capacity and commodity charge supports efficient outcomes. However, the Commission proposes to consider the relative proportions of the capacity and commodity charges when it next reviews the access arrangement. At that time the reference service tariff may have more significance.

The relationship between FT and IT tariffs

TGT's submission suggested that the price premium charged for IT service (15 per cent above FT tariffs, plus 5 per cent retention allowance) is not warranted given that IT is an inferior service to FT and the pipeline is fully contracted.[202]

In response, Epic explained that FT and IT service pricing structures differ because of the need to make a 'load factor adjustment' to IT service.[203]

The Commission's understanding of Epic's response is as follows. An FT user is required to pay a capacity charge based on the MDQ of capacity reserved for that user, whether or not the user actually employs the reserved quantity. Shippers pay for capacity based on their peak loads that they are unable to use at other times. FT users will on average pay an amount that is greater than the sum of the FT capacity and

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[201] Epic, lodgement of 2 March 2000, clause 5.2(a)(viii)(A).
[202] TGT submission, 26 October 1999, p. 29.
[203] Epic, response to submissions, 1 February 2000, p. 27.

commodity charges multiplied by the actual quantity of gas hauled because the capacity charge rate is applied to the MDQ.

Since IT users only pay for the actual quantity of gas that is hauled, the relationship between the FT charge and the IT charge depends on the efficiency that the FT users are able to achieve. Epic submitted: [204]

> The 15% 'premium' represents a load factor adjustment. IT service is a 'commodity' or throughput tariff, and as such is independent of load factor, unlike FT service which is 'capacity' based. An FT service shipper with a 'good' load factor of 115% would pay 1.15 x the capacity charge per GJ of throughput (the pipeline load factor is 'worse' than 115%). The 15% 'premium' for IT service is to reflect this load factor effect. In view of the fact that the majority of the IT service revenue will be rebated, Epic is not incented to support a high tariff.

This leads to a conclusion that the IT tariff is comparable to the FT charge.

In response to TGT's concern with the fixed 5 per cent retention allowance for IT service, Epic proposes to amend the access arrangement to set the retention allowance on the same basis as for FT service.[205]

The Commission is satisfied at this stage that the relationship between FT and IT tariffs proposed by Epic is reasonable. However, in the Commission's view the relativity of tariffs for different services must be responsive to the market. The Commission will consider the relativity of tariffs at each review.

'Postage stamp' tariff

The reference tariff proposed by Epic is a 'postage stamp' tariff (refer renumbered clause 5.2(a)(viii)(B) in the March 2000 lodgement). That is, the one tariff applies to haulage of gas to any point along the main pipeline. In addition, the access arrangement proposes a 'Whyalla Lateral Surcharge' on the tariff that will apply to gas delivered on the Whyalla lateral, as explained above in relation to the capacity charge.

In discussions Epic representatives explained that this structure reflects the fact that in excess of 90 per cent of the gas hauled through its pipeline system is delivered into the Adelaide metropolitan area and therefore a distance-based charging system would have very little impact on most customers. Epic submitted that the Whyalla Lateral Surcharge was calculated to recover the same revenues as under existing contracts for capacity on these facilities.[206] This lateral serves most of the rest of its customers.

In discussions, Epic representatives stated that the concentrated location of MAPS customers means that there is little difference in efficiency terms between a 'postage stamp' and distance-based pricing structure. Further, they stated that the 'postage stamp' system may actually be more efficient by reducing the administrative burden on Epic and its customers. Trading in capacity improves the efficiency of the market through arbitrage opportunities. According to Epic representatives, the use of a 'postage stamp' tariff encourages trading in capacity.

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[204] Epic, response to submissions, 1 February 2000, p. 27.
[205] Epic, response to submissions, 1 February 2000, p. 27.
[206] Access arrangement information, p. 10.

Epic's position appears to have general support in the marketplace since no submission criticised Epic's approach. However, this may simply reflect the fact that alternative haulage opportunities are not available in South Australia. As noted in 3.7, the Commission recently received correspondence from SAMAG Limited (after the submissions period) advocating a distance-based tariff.

The Commission notes comments by N.T. Gas Pty. Limited in respect of the 'postage stamp' tariff at present applying to its pipeline in the Northern Territory, as follows: [207]

> NT Gas recognises that maintaining such a pricing structure has the potential to impede growth in the utilisation of the ABDP. This is particularly in the case of price sensitive projects which are located only part way along the pipeline, but which, under a postage stamp tariff, would be charged for delivery of gas as if that gas was transported though [*sic*] the entire length of the pipeline.

The Commission is of the general view that distance-based tariffs are likely to provide better price signals to the market than 'postage stamp' or 'zonal' tariffs. Nevertheless, in the current circumstances of MAPS, in the Commission's view the loss in efficiency (if any) due to a 'postage stamp' tariff is likely to be minimal. The Commission considers that the issue needs to be addressed at the next review (see 3.7.4).

Backhaul tariff

In a June 1998 access arrangement prepared under the access legislation of 1995 applicable in South Australia, Epic offered a wide range of services, including backhaul tariffs.[208] Epic dropped from a later edition of the brochure a number of its earlier tariffs including the backhaul tariff, on the basis that the services could not easily be supplied and there had been no demand in the market for them.

This situation appears not to have changed substantially, with none of the submissions indicating a current demand for backhaul services. The Commission is therefore satisfied that the absence of a backhaul tariff does not impede efficiency at this time. The Commission addresses, in 3.7.4, the circumstances in which review of this issue may be appropriate in the light of initiatives to develop an additional source of gas supply to South Australia.

Incentives for the service provider to reduce costs and expand the market – section 8.1(f)

Within the proposed access arrangement Epic has included a provision that it refers to as the 'incentive mechanism'. This mechanism provides for a rebate to FT and existing haulage customers where revenue is generated from the sale of IT services utilising capacity made available by them.

The incentive mechanism is designed to have two key results. First, trading of unused capacity is encouraged with the objective of a larger number of customers taking gas supply and thereby broadening the market. Second, the incentive for customers to make available capacity that would otherwise be under-utilised has the potential to

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[207] N.T. Gas Pty. Limited, *Access Arrangement Information for the Amadeus Basis to Darwin Pipeline*, 25 June 1999, p. 6.

[208] Epic, *Information Brochure and Access Principles for the Moomba-Adelaide Pipeline System*, June 1998.

improve the overall utilisation, and thereby the efficiency, of the pipeline system. Thus, the incentive mechanism is consistent with an expansion of the market and with greater efficiency, which in turn should reduce costs per unit of delivered gas.

It is also necessary to consider the proposed access arrangement more broadly to assess how its other features are likely to impact on incentives for reducing costs and expanding the market.

As stated previously, in the Commission's view the reference tariff proposed by Epic is too high. If approved, it would weaken the commercial disciplines of a competitive market that the code endeavours to replicate. Tariffs at the levels proposed by Epic (whether its estimated cost of service or proposed revenue requirement for this period) would sustain a higher cost base than would be the case otherwise. Second, higher than appropriate tariffs are likely to reduce demand for gas as marginal projects subject to gas haulage costs are priced out of the market.

Therefore, in the Commission's view the reference tariff and reference tariff policy proposed by Epic are not consistent with providing incentives for the service provider to reduce costs and expand the market.

Section 8.2 factors

Section 8.2 of the code lists five factors about which the Commission is to be satisfied in determining whether to approve the reference tariff. These are assessed below.

Total revenue to be consistent with the principles and one of the methodologies contained in section 8 of the code – section 8.2(a)

The 'total revenue' referred to in the code is the revenue from sales of services over the covered pipeline. While it includes sales of non-reference services, it does not include revenues from the sale of services over parts of the pipeline system (such as extensions) that have not yet been included in the capital base of the pipeline system.

According to Epic, the FT and IT services described in the access arrangement can only be made available in limited circumstances.[209] Since the access arrangement was lodged, Epic has proposed to redesign its IT service. However, Epic is still expected to earn its revenues primarily from existing haulage agreements. To a lesser degree, revenues will also flow from the sale of IT services and from other arrangements entered into outside the terms of the access arrangement. Therefore, most of the total revenue that will accrue to Epic over the initial access arrangement period cannot be varied by the Commission's decision on the access arrangement.

In the face of the difficulty of estimating IT revenue and the likelihood of low or non-existent sales of FT service, the Commission has assessed Epic's total revenue for purposes of section 8.2 as if it were to account for 100 per cent of Epic's total revenue.

While Epic has utilised the cost of service approach in determining its reference tariff, in the Commission's view Epic's proposed capital base, rate of return and depreciation are overstated. As a consequence, the total revenue that Epic would derive from the FT

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[209] Access arrangement information, p. 4.

tariff if it accounted for 100 per cent of Epic's revenue is greater than would be earned if the principles of section 8 of the code were applied.

On this basis, the Commission is not satisfied that Epic's total revenue is consistent with the principles and one of the methodologies contained in section 8 of the code.

The proportion of total revenue that any one reference tariff is designed to recover is calculated consistently with the principles of section 8 of the code – section 8.2(b)

Sections 8.38 to 8.41 provide guidance favouring cost-reflective pricing, to the maximum extent that is commercially and technically reasonable. These provisions are subject to considerations of providing incentive for market growth and avoiding loss of supply opportunities.

Over the initial access arrangement period Epic expects that FT and IT services can only be made available in limited circumstances. The revenue that is likely to be derived from the IT service is particularly uncertain owing to the contingent nature of the service. The proportion of Epic's total revenue that will be recovered from the FT service is also expected to be small (or non-existent) over the next access arrangement period.

As noted in section 2.7.4, there is a difference between the stated pipeline primary capacity (323TJ per day), which is firm (i.e. reliable) capacity, and its stated maximum capacity (393TJ per day). The difference between the two provides an indication of the margin of capacity available to the service provider to ultimately make available for interruptible use. The Commission has not formed a view on whether Epic may have been overly conservative in establishing that margin and whether therefore the capacity for Epic to earn additional revenues from IT service has been understated. Also relevant to calculation of spare capacity is the level of contracted but unused capacity. The Commission intends to review this situation at the commencement of the next regulatory period on the basis of IT capacity sales between now and then.

Nevertheless, assuming that Epic were to earn 100 per cent of its revenue from the only reference service, the Commission is of the view that the FT reference tariff proposed by Epic is excessive and not calculated in accordance with the principles of section 8 of the code.

The proportion of total revenue recovered from users of a service is calculated consistently with the principles of section 8 of the code – section 8.2(c)

Section 8.42 of the code gives guidance that pricing should be cost-reflective, to the maximum extent commercially and technically reasonable.

As outlined in the discussion of section 8.1 factors, the Commission has reached the view that the relationship at this stage between FT and IT tariffs is appropriate. Therefore the Commission is also satisfied that the proportion of total revenue that will be derived from each category of user (FT and IT) is consistent with the principles of section 8 of the code, subject to the qualifications expressed above in respect of compliance with section 8.2(b).

Incentive mechanisms are incorporated consistently with the principles of section 8 of the code – section 8.2(d)

The proposed access arrangement incorporates an incentive mechanism that is to apply to the rebatable IT service. The Commission is satisfied that the mechanism is consistent with the principles of section 8 of the code.

Epic has not included incentive mechanisms of the type described in sections 8.45(a) and (b) of the code. These sections provide for the service provider to retain revenues achieved beyond forecast levels. Epic has adopted this approach because the capacity of the existing pipeline is fully contracted for the period of the proposed access arrangement and it is not expected to be possible for additional gas to be hauled on a firm basis without expansion of the system.

It is the Commission's intention to review the relevant circumstances at the time of the next access arrangement. At that time the Commission will again consider whether it is appropriate to broaden the scope of the incentive mechanism.

Forecasts are best estimates – section 8.2(e)

Epic's proposed initial tariff in Schedule 4 of the access arrangement is based on existing levels (for the year ending December 1998) of contract revenue and pipeline capacity, rather than demand forecasts. Because the pipeline system is fully contracted, the Commission has calculated the initial tariff based on the total system primary capacity stated in the access arrangement.

Therefore, it is unnecessary for the Commission to assess Epic's forecasts since none has been employed by Epic in setting its proposed reference tariff.

3. Access policies, terms and conditions and review of arrangement

In this chapter the mandatory non-tariff elements of the proposed access arrangement for MAPS are assessed for compliance with the code. The code requirements are outlined for each mandatory element followed by a summary of the service provider's proposal, the issues raised in submissions, Epic's response to submissions and the Commission's considerations. Where relevant these are followed by amendments that the Commission proposes be made for the access arrangement to be approved. All amendments are replicated in the executive summary.

Section 3 of the code establishes the minimum content of an access arrangement, which includes the following non-tariff mandatory elements:

- a services policy that must contain at least one service that is likely to be sought by a significant part of the market;
- terms and conditions on which the service provider will supply each reference service;
- a capacity management policy to state whether the covered pipeline is a contract carriage or market carriage pipeline;
- in the case of a contract carriage pipeline, a trading policy which refers to the trading of capacity;
- a queuing policy which defines the priority that users and prospective users have to negotiate capacity where there is insufficient capacity on the pipeline;
- an extensions/expansions policy which determines whether an extension or expansion of a covered pipeline is or is not to be treated as part of the covered pipeline for the purposes of the code; and
- a review date by which revisions to the access arrangement must be submitted and a date on which the revisions are intended to commence.

An access arrangement must also contain a reference tariff policy and at least one reference tariff. These provisions were assessed for compliance with the code in chapter 2.

In this chapter the original access arrangement proposed by Epic is considered. Revisions proposed by Epic are considered in the sections dealing with Epic's response to submissions and the Commission's considerations.

3.1 Services policy

3.1.1 Code requirements

Sections 3.1 and 3.2 of the code require an access arrangement to include a services policy, which must include a description of one or more services that the service provider will make available to users and prospective users. The policy must describe

any services likely to be sought by a significant part of the market, and any that in the relevant regulator's opinion should be included.

When practicable and reasonable, a service provider should make available those elements of a service required by users and prospective users and, if requested, apply a separate tariff to each.

3.1.2 Epic's proposal

Epic's original proposed services policy consisted of a reference service and a rebatable service as follows:

- reference service - FT service – firm transportation (haulage) of an amount equal to the final nominated receipt quantity for that day from the receipt point to any delivery points on the pipeline system; and
- rebatable service - IT service – interruptible transportation (haulage) available on a day if all the pipeline system capacity is not required to provide FT service to other users.

In view of the terms of the current haulage service contracts, Epic proposed that the reference service would only be available in limited circumstances until at least 1 January 2006. A prospective user would only have been able to contract for a specified service before the existing haulage agreements were terminated if it made a capital contribution to the construction of new facilities pursuant to clause 10.3 of the access arrangement. As a result, the reference tariff was only applicable within the context of the extensions/expansions policy (see sections 3.5 and 3.6 of draft decision).

FT service

The FT service in the original proposal provided for receipt of gas in the Moomba region, haulage down the main line and delivery to the Adelaide metropolitan region. An additional fixed capacity surcharge applied to gas deliveries from the Whyalla lateral.

The haulage service originally proposed by Epic can be summarised as follows:[210]

- 323TJ per day of existing capacity would be available for firm haulage. This amount was to be known as system primary capacity (SPC) and was to be allocated across all of the existing delivery points by the service provider.
- Prospective users of FT service could contract at a specific delivery point to use SPC that had not been contracted to other users. This amount was to be the primary capacity quantity (PCQ) of the user at that point. The sum of a user's PCQs was to be its maximum daily quantity (MDQ).
- A user with a contract for FT service would be entitled on a day to nominate a quantity of gas for delivery from any point on the pipeline system, subject to two constraints:
  - the user's aggregate nominations on a day could not exceed its MDQ; and

[210] Refer access arrangement information, pp. 4-5 for full description.

- the user could not nominate a quantity that would exceed the maximum capacity at that point. After nominations to use PCQ at a point were made, the balance of capacity was to be allocated among other users pro rata on the basis of their nominations at that point.

- A contract for FT service was to be for a minimum term of seven years. It could be extended by minimum periods of five years by giving at least two years' notice.

IT service

Conditions relating to IT service can be summarised as follows:[211]

- Nominations for FT service had priority; nominations for IT service would be taken after nominations for FT.
- IT users could nominate for delivery points that had remaining capacity. Where the aggregate of nominations exceeded available capacity, capacity would be allocated pro rata.
- Users with contracts for FT service would not have rights that would displace, or have an adverse impact upon, the quantities of gas that had been scheduled for receipt from/delivery to users with contracts for IT service. Once accepted, nominations were to be firm for the day of delivery.
- A contract for IT service had to be for a term of at least one year, automatically extended annually unless the user gave notice of termination.

Priority of service

The following priorities were set out in clause 23 and were to prevail when there was insufficient gas to deliver all nominated quantities:

- First:
  - primary capacity quantities nominated by FT users within their respective MDQs, up to the maximum capacity of the delivery points;

    and, in equal priority:

  - quantities nominated by other users under existing haulage agreements within their respective MDQs;

    or a pro rata allocation based on quantities nominated under the above two types of agreement.
- Second, a pro rata allocation of secondary capacity quantities as nominated by users of FT service;
- Third, a pro rata allocation of quantities as nominated by users of IT service;
- Fourth, a pro rata allocation of authorised variation quantities of users with contracts for FT service;
- Fifth, a pro rata allocation of authorised variation quantities of users with contracts for IT service.

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[211] Refer access arrangement information, pp. 4–5 for full description.

Distinction between 'users' and 'existing users'

The terms 'user' and (as part of revisions proposed by Epic in March 2000) 'existing user' are separately defined in the access arrangement. In most respects the access arrangement applies only to 'users', being persons who would be supplied with the specified FT or IT services. The arrangement also applies to existing users where they are specifically mentioned, for instance, in determining order of priority of service relative to users. Reasons for the distinction between users and existing users are discussed in 3.1.5 below.

Epic introduced a category of 'non-specified services' in its proposed revisions of March 2000. This category of service is discussed in 3.1.4 below. Users of non-specified services do not fall within the term 'user' as defined in the access arrangement. The terms and conditions on which they would be supplied are negotiable. The access arrangement refers to them and describes their rights and obligations where they interact with users of the specified services.

3.1.3 Submissions by interested parties

In their submissions parties raised the following issues in respect of Epic's proposed services policy:

- lack of competition in the gas market;
- lack of depth to the secondary gas market;
- support for other types of service; and
- need for an operable IT service now.

Several respondents raised concerns about competition in the gas market.[212] ETSA Power argued that the proposed access arrangement would prevent a competitive gas market from operating in South Australia until at least 2006.[213] This submission noted in particular the position of Boral as incumbent gas supplier and retailer of both gas and electricity. According to ETSA Power, from 1 January 2003 domestic consumers who purchase electricity from ETSA and gas from Boral will have a choice of electricity supplier but not of gas supplier. ETSA expressed concern that this would give Boral an unfair competitive advantage over other electricity retailers, as was the case with Centrica in the UK.

With low growth projections for gas sales in South Australia, ETSA Power calculated that any sales made by a new entrant would be at the expense of an existing gas retailer. ETSA Power proposed that capacity no longer needed by the existing retailer be transferred to the new retailer concerned when a new sales agreement is reached. According to ETSA a similar arrangement has contributed to increased competitiveness in the electricity market.

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[212] ETSA, SAGEUG, TXU, AGLES&M, Santos submissions of October 1999.
[213] ETSA Power submission, 25 October 1999, p. 3.

SAGEUG, representing industrial users, was concerned about the lack of choices in the South Australia gas market.[214] The SAGEUG submission stated that many members of the user group cannot negotiate an IT supply because of operational constraints and therefore face limited options in negotiating a contract. The group requested that the Commission encourage investment to provide greater access to the pipeline and to establish new players within the existing contract framework. SAGEUG expressed support for any policies that would encourage upstream competition among gas producers.

TXU Trading (TXU) submitted that pipeline augmentation is an inefficient means of establishing competition in the South Australia gas market, although it had no issue with augmentation to enhance capacity on a truly constrained pipeline. TXU expressed the view that there are not enough parties contracted to Epic to form a secondary market capable of setting a true market price for pipeline capacity. Like ETSA Power, TXU proposed a mechanism to transfer capacity between parties upon winning contestable load.

TXU objected to current shippers TGT and Boral retaining their positions in this and future regulatory periods and encouraged the Commission to review the timing and the process under which the existing haulage arrangements were put in place. United Energy suggested that the access arrangement be modified to allow Epic, on behalf of a new entrant, scope to negotiate with the existing shippers for access to unutilised capacity of the pipeline. NAdb Energy Services Pty Ltd (NAdb) stated that it is desirous of developing a gas-fired cogeneration plant. NAdb proposed that the access arrangement expressly provide for Epic to buy back or otherwise deal with unutilised haulage arrangements rather than prospective users having to deal with multiple users in a secondary market.

AGLES&M stated that preventing access to the pipeline until new facilities were built is unnecessarily obstructive. AGLES&M submitted that, as a minimum, unutilised capacity should be provided to new market entrants when it is available. AGLES&M suggested that an IT or short term FT service should be offered as a reference service. In respect of priority of service, AGLES&M submitted that clause 23.1(a) was deficient in nominating capacity on the basis of MDQ. It submitted that should the market have forewarning of an impending curtailment, it was likely that users would nominate MDQ to maximise their share of the available gas. This would be at the expense of customers whose demand is significantly less than their MDQ.

The Department of Primary Industries and Resources SA (PIRSA) stated that there is potential for existing users to use spare capacity to retail gas to other users in a secondary gas market.[215] PIRSA stated that TGT currently uses Boral's unused capacity to retail gas to Adelaide Brighton Cement. According to PIRSA, this circumvents the constraints on Epic arising from existing contracts and shows that it is possible to develop a competitive secondary gas market for IT service, within the capacity constraints of the pipeline. PIRSA submitted that an arbitrator under the *National Gas Pipeline Access Act 1995* (SA) is able to direct a user to provide contracted (but unutilised) capacity to a third party. According to PIRSA no disputes

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[214] SAGEUG submission, 18 October 1999, p. 1.
[215] PIRSA submission, 19 October 1999.

had been notified under the relevant provision of the Act (section 36). PIRSA concluded that this provision, for transfer of 'excess entitlement', is more stringent than code provisions, and so is likely to facilitate secondary trading.[216] PIRSA noted that significant new loads would still require construction of a new lateral.

Incumbent user TGT proposed that Epic offer an IT service permitting interruptions on the gas day. TGT stated that such a service would be of use to gas consumers having alternative fuel capabilities, to peaking generators and to underground storage facility developers. TGT stated that it is willing to make capacity available to other users on commercial terms, subject to the requirements of existing customers. TGT also expressed the view that TGT and Boral were better placed than Epic to trade in unutilised firm and interruptible capacity. The other current user, Boral, expressed a commitment to a free and fair secondary market in both gas supply and pipeline capacity.

Boral noted that the access arrangement defined system primary capacity to be 323TJ per day, which was to be available for firm service, the remaining capacity to be defined as interruptible. Boral queried how the rights of existing users would be reconciled to the proposed services.

Boral proposed the following alternative services policy.[217] Boral submitted that the service provider should not be able to contract a higher priority service than FT service, in which it included secondary capacity and authorised variations.[218]

> **Firm Service (FT):** A FT user contracts for a quantity of System Primary Capacity (SPC). The FT user is allocated each day a quantity of the System Secondary Capacity (SSC) available on the day in proportion to its SPC to provide a Total Reserved Capacity. This is fully tradeable between users. On any day a FT user may nominate a quantity that it is prepared to release back to the service provider for use by others, thereby reducing its Total Reserved Capacity to a Total Allocated Capacity (TAC) for the day. The incentive to do so will be provided through the rebate process. FT users may make variations during a day up to their TAC.
>
> **Interruptible High Priority Service (IT1):** This service is available on a day to the extent of any quantities released from FT users and is equal in priority on the day to the SSC of FT users. An IT1 allocated quantity takes precedence ahead of any variation requested by a FT user above its TAC for the day.
>
> **Interruptible Low Priority Service (IT2):** This is a true interruptible service and is the lowest priority service. IT2 Service will be interrupted if necessary to allow FT users to vary their requirements during a day up to their TAC for the day. Daily requirements of Firm and IT1 users above their allocated quantities are equal in priority to IT2.

Santos summarised the issues relating to market competitiveness in the following way:[219]

- No firm capacity in the pipeline until 2006.

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[216] *The Natural Gas Pipelines Access Act 1995* (SA) will not apply to MAPS when its code access arrangement is in place.
[217] Boral submission, 12 October 1999, p. 3.
[218] Boral submission, 12 October 1999, p. 7.
[219] Santos submission, 15 October 1999, pp. 1-2.

- The terms of interruption make establishing new gas consuming industries unattractive.
- Current owners of capacity may have a conflict of interest in onselling capacity because they may also be competing for the end customer.[220]
- The tariff structure makes constructing new firm capacity a significant barrier to entry, particularly for small–medium users.
- Overpriced gas transport makes gas less attractive.

These concerns correspond with those expressed by other interested parties, in particular regarding the range of services offered and the barriers to entry for small to medium size businesses. Submissions in respect of the contract term are dealt with in 3.2.4 below.

3.1.4 Epic's response to submissions

In response to submissions by TXU and ETSA Power, Epic rejected suggestions that it can offer more flexibility either by operating the pipeline as a market carriage pipeline, or by submitting an access arrangement similar to those that operate in the electricity market.[221] Epic submitted that market carriage is the effect of submissions that capacity trading rights be established and that parties using the system not be required to have contracted MDQ. Epic stated that the most suitable system for efficient capacity management is a contract carriage system under which existing rights are acknowledged and respected, and the rights and obligations of the parties are clear. Epic pointed to the geographic location of the market and the nature of and the density of the demand, the vast majority of which is located in and in close proximity to Adelaide, at the end of a long pipeline.

Epic stated that gas and electricity are distinctly different commodities, with different usage demands, market structures, physical flow dynamics and market dynamics, and so it is not reasonable for its access arrangement to have a similar basis to those in the electricity market.

Epic stated that the regulator has no power to change or confiscate contractual rights from users. Epic pointed out that although it has amended the access arrangement terms in response to submissions (see below), the fact remains that all the pipeline capacity that is suitable for firm service is contracted under the existing haulage arrangements. The object of the access arrangement, according to Epic, is to set out the terms upon which:

- access can be gained to spare capacity; and
- the service provider is prepared to develop incremental capacity.

Epic stated that the access arrangement is not a means by which to create spare capacity. Epic submitted that this is the function of the queuing, extensions and expansions policies.

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[220] Santos submission, 15 October 1999, p. 2.
[221] Epic, response to submissions, 1 February 2000, p. 1.

With respect to the provision of more flexible service, Epic stated that the contract carriage system is a 'baseline that is designed to meet the basic needs of users'.[222] Users with a need for greater flexibility must pay for specifically designed services. In view of this Epic proposes to amend the original proposed access arrangement in the following way:

> 4.1(b) The Service Provider is prepared to negotiate (subject to operational availability) regarding any other Service or element of a Service sought by a Prospective User ('Non-Specified Service').

Epic also proposes to amend clause 4.3, the clause describing the IT service. The revised proposal provides for IT service that is subject to interruption or curtailment on the day if an existing user chooses to exercise rights under an existing agreement on that day.

The capacity available for IT service would be determined in the following way:

> 4.3(b) The Capacity that the Service Provider will make available for IT service on a Day is the Capacity (if any) remaining (as reasonably and prudently determined by the Service Provider) after allowing for the Capacity required to meet the obligations of the Service Provider to all FT Users, the Existing Users and persons with contracts for Non-Specified Services which rank in priority ahead of IT service.

Epic indicated that, to assist the market in identifying whether IT service is available, it proposes to amend the access arrangement to provide: [223]

> … on each day, it [Epic] will post on the EBB the:
>
> - forecast maximum capacity for each delivery point, based on the gas specification and the conditions prevailing on the previous day; and
> - the forecast net available capacity, based on monthly forecasts which are provided by the FT users (under clause 18.1(c)).

Although the document lodged on 2 March 2000 does not contain this revision, Epic has confirmed that the amendment will be incorporated in further revisions.[224]

Epic proposes to delete clause 4.4 'Availability of Specified Services' from the original proposal. The current proposal no longer states explicitly that new facilities must be constructed before a new user can contract for a specified service. Epic now proposes that where existing facilities are to be utilised, the IT user must have entered into an existing facilities access agreement (clause 4.3(c)). Such an agreement is to be made between an existing user or FT user and the prospective IT user. The agreement would permit the IT user to have access to laterals and delivery points to allow the provision of IT service. This right is qualified by Epic's proposed clause 4.3(g), stating that the service provider will apply existing haulage rights in priority to the terms of an existing facilities access agreement. The IT user's sole remedy in case of dispute would be against the other party to the facilities agreement. Issues arising from these proposed provisions are given attention in the following section, 3.1.5.

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[222] Epic, response to submissions, 1 February 2000, p. 7.
[223] Epic, response to submissions, 1 February 2000, p. 25.
[224] Epic, letter to Commission, 15 June 2000, p. 4.

Particulars of Epic's amended relative priority of services are set out in clause 23 of Epic's proposed revisions to the access arrangement. Epic has dropped the concept of secondary capacity in its proposed revisions in favour of 'net available capacity'. Such capacity would be available first to any firm shipper at any delivery point and secondly for IT and other services to the extent that it is not utilised.[225]

Epic rejected Boral's submission that authorised variations should rank ahead of IT capacity. Epic acknowledged AGLES&M's concern over sequencing supply by MDQ nomination but submitted that there was no obvious and practical method to deal with it.

Epic proposes to amend the access arrangement to provide explicitly for 'non-specified services' (clause 4.1(b)). These would be services having features that differ from the FT and IT services specified in the access arrangement. Elsewhere, the access arrangement as Epic proposes to revise it makes note of the fact that no specific queuing policy has been provided for non-specified services. The arrangements that apply to IT service would apply to non-specified services (clause 10.1(e)). In terms of priority of service, the service provider may accord a non-specified service the same priority as that for FT service (clause 23.2(b))

3.1.5 Relevance of existing haulage agreements to range of services offered to third parties

Outline of existing haulage agreements

Taking account of extensions of terms agreed in early 1999, the main existing haulage agreements are due to terminate on the date on which an access arrangement for the second arrangement period is due to commence, 1 January 2006.

The two existing users of the pipeline are TGT and Origin Energy Limited (known as 'Boral Energy Limited' until its separation from the Boral construction and building products group and its stock exchange float). Until the pipeline system was privatised on 30 June 1995, the antecedents to those two users (then operating as the Electricity Trust of South Australia and the Gas Company) purchased a combined gas supply and haulage service under agreements with the former Pipelines Authority of South Australia (PASA). In preparation for privatisation of the PASA pipeline business, these contracts were disaggregated with effect from 30 June 1995. Since then, pursuant to the new arrangements, the users have obtained gas supplies from the Natural Gas Authority of South Australia (NGASA) and haulage services from Epic and its predecessor, Tenneco Gas. The Commission understands that TGT and Origin contract directly with gas suppliers in respect of their gas requirements beyond those supplied by NGASA under existing gas supply agreements. That is, NGASA is being wound down.

Origin has reserved 153TJ per day of the system primary capacity of 323TJ per day.[226] As the only other firm service user, TGT has the rest, representing a primary capacity split of approximately 47:53 between the respective users. The Commission

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[225] Epic, response to submissions, 1 February 2000, p. 10.
[226] Boral submission, 12 October 1999, p. 2.

understands that TGT has reserved additional capacity pursuant to an agreement for enhancements to the system.

Impact on access

According to Epic, all of the primary capacity of MAPS is fully contracted to these two shippers at present.

The fully-contracted state of the pipeline system, together with a number of features of the current haulage arrangements, means that firm services are unavailable to third parties unless the pipeline system is expanded or extended or the party negotiates with existing users for access to capacity they have reserved. Further, the terms of existing haulage agreements mean that delivery points contracted for use by the existing shippers are not available for FT service, except with the relevant shipper's agreement. This constraint is reflected in the wording of the revision to clause 4.2(a)(iii) proposed by Epic in March 2000. The shippers have certain other contractual rights that the Commission considers to be exclusivity rights within the meaning of the code. The discussion in this section of the draft decision focuses on the potential effect of these rights on the scope for Epic to supply services to other parties.

In relation to the potential for interruptible service, capacity in the system is fully utilised on a number of days during the year, but under-utilised at other times (refer to Attachment E to Schedule 1 to the access arrangement). Because of a number of provisions in the existing contracts, IT service of the type (firm on the gas day) defined in the original April 1999 access arrangement cannot be provided without interfering with the rights of parties to those contracts.

In addition to their rights to use the pipeline's total capacity, the current shippers have the right to renominate within a gas day. Epic has indicated that an interruptible service could be provided by Epic for some hours during the day, subject to possible interruption. In addition, the existing shippers have rights to capacity at delivery points as indicated by the terms of Epic's lodgement of 2 March 2000, in particular, the proposed revised incentive mechanism.

Code provisions

The main objective of the code is to ensure that users and prospective users are able to gain access, on reasonable terms, to services utilising spare capacity in the pipeline system. The notion of spare capacity includes not only uncontracted capacity but also contracted but unused capacity. (See in particular the definition of 'Spare Capacity' in section 10.8 of the code, and sections 3.2, 3.6, 3.12, 5.4, 5.9 and 6 and the overview of section 6 of the code.)

The notion of access to reserved but unused capacity does not confer any power on the regulator or arbitrator to interfere with the rights of existing users under contracts already in place. This is confirmed by a number of provisions of the code:

- The overview of section 6 states clearly that, while an arbitrator can determine that access should be provided to contractually reserved but unused capacity, it may not make a decision on access that 'deprives a person of a contractual right'. This is confirmed by the terms of section 6.15 (requiring the arbitrator to take into account firm and binding contractual obligations of existing users) and section 6.18

(preventing the arbitrator from making a decision that deprives a person of an existing contractual right).

- The overview of section 6 states that the consequence of the above is that 'access to contracted but unused capacity can be ordered on an interruptible basis but the original contract holder retains a priority right to that capacity'.
- Section 2.24 obliges a regulator, in approving an access arrangement, to take into account a number of factors including the public interest, the interests of stakeholders including the service provider, users and potential users and:

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

However, there is an exception to the requirement to give effect to existing firm and binding contractual obligations. Notwithstanding the provisions cited above, sections 2.25, 2.47 and 6.18 all state that the regulator or the arbitrator must not make a decision that has the effect of depriving a person of an existing contractual right, 'other than an Exclusivity Right which arose on or after 30 March 1995'.

Section 2.25 provides as follows:

> The Relevant Regulator must not approve an access arrangement (or draft and approve its own Access Arrangement) any provision of which would, if applied, deprive any person of a contractual right in existence prior to the date the proposed access arrangement was submitted (or required to be submitted), other than an Exclusivity Right which arose on or after 30 March 1995.

Similarly, in arbitrating an access dispute, pursuant to section 6.18 the arbitrator must not make a decision that:

> (a) subject to paragraphs (b), (c) and (d), is inconsistent with the Access Arrangement;
>
> (b) would impede the existing right of a User to obtain Services;
>
> (c) would deprive any person of a contractual right that existed prior to the notification of the dispute, other than an Exclusivity Right which arose on or after 30 March 1995;
>
> (d) is inconsistent with the applicable Queuing Policy; …

Section 6.18 differs from section 2.25 in that it applies to contracts made up to the date of dispute, which (unlike section 2.25) may include contracts made after the date of submission of the proposed access arrangement. Section 2.47, which comes into play after a pipeline service provider submits revisions to an access arrangement, also modifies the scope of section 2.25. Section 2.47 protects agreements made prior to the revisions submission date. That is, in a subsequent review of the access arrangement, it protects agreements made while the original access arrangement is being assessed (as is currently the case in respect of Epic) or is in operation (following final regulatory approval). Section 2.47 is similar in wording to section 2.25 above, but the obligations it applies to the regulator are expressed to apply to *revisions* to an access arrangement.

Sections 2.47 and 6.18 would apply to the extensions to the existing haulage agreements that Epic and the current shippers agreed on in April–May 1999.

An 'exclusivity right' is defined in section 10.8 of the code as a contractual right that by its terms either:

(a) expressly prevents a Service Provider supplying Services to persons who are not parties to the contract; or

(b) expressly places a limitation on the Service Provider's ability to supply Services to persons who are not parties to the contract,

but does not include a User's right to obtain a certain volume of Services.

As a result, notwithstanding the breadth of sections 2.24 and 6.15, it appears to be the intention of the code that the regulator and arbitrator may (but are not obliged to) make decisions that interfere with or 'override' exclusivity rights arising on or after 30 March 1995. In the case of the regulator, this could include requiring the access arrangement to include provisions that conflict, or whose exercise could potentially conflict, with exclusivity rights.

Commission assessment of issues arising from the existing haulage agreements

The first issue that the Commission has had to determine is whether the existing haulage agreements contain exclusivity rights.

Having identified exclusivity rights, it has then been necessary to ascertain the extent to which these rights are likely to interfere with the ability of third parties to gain access to spare capacity in the pipeline system. An exclusivity right in a contract between the service provider and a shipper is likely to be of practical concern only if, in the way it is drafted or implemented:

- it increases the likelihood that the shipper will refuse to resell contracted but unused capacity or refuse to resell that capacity on commercially reasonable terms; or
- it prevents or restricts the service provider from making spare capacity (within the meaning of the code) available to third parties.

Do the existing haulage agreements contain exclusivity rights?

Two clauses in the haulage agreements made in 1995 appear to the Commission to constitute or contain exclusivity rights. Confidential Annexure 4 identifies the relevant clauses to the parties only, states reasons for the Commission's view that the clauses incorporate exclusivity rights and states the Commission's assessment of their effect on third-party access.

Epic expressed the view in correspondence and discussions that the existing haulage agreements do not contain exclusivity rights. However, it considered that the two provisions put to it for comment (which were the same as those in Confidential Annexure 4) were best addressed by the Commission and the two shippers.[227]

The Commission sought the shippers' response to the Commission's views on the same two clauses in mid-January 2000. TGT did not add to comments it had provided in a letter dated 22 July 1999. TGT had stated then that the agreements do not contain exclusivity rights, and made the following points:

- The flexibility provided by its contract, including rights to vary nominations within the gas day, is necessary to ensure security of supplies to electricity generators and

[227] Epic, letter to Commission, 19 January 2000.

to meet the fluctuations imposed on generators by their participation in the national electricity market and by disruptions to the electricity supply system.

- In unbundling the combined gas and haulage arrangements of the former PASA, the present haulage agreements were an important transition towards open access.
- Boral (now Origin Energy) and TGT are able to trade in unutilised firm and interruptible capacity. They are better able to stimulate a secondary market than Epic because they are best placed to assess the probabilities of changes in demand during a day, and to accept commercial risks. A key objective of creating TGT was to create secondary markets in gas and pipeline capacity.

Boral's comments in 1999-2000 on the agreements generally and on the specific provisions identified in Confidential Annexure 4 were put to the Commission in discussions and by letter on a confidential basis.

Do the exclusivity rights have the effect that shippers are likely to decline to resell unused capacity or decline to resell such capacity on commercially reasonable terms?

A number of submissions to the Commission expressed strong concerns over negotiating with the current shippers for access to capacity. There were concerns that the current shippers are their competitors in wholesale/retail gas supply; that accordingly they do not have the same drivers as Epic to provide access; and that two potential resellers of unutilised capacity are too few to yield market-based access terms for resale of access rights.

TGT and Boral representatives in discussions with Commission representatives stated that they have incentives to resell unutilised capacity and gave examples of where they had done so, Boral following up the point in confidential correspondence with the Commission. Epic supported the thrust of these arguments. It cited the example of arrangements negotiated between the existing shippers enabling TGT to supply Adelaide Brighton Cement, and the willingness of TGT, expressed in its submission, to resell capacity as firm and interruptible services. In response to the submissions by third parties, Boral commented that it was not aware of any reasonable request for access that had not been satisfied 'in a reasonable and cost reflective manner during the term of the existing contracts'.[228]

The Commission's assessment of the effect of the clause identified in Confidential Annexure 4 Part A is given in that Annexure. For reasons stated in the Confidential Annexure, the Commission does not wish to pursue it in the current access arrangement period but reserves its position as to its response in this period in the event of a development such as a new pipeline system entering the State.

Other contractual provisions that, in the Commission's opinion, are not exclusivity rights, give the shippers substantial control of capacity during the term of the agreements. These provisions include the size of the shippers' capacity reservations (totalling 100 per cent of the system's indicative capacity), the right to renominate capacity on the day and the shippers' reservation of capacity in the laterals and delivery

[228] Boral submission, 12 October 1999, p. 2.

points. In other words, the scope of services that Epic can offer is constrained even without the exclusivity rights.

The Commission has not been able to establish from the information provided to it that existing shippers have in fact declined to resell unutilised capacity. However, the information that the Commission has indicates some dissatisfaction with terms that have been offered.

The Commission's assessment, in the light of these considerations, as to the effect of the clause identified in Confidential Annexure 4 Part B, is given in that Confidential Annexure.

It should be noted that, pursuant to section 13 of the *Gas Pipelines Access (South Australia) Law,* the existing shippers are prevented from engaging in conduct for the purpose of preventing or hindering the access of another person to a service provided by means of the code pipeline. This conduct would include refusing to sell a marketable parcel (within the meaning of the code) on reasonable terms and conditions. This provision could potentially be invoked to prevent an existing shipper from either exercising an exclusivity right, or acting in any other way, to restrict the access of a third party to service with respect to spare capacity in the pipeline system.

Do the exclusivity rights prevent or inhibit the pipeline service provider from making available to third parties services utilising spare capacity?

The question of whether there is spare capacity in the pipeline system has been canvassed with Epic.

In its submission Santos queried the system primary capacity of 323TJ per day, requesting further information to evaluate whether the stated capacity is reasonable. Santos also queried the heating value of gas transmitted through the pipeline system assumed by Epic. Santos argued that if the actual average heating value were applied, there would be an increase in capacity of some 5TJ per day.

Epic responded that the service provider is obliged to define 'a maximum level of capacity that it is prepared to guarantee will be available for the reference services – in this case, firm service for 365 days of the year, subject only to force majeure events'.[229] It also stated that the level of 323TJ per day proposed in the access arrangement 'is the product of extensive pipeline system flow modelling and probability analysis undertaken by Epic's (internal) technical specialists'. In relation to heating value, Epic stated that on its analysis, 'heating value has a very small impact – less than 0.3 per cent for each 1 per cent change in heating value'. Epic went on to describe inlet pressure as being of relatively greater significance and stated that it is 'directly under the control of the suppliers of the gas'.

One of the existing haulage agreements provided to the Commission contains extensive flow modelling analysis. On that basis the Commission accepts that 323TJ of primary capacity per day is currently a reasonable level at which to guarantee the reference service. The Commission also considers that the heating value and the inlet pressure of

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[229] Epic, response to submissions, 1 February 2000, p. 8.

gas are matters that are within the control of the Cooper Basin Producers rather than Epic, subject to contractual obligations. As the heating value is subject to variation the Commission considers it reasonable, within limits, for the pipeline service provider, in determining the system capacity, to assume a heating value that may fall below the average value in practice.

The Commission made other enquiries of Epic to identify any spare capacity on laterals in the pipeline system. Having regard to stated maximum capacities of laterals, the Commission's calculations indicated a substantial amount of unutilised capacity on some. In response Epic commented that the maximum capacities are as provided in the 1995 haulage agreements. According to Epic there are a number of assumptions underlying stated maximum pipeline capacity, which is a steady-state flow capacity. Epic stated: [230]

> The most significant assumption is the pressure at the inlet to the lateral. This pressure can vary substantially with the operation of the main pipeline, with pressure fluctuations driven by large changes in the demand (in particular the 1300 MW Torrens Island Power Station) and will in turn substantially affect the available capacity in a lateral. This effect is particularly pronounced in the case of the Taperoo lateral which is at the very end of the system and can experience relatively low inlet pressures.

Epic also made the point that many laterals serve only a single user or plant, examples being the Mintaro, Dry Creek, Osborne, Burra and Port Bonython laterals.

The Commission accepts Epic's statements in the quoted passage. However, extensions or expansions that are undertaken prior to and during the access arrangement period may also have an impact on available capacity at other points on the system. Two notable expansions that have been reported are the 42TJ per day capacity enhancement for services to TGT and the 25TJ per day enhancement for services to National Power's Pelican Point Power Station.[231] Both projects involve compressor enhancement and the latter project will require the looping of 34km of the mainline.

Such extensions or expansions may affect lateral inlet pressures, notwithstanding that they are designed to meet the needs of a particular user. The enhancement to primary capacity they create even falls outside the access arrangement until the capital investment is rolled into the pipeline system capital base, as in the case of the enhancement for services to National Power. However, as demands on a pipeline system and available capacity at particular points constantly change, provision for the pipeline operator to sell unused capacity on an interruptible basis over appropriate periods is a useful element of a flexible and efficient capacity management system.

At present, capacity in the pipeline system, laterals and existing delivery points is contracted to the existing shippers.

The Commission draws a distinction between the reservation of capacity in pipelines and the reservation of capacity in delivery points. The Commission understands that in order to accurately account for delivery of gas, unless individual metering is in place,

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[230] Epic, letter to Commission, 11 January 2000, p. 2.

[231] 'Epic Energy Boosts Capital Investment to $3.5 Billion', *The Australian Pipeliner,* October 1998 and 'New Expansion For Moomba To Adelaide Pipeline', *The Australian Pipeliner,* April 2000.

arrangements need to be made between users at a shared delivery point for the allocation of gas delivered to that point. In the Commission's view, similar considerations are not applicable to pipelines (mainlines and laterals).

Supply can only be provided without interfering with the existing shippers' rights if the prospective user reaches agreement with the shipper to share the delivery point or if the shipper arranges to have one constructed. This is reflected in the proposed operation of 'Existing Facilities Access Agreement' pursuant to clause 4.3(c) and in the definition of such an agreement in clause 43.1. Under clause 4.3(c), the user of an IT Service is required to enter into an existing facilities access agreement with the existing shipper to whom capacity at the relevant lateral and delivery point is contracted.

According to Epic, the best it could do where such agreement could not be reached would be to offer to give information to the third party to assist it to assess the likelihood and frequency of possible interruption, and to construct new facilities where required. The Commission believes that, in those circumstances, unless an existing shipper releases or disposes of contracted capacity, capacity could only be made available for firm service (for contracted periods or for firm service on the day) to new users by enhancement of the system.

The Commission is concerned about the requirement for a prospective user to enter into an 'Existing Facilities Access Agreement' with a shipper or existing user, as a precondition for obtaining IT service at an existing delivery point. This has the potential to provide existing users and shippers with advance knowledge of a prospective user's commercial plans. Such plans may well involve customers of the existing users or shipper at the proposed delivery point. It appears to the Commission that Epic, as owner of the facilities, is best placed to confirm any spare capacity and to facilitate agreement, where necessary, on allocation of quantities between multiple users of metering facilities. There are provisions in the access arrangement (clause 22) for Epic, as service provider, to allocate capacity according to a conforming allocation procedure provided by a downstream service provider, however there does not appear to be a provision for allocation by Epic in the absence of such a procedure. Nor is there provision for Epic to put one in place in the absence of agreement between the parties. The Commission invites submissions from interested parties as to how this might best be achieved.

The above concerns apply with more force to capacity on laterals, which Epic proposes to be also subject to the requirement of entering into an 'Existing Facilities Access Agreement'. In this case, where spare capacity is or may become available, in the Commission's view a prospective user should not be required to have the prior agreement of existing users or shippers on a lateral. As discussed further below, the Commission proposes deleting references to laterals in the definition of 'Existing Delivery Facilities'.

In the revisions to its proposed access arrangement, Epic has significantly changed the rebate/incentive mechanism originally proposed. Epic identified this change as one of a number that 'attempt to find a balance between the rights of Existing Users and the expectations and requirements of prospective new users'.[232] Epic noted that TGT had

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[232] Epic response to submissions, 1 February 2000, p. 5.

offered to supply firm and interruptible services, but several submissions had raised concerns relating to: [233]

a) the willingness of existing shippers to make facilities available. The main catalyst for this was identified as the effectiveness of the incentive (rebate) mechanism.

b) the level of and basis for the tariff.

Epic's revised proposed rebate incentive mechanism (clause 5.3) provides for a monthly rebate to be paid to new FT users and to the existing shippers if they permit use of facilities contracted to them to allow Epic to provide IT service. Arrangements between existing shippers and new users for the use of facilities over which the shippers exercise contractual rights would be by way of an 'Existing Facilities Access Agreement'.

The rebate would comprise a component to reimburse the shipper for its fixed tariff for the lateral serving it; a similar component for use of its delivery point and a 50 per cent share of net revenues (after deducting the preceding components). The mechanism is discussed in section 2.9 of this draft decision. For reasons stated in section 2.9.5, the Commission accepts the proposed mechanism.

Epic's proposal has potential to deal, to a limited degree, with the effects of the system primary capacity being fully contracted, by conditionally making available a limited class of IT service. That IT service would be made available subject to shipper rights under the existing haulage agreements. Notwithstanding the foregoing, the Commission is concerned, for reasons stated in Confidential Annexure 4 Part B, that the proposed revisions to the access arrangement to provide for the IT service allow for the shippers to give effect to the exclusivity right identified in that annexure.

For reasons stated above and in Confidential Annexure 4 Part B, the Commission proposes the following amendments to the access arrangement.

- Subject to a qualification, clause 4.3(c) should be amended as proposed by Epic in the revisions to the access arrangement it lodged in March 2000. The qualification is that Epic should delete the requirement for the prospective IT user to obtain the agreement of the existing user to allow the IT user to utilise capacity on the lateral that is to be employed in providing the service. This could be achieved by deleting the references to laterals in the definition of 'Existing Delivery Facilities' (in clause 43.1).
- Clause 4.3(d) should be amended as proposed by Epic in the March 2000 document, provided clause 4.3(d) is narrowed to exclude the operation of exclusivity rights. In the Commission's view, this should be achieved by amending the definition of 'Existing User Rights' (in clause 43.1) to expressly exclude any exclusivity right within the meaning of the code that arose on or after 30 March 1995. This amendment would also address the Commission's concerns with paragraphs (e) and (f) of proposed clause 4.3, which similarly give operation to the whole of existing user rights including exclusivity rights.

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[233] Epic response to submissions, 1 February 2000, p. 7.

If, notwithstanding the incentive mechanism and the Commission's proposed amendments to the access arrangement, the existing shippers give effect to the so-called exclusivity provisions, third parties that may be adversely affected may pursue the issue under the code's arbitration provisions. In the Commission's view, Epic's future responses to applications for access would provide a basis for arbitration in which exclusivity rights may be a relevant issue.

Therefore, in the Commission's view paragraph (ii) of clause 4.3(g) conflicts with the objectives of the code to ensure that an access seeker is entitled to the benefit of the code mechanisms for resolving disputes regarding access to services provided by the pipeline system. If the definition of 'Existing User Rights' is amended as proposed, the access seeker would potentially have an interest in obtaining a decision by an arbitrator in the event of an access dispute. An issue for decision by the arbitrator would be whether or not the service provider had, in purporting to give priority to the rights of existing users, given effect to exclusivity rights within the meaning of the code.

The arbitrator would be required to ensure that existing contractual rights (with the exception of exclusivity rights arising on or after 30 March 1995) are protected. That would potentially require the arbitrator to determine whether the provisions under discussion are in fact (as the Commission asserts) exclusivity rights within the meaning of the code.

There appears to be no valid reason for excluding the rights of an access seeker to gain full access to spare capacity pursuant to relevant provisions and mechanisms set out in the *Gas Pipelines Access Law,* including the code. Indeed, the Commission is of the view that those rights cannot be excluded.

For these reasons, clause 4.3(g)(ii) proposed in the March 2000 document should not be included in the access arrangement.

Reallocation of released or surrendered capacity

There is good sense in an access arrangement providing for relinquishment and reallocation of capacity. The pipeline owner, the existing shipper, the new user and the ultimate gas customer all have a stake in assuring continuity of service and certainty of process to that end. Epic's trading policy (discussed in section 3.4 of this chapter) provides for the reallocation of capacity in cases where it is released by the shipper to another user or to Epic.

In a competitive transmission market any capacity released or surrendered by a shipper in consequence of a lost sale would be available for resale by the pipeline operator (if the shipper did not itself deal with it) to facilitate the changeover of retail suppliers, whoever they might be.

The Commission notes the submissions in that respect by ETSA Power and TXU (see 3.1.3). In the Commission's view, if a shipper loses sales to another supplier the mechanisms to deal with the capacity no longer required for those sales should be non-discriminatory between shippers. The Commission considers that mechanisms for the transfer of capacity can be included in the access arrangement services policy consistently with the factors in section 2.24 of the code

The Commission rejects Epic's argument that provisions for the transfer of gas capacity rights necessarily involve a market carriage model. Understandably the submissions by the electricity suppliers ETSA Power and TXU were couched in terms of the electricity market with which they are familiar. However, mechanisms for the transfer of capacity rights on change in contestable load can equally be accommodated in a contract carriage framework for the gas industry.

Provided arrangements are negotiated for shippers to share or construct delivery points, the Commission cannot see any reason that released or surrendered capacity could not be made available to third parties on a firm basis during the initial access arrangement period.

Proposed amendments flowing from assessment of existing haulage agreements

For the above reasons, pursuant to section 2.13 of the code, the Commission proposes the amendments to the access arrangement set out in 3.1.6.

Projects to expand supply and haulage of gas to South Australia

Commission representatives have discussed with Epic issues arising from a proposal by SAMAG Limited to develop a magnesium refining plant to operate in Port Pirie from about 2003. SAMAG has entered into a memorandum of understanding with the South Australian Government. The memorandum commits the State Government to actively seeking bids for a new pipeline from Victoria.[234] The South Australian Government is now looking more widely to identify new sources of gas (which may involve new means of delivery by pipeline) to South Australia.[235]

An issue arising from these developments is that, if they result in a new pipeline being developed to supply gas, that pipeline could potentially render part of the capacity of MAPS excess to demand, at least in the years immediately following the new entry. A pipeline originating in Victoria (if that were the case) could create demand for backhaul services for the delivery of gas to the Port Pirie–Whyalla lateral. The Commission addresses the implications for review of this access arrangement in 3.7.4.

3.1.6 Commission's considerations

In this draft decision the Commission's consideration of the proposed access arrangement has been influenced by the existing haulage agreements to which Epic is a party. As noted in section 2.10.3, Epic has argued that its existing capacity is fully committed and operational flexibility impacted by the terms of its existing haulage agreements and it therefore has limited scope to offer the reference service during the first access arrangement period without enhancement of the pipeline system. Nor can it in this access period offer the firm-on-the-day interruptible service it proposed in the original access arrangement document of April 1999.

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[234] Hon Rob Kerin, MP, 'New industry for Port Pirie', *Media release,* 19 May 2000, Pima Mining NL, 'SAMAG signs MOU with South Australian Government', *Stock Exchange announcement,* undated.

[235] Hon Rob Lucas, MLC, 'State Government calls for new gas pipeline investment', *Media release,* 19 June 2000 and Department of Treasury and Finance (SA), *New Gas Supply Options for South Australia Request for Submissions,* 16 June 2000.

While all that is true, the Commission is concerned that in those circumstances the agreements made in 1995 substantially foreclose the opportunities for new entry provided by a deregulating gas market. The Commission is also concerned that Epic proposes, in providing for the parties to give effect to the provisions of the existing haulage agreements in its access arrangement, to not entirely exclude exclusivity rights that arose on or after 30 March 1995. Furthermore, apart from the question of exclusivity rights, as will be explained later in relation to the queuing policy, the Commission has been concerned to address the possibility that the parties may seek to extend the existing agreements in substance beyond 2005.

At the time the agreements were made (30 June 1995), the COAG commitment to free and fair trade in gas had been in place for more than a year and steps were being taken towards its implementation. The parties were therefore in effect on notice that regulatory bodies and policy-makers were likely to view with concern new arrangements that ran counter to the COAG principles. The code's cut-off date for preservation of exclusivity rights (30 March 1995) reflects that logic. However, the constraints in the existing agreements (identified in the original access arrangement and in Epic's March 2000 revisions) that hinder the development of competition go beyond the exclusivity rights. The clauses that are not exclusivity rights are protected from regulatory intervention for purposes of applying the code to the access arrangement.

A number of factors identified in the remaining sections of this chapter together mean that unless other developments (such as a new pipeline) occur, the difficulties facing new entrants will continue throughout the period of this arrangement and into the future. Relevant issues discussed later in the chapter, in the light of the pipeline being at full capacity, are Epic's proposed queuing and extensions and expansions policy and contract renewal terms.

Reference FT service

Having regard to Epic's response to submissions, the Commission considers that the FT service proposed by Epic meets the requirements of users and potential users in terms of section 3.2 of the code.

This conclusion is arrived at only because, for purposes of the code, the Commission is obliged to have regard to the constraints arising from the existing haulage contracts other than exclusivity rights arising on or after 30 March 1995. The revisions proposed by Epic in its March 2000 lodgement in respect of FT and IT services (below) better address the constraints of the existing agreements and the possibilities for reducing their adverse effects than did the terms of the April 1999 application.

This approval of the proposed FT service is qualified by the modifications to the reference tariff provisions, access policies and terms and conditions of service required by the Commission in amendments proposed elsewhere in this draft decision.

Rebatable IT service

The Commission accepts that the revenues likely to be derived from IT service are unpredictable and that it is appropriate to propose the IT service as a rebatable service. The Commission sees merit in the IT service originally proposed by Epic (firm on the day), in comparison with the interruptible-on-the-day service now proposed. However,

the Commission acknowledges that provisions of the existing haulage agreements prevent Epic from specifying in its access arrangement a service of the former kind in the initial access arrangement period.

The Commission proposes amendments to the terms of the IT service to remove from the terms of access any obligation on the part of the service provider or prospective users to observe the terms of exclusivity rights in the existing haulage agreements.

Non-specified services and priority of service

Provisions for non-specified, excluded or negotiated services are a common element in recent access arrangements and proposed access arrangements. They enable service providers to accommodate any special requirements of a user or potential user, presumably at additional cost to the user over the regulated services offered. No forecast of estimated revenues, if any, derived from the provision of such services has been included by Epic in its submissions. Such services will not be provided at a higher priority than the FT service, but provision is made in clause 23.2 for the service provider to rank them equally in priority of service. That is relevant to the entitlements of FT and other users in the event of a shortfall in capacity.

The Commission is prepared to accept that the access arrangement make provision for non-specified services. However, for reasons set out in section 3.5.5, the Commission is concerned that Epic's proposed queuing policy and order of priority of service together could facilitate an extension of the duration and/or terms and conditions of existing haulage agreements beyond 2005. In the Commission's view, such an outcome would be to the detriment of new entrants.

Accordingly, the Commission requires the amendments to the queuing policy set out in section 3.5.5. The Commission invites submissions as to whether clause 23.2, as proposed by Epic in its lodgement of March 2000, raises issues for users and prospective users.

The Commission is concerned that Epic's clause 43.1 definition of 'Available Capacity' and 'Spare Capacity' as applied to clause 23 are inconsistent with the definition of 'Spare Capacity' in section 10.8 of the code. Epic's definitions do not take into account contracted but unused capacity.

Accordingly, the Commission requires the amendment to the definitions of 'Available Capacity' and 'Spare Capacity' set out below.

Reallocation of released or surrendered capacity

Commission representatives discussed with Epic representatives the question of reallocation of capacity for the reason that a customer of a shipper has changed suppliers.

In response, Epic wrote that it would accept that capacity that is released by a user: [236]

> (a) otherwise than under the trading policy clause 26.2,
>
> (b) for reason that a consumer or aggregator has changed suppliers
>
> may be contracted by another user, or a prospective user:
>
> (i) who is (directly or indirectly) supplying that consumer (or aggregator); and
>
> (ii) without following the queuing process set out in clause 10.

In the Commission's view the access arrangement should also make provision for the service provider to require that capacity not required by an existing user, in consequence of losing a customer to another supplier, be transferred to the other supplier, if that capacity is not released by the existing user. Any such provision should be subject to the provisions of the relevant existing haulage agreement other than any exclusivity rights that arose on or after 30 March 1995. The Commission makes further comments in Confidential Annexure 4 Part C.

The Commission recognises that market evolution provides opportunities for existing shippers to make interstate trades in gas to make up for sales lost in the 'home' market. The development of interstate trade is a fundamental objective of the code. In those circumstances, the shippers would be likely to have concerns about the service provider intervening to make some part of their capacity rights available to another party entering the home market.

Nevertheless, in the Commission's view, the proposed provision would be an instrument for introducing contestability to a significant geographic area of the market that is likely to be subject to the constraint of a fully-contracted pipeline for some considerable time into the future. At this stage there is uncertainty as to whether the SAMAG/South Australian Government initiative to introduce new supply sources would resolve this capacity constraint, and the terms on which it would do so.

In the Commission's view, a provision for the transfer of capacity to shadow transfers in contestable load is entirely consistent with code objectives of fostering trade in gas within a competitive market. It also gives visible effect to fair terms of access for all users of haulage services, which is a code objective. It would be important in the circumstances outlined that prospective shippers have available to them the mechanisms provided in the code for redress against the service provider in the event of a dispute over access.

Finally, while the amendments proposed in the Commission's draft decision would benefit South Australian gas users, in the Commission's view additional benefits could arise if more were done to bring about competition in supply at the wellhead.

Proposed amendment A3.1

For Epic's access arrangement for MAPS to be approved, the Commission requires:

[236] Epic, letter to Commission, 15 June 2000, p. 15.

- that the access arrangement be amended to provide for the FT, IT and non-specified services set out in Epic's lodgement of 2 March 2000, subject to the proposed amendments in the remainder of this draft decision; and

- that clause 43.1 be amended to make the definition of 'Available Capacity' and 'Spare Capacity' consistent with the definition of 'Spare Capacity' in section 10.8 of the code.

Proposed amendment A3.2

For the access arrangement to be approved, the Commission requires that Epic incorporate the proposed amendment providing for Epic to post on the EBB each day:

- forecast maximum capacity for each delivery point, based on the gas specification and the conditions prevailing on the previous day; and
- the forecast net available capacity, based on monthly forecasts that are provided by the FT users (under clause 18.1(c)).

as described in Epic's response to submissions of 1 February 2000 (section 2.2.7, page 24 of public response) and in section 3.1.4 above in this draft decision.

Proposed amendment A3.3

For the access arrangement to be approved, the Commission requires that it be amended to provide that capacity that is released or surrendered by a user be dealt with as proposed by Epic in its letter dated 15 June 2000, as quoted above, to the effect that:

> capacity that is released by a user:
>
> (a) otherwise than under the trading policy clause 26.2,
>
> (b) for reason that a consumer or aggregator has changed suppliers
>
> may be contracted by another user, or a prospective user:
>
> (i) who is (directly or indirectly) supplying that consumer (or aggregator); and
>
> (ii) without following the queuing process set out in clause 10.

Proposed amendment A3.4

For the access arrangement to be approved, the Commission requires that it be amended to make provision for the service provider to require that capacity be transferred in specified circumstances. The circumstances are where:

- in consequence of losing a customer to another supplier, an existing user no longer requires the volume of capacity attributable to that customer; and
- the capacity is not released by the existing user;

it must be transferred to the other supplier.

Any such provision should be subject to the provisions of the relevant existing haulage agreement other than any exclusivity rights that arose on or after 30 March 1995.

Commission application of code section 2.25 to the access arrangement

Only the courts have jurisdiction to determine questions of law. The views formed by the Commission on the question of whether the agreements contain exclusivity rights do not bind the courts. Nor do they bind interested parties, although the Commission considers that the views it has formed are consistent with the code, with legal principles for interpreting the code and with the code intent of enabling third parties to obtain access to contracted but unused capacity.

Clarifying the standing of exclusivity rights *vis a vis* the access arrangement will assist interested parties if they seek judicial review of this decision or judicial determination of a dispute concerning the operation of clauses in existing haulage agreements. The Commission believes that this objective would be best served by amending the proposed access arrangement to reflect the terms of section 2.25 of the code.

It is desirable to ensure that a court or tribunal faced with a dispute between Epic and/or existing or potential users is able to determine whether the access arrangement conflicts with existing contractual rights to a greater extent than allowed by the code. The court or tribunal should be enabled to do this without bringing the validity of the access arrangement into doubt.

For this reason, and for reasons stated earlier, the Commission proposes the following amendments to the access arrangement.

Proposed amendment A3.5

For the access arrangement to be approved, the Commission requires that it be amended to contain a provision in the following terms:

> This access arrangement takes effect subject to any contractual rights in existence prior to the date of lodgement of the proposed access arrangement, 1 April 1999, with the exception of Exclusivity Rights (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.6

For the access arrangement to be approved, the Commission requires that clause 4.3, other than clause 4.3(g)(ii), as proposed in Epic's lodgement of 2 March 2000 be incorporated in the access arrangement, subject to adding the following to clause 4.3(c):

> For the avoidance of doubt, nothing in the Agreement requires or permits the Service Provider or User to observe or give effect to the terms of any Exclusivity Rights (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.7

For the access arrangement to be approved, the Commission requires that the definition, in clause 43.1, of 'Existing User Rights' proposed in Epic's lodgement of

2 March 2000 be incorporated in the access arrangement, subject to adding the following:

> The term 'Existing User Rights' does not include any Exclusivity Right (within the meaning of the Code) that arose on or after 30 March 1995.

Proposed amendment A3.8

For the access arrangement to be approved, the Commission requires that the definition, in clause 43.1, of 'Existing Delivery Facilities' proposed in Epic's lodgement of 2 March 2000 be incorporated in the access arrangement, subject to the deletion of references to laterals.

3.2 Terms and conditions of service

3.2.1 Code requirements

Section 3.6 of the code requires that an access arrangement include the terms and conditions on which a service provider will supply each reference service. These terms and conditions must be reasonable according to the relevant regulator's assessment.

3.2.2 Epic's proposal

Epic's proposed access arrangement incorporates the terms and conditions of service at clauses 11–42, which means that they cannot be varied without the regulator's approval. Technical specifications and forms associated with service provision are included as schedules to the access arrangement. FT and IT service contract forms are incorporated as Schedules 6 and 7, respectively, to the access arrangement.

Clauses that were the subject of submissions by interested parties and other clauses that the Commission considers must be reviewed are outlined in Table 3.1 below. Clauses that fall within the code policy obligations of the service provider, e.g. trading policy, queuing and extensions and expansions policy are excluded from the following table and dealt with later in this chapter.

In response to submissions, Epic proposes to make a number of changes to the access arrangement, as detailed in the document lodged with the Commission on 2 March 2000. The changes that Epic proposes to make, and the submissions that prompted them, are discussed in 3.2.4, which also addresses a number of issues on which Epic has not changed its position.

Table 3.1: Clauses discussed in sections 3.2.4 and 3.2.5

Clause 9: Creditworthiness
The service provider is not obliged to commence a service or to continue to provide a specified service unless the user or prospective user meets and continues to meet the creditworthiness criteria (specified in clause 9.4) in a manner acceptable to the service provider. The user or prospective user is obliged to provide specified credit and financial information and undergo credit checks and evaluation of credit risk. The service provider has discretion to request other forms of financial security if the user or prospective user fails to meet the creditworthiness criteria (clause 9.5).
Clause 11: Commencement, term and extension
Epic proposed a commencement date that is no earlier than 18 months (being a January) and no later than 29 months (being a December) after the annual clearance of the queue on 1 July. That is, after a prospective user had requested a specified service that could only be satisfied by the construction of new facilities, and Epic had chosen to construct those facilities, commencement could only take place during a 12 month period that was between 29 and 18 months after the request for service. Epic submitted that this was an appropriate timeframe for construction of the requisite facilities. Epic proposed minimum terms of seven years for FT service, with a minimum extension of five years, and one year for IT service. An agreement for IT service would automatically extend on an annual basis unless the user: had given written notice of termination under clause 36.5; was in default on the anniversary of the commencement date; or had not made a nomination under clause 18.5 on at least one occasion during the year.
Clause 12: Principal receipt and delivery obligations of user
Clause 12 sets out the user's obligations regarding receipt and delivery of nominated quantities of gas; the temperature (being no greater than 60°C) of that gas at receipt points within 50km of Moomba; and odorisation.
Clause 13: Principal receipt and delivery obligations of service provider
The service provider is on a day to accept at the receipt point(s) a quantity of gas up to the final nominated delivery quantities. The service provider is to deliver to the user at the relevant delivery points final nominated delivery quantities. Gas is to be supplied at a temperature no greater than 48°C and within specified pressure limits.
Clause 15: Gas quality
Clause 15 establishes the specification for gas supplied to the system by users. It also describes the actions the service provider will take to deal with non-specification gas that enters the system. It includes the power to issue an operational flow order to the user to restrict or terminate supplies of non-specification gas into the system, and to vent gas.
Clause 17: Retention allowance
Retention allowance for FT service is to be calculated by multiplying retention allowance percentage for that day by the quantity.

Clause 18: Forecasting, nominating and scheduling of service For both FT and IT service the user would have to give the service provider a copy of confirmation from the producers of the actual quantity of gas supplied for the user at each point on that previous day, not later than 0830 after each day. If confirmation for a receipt point were not received in time, the user would be deemed not to have supplied any gas at that receipt point on that previous day. Not later than 1100 on each day, the user would have to nominate the quantities of gas for the following day that were to be delivered by the service provider at each delivery point, the sum of which quantities could not exceed the MDQ. If the sum of the user's nominations exceeded the MDQ, the service provider would reduce those nominations on a pro rata basis so as to total the MDQ. If the user failed to make a nomination by 1100, it would not be entitled to FT service on the following day.
Clause 19: Imbalance and zone variation Under clause 19.2(c), if there is an imbalance at the expiration or termination of the agreement, the user would have to pay the service provider an amount equal to the number of GJs of the imbalance multiplied by the excess imbalance charge rate.
Clause 20: Imbalance trading Imbalance trading is an alternative means of clearing an imbalance.
Clause 21: Allocation of receipt point quantities If the total quantity of gas supplied to a shared receipt point in a day is equal to the sum of confirmed quantities, each user is to be taken to have received its confirmed quantity. If the total quantity of gas supplied is greater or less than the sum of confirmed quantities, each user would be taken to have received the proportion the user's confirmed quantity bore to the total measured quantity.
Clause 22: Allocation of delivery point quantities This clause outlines a method for allocating delivery point quantities at unmetered and metered facilities.
Clause 24: Curtailment and interruption Epic proposed rights to curtail, interrupt or discontinue services, on a minimum one hour's notice (or less in an emergency) to deal with a shortfall in system capacity in circumstances that are not within the control of the user.
Clause 25: Operational flow orders An OFO is an announcement by the service provider of operating conditions, attributable to the conduct of the user, that breach the user's obligations under the agreement. It is conduct that adversely affects, or has the potential to adversely affect, the provision of services to other users. The OFO directs the user to take specific action to correct the conduct. Epic proposed that while an OFO was in effect the user would pay an amount equal to the default charge rate for each GJ of gas in respect of which the user was at variance. The default charge rate is set out in the Tariff Schedule.

Clause 27: Electronic bulletin board
Epic proposed that all operational and other 'day to day' communications between the service provider and the user take place on an electronic bulletin board (EBB). This would extend to all nominations by the user, the scheduling of all quantities for a day by the service provider, and the issuing of curtailment and other notices by the service provider. The service provider would determine when to implement the EBB; before then, all communications would take place in writing (mainly by facsimile). The user would be solely responsible for monitoring the EBB and its facsimile machine at all times.
Clause 28: Receipt and delivery points This clause sets out the service provider's requirements for ownership, access to, operation and use of equipment at receipt and delivery points.
Clause 29: Measurement at receipt and delivery points The quantity and quality of gas is to be measured in accordance with the terms of Schedule 9.
Clause 32: Payment If a user disputed an invoice, it would have to notify the service provider in writing within 4 days after receipt of the invoice, specifying the amount in dispute and the reasons for the dispute.
Clause 34: Force majeure If a party could not perform an obligation wholly or partly because of force majeure, it would be excused the corresponding amount of liability to the other party. Force majeure would not relieve either party from the obligation to pay for gas previously delivered. Force majeure would not suspend or reduce the user's obligation to pay any moneys payable under the agreement (including, where the agreement was for FT service, the capacity charge).
Clause 35: Liability and indemnity Epic proposed that the service provider's liability to the user for failing to provide the specified service under the agreement be limited to the lesser of: ■ the direct losses actually incurred by the user; and ■ the amount determined in accordance with the following formula: 2.5 x Gas Shortfall x C (where 'C' is the capacity charge rate) but this clause (refer clause 35.3) would not remove or reduce the user's obligation to pay the capacity charge in respect of the gas shortfall.
Clause 37: Dispute resolution and independent experts If any dispute, controversy or claim arises, the parties are to follow the procedures set out in the clause. This is a two-stage process, initially involving senior managers or executives and a mediator if the parties agree to that. Failing resolution, there is recourse to an independent financial or technical expert, depending on the nature of the dispute.

Clause 38: Assignment The *service provider* could, without the consent of the user, assign the whole or any part of *its* rights under the agreement to: ■ any related body corporate; or ■ any purchaser or transferee of an interest in the pipeline system. An assignment by the *user* would be conditional upon, and would not be binding until, the assignee had: executed a deed of covenant in favour of the service provider agreeing to be bound by the agreement; and paid the application fee to the service provider (clause 38.3).
Clause 39: Confidentiality The service provider is obliged to keep confidential all confidential information received from the user except with the prior written consent of the disclosing party or in the circumstances specified in the clause. Permitted disclosure is subject to the service provider obtaining a written undertaking of confidentiality from the person to whom the information is to be given, and in accordance with the user's agreement to disclose certain matters set out in clause 39.3.
Clause 42: Miscellaneous The service provider would promptly notify the user of any amendment of, or variation to, the access arrangement or the tariff schedule.
Clause 43: Definitions and interpretation This clause defines terms used in the proposed access arrangement and states how its provisions are to be interpreted.

3.2.3 General submissions by interested parties

TGT submitted that terms and conditions for the provision of haulage services should not be included in the access arrangement, but should be incorporated in a separate contract agreed between the user and Epic Energy.

Boral stated that the access arrangement failed to take account of the needs of the market, and suggested that the Commission convene a working party made up of the service provider, users and prospective users to make suitable amendments. Osborne strongly suggested that Epic be required to consult with the industry to arrive at arrangements that are acceptable to the stakeholders.

To summarise, a number of parties submitted that terms and conditions were unnecessarily rigid and the penalties imposed too severe. Some of these terms have since been amended by Epic and others remain the same. Epic made a general response to criticisms of various fees (principally the fee for applications for service), indicating that they are intended to defray costs incurred.[237]

A number of industry members indicated a desire to discuss Epic's terms with Epic in a public forum.

[237] Epic, response to submissions, 1 February 2000, p. 28.

3.2.4 Epic's response to submissions

The following clauses about which interested parties have concerns are discussed in this section: 11, 12, 15, 17, 18, 19, 21, 22, 24, 25, 27, 32, 34, 35, 38, 42 and 43. Clauses 9 (creditworthiness requirements), 13 (receipt and delivery point obligations of the service provider), 20 (imbalance trading) and 37 (dispute resolution), with which the Commission has concerns, are discussed in 3.2.5, along with Epic's response to those concerns. The Commission also draws the attention of the applicant and interested parties to clauses 28 (receipt and delivery points), 29 (measurement at receipt and delivery points), clause 39 (confidentiality) and clause 43.6 (precedence of documents).

Clause 11 Commencement, term and extension
Clause 6 FT service– requests for service, evaluation and queuing (clause 6.3(d) – commencement)

As noted by Epic, a number of parties made submissions supporting shorter contract terms.[238]

TGT, Boral, AGLES&M and Osborne all submitted that the 29–18 month time collar proposed in the original clause 11 was too restrictive. TGT submitted that IT service should not terminate pursuant to clause 11.3(b)(iii) where it had not been used during the year. TGT argued that IT service may be sought by a user as a peaking or backup service.[239]

According to Epic, it intended this collar to promote the efficient development and utilisation of capacity, and to prevent parties from contracting capacity too far in advance.[240] In response to submissions Epic proposes to delete this requirement from clause 11.1 in the original access arrangement, and to insert the following provision in the queuing policy in respect of FT service:[241]

> 6.3 A Request for Service must:
>
> …
>
> (d) show a Commencement Date being the first day of a Month which Month cannot be in a year that is later than that indicated below:
>
> | Year Request for Service is made: | Year of latest commencement of Service: |
> |---|---|
> | 2000 – 2003 | 2006 |
> | 2004 | 2007 |
> | 2005 | 2008 |

238 Epic, response to submissions, 1 February 2000, p.14.
239 TGT submission, 26 October 1999, p. 15.
240 Epic, response to submissions, 1 February 2000, p. 14.
241 Clauses 11.1 (b) and (c).

> The Prospective User must pay a non-refundable Application Fee to the Service Provider on the Day that the Request for Service is lodged. An Application Fee is not required for a request to vary service in accordance with clause 6.9.

Epic also proposes to amend the length of contract term for each type of service. In its response to submissions, Epic accepted that it should provide for a contract term of one year for FT service, on the basis that the formula for calculation of the capital contribution is amended as proposed in its revised extensions and expansions policy.[242] The relevant revised clauses dealing with contract term actually proposed by Epic read as follows:

> 11.2 The term of any Agreement must be at least 2 years.
>
> 11.3(a) Where the Agreement is for FT service, the User may extend the term by minimum periods of 2 years at a time.

Under clause 36.5, the user may terminate an IT contract at any time after 12 months by giving at least 10 business days' notice.

Although Epic proposes to adjust the term of extensions of FT contracts from 5 years to 2 years (to correspond with the initial term), it has not adjusted the period of notice required for seeking an extension (2 years).

Clause 12 Principal receipt and delivery obligations of user

TGT submitted that the maximum temperature at which gas should be received within 50km of Moomba should be 71°C rather than the 60°C proposed in the access arrangement. TGT submitted that the former is consistent with existing agreements.

Epic responded that a lower gas temperature is consistent with safer and cheaper operation and advocated introduction of a national standard.

Clause 15 Gas quality

Clause 15.1 and Schedule 3 to the access arrangement establish the gas specification that users must observe. Clause 15.3 described the actions the service provider would take to deal with non-specification gas that entered the system. It included the power to issue an operational flow order to the user to restrict or terminate supplies of non-specification gas into the system and to vent gas.

TGT argued against Epic tightening up the gas specification, submitting that the specification in the existing haulage agreements should be observed. Boral's submission criticised on environmental grounds the venting of non-specification gas, proposing that that course only be a last resort after assessment of the incident.

In response, Epic stated that the gas specification aims to be identical to that for the MSPS, which receives gas from the same sources. Epic submitted that the new specification does not affect any power generation facilities, and Santos did not raise an issue.

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[242] Epic, response to submissions, 1 February 2000, p. 15.

Epic proposes to renumber and amend clause 15.3(b)(iv) so that the service provider's powers would now read as follows:

> (iii) will if there is no other practical means of addressing the matter, vent or flare Gas to remove any or all of the Non-Specification Gas (and, in that event, will post a notification on the EBB).

Clause 17 Retention allowance

Boral, TGT and AGLES&M submitted that the original proposed retention allowance offered no incentive to minimise compressor fuel usage and thus the cost to users, and that the fixed 5 per cent quantity for IT service was unreasonable.[243]

In response, Epic proposes the following addition to the access arrangement:

> 17.1 (c) The Service Provider will use all reasonable and prudent efforts to minimise the quantity of System Use Gas that is required for the operation of the Pipeline System.

Epic proposes to remove from the access arrangement the 5 per cent fixed retention allowance for IT service (clause 17.4 in the original proposal).[244] Clause 17.3 'Calculation of Retention Allowance' would now apply to both FT and IT service, so that there would be no IT service differential. Epic has developed a pro rata formula for calculating the retention allowance that would have to be paid by each FT and IT user and each user having a contract for other ('non-specified') services. The formula takes account of system-use gas to be supplied by existing users under the 1995 haulage agreements. Epic's proposed revisions to the access arrangement incorporate an acknowledgment by the parties that total system–use gas quantity will in future be allocated pro rata across all users on the basis of daily nominations (clause 17.5). This is to come into effect from the earlier of the revisions commencement date or the expiration or termination of the existing haulage agreements.

Proposed new clauses 18.3(e) and 18.5(f) provide for the service provider to post on the EBB each day the retention allowance per centage.

Clause 18 Forecasting, nominating and scheduling of service

Osborne, Boral and AGLES&M submitted that this clause was rigid, the process protracted and insensitive to customer needs and the nomination process requirements inflexible and unnecessarily punitive.

Osborne submitted that the proposed nomination procedures were unsuitable for a company such as Osborne that uses gas for electricity generation. According to Osborne, this was exacerbated by the 'excessive' and 'restrictive' excess imbalance charges,[245] which were also criticised by TGT[246] (see discussion under clause 19 below). Boral similarly submitted that clauses 18.2 and 18.3, relating to the nomination procedure, 'demonstrate a heavy handed approach that should be modified to reflect the reality of a practical working relationship between the parties'. Boral suggested a

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[243] Discussed by Epic, response to submissions, 1 February 2000, p. 28.
[244] Epic, response to submissions, 1 February 2000, p. 29.
[245] Osborne submission, 7 October 1999, p. 3.
[246] TGT submission, 26 October 1999, pp. 15-16.

fallback response or a default process for those users who do not nominate by a specified time.[247] AGLES&M commented that the proposed time, 0830, specified for confirmation of the prior day's receipts is earlier than the present arrangements and unlikely to be achievable (clauses 18.2 and 18.5(b)).

In response to submissions, Epic has not put forward a change to the 1100 nomination time for users but does propose that notification of the retention allowance percentage for each user be posted on the EBB by 1700 on a gas day.

Epic proposes that FT service users must furnish the service provider, no later than 1730, with a copy of confirmation from the producers (or other suppliers) that they will supply the initial nominated receipt quantity on the following day.

With respect to IT service, Epic proposes that a notice of capacity that the service provider reasonably and prudently determines will be available for IT service on the following day be posted no later than 1530 every day (previously 1200). The IT service user's nomination would be required no later than 1600. Notification of the quantity of gas that will be delivered would be posted on the EBB not later than 1630. Epic proposes that if nominations exceed available capacity at a single delivery point, capacity would be allocated pro rata on the basis of users' respective nominations.

Confirmation of receipt point quantities would have to be received no later than 1730 on a day. If no confirmation were received, the same provisions as were originally proposed would apply; that is, the user would be deemed not to have made any nomination for the following day and penalties would result if gas were injected into the pipeline and received by the user on that day.

Epic did not respond to AGLES&M's query about the 0830 time for confirmation of the prior day's receipts. However, Santos has advised the Commission: [248]

> The clause can and is being fulfilled by the Operator of Moomba. There is a possibility that as the figures are reconciled at a later date in the normal course of business, there could be a change in the numbers.

Clause 19 Imbalance and zone variation

AGLES&M queried the 'Correction of Imbalance' term (clause 19.2), stating that an imbalance in which the service provider receives more gas than is delivered requires an alternative settlement mechanism. In the original proposal, any imbalance at the date of expiration or termination of agreement required a payment to the service provider by the user. AGLES&M submitted that an imbalance in favour of the service provider would require a payment by the service provider or some other settlement mechanism.[249]

In response to AGLES&M's submission, Epic proposes to revise clause 19.2, with 19.2(c) now reading as follows:

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[247] Boral Energy submission, 12 October 1999, pp. 5-6.
[248] Santos, e-mail to Commission, 4 July 2000.
[249] AGLES&M submission, 25 October 1999, p. 3.

> 19.2(c) If, at the date of expiration or termination of the Agreement there is an Imbalance, then despite the expiration or termination of the Agreement, the User must:
>
> (i) if the Imbalance is negative, pay to the Service Provider (within 7 Days after receipt of an invoice) an amount equal to the number of GJs of the Imbalance multiplied by the Excess Imbalance Charge Rate; and
>
> (ii) if the Imbalance is positive, make arrangements with another person with an Applicable Contract to sell to that person that quantity of Gas and take delivery of it as soon as possible.

TGT submitted that the proposed imbalance charges were excessive in that they applied if there was an imbalance of more than 8 per cent for one day, and they applied to the whole quantity of the imbalance.[250]

Epic responded that only the 'Excess Imbalance' attracts the charge; the 8 per cent threshold amount does not attract the charge.[251] Epic submitted that this is a generous allowance. Epic proposes to modify clause 19.3 to make it clear that the 'Excess Imbalance Charge' only applies to the excess imbalance, and not to the 'Imbalance Buffer Quantity' (i.e. an excess up to the 8 per cent threshold).

Boral submitted that the daily imbalance limit of 8 per cent and the 8 per cent permitted zone variation from nominations were unworkable for it and likely to lead to dispute.[252] Osborne made similar criticisms in the light of what it called the 'inflexible' nomination procedure.[253]

Epic responded that the buffer quantity is comparable for other major pipelines, and put arguments to the Commission to the effect that the proposed figure is appropriate to the pipeline system as it becomes subject to third-party access, given that it is not supported by gas storage or LNG facilities.

Clause 21 Allocation of receipt point quantities

In its submission Boral proposed that the allocation method for shared *receipt* points should only represent a default allocation method, and that pre-existing alternatives should be recognised.

Epic expressed agreement with Boral's submission on shared receipt points and proposes to amend clause 21.2 so that it would now begin as follows:[254]

> Subject to any different allocation arrangements agreed between the Producers, the User and all Other Users using a Receipt Point which are notified to the Service Provider, the following allocation procedures will apply …

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[250] TGT submission, 26 October 1999, p. 16.
[251] Epic response to submissions, 1 February 2000, p. 22 and Epic letter to Commission, 15 June 2000, p. 3.
[252] Boral submission, 12 October 1999, p. 6.
[253] Osborne submission, 7 October 1999, p. 3.
[254] Epic, proposed revisions to access arrangement, 2 March 2000.

Epic also proposes to add a provision (clause 21.2(c)) to deal with the allocation of receipt quantities when no confirmed quantities are provided to the service provider on that day.

Clause 22 Allocation of delivery point quantities

Boral suggested that the allocation method for shared *delivery* points was unnecessary; where a delivery point is shared the users could advise an allocation method to allocate total measured quantity at that point. Boral commented: [255]

> By providing an allocation method at the delivery point the pipeline owner potentially creates a disconnect with the distribution system allocation method.

With respect to clause 22.3(a)(ii)(B) AGLES&M submitted: [256]

> This clause requires that a delivery point allocation method based on fixed percentages be in place. AGLES&M disagrees that the allocation method should be so rigidly specified as this may be inequitable for some users, and believes that a flexible allocation method should be considered, particularly to cater for users who have seasonal or cyclical demand.

Epic responded to both submissions, stating that it agreed with neither.

In response to Boral's submission, Epic stated that not every delivery point feeds into the distribution system, and that an allocation method for MAPS and the distribution system is neither currently in use nor required by the code.[257]

Epic's response to AGLES&M's submission was that this is an area in which clarity is required and the proposed allocation method is equitable to all users.[258] Epic stated that attempting to deal with cyclical or seasonal demands presents considerable potential uncertainty and thus difficulty. According to Epic, the 'best (and only viable) alternative for those is to install actual metering facilities'.[259]

In response to further discussions with Commission representatives about Boral's concern, Epic stated: [260]

> There is no requirement for a Conforming Allocation Procedure to include at least one metered point (other than the delivery point on the MAP).
>
> In order to remove possible ambiguity, it is proposed that in Clause 22.3(a)(ii) the words '*if any*' be added after the words '*Metered Facilities*' in the brackets.

Clauses 24 and 25 Curtailment notices and operational flow orders
Clause 37 Dispute resolution and independent experts

Interested parties did not make submissions regarding curtailment notices (clause 24). However, Boral submitted that the penalty for breach of the OFO provisions in clause 25 is extreme (default charge rate of $7.50 GJ). TGT also criticised the rate and

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[255] Boral submission, 12 October 1999, p. 7.
[256] AGLES&M submission, 25 October 1999, p. 3.
[257] Epic, response to submissions, 1 February 2000, p. 32.
[258] Epic, response to submissions, 1 February 2000, p. 31.
[259] Epic, response to submissions, 1 February 2000, p. 30.
[260] Epic, letter to Commission, 15 June 2000, p. 3.

submitted that the charge should relate directly to the costs or losses for which Epic would be liable in the event of the user's non-compliance.[261]

Boral submitted that there must be a requirement that an OFO only be issued when all other reasonable attempts to control a situation have failed and there is a serious risk of the user's actions causing the service provider to breach another contract. Even then, the extent of any restriction should be the minimum necessary to prevent the breach and should be adjusted as the situation changes. Boral submitted that the service provider should take all reasonable steps to ensure that the OFO is received and acted upon by the user. This should include telephone and fax contact in addition to the EBB. Boral stated that the indemnity provided under the OFO provisions should only apply for the liabilities of the user in complying or failing to comply with the OFO and for the service provider's costs if the user failed to comply.

Epic responded that the default charge rate (which is applicable to clauses 24 and 25) is not meant to be liquidated damages, rather a negative incentive to enforce behaviour. Epic submitted that a claim based on a default charge rate would be simpler to resolve.

In the context of this penalty and the indemnities required of users under clauses 24 and 25, Commission representatives raised concerns with Epic that the boundary between circumstances in which the clauses would be used was unclear. In response, Epic gave the following explanation: [262]

> - Clause 24 – Curtailment Notice is specifically directed to adequacy of capacity to accommodate the scheduled quantities for any reason.
> - Clause 25 – OFO covers much the same ground but specifically applies to:
>   - operating conditions (refer clause 25.2)
>   - events attributable to breach by the user of its obligations.
>
> It is acknowledged there is potential overlap of 'cause' and of rights and responses. However, we view the OFO as being the more significant measure when the magnitude of events require such action. The Curtailment Notice potentially providing a means of controlling less significant behaviour. For the purpose of this access arrangement we would propose to maintain both control measures.

In its proposed revisions of 2 March 2000 to the access arrangement, Epic has amended clause 25.3(a) to now read as follows:

> The Service Provider will issue an OFO by posting the OFO on the EBB. Notification that an OFO has been issued will be sent by facsimile to the User and the Service Provider will also telephone the User to advise that the OFO has been or will be issued.

In response to discussions with Commission representatives, Epic agreed to add, in clause 24.2(a), similar wording to that in 25.3(a), as follows: [263]

> Notification that a Curtailment Notice has been issued will be sent by facsimile to the user and the Service Provider will also telephone the user to advise that the Curtailment Notice has been issued.

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[261] TGT submission, 26 October 1999, p. 16.
[262] Epic, letter to Commission, 15 June 2000, p. 4.
[263] Epic, letter to Commission, 15 June 2000, p. 3.

Commission representatives raised concerns with Epic that users might not have effective access to procedures for resolving disputes over the circumstances in which a curtailment notice or OFO had been issued. It appeared to Commission representatives that the charges and indemnity potentially arising under clause 25 would fall into the category of financial issues, on which the user would have little room for argument as to liability, given the then proposed drafting of clause 25.

In response, Epic proposes to amend clause 37.2(a)(i) to clarify the ambit of matters falling within the scope of dispute resolution by a technical expert. It proposes to do this by adding the words below in bold type, so that the clause would now read as follows: [264]

> a 'Technical Matter' means any matter involving issues relating to the receipt, transportation and delivery of Gas under the Agreement which is capable of determination by reference to engineering or scientific knowledge and practice **and includes the grounds on which the Service Provider has issued a Curtailment Notice or an OFO**; and

As part of its revisions of 2 March 2000 to the access arrangement, Epic proposes to replace the word 'will' with 'is entitled to' in the phrase 'the Service Provider will take action to give effect to those requirements' (clause 25.4(b), dealing with OFOs).

Clause 27 Electronic bulletin board

Boral submitted that the EBB would be a useful tool once there are several users on the system. Boral predicted that, by that time, users would likely be on line to EBBs from several pipelines. Boral made submissions in respect of uses (other than a routine nomination process) of the EBB when a response is required within a limited time or when a failure to respond to a notice will result in an adverse consequence for the user. Boral submitted that the service provider should be required to either have an acknowledgment facility on the EBB (and to follow up if the message remains unread in a reasonable time) or to use a secondary method such as phone or fax to alert the user to the message. Boral argued that the content and transfer protocols should be standardised across all service providers to prevent a proliferation of different and incompatible systems.[265]

AGLES&M submitted that the $25 charge for access to the electronic bulletin board is trivial and should be waived.[266]

Epic responded that it is finalising the design and implementation of an EBB system. That system would operate on a user's personal computers. Requirements for monitoring of facsimiles would be similar to those for the EBB system. Epic indicated that communications made after office hours would be followed up, on the 'manual' basis suggested (that is by telephone and fax as appropriate). Epic indicated that it would be giving customer training and taking account of feedback. Epic proposes to modify the clauses dealing with indemnities given by the user, in respect of breaches of user obligations and other matters arising from operation of the EBB. Epic now proposes to deem the user's EBB obligations to be 'material obligations' for purposes

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[264] Epic, letter to Commission, 15 June 2000, p. 3.
[265] Boral submission, 12 October 1999, p. 8.
[266] AGLES&M submission, 25 October 1999, p. 4.

of clause 36.1 (default by user). As noted above, Epic made a general response to criticisms of various fees (principally the fee for applications for service), indicating that they are intended to defray costs incurred.[267]

Clause 32 Payment

AGLES&M submitted that the limit of 4 days in which to notify a payment dispute was unreasonably brief and recommended a period of at least 10 business days. In response, Epic proposes to revise clause 32.2(a) as follows:

> The User must, by the due date for payment of the invoice, notify the Service Provider in writing specifying the amount in dispute and the reasons for the dispute.

In response to Commission concerns that the current requirement for payment within 7 days of receipt of invoice could still create hardship, Epic proposes to extend the period to 9 days (clause 32.1).[268]

Clause 34 Force majeure

TGT submitted that it was unreasonable for Epic to require continued payment of the capacity charge during a force majeure event.[269]

In response, Epic proposes to revise clause 34.4(b) so that it would now read as follows:

> 34.4(b) An event or circumstance of Force Majeure will suspend or reduce the User's obligation to pay any moneys applicable under the Agreement (including, where the Agreement is for FT Service, the Capacity Charge) only where, and to the extent that, the Force Majeure event prevents the Service Provider from providing the relevant Service.

Clause 35 Liability and indemnity
Clause 43.1 Definition of 'direct losses'

TGT submitted that the limitation of the service provider's liability to 'direct losses' and to two and a half times the capacity charge rate was unreasonable, and referred the Commission to clause 38.6 of its existing haulage agreement.[270] The Commission is unable to disclose the terms of that clause except pursuant to the process prescribed by section 42 of the Law (to the extent the parties may require that). The Commission describes the clause in Confidential Annexure 4 Part D.

Epic responded that the regime it has offered is reasonable, commercial and appropriate for a service provider that is required to accept a regulated (fixed) return.[271] Epic noted that the service provider's liability is limited in relation to the transmission system in Victoria. In discussions with Commission representatives, Epic representatives submitted that the proposed regime is simple and certain.

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[267] Epic, response to submissions, 1 February 2000, p. 28.
[268] Epic, letter to Commission, 15 June 2000, p. 4.
[269] TGT submission, 26 October 1999, p. 16.
[270] TGT submission, 26 October 1999, p. 16.
[271] Epic, response to submissions, 1 February 2000, p. 33.

In response to criticisms of penalties attached to the EBB and trading policy, Epic proposes to modify the liability and indemnity provisions to remove references to those provisions of clauses 26 and 27 that it now proposes to delete. Those clauses are discussed separately in this chapter.

Clause 38 Assignment

Clause 38.1(a) permits the *service provider,* without the user's consent, to assign its rights under an agreement with the user. AGLES&M commented: [272]

> It would be reasonable to expect that no such assignment would occur without the assignee having the technical and financial wherewithal to satisfy the agreement's obligations.

In response, Epic stated that it proposes to amend the clause so that it would read as follows.[273]

> 38.1(a) The Service Provider may, without the consent of the User, assign the whole or any part of its rights under the Agreement to any transferee of an interest in the Pipeline System. The assignment will not be effective until the assignee executes a deed of covenant in favour of the User agreeing to be bound by the Agreement.

Epic stated that the aim of the amendment is to tie the economic entitlement to revenue, to ownership of the pipeline system. Epic pointed out that assignment would require Ministerial consent, and the Minister must take into account the technical and financial competence of any potential assignee of an interest in the pipeline. (The Commission understands that the Minister for Minerals and Energy (SA) is responsible for approving the transfer of pipeline licences under the Petroleum Act (SA).)

Turning to assignments by the *user,* AGLES&M submitted that a $5000 fee, payable by the assignee pursuant to clause 38.2(c)(ii) and additional to the original application fee, was unreasonable. Epic proposes to revise the clause so that the relevant fee would cover:[274]

> costs reasonably incurred in:
>
> (A) preparing the required deed of covenant; and
>
> (B) assessing whether the assignee meets the Creditworthiness Criteria.

Both Boral and TGT submitted that clause 38.3 'Change of Control of the User' required revision.[275] TGT commented:

> … the change of control provision is unreasonably restrictive, and for listed companies such provisions are impractical. Epic Energy has not proposed a similar provision with respect to ownership of the MAPS.

Epic proposes to amend the clause to exclude ASX-listed companies from its application, but otherwise submits that the clause is appropriate and reflects commercial practice.

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[272] AGLES&M submission, 25 October 1999, p.4.
[273] Epic, response to submissions, 1 February 2000, p. 30.
[274] Epic, proposed revisions to access arrangement, 2 March 2000.
[275] Boral submission, 12 October 1999, p. 8; TGT submission, 26 October 1999, p. 16.

Clause 42.1 Amendment of service agreements

TGT submitted that it was unreasonable for Epic to amend the terms and conditions of agreement without the user's consent.[276] Boral expressed similar sentiments, but submitted that intended changes be referred to a committee of stakeholders.[277] Epic responded that any such amendment would involve public consultation through the regulator, and the majority of service agreements were likely to involve negotiated terms that could involve deletion of clause 42.1. It rejected Boral's proposal for a committee.

Clause 43 Definitions and interpretation – MHQs (Schedule 2)

TGT submitted that MHQs should be related to maximum capacities rather than scheduled delivery quantities, or they would be unreasonably restrictive considering volatility of demand for gas generation of electricity.[278] Epic rejected the submission on the basis that the system aimed to balance MHQs delivered with MHQs received, that the imbalance buffer assisted users and that a change to the provision could cause disadvantage to some users.

3.2.5 Commission's considerations

The response of interested parties to the proposed access arrangement was to request a much greater level of flexibility. Since making its application in April 1999 Epic has proposed revisions to increase the flexibility of the arrangement. However, the Commission still considers that, as a whole, the arrangement favours the service provider, particularly in the way it limits the obligations of the service provider and requires the user to indemnify the service provider in a range of situations. Taking into account other clauses not dealt with in submissions but raised by the Commission with Epic, the Commission considers that a number of clauses (discussed below) are onerous to users and potential users and in some cases ambiguous.

Where the Commission requires amendments to the access arrangement not already addressed by Epic's proposed revisions, these are set out below.

Clause 9 Creditworthiness

The Commission considers that the creditworthiness requirements of the original access arrangement are unnecessarily strict, and that some of the information required is either not relevant to a prospective user's creditworthiness or not necessary to sustain an ongoing commercial relationship between the parties. The Commission is concerned in particular with the discretion afforded the service provider under clause 9.1 and the scope of information requirements in clause 9.2.

In response to these concerns, Epic stated that its view still is that clause 9 does not impose an unnecessary burden on users or prospective users. However, it indicated that

[276] TGT submission, 26 October 1999, p. 16.
[277] Boral submission, 12 October 1999, p. 5.
[278] TGT submission, 26 October 1999, p. 16.

it would find an alternative form of wording satisfactory, Epic noting that EAPL had proposed a similar form of wording in its proposed access arrangement (see below). [279]

Subject to the proposed revised clause being cross-referenced to Schedule 2, Form 3, of the access arrangement so as to clearly indicate the credit and financial information that the service provider can reasonably request of the user or prospective user, the proposed revision satisfies the Commission's concerns.

Proposed amendment A3.9

For the access arrangement to be approved, the Commission requires that clauses 9.1 and 9.2 be modified so that:

- they read as proposed by Epic in its letter dated 15 June 2000 to the Commission, as follows:

  9.1 The Service Provider will not be required to commence the Specified Service for a Prospective User or to continue to provide the Specified Service to the User if the Prospective User/User is not able to satisfy the Service Provider of the ability of the Prospective User/User to fulfil its obligations under the Agreement.

  9.2 If the Service Provider is not satisfied that the Prospective User/User will fulfil its obligations or continue to fulfil its obligations under the Agreement, the Service Provider may require, and the Prospective User/User will provide, security for those obligations to the Service Provider's reasonable satisfaction.

- they are cross-referenced to Schedule 2, Form 3, of the access arrangement so as to clearly indicate the credit and financial information that the service provider can reasonably request of the user or prospective user.

Clause 11 Commencement, term and extension
Clause 6 FT service - requests for service, evaluation and queuing (clause 6.3(d) – commencement)

The Commission considers that the revisions proposed by Epic to delete the time collar from clause 11.1 and to amend clause 6.3 in respect of the commencement date respond to the concerns of interested parties and are reasonable.

Epic raised concerns that assets would be at risk of being stranded if it accepted short contract terms. However, it has sought to offset this risk in its revised capital contribution formula. In the circumstances, the Commission accepts the proposed contract term of 2 years for FT service. Given that IT users are required to fully fund any required new facilities, the Commission considers that the service provider should accept prospective users' reasonable requests for a shorter contract term.

Clause 11.3 is confusing in providing that the user may extend the term by minimum periods of two years, but must give notice of not less than two years before the termination date.

[279] Epic, letter to Commission, 15 June 2000, p. 3.

Given that firm service in the pipeline is fully contracted, an issue arises as to whether a provision guaranteeing automatic rollover of firm service agreements would make it difficult or uneconomic for new customers, especially aggregators, to gain access to the system. Unless spare capacity became available for firm service, they would be obliged to contribute to extensions or expansions. That would likely mean that service to new customers would be provided on more expensive terms than for an existing user. On the other hand, existing users could be expected to attempt to secure capacity on terms that are no worse than at present. As noted in section 3.5.3 later, TGT made a submission that if there were insufficient capacity to cover demand from 2006, as a 'foundation shipper', TGT 'should have some priority to the existing capacity, and should not be obliged to contribute further to the costs of expanding pipeline capacity'.[280]

In the Commission's view such market concerns arise from Epic's present expansions and extensions policy and from code provisions for new facilities investment.

Epic has advanced arguments in support of its conservative estimate of market growth potential. While, in the Commission's view, Epic's pessimistic market outlook may not be well founded or may to some extent be self-perpetuating, the code gives service providers the discretion to not undertake speculative investment.

The capital base proposed by Epic for this access arrangement period corresponds with the primary capacity specification of the pipeline system and includes the 42TJ per day capacity enhancement for services to TGT. It does not at this stage include the 25TJ per day enhancement for services to National Power's Pelican Point Power Station.

It is appropriate for the capital base to correspond with the primary capacity specification of the system in use. Section 8.15 provides that the capital base of a covered pipeline 'may be increased from the commencement of a new Access Arrangement Period to recognise additional capital costs incurred in constructing New Facilities for the purpose of providing Services'. As noted in section 3.6.4 following, Epic's stated intention is to increase the capital base at the next review period by the amount of the new facilities investment that is recovered by the reference tariffs. The Commission considers that Epic should clarify whether this means that it is unlikely that the primary capacity specification will be increased at the next review period.

Clause 10.5(b) of the access arrangement (as originally lodged and as Epic proposes to revise it) treats new facilities investment over a threshold level as falling outside the covered pipeline for purposes of the code 'unless included in a future review'.

Clause 10.5(b) as originally lodged also provided that the service provider would determine terms and conditions of access to such facilities on a case-by-case basis. While Epic has agreed to delete that part of the clause, Epic will still determine terms and conditions of access to such facilities without regulatory oversight during the access arrangement period (as the code provides). That is of little consequential effect for the market if, as indicated by Epic, enhancements are sized for a specific user's needs and little, if any, additional capacity is made available for firm service.

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[280] TGT submission, 26 October 1999, p. 13.

It is likely to be of consequence to the market that any new capacity to provide for firm service is likely to be tied up well into the future by parties contracting for enhancements to capacity during the access arrangement period.

The termination of the TGT and Origin Energy haulage agreements for most of the pipeline's capacity at the end of 2005 does hold out the prospect of established firm capacity coming available. However, it would be surprising if those parties did not negotiate to have their expected capacity requirements satisfied in new agreements. Such agreements would impact on whether firm capacity is available under the access arrangement for the next period (as the code permits), just as the present agreements impact on firm capacity available under the access arrangement for the immediate period. The Commission addresses the implications for Epic's proposed queuing policy in section 3.5.5 below.

The Commission does not consider that altering the renewals provision from that proposed in the revised access arrangement (other than as indicated below) would adequately address the issue of encouraging new entry to the gas supply market. Rather, it is a question of whether speculative investment or investment on liberalised terms would foster market growth.

The Commission accepts TGT's submission in respect of clause 11.3(b)(iii), that IT service should not automatically terminate where it has not been used during the year.

Proposed amendment A3.10

For the access arrangement to be approved, the Commission requires that clauses 6.3, 11.1 and 11.2 be amended in the manner proposed in the lodgement of 2 March 2000, subject to adding to clause 11.2 a provision to the following effect:

> The Service Provider will accept reasonable requests for a shorter Term of Agreement for IT service.

The Commission also requires that clause 11.3 be amended to read as follows:

> 11.3(a) Providing the User is not in default at the date of notice, the User may extend the Term for FT service by minimum periods of 2 years at a time:
>
> (i) by giving written notice to the Service Provider not less than 3 months prior to the Termination Date; or
>
> (ii) by giving notice at a time and in a manner previously arranged with the Service Provider.
>
> (b) Where the Agreement is for IT Service, the Term will automatically extend on a year by year basis from the Termination Date unless:
>
> (i) the User has given written notice of termination to the Service Provider under clause 36.5;
>
> (ii) the User is in default under the Agreement at the Termination Date.

Clause 12 Principal receipt and delivery obligations of user

The Commission agrees with TGT and is not sympathetic to Epic's proposal for a lower temperature for gas entering the pipeline within 50km of Moomba than that

required of the existing users. Adoption of the temperature specified in the proposed access arrangement would place new users at a disadvantage to existing users.

The Commission is sympathetic to Epic's desire to reduce the maximum inlet temperature to 60°C, provided agreement is reached with all users of the pipeline. (Related comments on the issue of gas quality are set out in response to clause 15, discussed below.)

Proposed amendment A3.11

For the access arrangement to be approved, the Commission requires that Epic amend clause 12.4 by replacing the term '60°C' with the following:

> 71°C, or such lesser temperature as may be agreed at a future date with all users of the pipeline system at that time or as may be agreed as part of a future national gas code.

Clause 13 Principal receipt and delivery obligations of service provider

There appears to be a typographical error ('to') in clause 13.3 in the proposed revisions of 2 March 2000, and the Commission suggests insertion of the word 'so' in its place.

As a separate issue, in its proposed revisions of 2 March 2000, Epic had proposed to modify the wording of clause 13.3 so that the final sentence would read as follows:

> The User acknowledges that the Service Provider can only fulfil this obligation if the User meets its obligations under clause 12, and if all Other Users meet their corresponding obligations to the Service Provider.

Commission representatives raised concerns with Epic that the service provider should not be excused from its delivery obligations to a user on the grounds that all other users had not complied with their obligations. Commission representatives envisaged that if and when a diverse user base is established, the actions or inaction of some users could conceivably cancel each other out and not prevent the service provider from fulfilling its obligations. In response, Epic proposes that all words after the comma in the quoted sentence be deleted.[281]

Proposed amendment A3.12

For the access arrangement to be approved, the Commission requires that clause 13.3 be amended as proposed by Epic in its lodgement of 2 March 2000 and as modified by its letter dated 15 June 2000.

Clause 15 Gas quality

In the Commission's view it is essential to interstate trade and competition in gas supply that the specifications of gas for interconnected pipeline systems be harmonious.

[281] Epic, letter to Commission, 15 June 2000, p. 5.

The specifications in the existing haulage agreements are minimum standards, which raises the inference that they may be subject to change over time. Provided any safety and operational issues affecting shippers and consumers are thoroughly addressed in the process, the Commission supports revision of gas specifications to achieve consistency and equality for all users. The Commission considers that in response to the issue raised by TGT, Epic's assurance needs to go further than its present statement 'Epic's technical advice is that this specification does not affect any power generation facilities'.[282]

Clause 15.3 describes the actions the service provider will take to deal with non-specification gas that enters the system.

The Commission appreciates that contractual arrangements for the supply of gas are mainly between the Producers and NGASA or users; and between NGASA and the two existing users. Latterly, supply arrangements between end-users and other suppliers have come into being. The supply arrangements do not directly involve Epic and clause 15.3 has been drafted from that perspective.

However, the focus of clause 15 is on emergency measures to deal with non-specification gas. Epic has addressed Boral's concern about venting gas by providing for flaring and adding the words 'if there is no other practical means of addressing the matter' before the venting or flaring option.

As it stands, the revised version of clause 15 proposed by Epic still places a greater onus on the user than on Epic to bring about a termination of off-specification gas supply. However, with its monitoring equipment, Epic may often be in a better position to quickly achieve this result than are users. In these circumstances the Commission considers that Epic should amend clause 15.3(b)(ii) to better reflect this reality. Accordingly, the Commission proposes the following amendment.

Proposed amendment A3.13

For the access arrangement to be approved, the Commission requires that clause 15 be amended as proposed by Epic in its lodgement of 2 March 2000, subject to:

- Epic amending clause 15.3(b)(ii) by replacing the word 'may' with 'will' and by adding after the word 'System' in that clause words to the following effect:

  > … and for that purpose will communicate directly with the operator of the Moomba processing plant or other originator of the non-specification gas (if known) to bring about a termination of the supply of that gas as soon as it becomes aware of the problem;

- Epic describing the steps it will take to ensure that users are not adversely affected by the proposed change in gas specification.

[282] Epic, response to submissions, 1 February 2000, p. 34.

Clause 17 Retention allowance

In the Commission's view the revisions for calculating the retention allowance that Epic proposes go some considerable way to addressing the concerns expressed by interested parties. However, the Commission believes that the revised proposal does not set a sufficiently high standard for the management of system-use gas by the service provider and therefore proposes a revised standard. Observance of the standard is an issue that would fall within the scope for audit when the access arrangement is reviewed.

Proposed amendment A3.14

For the access arrangement to be approved, the Commission requires that, in addition to making its other proposed revisions of 2 March 2000 to clause 17, Epic change its proposed revision to clause 17.1(c) to adopt the following standard:

> 17.1 (c) The Service Provider will use its best endeavours to minimise the quantity of System Use Gas that is required for the operation of the Pipeline System.

Clause 18 Forecasting, nominating and scheduling of service

The Commission acknowledges that MAPS is operating at full capacity under contractual arrangements determined in 1995 and therefore it is difficult for the service provider to offer a highly flexible nomination procedure. The Commission is willing to approve clause 18 in the revised form proposed by Epic, subject to further consultation after interested parties have considered this draft decision and the amendments proposed by Epic.

Proposed amendment A3.15

For the access arrangement to be approved, the Commission requires that clause 18 be amended in the manner proposed in the revised lodgement of 2 March 2000.

Clause 19 Imbalance and zone variation

In the light of the Commission's comment that it is difficult for the service provider to offer a highly flexible nomination procedure, the Commission recognises that the revisions to clause 19 proposed by Epic go some way to addressing user concerns. Epic has addressed criticisms of the excess imbalance charge by proposing a clarifying amendment.

However, the Commission considers that even as Epic proposes to modify it, clause 19.2(c) is onerous for users. The Commission therefore proposes to further revise that clause, as set out in the proposed amendment. Commission representatives also canvassed in discussion with Epic representatives the possibility of the service provider's facilitating imbalance trading, for example, via the EBB, but Epic did not respond to that point.

The Commission considers that clause 19 should be reviewed as a whole when revisions to the access arrangement are submitted, in 2005. Such a review would be of greater practical consequence than now, with the existing haulage agreements terminating at that time. The Commission invites submissions on the question of whether the clause should be within the scope of review if a significant major event were to be defined to trigger an earlier review (see 3.7.4 below).

Proposed amendment A3.16

For the access arrangement to be approved, the Commission requires that, in addition to making its other proposed revisions of 2 March 2000 to clause 19, Epic amend its proposed revision to clause 19.2(c) to read as follows:

> 19.2(c) If, at the date of expiration or termination of the Agreement there is an Imbalance, then despite the expiration or termination of the Agreement, the User must:
>
> (i) if the Imbalance is negative, pay to the Service Provider (within 10 Days after receipt of an invoice) an amount equal to the number of GJs of the Imbalance multiplied by the Excess Imbalance Charge Rate; and
>
> (ii) if the Imbalance is positive, make arrangements to sell the amount of the Imbalance to another user. The Service Provider will assist the User (for instance, by providing access to the EBB) so that the user has the opportunity to realise from the sale the full market value that would be achieved in the normal course of trading.

Clause 20 Imbalance trading

The access arrangement provides, in clause 20, for imbalance trading as an alternative means of clearing an imbalance. Commission representatives raised a concern with Epic representatives that clause 20.2(b) (in the form proposed by Epic on 2 March 2000) was open to interpretation that, notwithstanding trade to net out the excess imbalance having occurred, the user was still responsible for the 'excess imbalance'. Commission representatives raised the possibility of clarification of the clause. In response, Epic stated that the 'intent is that the trade/net out is a means of correcting/clearing the imbalance'.[283]

Proposed amendment A3.17

For the access arrangement to be approved, clause 20.2(b) must be amended so that it is clear that the charge applies to the outstanding excess imbalance, i.e., to that imbalance outstanding after any and all exchanges or trades have been made.

[283] Epic, letter to Commission, 15 June 2000, p.3.

Clause 21 Allocation of receipt point quantities

The Commission considers that the amendment to clause 21.2 proposed by Epic adequately addresses the submissions by Boral described in 3.2.3 above. The Commission notes the proposed addition of clause 21.2(c).

Proposed amendment A3.18

For the access arrangement to be approved, the Commission requires that clause 21 be amended as proposed in the revisions to the access arrangement of 2 March 2000.

Clause 22 Allocation of delivery point quantities

The submissions on this matter came from companies associated by ownership interests with downstream reticulators of gas, one of them the incumbent in South Australia. The Commission is concerned when there is disagreement between the transmission and distribution sectors over the procedure for allocating gas to unmetered facilities, because lack of consensus on metering and allocation is a potential barrier to entry to gas retailing markets.

The Commission is satisfied that the amendments now proposed by Epic adequately address Boral's submission. In respect of AGLES&M's concern, the Commission's interpretation of clauses 22.3(b) to (d) is that, subject to agreement amongst users, users may vary the allocation method to take account of seasonal variations. In contact with Commission representatives, AGLES&M has suggested that Epic could make this latitude explicit in the clause so as to avoid the term 'fixed' in the clause being misconstrued to mean that allocations based on daily nominations (or some other appropriate variable) would not be considered.[284]

For reasons stated in section 3.2.5 of this draft decision, the Commission is concerned that there does not appear to be a provision for allocation by the service provider in the absence of agreement by the parties. Nor is there provision for Epic to put one in place in the absence of agreement between the parties. The Commission invites submissions from interested parties as to how this might best be achieved.

Proposed amendment A3.19

For the access arrangement to be approved, the Commission requires that Epic incorporate in it the revision to clause 22.3(a)(ii) proposed in Epic's letter to the Commission of 15 June 2000, that is, the words 'if any' be added after the words 'Metered Facilities' in the parentheses.

[284] AGLES&M, e-mail to Commission, 24 May 2000.

Clauses 24 and 25 Curtailment notices and operational flow orders

Clause 41 Notices

The Commission considers that clause 24 is more prescriptive than comparable provisions applying to other pipeline systems. Of particular concern is the one-hour time period in which a user must comply with a curtailment notice. However, recognising that the pipeline is operating at full capacity and that Epic proposes to amend clause 24(2)(a), the Commission proposes to approve clause 24 in the revised form.

Epic proposes to revise clause 25(3)(a) similarly to clause 24(2)(a) so as to require the service provider to also telephone the user to advise that a curtailment notice has been issued. This suggests the need for a consequential amendment (not yet provided for) to clause 41.1(c), to remove the service provider's option to give a notice only in writing.

In addition, Epic proposes to revise clause 25.4(b), dealing with the exercise of its rights in the event of non-compliance with an OFO.

Clause 25 imposes potentially heavy financial liabilities on the user (by way of default charges) and requires the user to indemnify the service provider even when the user fully complies with instructions. In the Commission's view, there is an underlying presumption in the agreement that aggregators will devise mirror provisions in their supply contracts with end-users of gas to offset such risks. However, the thrust of national gas policy reforms is to also encourage industrial users to directly participate in pipeline systems and so the Commission believes that it must consider the potential impact of these provisions on such users.

Submissions did not challenge the concepts of default charges and indemnity. The reservations expressed with respect to their design came from the two existing users. In the Commission's view this limited response reflects the lack of real access to FT service in the initial access arrangement period within existing capacity.

The Commission's response is to accept the revised forms of clause proposed by Epic but to signal that it will look into the operation of clauses 24 and 25 when the access arrangement is reviewed. In the interests of providing for greater certainty in future negotiations, the Commission would welcome any further submissions to assist it to resolve the issue now if possible.

Epic's proposed revision of clause 37, in response to Commission concerns regarding dispute resolution over the circumstances in which curtailment notices or OFOs are issued, is dealt with in a separate proposed amendment further below.

Proposed amendment A3.20

For the access arrangement to be approved, the Commission requires Epic to:

- adopt the revisions to clauses 24 and 25 set out in its lodgement of 2 March 2000 and in its letter dated 15 June 2000; and
- amend clause 41.1(c) by deleting after the words 'telephone and' the word '/or'.

Clause 27 Electronic bulletin board

The Commission considers that, in view of Epic's confirmation in its response to submissions that it is proceeding with the design and implementation of an EBB, it should publicly disclose (whether as part of or in conjunction with the access arrangement information) the timetable for introduction of the EBB.

The Commission is concerned that clause 27.4(d), as Epic proposes to revise it, excuses the service provider from liability for its own negligence or default in obligations, notwithstanding that the user's EBB obligations are termed 'material obligations' for purposes of clause 36.1 (default by user). Accordingly, the Commission requires the amendment set out below. There is also a need to make clause 4.2 of the EBB System Agreement consistent with the access arrangement as proposed to be revised.

For the sake of clarity, the Commission understands that the $25 fee for use of the EBB is a once-only charge and on that basis does not propose to require that Epic reconsider it in response to AGLES&M's submission.

Epic has acknowledged in correspondence with the Commission that it intends to consult parties on the formulation and revision of rules for use of the EBB.[285] The Commission encourages such consultation. However, the Commission's decision on this access arrangement does not extend to any EBB rules that may be prepared by Epic as a result of consultations with interested parties. The Commission reserves the right to review the operation of such rules as part of future reviews of the access arrangement. Commission representatives are available to discuss with any party any proposed rules that may raise urgent competition or fair trading issues under the Trade Practices Act.

The Commission sees merit in Boral's suggestion that pipeline service providers make efforts to develop standard protocols for EBBs nationally.

Proposed amendment A3.21

For the Commission to approve the access arrangement, Epic must amend clause 27.4(d) to read as follows:

> The Service Provider will not be responsible for any losses, costs, damages and expenses suffered or incurred by any person in relation to the use of the EBB or any communications related to the EBB, unless such losses are due to the negligence of the Service Provider or default by the Service Provider in complying with its obligations under the Agreement.

Epic must amend clause 4.2 of the EBB System Agreement in Schedule 5 of the access arrangement to reflect the above amendment to clause 27.4(d) and Epic's proposed revisions of 2 March 2000 to clause 27.3(b) of the access arrangement.

[285] Epic consolidated response to Commission letter of 30 April 1999.

Clause 28 Receipt and delivery points
Clause 29 Measurement at receipt and delivery points

Clauses 28 and 29 specify, amongst other things, Epic's requirements for ownership of equipment and measurement of the quality and quantity of gas at receipt and delivery points. Clause 28.1(d) (proposed by Epic to be renumbered 28.1(c)) states:

> Unless the Service Provider otherwise agrees:
>
> (c) the equipment at a Receipt Point, irrespective of ownership, must at all times comply with the specifications and other technical requirements for Receipt Points set out in Schedule 8 so as to record continuously the volume and the energy flow rate and all measurements used in their computation;

Clause 28.2(d) (proposed by Epic to be renumbered 28.2(c)) provides identical requirements for delivery points, except that the clause 'Unless the Service Provider otherwise agrees' is omitted.

Clause 29 requires that the quantity and quality of gas at each receipt and delivery point be measured in accordance with Schedule 9. Schedule 8 provides a detailed specification of the measuring equipment required and Schedule 9 includes standards for volumetric and energy measurement.

From the wording of the clauses and the schedules referred to, these requirements apply to all receipt and delivery points (unless the service provider otherwise agrees in respect of receipt points). The requirements are extensive and include a requirement for continuous on-line gas chromatography and remote monitoring. While this may be entirely appropriate at receipt points, the Commission is concerned that the cost of meeting these requirements, if applied to all delivery points regardless of size, could be a barrier to the entry of new users having relatively modest MDQ requirements.

The Commission does not accept the arrangements as currently proposed and accordingly proposes the following amendment. The Commission would be pleased to receive the comments of the applicant and other interested parties on this issue, which arose subsequently to consultation with the applicant on other issues considered in this draft decision.

Proposed amendment A3.22

For the access arrangement to be approved, the Commission requires Epic to amend clauses 28 and 29 and Schedules 8 and 9 to establish, in consultation with users and prospective users:

- threshold values at which, and circumstances in which, it is reasonable for the service provider to require the installation of measuring equipment and adherence to procedures set out in Schedules 8 and 9.

Clause 32 Payment

The Commission considers that the timeframe to pay an invoice and notify a dispute, which Epic proposes to extend to 9 days, is still too short.

In the light of AGLES&M's submission, the Commission considers that 10 business days would be reasonable and in line with commercial practice. The Commission proposes the amendment set out below. This period flows on to the period allowed to notify a dispute (clause 32.2(a)).

Proposed amendment A3.23

For the access arrangement to be approved the Commission requires that clause 32.1 be amended to read as follows:

> The User will pay each invoice by direct payment to a bank account nominated by the Service Provider by the later of the 14th day of the month or 10 business days after receipt of the invoice from the Service Provider.

The Commission also requires that Epic revise clause 32.2(a) as proposed in its lodgement of 2 March 2000.

Clause 34 Force majeure

The Commission is satisfied that the revision proposed by Epic meets the concern raised by TGT.

Proposed amendment A3.24

For the access arrangement to be approved, Epic must amend clause 34.4(b) in accordance with the proposal in Epic's lodgement of 2 March 2000.

Clause 35 Liability and indemnity
Clause 43.1 Definition of 'direct losses'

In its *Determination* on the Market and System Operations Rules (MSOR) proposed for authorisation in Victoria, the Commission expressed concern that limited liability on the part of the system operator raised issues of potential moral hazard and barrier to entry.[286] Moral hazard arguably arose from a disincentive to exercise an appropriate standard of care and the barrier to entry arguably arose from the users' costs of insurance to meet risks not borne by the service provider. On the other hand, the system operator would pass on to users anyway the costs of insuring against the risks of not limiting liability, because the system operator was to be a non-profit body funded by market participants.

The Commission resolved these concerns by finding that, on balance, limited liability may be more appropriate, subject to the parties' reviewing the relevant provisions in a public process of consultation within three months of market commencement.

Some distinctions need to be drawn between the situations of the Victorian operator and Epic. Epic is a commercial for-profit enterprise funded by sales of its haulage

[286] ACCC, 'Applications for Authorisation: Market and System Operations Rules', *Determination,* 19 August 1998.

services. Epic operates in a contract carriage market, rather than in a market carriage system. Given the code provisions maintaining terms of existing haulage agreements other than exclusivity rights, indemnity provisions in the 1995 haulage agreements will continue to be applicable to existing users.

Limited liability was not a contentious issue in the Commission's examination of the proposed Central West Pipeline access arrangement, which is now at final decision stage.[287] However, the Epic system significantly differs from the Central West Pipeline, in respect of which limited liability has been proposed, in that MAPS is fully contracted and Central West's market is still being developed.

The Commission is attracted to Epic's argument that its proposed regime is simple and certain. A simple regime may satisfactorily address many, if not most, situations. The Commission's assessment of the impact, on potential MAPS users, of moving to this regime in the light of the provisions in the existing haulage agreement to which TGT referred the Commission, is given in Confidential Annexure 4 Part D.

Submissions on clause 35 of the access arrangement were limited to those by TGT. The Commission is concerned by the balance of various provisions favouring the service provider, and has endeavoured to address that concern by the proposed amendments to other clauses described in this chapter. The Commission considers that limitation of liability is an issue that needs to be further explored in public consultation.

In the light of the above factors, at this stage the Commission considers that Epic's liability and indemnity regime may unduly favour the service provider. Accordingly, the Commission requires the change given in the following proposed amendment.

Users should note well that the change proposed by the Commission in some instances would place greater liability on the user. An example is clause 15.3(d), which provides for a user to indemnify the service provider against losses arising from the user's having supplied non-specification gas. Another example is clause 19.5, in which the user indemnifies the service provider against losses arising from an excess imbalance.

Accordingly, the Commission is very much interested to hear the views of Epic, users and prospective users as to the balance of interests to be struck in the indemnity provisions. The Commission's proposed amendment is intended to provide a focus for submissions.

Proposed amendment A3.25

For the access arrangement to be approved, the Commission requires that Epic incorporate in clause 35 the revisions proposed in its lodgement of 2 March 2000, subject to changing the word 'lesser' in clause 35.3 to 'greater'.

[287] ACCC, 'Access Arrangement by AGL Pipelines (NSW) Pty Ltd for the Central West Pipeline', *Final Decision,* 30 June 2000.

Clause 37 Dispute resolution and independent experts

The Commission welcomes the revision to clause 37.2(a)(i) proposed in Epic's letter of 15 June 2000 to clarify the scope of dispute resolution in respect of the circumstances in which a curtailment notice or OFO has been issued.

In its lodgement of 2 March 2000, Epic proposed some changes to the wording of clauses 37.1, 37.2(c) and 37.2(d). There are two changes of significance. One would make the process voluntary rather than mandatory (clause 37.1). The other proposes to revise the provisions dealing with potential conflict in interests of the prospective expert (see clause 37.2(c)(iii)).

These changes have not been the subject of formal public consultation and accordingly the Commission will consider any comments that interested parties wish to make. The Commission considers that the service provider, as the party responsible for implementing the access arrangement, cannot have the right to 'opt out' of the dispute resolution process it puts forward. Opting out would make that aspect of the access arrangement of diminished value and undermine the terms of the provisions to which the process is applicable. The Commission deals with this issue in the following proposed amendment.

Proposed amendment A3.26

For the access arrangement to be approved, the Commission requires that Epic:

- adopt the proposed revisions to clause 37.2(a)(i) set out in its letter dated 15 June 2000, that is, Epic is to add after the word 'practice' the following words:

  > and includes the grounds on which the Service Provider has issued a Curtailment Notice or an OFO

- add, after clause 37.1(d), the following sentence:

  > The Service Provider is bound to take part in a Dispute resolution process initiated by another Party.

Clause 38 Assignment

The Commission is satisfied that Epic's response sufficiently addresses the concerns expressed about assignment by the service provider (clause 38.1). The Commission understands that assignment by the user is subject to the dispute resolution provisions (clause 37).

In the Commission's view, Epic's proposed revisions to clause 38.2 and 38.3, dealing with assignment by the user, do address the concerns expressed in submissions. However, the Commission considers that Epic's proposed amendments to clause 38(2) should be further modified to allow the user the opportunity to itself prepare relevant documentation, thereby minimising costs to the user. Accordingly, the Commission proposes the following amendment.

Proposed amendment A3.27

For the access arrangement to be approved, the Commission requires Epic to make the revisions to clause 38 proposed in Epic's lodgement of 2 March 2000, subject to clause 38(2)(c) being amended to read as follows:

> 38.2(c) An assignment by the User will be conditional upon, and will not be binding until, the assignee has:
>
> (i) executed a deed of covenant in favour of the Service Provider agreeing to be bound by the Agreement. The Service Provider may prescribe a reasonable form of covenant but the User may make its own arrangements to draw up the deed and submit it to the Service Provider; and
>
> (ii) reimbursed the Service Provider's costs, within the limits of the Application Fee, that have been reasonably incurred in assessing whether the assignee meets the Creditworthiness Criteria.

Clause 39 Confidentiality

Clause 39 describes the service provider's confidentiality obligations in dealing with commercially sensitive information of users. Such information ranges from capacity nominations to financial and credit data.

In its lodgement of 2 March 2000, Epic proposes to make certain additions and clarifications to the original clause, including an obligation on the service provider to observe the ring-fencing provisions of the code (clause 39.4). The ring-fencing provision is appropriate given other proposed amendments to make information available to other members of the holding company group of which the service provider is a part. The Commission generally does not have an issue with the proposed revisions.

However, the Commission believes that there is a drafting error in proposing to add to clause 39.1(d)(vi) the words 'or a proposed Acquirer to whom a Release is proposed to be made'. The 'Acquirer' is defined in clause 26.2(a)(ii) to be a person to whom an FT user proposes to release a marketable FT parcel of gas.

The Commission understands that it is not the service provider's intent to release any confidential information other than as strictly necessary. Clause 39.2 (requirement for written undertaking) builds in a check on such release. However, the Commission believes that the applicant should further revise clause 39.1(d)(vi) to make it clear that only information relevant to the release of a marketable FT parcel may be disclosed to the Acquirer.

Accordingly, the Commission does not at this stage accept the proposed revision to clause 39.1(d)(vi) and invites submissions on that clause.

Proposed amendment A3.28

For the access arrangement to be approved, Epic must not incorporate in its proposed revisions of 2 March 2000 to clause 39 its proposed amendment to clause 39.1(d)(vi).

Clause 42.1 Amendment of service agreements
Clause 43 Definitions and interpretation – MHQs (Schedule 2)

On the basis of Epic's response to submissions, the Commission does not propose to require amendment of the access arrangement in respect of these issues.

Clause 43.6 Precedence of documents

Clause 43.6 clarifies the order of precedence of documents comprising the agreement between the service provider and the user. The order is access arrangement first and then the applicable contract.

Because of proposed changes to the access arrangement lodged by the applicant in March 2000 or required by the Commission in this draft decision, the contract provisions contained in the schedules attached to the access arrangement may be inappropriate. Alternatively, they may conflict with the clauses of the access arrangement as modified.

The Commission expects that the applicant would make appropriate amendments to the schedules. However, for the sake of caution, the Commission proposes the addition to clause 43.6 set out in the following proposed amendment.

Proposed amendment A3.29

For the access arrangement to be approved, the Commission requires that Epic add the following to clause 43.6:

> If there is any conflict or discrepancy between the clauses of the Access Arrangement and the Schedules to the Access Arrangement, then unless otherwise provided in a clause of the Access Arrangement, the clauses and Schedules will rank in order of interpretive precedence as follows:
>
> (c) clauses of the Access Arrangement; and
>
> (d) the Schedules.

3.3 Capacity management policy

3.3.1 Code requirements

Section 3.7 of the code requires that an access arrangement include a statement that the covered pipeline is either a contract carriage pipeline or a market carriage pipeline.

3.3.2 Epic's proposal

Clause 3 of the original proposed access arrangement stated that MAPS is a contract carriage pipeline.

3.3.3 Submissions by interested parties

No comments were received on this issue.

3.3.4 Commission's considerations

As the access arrangement includes a statement that MAPS is a contract carriage pipeline, it satisfies the requirements of section 3.7 of the code.

3.4 Trading policy

3.4.1 Code requirements

If a pipeline is a contract carriage pipeline, 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 person. 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; and
- 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.

3.4.2 Epic's proposal

Clause 26 of Epic's original access arrangement stated that users could trade rights in three circumstances. These were:

- a user could undertake a 'bare transfer' and need not supply the service provider with any information in relation to a bare transfer;
- an FT user could release part of a primary capacity quantity on the basis that the service provider would deal with, invoice and accept payment from the acquirer as if the acquirer were the user in respect of that marketable FT parcel; and
- an IT user could release the right to access maximum capacity of an excluded point for the purpose of FT or IT service, on the basis that the service provider would deal with, invoice and accept payment from the acquirer as if the acquirer were the user in respect of that marketable IT parcel.

An 'excluded point' is a new delivery or receipt point for IT services to a user, defined in clause 10.3(h).

With respect to the latter two transfers:

- a user could change the delivery point if the sum of the existing primary capacities at the new point was less than the point's maximum capacity, and the available capacity at the new point was equal to or greater than the primary capacity quantity of the user at the existing point. Otherwise clause 10, the queuing policy and extensions/expansions policy, would apply;
- if the acquirer did not have an applicable contract with the service provider, the user could release a marketable parcel, provided the acquirer met the creditworthiness criteria and executed an applicable contract in respect of that parcel – the user would have had to ensure the acquirer provided all required information; and
- nothing would prevent or restrict the service provider from imposing other conditions on the terms on which a release could be cancelled or terminated, if those conditions were reasonable on commercial and/or technical grounds.

The service provider would post on the EBB a register of marketable parcels notified to it by the user and by other users.

3.4.3 Submissions by interested parties

Since the proposed access arrangement was submitted on 1 April 1999, Epic has proposed the revisions to clause 26 detailed below in 3.4.4. The revisions address a number of the concerns raised in submissions.

Boral made three points.[288]

- The timings are unnecessarily early. A trade will normally be arranged between two users and notified to the service provider at the same time as its initial nomination.
- The trade should be applicable equally to secondary capacity allocated to the user.
- The terminology should be 'trade', not 'release', especially in the light of Boral's proposal for IT1 service (see 3.1.3).

TGT submitted that it was unclear in clauses 26.2 and 26.3 why an acquirer must have an existing contract with the service provider, particularly as the existing user is indemnifying the service provider.[289] (Clause 26.2(b)(iii) stated that the user would be deemed to have indemnified the service provider from and against losses incurred through failure by the acquirer of a marketable IT parcel to meet obligations to the service provider.)

TGT further submitted that the MDQ of the acquirer should be the amount of the marketable parcel plus its existing MDQ.

[288] Boral submission, 12 October 1999, p. 4.
[289] TGT submission, 26 October 1999, p. 11.

AGLES&M submitted that it 'would be more flexible and enhance competition' if partial capacity reservations could be transferred, in place of the current requirement that all capacity be transferred from one delivery point to another.[290]

3.4.4 Epic's response to submissions

In response to Boral's first point, that the timings are unnecessarily early, Epic stated that under a contract carriage regime the service provider needs to know whose rights to capacity are being utilised in advance, so that it can meet its obligations under the agreement and invoice the correct acquirer.[291] Therefore Epic stated that it does not intend to make any changes to the trading policy to meet this submission, nor has it proposed any change in terminology. As noted in 3.1.4, Epic has dropped the concept of secondary capacity in its proposed revisions in favour of 'net available capacity'. Such capacity would be available first to any firm shipper at any delivery point and secondly for IT and other services to the extent that it is not utilised.

In response to TGT, Epic proposes to delete the indemnity clause 26.2(b)(iii) and to insert the following provision:

> 26.2(c) If the User wishes to Release a Marketable FT Parcel to an Acquirer who does not have an Applicable Contract with the Service Provider, then it may do so provided that the Acquirer first:
>
> (i) meets the Creditworthiness Criteria; and
>
> (ii) executes an FT Service Contract in respect of that Marketable FT Parcel.
>
> The User must ensure that the Acquirer provides a Request for Service and all required information.

Epic proposes to similarly change conditions in relation to IT service - refer clause 26.3(c). Epic explained that it wished the transferee to be an existing user to address credit risk of the user. In relation to MDQ, Epic stated that, for the mainline, the transferee could aggregate MDQ under the contract with released MDQ, but could not do so for specific delivery points.

Epic proposes to amend clause 26.6 in response to AGLES&M's submission, so as to provide for partial transfer of capacity between delivery points.[292]

3.4.5 Commission's considerations

The Commission is satisfied with Epic's proposed revisions to clause 26. AGLES&M has indicated that it is satisfied with Epic's proposed revised clause 26.6.[293]

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[290] AGLES&M submission, 25 October 1999, p. 3.
[291] Epic, response to submissions, 1 February 2000, p. 31.
[292] Epic, letter to Commission, 26 March 2000.
[293] AGLES&M, e-mail to Commission, 13 June 2000.

Proposed amendment A3.30

For the access arrangement to be approved, Epic must amend clause 26 as proposed in its lodgement of 2 March 2000 and letter dated 26 March 2000.

3.5 Queuing policy (and extensions and expansions policy)

3.5.1 Code requirements

Sections 3.12 to 3.15 set out the code's requirements for a queuing policy. An access arrangement must include a queuing policy for determining the priority given to users and prospective users for obtaining access to a covered pipeline and for seeking dispute resolution (under section 6 of the code). The purpose of a queuing policy is to allocate spare capacity where there is insufficient capacity to satisfy the needs of all users and potential users that have requested capacity.

A queuing policy must be set out in sufficient detail to enable users and prospective users to understand in advance how it will operate. It must also, to the extent reasonably possible, accommodate the legitimate business interests of the service provider, of users and prospective users, and must generate economically efficient outcomes.

3.5.2 Epic's proposal

Clause 10 of the original access arrangement contained the service provider's queuing policy and extensions/expansions policy. Epic indicated that as there is no spare capacity it has linked the queuing policy to the extensions and expansions policy. Therefore, the extensions/expansions policy is of immediate importance to all prospective users queuing for service.

To some extent these policies are also considered together in this draft decision because of the way they were presented in Epic's proposal. Revisions to the access arrangement proposed by Epic in March 2000 would also incorporate aspects of the queuing policy in clauses 6 and 7 of the arrangement. (Clauses 6 and 7 set out how the service provider deals with requests for FT and IT service, respectively.)

According to Epic's proposed access arrangement, a potential user who joined the queue might either:

- wait until the following 1 July when the queue was cleared to be notified of spare capacity, or
- immediately apply for an expansion of capacity and make a capital contribution to the construction of new facilities, thereby avoiding the queue. The latter option was also open for potential users of IT service.

In relation to FT service, the proposed queuing policy is as follows:

- upon receipt of an FT request, a queue would be formed (or if a queue already existed, the prospective user would be added to it);
- if, at the following 1 July, there was sufficient spare capacity to meet all queued FT requests, all would be satisfied;
- if, at 1 July, there was insufficient spare capacity to meet all queued FT requests, the prospective users would have the opportunity to have their requests satisfied through the construction of new facilities subsequently.

Before construction would be undertaken:

- the service provider would determine an indicative range for the capital contribution that would be payable for the construction of new facilities to satisfy the FT requests (taking into account any spare capacity when making that determination);
- the prospective users would then be asked to indicate the amount (notified capital contribution) that they would be prepared to pay;
- the service provider would carry out a more detailed study to determine the estimated capital contribution that would be payable to construct new facilities for each of those prospective users that had notified a capital contribution; and
- each prospective user that had notified a capital contribution equal to or greater than the estimated capital contribution would be deemed to have committed to contract for FT service. This would be on the basis that the prospective user would pay its notified capital contribution until such time as the regulator had approved the actual capital contribution for the new facilities. (If the actual capital contribution were less than the notified capital contribution, the service provider would refund the difference.) The capital contribution would be payable in a lump sum unless the service provider agreed to its being paid over the seven-year term of the FT service contract (in which case interest would be payable).

Where facilities were constructed to satisfy an FT or IT request without queuing, the service provider would not take existing spare capacity into account when determining the new facilities required and the capital contribution payable.

In the initially proposed access arrangement, Epic interpreted existing contractual constraints to mean that FT service or IT service would **only** be made available if:

- new facilities were constructed for the benefit of the prospective user pursuant to clauses 10.3 or 10.4 of the access arrangement; and
- those new facilities comprised at least one or more new delivery points, as well as an expansion of capacity in the mainline and in any lateral that was to be utilised.

In those circumstances, it would only be those new delivery points or delivery points released by existing users that the prospective user would be entitled to use on a gas day.

IT service is not subject to annual clearance of the queue.

3.5.3 Submissions by interested parties

Submissions in relation to the queuing policy focused on the application fee to join the queue, the timeframe for determining spare capacity and constructing new facilities, and priority issues.

Osborne queried the $5000 application fee[294] required by the service provider before an IT capacity booking would be undertaken, and suggested that it should, at the very least, vary as a function of the volume of capacity requested.[295]

AGLES&M submitted: [296]

> [T]here should be no significant charge for an enquiry as to the general availability of capacity, although it may be appropriate to permit recovery of reasonable costs where the service provider is required to undertake substantial investigation to respond to a detailed request.

AGLES&M and other interested parties identified this fee as a barrier to entry, arguing that it would dissuade prospective users from exploring new gas supply opportunities. AGLES&M further submitted that forfeiture of the application fee, as provided for in clauses 6.4 and 7.3, would be unreasonable when a request was incomplete or deficient. AGLES&M suggested that the prospective user be given a grace period to correct any anomalies.[297]

AGLES&M, Boral and Osborne all made submissions about the timing requirements in clause 6.3(b), for which Epic has since proposed revisions. Other submissions made by AGLES&M, Boral and TGT argued that there were inconsistencies and unnecessary delays in the queuing arrangement. According to these submissions, there appeared to be no method of allocating priority among users in the queue,[298] and clearing it once a year on 1 July would cause uncertainty in the market, delay other business decisions and act as a disincentive to the use of gas.[299] Santos submitted that it was unclear whether Boral and TGT would be part of the queue or treated separately, and their obligation to contribute to costs of expansion was unclear.[300]

TGT made a submission that if there were insufficient capacity to cover demand from 2006, as a 'foundation shipper', TGT 'should have some priority to the existing capacity, and should not be obliged to contribute further to the costs of expanding pipeline capacity'.[301]

3.5.4 Epic's response to submissions

In response to criticism of the application fee, Epic submitted that the fee was intended to defray the costs of specialist enquiries into the costs of providing service to a user.

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[294] Access arrangement, Schedule 4, Tariff Schedule.
[295] Osborne submission, 7 October 1999, p. 3.
[296] AGLES&M submission, 25 October 1999, p. 2.
[297] AGLES&M submission, 25 October 1999, p. 2.
[298] TGT submission, 26 October 1999, p. 12.
[299] AGLES&M submission, 25 October 1999, p. 2.
[300] Santos submission, 15 October 1999, p. 2.
[301] TGT submission, 26 October 1999, p. 13.

Epic indicated that it was prepared to discuss a reasonable fee with the Commission.[302] Epic agreed to give applicants a grace period to correct deficient applications, and proposes to revise clauses 6.4 and 7.3 accordingly.

With respect to the allocation of priority in the queue, Epic responded: [303]

> *The issue is whether clause 3.12 of the Code requires that one prospective user must have priority over another, or whether they can rank equally in priority. In Epic's view the latter is an allowable outcome.* This outcome conforms with another requirement of clause 3.13 of the Code, being that the policy generate, to the extent reasonably possible, economically efficient outcomes. (Emphasis in original.)

With respect to the policy being restrictive and preventing users from rapidly capturing opportunities for incremental growth, Epic responded as follows: [304]

> These comments appear to ignore the fact that new facilities investment is required to provide capacity for new incremental FT Service. That being the case, Epic does not agree with the comments; the policy has been structured to address these concerns.

Epic also submitted that considerable time and effort is involved in responding to requests for service, which was another reason for annual clearance of the queue.[305] Epic stated that it had not attempted to explicitly address the issue of whether the existing users should be obliged to contribute to new capacity, or accord priority to the existing shippers. Epic submitted that that issue 'is dictated by the timing of the application to contract for additional capacity through the queuing policy'.[306]

The issue of the 29-18 month time collar, now removed by Epic, is discussed above in 3.2.4 and 3.2.5.

Epic has revised the presentation of the IT queuing clause, 7, and added clause 7.6, which states that a new request for IT service is not required for an extension of the contract or the contracting of a marketable IT parcel to an acquirer.

Clause 10.1 (in the revised form of March 2000) states that 'the arrangements that apply to IT Service [with respect to queuing] will apply to Non-Specified Service' and a 'specific Queuing Policy has not been provided for IT Service'.

3.5.5 Commission's considerations

Clause 6 Firm service

The Commission considers that it is unnecessary to oblige a 'User', pursuant to clause 6.2, to provide the information in respect of variations to service or increases in MDQ prescribed by clauses 6.3(b), 6.3(c) and 9.2, save for information:

- required to assess whether there is capacity to supply the requested service; and
- to update clause 9.2 (creditworthiness) information since it was first lodged.

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[302] Epic, response to submissions, 1 February 2000, pp. 28, 29.
[303] Epic, response to submissions, 1 February 2000, p. 12.
[304] Epic, response to submissions, 1 February 2000, p. 13.
[305] Epic, response to submissions, 1 February 2000, p. 29.
[306] Epic, response to submissions, 1 February 2000, p. 14.

In the Commission's view, there are circumstances in which it would be unreasonable to treat a user's request to increase its MDQ as a separate, new contract (clause 6.2(c)). The Commission has in mind that in the event that capacity is not normally fully contracted in the future, a new application may not involve examining the construction of new facilities and so an application fee in the order of $5000 would be unreasonable. In those circumstances an application to increase MDQ should, in the Commission's view, be treated as a request to vary service in accordance with clause 6.9.

The Commission similarly considers that it would be unreasonable to require an application fee for FT service wherever it is obvious to the service provider that that service could only be provided with an extension to or expansion of the system. In those circumstances, before an application fee is required, the prospective user should be asked whether it is prepared to join a queue for service that would involve construction of new facilities.

Some provisions of clause 6.9(b) give discretions to the service provider, which, in the event of controversy, could only be resolved through the dispute resolution process. In particular, clause 6.9(b) gives the service provider a right to refuse to vary service where, in its reasonable opinion, it would not be 'technically or economically prudent for it to do so' or 'would prejudice the rights of another FT user for it to do so'.

The Commission considers that recourse to dispute resolution could be minimised if the service provider were to publish clear and objective general criteria that would guide its managers and staff in exercising discretion when Epic considers requests for service. In the Commission's view these guidelines should be operational by the time it first receives a request for FT service to a user. The Commission would address whether Epic had done so, and whether such guidelines met the needs of users, at its next review.

As noted above, the queuing policy interacts with the extensions and expansions policy. For reasons given below in discussion of the extensions and expansions policy, the Commission has unresolved concerns with the effects of clearing an unordered queue annually. The concern is with the incentive resulting from the queuing policy for prospective users to join the queue just prior to clearance or primarily to pay for extensions or expansions individually, irrespective of whether or not spare capacity may be available. The Commission is also concerned that it may not be the case throughout the access arrangement period that spare capacity will only be available with extension or expansion of the system (see discussion, in 3.7, of the South Australian initiative to identify new supplies of gas).

In the Commission's view approval of a queuing process in which customers are not ranked in order of priority of application is to risk difficulties and possibly litigation by disaffected parties against the service provider in a few years' time if limited capacity were to become available. Not ranking the FT requests in order of priority would prevent the service provider from allocating amongst applicants any spare capacity that was available, if there were insufficient for all.

Accordingly, the Commission does not accept queuing provisions assuming annual clearance of the queue for FT service (clause 6.7) nor queuing without an order of priority. The Commission further indicates its proposed approach to this issue in 3.6.5.

Application of the queuing and priority of service provisions to non-specified services

A further relevant consideration is that the access arrangement does not appear to prevent Epic from agreeing with Origin Energy and/or TGT to extend the duration and/or terms of their existing agreements. On review of the access arrangement at the end of 2005, for purposes of applying the code the Commission would be obliged to give effect to any extension of the existing agreements beyond 2006 that was negotiated prior to submission of revisions to the access arrangement. The Commission would not be obliged to give effect to any exclusivity rights in the agreement so extended (see section 2.47 of code).

The parties might simply roll-over the existing agreements, thereby tying up capacity beyond 1 January 2006 without going through the queuing procedures set out in the access arrangement. This appears to be possible under the proposed access arrangement because:

- the queuing policy only applies with respect to FT services (refer clause 6.1) – the services provided under the existing agreements are not FT Services;
- as noted in 3.5.4, clause 10.1 (in the revised form of March 2000) states that 'the arrangements that apply to IT Service [with respect to queuing] will apply to Non-Specified Service' and a 'specific Queuing Policy has not been provided for IT Service'. Although in the proposed revisions of March 2000 the definition of 'Services' has been deleted, it could be argued that a request by an existing user to extend the term of an existing agreement constitutes a request for a non-specified service. This means that the user of a non-specified service would not have to go through the same queuing process as an applicant for FT service. However, it appears from clause 23 (in the revised terms proposed by Epic in March 2000) that the two classes of user might nevertheless enjoy the same order of priority of service on any day.

  Clause 23.1(a) provides that, on a gas day, quantities nominated by either of the existing users (Origin Energy and TGT) under the existing haulage agreements would share equal first priority with quantities nominated by FT users from their confirmed 'Primary Capacity Quantities'.

  However, clause 23.2 provides for the service provider to vary the order of priority of service set out in clause 23.1 to accommodate a non-specified service. Clause 23.2 provides as follows:

  > (a) In the case of a Non-Specified Service, the Service Provider may, by written notice to the User, vary the priority and sequence in clause 23.1 by:
  >
  > (i) inserting one or more additional paragraphs; and/or
  >
  > (ii) modifying one or more existing paragraphs.
  >
  > (b) The Service Provider will not vary clause 23.1 so as to accord a Non-Specified Service a higher priority than that for FT Service referred to in clause 23.1(a) (but, for the avoidance of doubt, the Service Provider may accord a Service the same priority as that for FT Service referred to in clause 23.1(a)).

Section 3.12 of the code states that a queuing policy is to govern the priority as between prospective users with respect to spare capacity. Until such time as pipeline capacity is

reserved, it is by definition ‘spare’ (see the definition of ‘spare capacity’ in the code). Existing users seeking to extend their contracts would be prospective users within the meaning of the code, as they would be seeking to ‘enter into a contract for a Service’.

The issue is therefore whether the queuing policy ought to contain provisions capturing procedures for entering into service contracts for services other than FT and IT service. In the Commission’s view the purpose of a queuing policy is to ensure that new entrants can compete fairly with existing shippers to gain access to capacity on the pipeline system in the period after existing contracts terminate (in this case, that is the period beyond 2005).

Section 3.13 of the code requires that a queuing policy accommodate the interests of all users and prospective users and generate economically efficient outcomes. In the Commission’s view it would be detrimental to new entrants if existing users could tie up capacity simply by extending current arrangements. Further, section 3.14 of the code allows the regulator to ‘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’. In particular, section 2.24(e) requires the regulator to have regard to ‘the public interest, including the interest in having competition in markets’.

It seems to the Commission that it would be contrary to the objectives of establishing the code if the access arrangement permitted existing agreements to be extended into the future while terms of access to other parties remain subject to queuing, surcharges and possibly less favourable terms and conditions.

The Commission notes that clause 6.8 of Epic’s March 2000 proposed revisions to the access arrangement provides, amongst other things, that FT users do not need to queue for an extension of an FT contract. The Commission invites submissions on the foregoing issues and on the question of whether the same considerations should apply to extensions of FT service contracts once an access arrangement is established.

Accordingly, the Commission requires amendments to the queuing policy, to address these concerns.

Clause 6 Firm service

For reasons stated earlier in this section, the Commission proposes the following amendment.

Proposed amendment A3.31

For the access arrangement to be approved, the Commission requires that, except in the following respects, the arrangement incorporate Epic’s proposed amendments of 2 March 2000 to clause 6.

- First, Epic is required to amend clause 6 so that it also applies to requests for non-specified services, in replacement or continuation of capacity reservations under the Existing Transportation Agreements or extensions thereof, by the Existing Users as defined in respect of those Agreements.

- Second, Epic is required to amend clauses 6.2(b) and (c) as proposed in Epic's revisions of 2 March 2000 to limit the information required from a 'User' as indicated in 3.5.5 above, that is, to limit the information to:
  - that required to assess whether there is capacity to supply the requested service; and
  - that required to update clause 9.2 (creditworthiness) information since it was first lodged.
- Third, Epic is to amend revised clause 6.2(c) so that a request to increase MDQ is not to be treated as a request for a separate, new contract when sufficient spare capacity is available to meet that request (subject to queuing). Such a request is to
- Fourth, Epic is to amend revised clause 6.2 by adding after clause 6.2(c) the following:

  > Where the Service Provider reasonably believes that the service requested pursuant to clause 6.2(a) or clause 6.2(c) could only be provided with an extension to or expansion of the system, an Application Fee is not required until the Prospective User or User has consented to join the queue for FT Service.

- Fifth, Epic is to amend revised clause 6.7(a) to read as follows:

  > All FT Requests will be placed in a queue and will be satisfied in the order in which they are received. Where the Service Provider reasonably believes that satisfaction of the Request for Service will require the construction of New Facilities, an FT Request will not be accorded any priority over any other FT Request falling in the same construction task. However, the priority of FT requests ranked in order of receipt will determine the order in which they are satisfied for all other purposes, including:
  >
  > (i) any construction associated with capacity enhancement for another party or parties, whether or not the construction is carried out under the terms of the Access Arrangement; and
  >
  > (ii) any allocation of spare capacity.

- Sixth, Epic is to amend revised clause 6.9(a) to include a request by a User to increase MDQ except:

  > (i) where the Service Provider reasonably believes that assessment of the Request for Service will involve an assessment of the cost of constructing new facilities; and
  >
  > (ii) the User is informed of that fact before the Request for Service is accepted.

Application of the queuing and priority of service provisions to non-specified services

For reasons stated above, the Commission proposes the following amendment. See also section 3.1.6 of this draft decision and proposed amendment A3.1.

Proposed amendment A3.32

For the access arrangement to be approved, the Commission requires that clause 10 be amended to make the queuing policy applicable to requests for non-specified services.

Clause 7 Interruptible service

The Commission is not persuaded by Epic's response to submissions that a $5000 application fee for IT service is reasonable. The Commission is prepared to consider alternative proposals, such as a cost-reflective application processing charge and monthly account fee in line with commercial practice. The Commission notes that Schedule 4 Tariff Schedule already provides for a monthly IT customer charge of $50 (in addition to charges for gas haulage).

Clause 7.5(a), forming part of the queuing policy for IT service, specifies that requests for service will be dealt with in the 'order or priority' in which they are received. However, these terms do not have the same meaning.

Therefore the Commission proposes the following amendment to address these two issues.

Proposed amendment A3.33

For the proposed access arrangement to be approved, the Commission requires that Epic incorporate the revised clause 7 as proposed in its lodgement of 2 March 2000, subject to:

- Epic deleting from clause 7.2 all words after 'Month,';
- Epic deleting the amount '$5,000' in respect of 'Application Fee – IT Service' in Schedule 4 Tariff Schedule; and
- Epic modifying its proposed revision to clause 7.5(a) so that, in the phrase 'in the order or priority', the words 'or priority' are deleted.

3.6 Extensions and expansions policy

3.6.1 Code requirements

The code requires an access arrangement to have an extensions/expansions policy (section 3.16). The policy is to set out the method to be applied 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 impact on reference tariffs of treating an extension or expansion as part of the covered pipeline.[307] In addition, an extensions and expansions policy must outline the conditions on which the service provider will fund new facilities and provide a description of those new facilities.

[307] For example, reference tariffs may remain unchanged, but a surcharge may be levied on incremental users.

3.6.2 Epic's proposal

The extensions and expansions policy is described above in 3.5.2. Epic has revised clause 10 substantially, in response to submissions criticising the proposed capital contribution and various other terms and conditions relating to the extensions and expansions policy.

3.6.3 Submissions by interested parties

Submissions by interested parties focused on the following issues:

- parties queried how the formula for capital contribution was derived and the sources of a number of the parameters, especially the depreciation and inflation rates;[308]
- the delays incurred as a result of the once-yearly clearance of the queue and determination of whether new construction would be undertaken were questioned;[309]
- Santos pointed out that Epic avoids risk for both project cost and time variance under the proposed arrangement;[310]
- Santos noted the opportunity cost of capital incurred by the prospective user in paying the capital contribution at the outset;[311]
- TGT and Boral asked how the capital cost of extensions and expansions would affect reference tariffs; [312] and
- TGT submitted that the proposed limitations on funding by the service provider were reasonable. However, TGT submitted that where the requested service would require expenditure exceeding the proposed limit, at least that amount should be expended rather than none at all.[313]

3.6.4 Epic's response to submissions

Epic stated that its primary objective in formulating the extensions and expansions policy is to reduce the risk of stranded assets, by the following means:

- by requiring a new incremental prospective user to make a lump sum contribution (as a capital contribution) to the cost of new facilities investment; and
- by placing a limit on the amount of new facilities investment that Epic can be required (by the arbitrator) to undertake, to the levels set out in clause 10.5.

Epic proposes to add, in a new clause 10.5(d), a statement that it 'does not intend to make any Speculative Investment'.

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[308] Santos, TGT and Boral submissions of October 1999.
[309] AGLES&M, Boral and TGT submissions of October 1999.
[310] Santos submission, 15 October 1999, p. 5.
[311] Santos submission, 15 October 1999, p. 4.
[312] TGT submission, 26 October 1999, p. 13, Boral submission, 12 October 1999, p. 9.
[313] TGT submission, 26 October 1999, p. 14.

With respect to risk and timing of construction, Epic proposes to amend clause 10.3(a), so that it now would now read as follows:

10.3 Construction of New Facilities for an FT User or IT User

(a) **Service Provider to Make an Offer:**

As soon as practicable after the Service Provider has:

(i) in the case of an FT Request, notified a Prospective User pursuant to clause 6.7 that it will be placing the Prospective User in a queue with its FT Request; or, as the case may be

(ii) in the case of an IT Request, notified a Prospective User pursuant to clause 7.4(b) that New Facilities are required in order to satisfy its IT Request,

the Service Provider will:

(iii) undertake a study to determine the estimated cost of constructing the New Facilities to satisfy the FT Request or (as the case may be) the IT Request;

(iv) calculate the estimated Capital Contribution ('Estimated Capital Contribution') required in order for the Service Provider to construct the New Facilities;

(v) give notice to the Prospective User of:

(A) the nature of the proposed New Facilities to be constructed;

(B) the proposed timetable for constructing and commissioning those New Facilities; and

(C) the Estimated Capital Contribution;

(vi) **negotiate with the Prospective User the contractual matters relevant to be addressed for the construction of the New Facilities (and specifically, timetable and risk allocation of the various construction and related risks);** [emphasis added] and

(vii) make an offer to the Prospective User to satisfy its FT Request or (as the case may be) IT Request on the basis that:

(A) the Prospective User will pay the whole of the Estimated Capital Contribution to the Service Provider prior to the date of commencement of physical construction of the New Facilities. **(As an alternative, the Service Provider may agree to accept payment by instalments, which are advanced to correspond with payments to be made by the Service Provider to contractors for work carried out in relation to the New Facilities)** [emphasis added];

(B) if the actual Capital Contribution (which will only be able to be determined by the Service Provider after the New Facilities have been constructed and commissioned) ('Actual Capital Contribution') as approved by the Regulator under clause 10.3(f) is greater than the Estimated Capital Contribution, the Prospective User will pay the balance to the Service Provider within 14 Days after the date of approval;

(C) if the Estimated Capital Contribution is greater than the Actual Capital Contribution, the Service Provider will refund the excess to the Prospective User; and

(D) the Prospective User will pay all other charges payable for FT Service or (as the case may be) IT Service.

For the purposes of this clause 10.3(a):

(E) the Service Provider will not; and

(F) the Prospective User will not have any right to require the Service Provider to,

take into account any Spare Capacity that may exist at any point in time.

Epic stated that its intention is to increase the capital base at the next review period by the amount of the new facilities investment that is recovered by the reference tariffs in accordance with regulatory approval under section 8.16(a) of the code.[314]

In its lodgement of 2 March 2000 at clause 10.6, Epic's stated intention regarding regulatory treatment of new facilities investment is to not seek to have any amount of the capital contribution added to the capital base. The proposed clause also provides for Epic to 'seek to have the amount of the New Facilities Investment represented by "I" in the formula in clause 10.4(l) added to the Capital Base'. The capital contribution formula has been revised and clarified in the latter clause. The clause proposes to relate capital contribution to the actual capital cost of the new facilities. In the case of an expansion of capacity, the contribution equals the actual cost of the new facilities, less the present value of the capacity charge revenue over the term of the FT service contract.

Epic rejected the proposal that, where capital expenditure would exceed the clause 10.5(a)(ii) limit, at least that limit be spent. It did so on the grounds that expenditure on sub-standard facilities would lack commerciality. Epic indicated that it proposed to revise the expenditure limit of $75 million to the following: [315]

(i) the annual maximum amount (clause 10.5(a)(ii)(A)) be a net contribution by Epic (that is, an 'equity' component) of $20m per annum; and

(ii) the $20m limit in a year be increased by the unexpended portion of the limit in the immediately preceding year (clause 10.5(a)(ii)(B)).

Epic explained that the limit that had initially been proposed was well in excess of the figure that could be sustained by the business. Epic stated that the amendment would 'align the limit to an estimate of the free cash flow available to Epic (that is, earnings after interest and tax expense, adding back depreciation)'.

Epic's proposed revisions of 2 March 2000 give effect to the first of these adjustments. In later correspondence, Epic confirmed that it would incorporate the second adjustment in further revisions.[316]

3.6.5 Commission's considerations

The Commission is satisfied that the concerns raised by interested parties about calculation of the capital contribution and the requirement that contributions be paid at the outset have been sufficiently addressed in Epic's proposed revisions to the access arrangement. However, the Commission considers that, consistently with its post-tax

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[314] Epic, response to submissions, 1 February 2000, p. 16.

[315] Epic, response to submissions, 1 February 2000, p. 19.

[316] Epic, letter to Commission, 15 June 2000, p. 4.

regulatory framework, the WACC to be applied as the discount rate in the formula for calculating the capital contribution for future capital expenditure should be the post-tax nominal vanilla WACC.

Further, the Commission would be assisted by the comments of Epic and other interested parties on the capital expenditure limit, in the light of Epic's response to submissions (reflected in its proposed clause 10.5(a)(ii)) and the amendments to the reference service, tariff and tariff escalator proposed by the Commission. Accordingly, the Commission proposes to not accept that limit at this stage, pending submissions to assist it to resolve the matter in its final decision.

The Commission accepts the regulatory treatment of new facilities investment proposed in clause 10.6, but considers that provision needs to be made for the possibility that the net present value of the revenue stream is less than the actual cost of the new facilities.

In its response to submissions, Epic stated that it would include in its proposed revisions to the extensions and expansions policy a 'clause ... to address the minimum parameters that would apply' in respect of commercial negotiations over timetable and allocation of risks. Epic representatives have since identified the proposed clause as 10.3(a)(vi), which was quoted in 3.6.4.

Epic proposed this revision in response to submissions criticising the allocation of construction risks.[317] In particular, Santos criticised the original provisions in that although Epic would own the facilities when constructed 'Epic does not bear any risk for project cost or time variances' and there did not appear to be mechanisms for the user to challenge the design or costs of the facilities.[318]

The Commission sought Santos' comments on the proposed revision. Santos expressed the view that the expansion policy offered by EAPL on MSPS is preferable for the access seeker in terms of not having to make an up-front capital contribution and quickly negotiating a surcharge.[319] According to Santos, the pipeline owner quotes on building time and cost, including a net present value calculation of receipts from gas haulage for the access seeker based on the reference tariff. If cost exceeds receipts, a surcharge or alternative arrangement is negotiated.

Commission representatives expressed concern to Epic representatives that in seeking approval for clause 10.5(b), it was in effect seeking an indirect endorsement from the regulator for terms and conditions of access to be decided by the service provider without reference to the regulator. Clause 10.5(b), as stated in Epic's lodgement of 2 March 2000, reads as follows:

> All other extensions/expansions will not form part of the Pipeline System for the purposes of the Code (unless included in a future review of this Access Arrangement), and the terms and conditions of gaining access to any such extensions/expansions will be determined by the Service Provider on a case by case basis.

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317 Epic, response to submissions, 1 February 2000, p. 18.
318 Santos submission, 15 October 1999, pp. 3-4.
319 Santos, e-mail to Commission, 26 July 2000.

In response, Epic stated that it proposed to delete all words after the comma in the above clause. This meets the Commission's concern on that aspect of the policy. Other implications of clause 10.5(b) were discussed in 3.2.5, under 'Clause 11 Term and extension'.

Concerns remain with respect to annual clearance of the queue. A prospective user that wishes to contract capacity shortly after the queue has been cleared would have to wait up to twelve months. Then, even if spare capacity were to become available during that time, the process of obtaining an indication of the terms on which that capacity would be available would begin.

In discussions with Commission staff, Epic has indicated that it has taken the approach of excluding spare capacity from consideration except when clearing the queue, for the following reasons:

- for equity between potential users;
- to overcome the possibility that 'first-come first-served' allocation could leave unmarketable parcels of capacity on hand; and
- to make for efficiency in optimising the size of new facilities, by enabling all outstanding demand and supply to be taken into consideration.

The policy that parcels of spare capacity only be taken into account annually would make them unmarketable for significant periods of time. The Commission acknowledges that that is of limited concern in the immediate future while the system is fully contracted. In the Commission's view, the last of Epic's reasons is the strongest point. However, the Commission believes that annual clearance of the queue is potentially too infrequent while the pipeline has the monopoly of haulage in South Australia, and is likely to discourage applications by industrial customers to join the queue. It may also have the inefficient result of preventing the service provider from linking work planned in response to queue requests with significant work planned for individual access-seekers.

Following further discussions, Epic made the following comments: [320]

> Epic remains of the view that its proposed annual queue clearance proposal is both equitable and an efficient clearance mechanism. However, we acknowledge that during a capacity enhancement process for a party or parties, there may be an opportunity to incorporate the requirements of third parties, should those requirements be confirmed in sufficient time.
>
> The provision of capacity to third parties in this way is, of course, an ad hoc process, dependent upon the existence and timing of the initial enhancement process. We would be prepared to commit to good faith negotiations with prospective users for possible incorporation into such an enhancement project at the time.

Epic's response is a positive development. However, the Commission considers that a threshold capacity level for supply should be struck below which the queue should be cleared three-monthly. The value of this threshold level would be best determined in a process of public consultation following release of the draft decision. There might also

[320] Epic, letter to Commission, 15 June 2000, p. 5.

be scope for six-monthly clearance of the queue for work of a higher, intermediate, threshold value.

For the above reasons, the Commission requires the following amendment.

Proposed amendment A3.34

For the access arrangement to be approved, the Commission requires that Epic revise clause 10 as proposed in its lodgement of 2 March 2000, except as indicated in the following points:

- First, revise the procedures for clearance of the queue in accordance with the indications given above, following public consultation on relevant threshold values for determining when applications for access would be reviewed and cleared from the queue;
- Second, amend the definition of 'I' in clause 10.4(l)(iii) so that it reads as follows:

  > 'I' = the present value calculation (using as the discount rate the nominal post-tax vanilla WACC assessed by the Regulator) over the term of the FT Service Contract of the Capacity Charge revenue ('CCR');

- Third, incorporate further revisions in the access arrangement to reflect the intentions stated in its letter dated 15 June 2000 (clause 10.5(a) expenditure limit; queue clearance in association with capacity enhancement for a party or parties);
- Fourth, incorporate provisions establishing the minimum parameters that would apply in respect of commercial negotiations over timetable and allocation of construction risks for enhancements to capacity, taking into consideration the issues raised by Santos;
- Fifth, subject to further public consultation as indicated above, provide for clearance of the queue at more frequent intervals than annually;
- Sixth, delete clause 10.5(a)(ii); and
- Seventh, amend clause 10.6 as proposed in Epic's lodgement of 2 March 2000 by replacing 'I' with 'the lesser of "A" and "I" '.

3.7 Review and expiry of the access arrangement

3.7.1 Code requirements

Section 3.17 of the code requires an access arrangement to include a date upon which the service provider must submit to the regulator a revised access arrangement (revisions submission date) and a date upon which the revisions are intended to commence (revisions commencement date).

In deciding whether these two dates are appropriate, the regulator must have regard to the objectives contained in section 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 (section 3.17(ii)).

An access arrangement period accepted by the regulator may be of any duration. However, if the period is greater 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, subsequently prove to be incorrect (section 3.18 of the code). The code provides examples of such mechanisms for guidance. Thus a regulator could consider triggers for early submission of revisions based on:

- divergence of the service provider's profitability or the value of services reserved in contracts from a specified range; or
- 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.

Finally, the revisions commencement date is not a fixed date. The date is subject to variation at the time the regulator approves the revisions pursuant to section 2.48 of the code. This section states in part:

> Subject to the Gas Pipelines Access Law, revisions to an access arrangement come into effect on the date specified by the Relevant Regulator in its decision to approve the revisions (which date must not be earlier than either a date 14 days after the day the decision was made or ... the Revisions Commencement Date).

3.7.2 Epic's proposal

In its original access arrangement Epic proposed to submit revisions on 1 July 2003. Epic subsequently proposed to change this date to 1 July 2005. Revisions are now intended to commence on 1 January 2006. This date would coincide with the date on which the existing haulage agreements are due to expire.

3.7.3 Submissions by interested parties and Epic response

Boral and TGT approved of Epic's revised proposals.

TGT submitted that triggers for review could include major changes to MAPS, such as expansion, or to the gas market.[321] Epic responded: [322]

> The triggers for revisions for the Access Arrangement should be left for Epic to determine. The position is no different than that which applies to parties to negotiated contracts – it is necessary for those parties to seek to negotiate revisions with each other.

Apart from these submissions, as noted in 3.1.5, Commission representatives have more recently discussed with Epic issues arising from a proposal by SAMAG Limited

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[321] TGT submission, 26 October 1999, p. 17.
[322] Epic, response to submissions, 1 February 2000, p. 34.

to develop a magnesium refining plant to operate in Port Pirie from about 2003. SAMAG has entered into a memorandum of understanding with the South Australian Government. The memorandum commits the State Government to actively seeking bids for a new pipeline from Victoria.[323] Such a pipeline, if developed, might connect with MAPS at Wasleys, south of the Port Pirie–Whyalla lateral. The South Australian Government is now looking more widely to identify new sources of gas (which may involve new means of delivery by pipeline) to South Australia.[324]

In discussions and correspondence with Commission representatives, SAMAG has expressed dissatisfaction with the reference tariff structure proposed in Epic's access arrangement. Its primary concerns are to secure a distance-based method of charging and a backhaul tariff that is distance-based and offers a substantially better discount on forward-haul than the 50 per cent that applied under Epic's June 1998 access arrangement made under South Australian legislation.[325]

Epic representatives have responded to these concerns in discussion with Commission representatives. They put the view that reconfiguration of the reference tariff and service is inappropriate at this stage. They stated that they continue to be willing to negotiate commercially to address the requirements of SAMAG, which requirements in Epic's view are specific to the prospective customer. While the Commission understands that commercial discussions between the parties have been reactivated,[326] SAMAG continues to seek regulatory review now of the reference tariffs and tariff structure.

As noted previously, a broader issue arising from these developments is that, if they result in a new pipeline being developed to supply gas, that pipeline could potentially render part of the capacity of MAPS excess to demand, at least in the years immediately following the new entry. A pipeline originating in Victoria (if that were the case) would be likely to create demand for backhaul services from a wider range of parties for the delivery of gas to the Port Pirie–Whyalla lateral.

3.7.4 Commission's considerations

Revisions submission and commencement dates

Epic has proposed a revisions submission date and a revisions commencement date in accordance with the requirements of the code.

An access arrangement for the initial access arrangement period will commence in accordance with section 2.26 of the code only after the Commission is satisfied that it meets the code requirements and gives final approval to it. The term of the access arrangement is not expected to exceed 5 years by the time further public consultation is

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[323] Hon Rob Kerin, MP, 'New industry for Port Pirie', 19 May 2000 *Media release* and Pima Mining NL, 'SAMAG signs MOU with South Australian Government', *Stock Exchange announcement,* undated, May 2000.

[324] Hon Rob Lucas, MLC, 'State Government calls for new gas pipeline investment', *Media release,* 19 June 2000.

[325] *Natural Gas Pipelines Access Act 1995* (SA).

[326] The Commission understands that commercial discussions were first initiated between the parties some months ago.

held, and a final decision and final approval document are issued. As noted in chapter 2, Epic's revenues in the initial access arrangement period are not tied to forecast demand. Rather, the Commission proposes that they be adjusted to the cost of service revenue requirement calculated by the Commission.

In the foregoing circumstances, the Commission does not need to consider the review mechanisms outlined in section 3.18 of the code.

The constraints arising from the existing haulage agreements and the provisions of section 2.25 applicable to those agreements are relevant in making the assessment required by section 3.17 of the code. Because of those agreements, the Commission's determination in respect of the reference tariff and reference tariff policy is of limited practical effect in terms of making capacity available at that rate during the initial access arrangement period. However, the reference tariff and the underlying tariff policy resulting from the regulatory process are likely to be relevant parameters in commercial negotiations between Epic and potential users of services supplied in this and later periods.

It is sensible to terminate the access arrangement period when the existing agreements terminate, as Epic proposes. Accordingly, the Commission considers that the two revised dates proposed by Epic will not cause the reference tariff and reference tariff policy as proposed to be amended by the Commission to conflict with section 8.1 principles. Therefore, the Commission has no objection to the revised dates proposed by Epic.

The issue of a trigger for early review

In the Commission's view, the development of a new pipeline as an alternative or complement to MAPS, if realised, may render the existing range of services, constraints on service delivery and tariff structure out of date. Such a development would potentially bring the proposed reference tariff and reference tariff policy into conflict with section 8.1(e) of the code (efficiency in the level and structure of the reference tariff), and possibly with other provisions including sections 8.1(a) and 8.1(b).

If any developments were to adversely impact on Epic, it could exercise its rights to apply for an early review. Having regard to section 8.1, the Commission has given consideration to requiring Epic to incorporate in the access arrangement a trigger for early review. The Commission has in mind that this would give other interests the opportunity to make submissions in respect of tariffs, tariff policy, service policy and other relevant issues, but only if that trigger were activated. An example of such a trigger might be the irrevocable commitment of a pipeline developer to construct a new pipeline to serve customers in South Australia.

Commission representatives sought Epic's views on this proposal. Epic expressed concern at the regulator attempting to define events that are to serve as 'triggers' for review of the access arrangement. In confirming its views, Epic continued: [327]

> Epic Energy does not believe that, as advocated by the Commission, an 'irrevocable commitment to a new pipeline' is appropriate or necessary as a trigger mechanism to

[327] Epic, letter to Commission, 6 July 2000.

> review the Access Arrangement. It is Epic Energy's firm view that such an approach by the Commission would predicate a break down of a fundamental principle of the National Access Code, that the Access Arrangement be both certain and fixed.
>
> Epic Energy believes that the attempt to define events to serve as a trigger is anti-competitive and further, removes development incentive.

Epic concluded by emphasising that 'there is no need for review merely on the construction of an unrelated, unconnected pipeline'.

The Commission agrees with this last point (save if an unconnected pipeline were constructed so as to permit supply of gas to customers served or contestable by MAPS). However, subject to submissions in response to this draft decision, the Commission is not persuaded by the thrust of Epic's other comments.

The Commission agrees with Epic that the code is designed to provide a framework of certainty for access during the period of the access arrangement. That is why the Commission does not believe that it should be re-examining the tariff structure now in response to SAMAG's views and the South Australian supply/pipeline initiative. At this stage the proposals are uncertain of translating to actual development. As submissions in response to the Commission *Issues Paper* did not question the tariff structure (particularly the 'postage stamp' approach and lack of backhaul) in the way SAMAG does, the Commission takes it that the market is not seriously concerned by those issues at this time.

However, the code makes explicit provision for an early review to be triggered by 'specific major events'. Epic's argument is not supported by the words of the code in section 3.17(ii). Further, section 2.14 of the code obliges the regulator to have regard not only to the legitimate business interests of the service provider, but also to the public interest, including the public interest in having competition in markets, and to the interests of users and prospective users. In respect of this issue, the code provision enabling the service provider to initiate an early review (section 2.28) to an extent addresses the service provider's legitimate business interests and investment. In the Commission's view, a trigger for review in consequence of a defined major event may provide for a balance of interests.

The Commission will be assisted in reaching a final position by submissions on the matter from the applicant, users and prospective users. The submissions should address the following issues:

- whether to include a section 3.17 trigger in the access arrangement;
- if so, how to define a 'significant major event' for purposes of that trigger; and
- whether the regulator's scope for review of the access arrangement should be limited, for example, to reviews of the tariff structure only.

The Commission emphasises that while prospective developments in the market have a bearing on such submissions, a trigger can only be defined in terms of the actual occurrence (in the future) of a 'specific major event'.

For the above reasons, the Commission proposes the following amendments to the access arrangement. In the event the Commission is persuaded by submissions that the

access arrangement should incorporate one or more trigger events it would, as part of the further process of public consultation:

- make the terms of such events known to Epic prior to the final decision;
- make known its views as to the scope of any review that should be triggered by the occurrence of the specific major event.

Proposed amendment A3.35

For the access arrangement to be approved, the Commission requires that Epic amend the access arrangement to provide for the revisions submission date and revisions commencement date proposed in clauses 1.2 and 1.3 of its lodgement of 2 March 2000.

Proposed amendment A3.36

For the access arrangement to be approved, the Commission requires that Epic amend the access arrangement by defining, in response to the further process of public consultation, specific major events (if any) that would trigger an obligation on the service provider to submit revisions prior to the revisions submission date.

4. Information provision and performance indicators

4.1 Information provision

4.1.1 Code requirements

The service provider's access arrangement information must contain sufficient information in the opinion of the relevant regulator to:

- enable users and prospective users to understand the derivation of the elements in the proposed access arrangement described in sections 3.1 to 3.20 of the code; and
- form an opinion as to the compliance of the access arrangement with the provisions of the code (section 2.6).

According to section 2.7 of the code, the access arrangement information provided may include any relevant information, but must at least contain the categories of information described in Attachment A to the code, which is summarised in Figure 4.1 below.

Figure 4.1: Summary of Attachment A information

The information required is divided into six categories:

Category 1: access and pricing principles

Tariff determination methodology; cost allocation approach; and incentive structures.

Category 2: capital costs

Asset values and valuation methodology; depreciation and asset life; committed capital works and planned capital investment (including justification for); rates of return on equity and debt; and debt/equity ratio assumed.

Category 3: operations and maintenance costs

Fixed *versus* variable costs; cost of services by others; cost allocations, for example, between pricing zones, and cost categories.

Category 4: overheads and marketing costs

Costs at corporate level; allocation of costs between regulated and unregulated segments; cost allocations between pricing zones, services or categories of asset.

Category 5: system capacity and volume assumptions

Description of system capabilities; map of piping system; average and peak demand; existing and expected future volumes; system load profiles and customer numbers.

Category 6: key performance indicators

Indicators used to justify 'reasonably incurred' costs

Under section 2.8 of the code, information included in the access arrangement information may be categorised or aggregated. The extent to which it may be categorised or aggregated is that necessary to ensure that disclosure of the information is, in the opinion of the relevant regulator, not unduly harmful to the legitimate business interests of the service provider, a user or prospective user.

If the relevant regulator is not satisfied that the access arrangement information meets the requirements of the code, it may require the service provider to make changes to the access arrangement information. Likewise, if requested to do so by any person, the relevant regulator must review the adequacy of the access arrangement information. However, the relevant regulator must not require the inclusion of material the release of which, in the regulator's opinion, could be unduly harmful to the legitimate business interests of the service provider or of a user or prospective user (section 2.9).

If the relevant regulator requires the service provider to change the access arrangement information, it must specify the reasons for its decision and allow the service provider a reasonable time to make the changes and to resubmit the access arrangement information.

This chapter relates specifically to access arrangement information provided for users and prospective users. The regulator also has wider information-gathering powers under GPAL. That Law gives the regulator power to require a person to give the regulator information or a copy of a document.[328] The power can be exercised if the regulator has reason to believe that a person has information or a document that may assist the regulator in the performance of any of the regulator's prescribed duties under the Law. Section 2.8 of the code states that nothing in that section limits the regulator's power under the Law to obtain information, including information in an uncategorised or unaggregated form. The code and the Law place separate limitations on the regulator's discretion to disclose information received that has been identified as being of a 'confidential or commercially sensitive nature'.[329]

These statutory powers aside, the Commission values the co-operation of the service provider and other interested parties in making information available in response to the numerous queries that inevitably arise in considering complex matters.

4.1.2 Epic's proposal

Epic submitted access arrangement information in conjunction with the access arrangement on 1 April 1999. The Commission has made both documents available on-line on the Commission's website. Hard copy was provided to the Code Registrar and the documents have been available in hard copy in response to any requests by interested parties. Details were included, where appropriate, in the Commission's *Issues Paper* of September 1999 and relevant extracts are reproduced in this draft decision.

Epic corrected some parts of the access arrangement information in later correspondence with the Commission. The Commission understands that Epic is preparing a consolidated corrected version that will be made available for the

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[328] *Gas Pipelines Access (South Australia) Law,* section 41.
[329] Code, sections 7.11 and 7.12 and *Gas Pipelines Access (South Australia) Law,* section 42.

Commission's website in conjunction with a consolidated version of Epic's proposed revisions to the access arrangement.[330]

4.1.3 Submissions by interested parties

TGT submitted that the 'access arrangement information is not sufficient to enable users and prospective users to understand the derivation of some elements of the proposed access arrangement.'[331] TGT noted a particular lack of supporting information in respect of the following code Attachment A categories:

- Tariff determination methodology (Category 1). In particular, TGT queried derivation of the proposed capacity charge for FT service, rationale for allocating revenue between FT capacity charges and commodity charges, and justification for the 15 per cent premium for IT service.
- Economic life assumption (Category 2). TGT submitted that the basis for this assumption required further justification
- Planned capital investment (Category 2). TGT submitted that the access arrangement information did not adequately describe and justify the significant expenditure proposed each year.
- Description of system capabilities (Category 5). TGT submitted that system capabilities were not adequately described or explained. In particular, TGT sought further explanation of the limitation on capacity to be made available for FT service.

There were no other submissions on this issue.

4.1.4 Commission's considerations

In addition to the access arrangement information, Epic has provided a response to submissions on its ORC valuation (14 December 1999), a response to submissions generally (1 February 2000) and proposed revisions to its access arrangement (2 March 2000). In addition, Epic has provided information to the Commission confidentially and on a for-public-disclosure basis. The Commission has incorporated public material in its draft decision as appropriate.

The Commission considers that there is sufficient information in the access arrangement information to enable users and prospective users to understand the derivation of the elements in the proposed access arrangement. There is also sufficient information to enable them to form an opinion as to the compliance of the access arrangement with the provisions of the code. Furthermore, the access arrangement information includes the information described in Attachment A of the code.

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[330] The documents would represent the company's position prior to the draft decision document. The consolidated revised access arrangement proposals would update the version of 2 March 2000 that has been available on-line on the Commission's website.

[331] TGT submission, 26 October 1999, p. 10.

The Commission will review the situation in response to comments on the draft decision and the consolidated corrected document that the Commission understands that Epic is preparing.

4.2 Key performance indicators

4.2.1 Code requirements

Category 6 of Attachment A to the code includes key performance indicators (KPIs) in the ambit of access arrangement information. The KPIs given as examples are:

- industry KPIs used by the service provider to justify 'reasonably incurred' costs; and
- the service provider's KPIs for each pricing zone, service or category of asset.

Section 8.6 of the code allows the regulator to 'have regard to any financial and operational performance indicators it considers relevant in order to determine the level of costs within the range of feasible outcomes under section 8.4 that is most consistent with the objectives contained in section 8.1'. The regulator must then identify the indicators and provide an explanation of how they have been taken into account (section 8.7 of the code).

4.2.2 Epic's proposal

Epic suggested that there are two distinct potential roles for KPIs and benchmarks:

- to establish service standards or monitoring arrangements to ensure that the quality of service provision does not decline within a price control period (typically 5 years); and
- to help determine the efficient level of operating costs that should be included in the 5-year price control mechanism.

Epic submitted that there are no useful comparators in Australia at this time, and therefore did not seek to use KPI data in setting or justifying the proposed reference tariffs.[332] Epic submitted that there are too many differences of a geographic, historic, political, operational and physical nature in the Australian pipeline sector, to permit benchmarks to be used to set the level of allowable costs. Rather, Epic put the view that quality of service indicators may provide some future comparison of the service performance of pipelines in Australia.[333] Further, Epic submitted that Category 6 of Attachment A to the code should be modified to enable pipelines to develop quality of service standards and supporting measurement data.[334]

Despite Epic's view that KPIs are of limited use, Epic did provide a simplified comparison of gas haulage charges in 1997 across a range of transmission pipelines in

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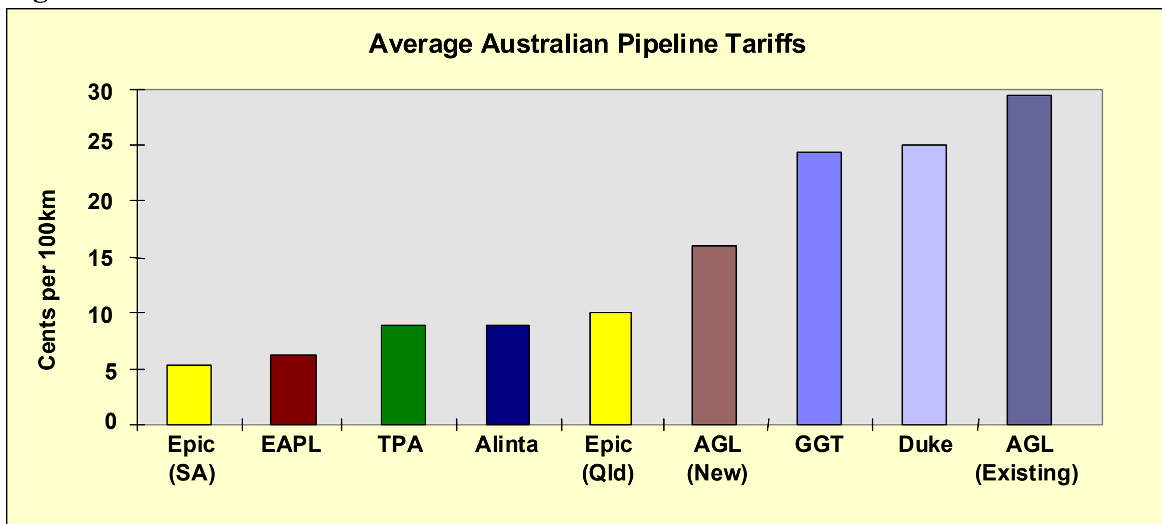
[332] Access arrangement information, p. 14.
[333] Access arrangement information, p. 15.
[334] Access arrangement information, p. 15.

Australia. Epic noted that, despite its pipeline being fully compressed, it still held a very competitive position.[335]

Figure 4.2



Service standards

Epic submitted that service factors are more relevant when comparing key performance indicators across a range of pipelines. Table 4.1 below compares Epic's performance with that of PASA, its predecessor as owner and operator of MAPS.

Table 4.1

Item	PASA				Epic		
	1979/80	**1984/85**	**1989/90**	**1994/95**	**1996**	**1997**	**1998**
No. employees (total SA)	127.0	188.0	193.0	127.6	109.8	103.9	97.8
Pipe operated (total SA, km)	919.0	1593.0	1739.0	2039.0	2039.0	2039.0	2040.0
Km pipe/employee	7.2	8.5	9.0	16.0	18.6	19.6	20.9
LTIs [(a)] (total SA)	n/a	18	13	2	2	0	0
GUF [(b)]	-1.02%	-0.33%	-0.73%	-0.28%	-0.03%	+0.11%	+0.01%
Load factor [(c)]	1.21	1.25	1.39	1.41	1.72	1.53	1.76
No. of restrictions (Gas not delivered, GJ)	47	234	7	4.5	0	0	0

Source: MAPS access arrangement information, p. 16.
Notes:
(a) LTI = Lost Time Injury.
(b) GUF = gas unaccounted for. A (+ ve) sign means that Delivery Point measurement exceeds Receipt Point measurement.
(c) Peak Day ÷ Average Day.

Epic also provided the following information relating to its historical use of gas in operations. This shows a decline in unaccounted-for gas (UAG) between 1996 and 1998.

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[335] Access arrangement information, p. 16.

Table 4.2

	1996	1997	1998
Fuel gas (TJ's)	874.317	1,021.126	1,262.013
Other measured (venting, etc) (TJ)	86.906	95.350	79.060
Total fuel gas (TJ)	961.223	1,116.476	1,341.073
Gas unaccounted for	25.186	(82.784)	(7.835)
Total gas used (TJ)	**986.409**	**1,033.692**	**1,333.238**
Total cost (financial accounts)	**$2,478,000**	**$2,602,000**	**$3,261,000**

Source: MAPS access arrangement information, p. 17.

4.2.3 Submissions by interested parties

Santos noted Epic's concerns about the difficulty in making comparisons between pipeline systems in Australia, but suggested that Epic's figure for 'kilometre of pipe per employee' and its apparent improvement over time had been distorted by the inclusion of low-cost (small diameter and oil) pipelines. Further, Santos noted that if Epic's low-cost pipelines were excluded from the denominator of the cents per 100km in Figure 4.2 above, Epic's cost would rise from 5 cents per kilometre to 10 cents per kilometre. Epic would then be ranked below EAPL, TPA and Alinta.[336]

TGT also noted the difficulties in comparing pipelines, but stated that a comparison with the O&M costs of other pipelines remains a guide to the reasonableness of forecast costs.[337] TGT accepted that short, highly compressed pipelines are likely to compare unfavourably against benchmarks such as O&M costs per 1000km because of significant fixed costs. TGT also commented that older pipelines have higher maintenance costs than new pipelines. However, TGT considered that these factors were not enough to explain the divergence between Epic's forecast O&M costs for 1999 of $14.2 million per 1000km, and costs of between $9 million and $12.8 million for other pipeline systems. In particular, TGT expressed difficulty in understanding why Epic's forecast for 2000 differed so much from EAPL's forecast of only $12.3 million for the MSPS, given that the two pipelines are of a similar age, the main difference (other than length) being the number of compressor stations.[338]

TGT also suggested that two 'holistic productivity' indicators for comparing the technical efficiency of utilities - 'total factor productivity' (TFP) and 'data envelopment analysis' (DEA) should be considered for benchmarking transmission gas businesses.[339] Comparisons could involve developing 'reference sets' for utilities, that

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[336] Santos submission, 15 October 1999, p. 8.
[337] TGT submission, 26 October 1999, p. 20.
[338] TGT submission, 26 October 1999, p. 20.
[339] TGT noted that the Bureau of Industry Economics (BIE) in its 1994 review of gas distribution businesses considered these two measures. Refer TGT submission, 26 October 1999, p. 32.

is, a set of several technically efficient utilities that were comparable to a specific utility, and therefore represented a best–practice benchmark for that utility.[340]

Finally, TGT submitted that further work should be undertaken by the industry in conjunction with regulators to develop useful measures, and that other indicators such as service standards, pipeline condition and operating performance, should be developed and tracked over time.[341]

4.2.4 Commission's considerations

The Commission noted in its Victoria *Final Decision* the challenges in identifying KPIs and benchmarks especially in a newly deregulated commercial environment as applies to the Victorian natural gas industry.[342] The Commission also considered the use of benchmarks such as load factor and energy delivered per employee. The Steering Committee on National Performance Monitoring of Government Trading Enterprises suggests these as a basis for developing non-financial indicators for the performance of utilities.

The Commission recognises the limitations of KPI information noted by Epic, but considers the information can still provide a useful guide in benchmarking operating performance across pipelines. The Commission welcomes Epic's contribution to the available body of benchmarking information, and its views on the importance of service standard comparisons.

The issue of service standards is discussed in some detail in the Commission's *Draft Regulatory Principles*.[343] Submissions received in response to the Commission's 'Regulation of Transmission Revenues' *Issues Paper*[344] revealed support for explicit service standards to be developed, although there is less consensus on how to actually determine appropriate service standards and at what level or levels service standards should be set. The Commission does have concerns about undertaking what could be seen as 'technical regulation' rather than economic regulation, and does not consider it appropriate for it to solely determine the service standards that must apply to service providers, either individually or collectively. However, it is the Commission's preference that all interested parties have the opportunity to provide input to any service standards proposed by a service provider to apply for the duration of the regulatory period.

In addition to the KPI information provided by Epic, the Commission considered cost per pipeline length. This is a well-known industry-accepted benchmark for operating and maintenance costs.

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[340] TGT submission, 26 October 1999, p. 32.

[341] TGT submission, 26 October 1999, p. 32.

[342] ACCC, Access arrangements for Transmission Pipelines Australia Pty Ltd and others, *Final Decision,* 6 October 1998, p. 157.

[343] ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues,* 27 May 1999, p. 98.

[344] ACCC, 'Regulation of Transmission Revenues', *Issues Paper*, May 1998.

This indicator was compared across several pipelines and the results are summarised in Table 2.20 of this draft decision. The relatively high figure shown for MAPS is to some extent (as TGT has submitted) associated with Epic's comparatively large number of compressor stations.

Therefore, the Commission considered forecast operating costs as a percentage of overall capital costs employed.[345] As noted in section 2.6.4, this measure typically ranges from 2 per cent for an uncompressed pipeline to 5 per cent for a fully compressed pipeline. In Epic's case forecast operating costs are approximately 2.8 per cent of the ORC value calculated by the Commission.

Overall, the Commission considers Epic's operating costs to be within acceptable limits. However, the Commission will consider whether the level of operating costs continues to be appropriate at the commencement of the next regulatory review.

4.3 Financial indicator analysis

The Commission stated in the *Draft Regulatory Principles* that financial indicator analysis can provide the Commission with a means of assessing the likely impact of its decisions on the financial standing of regulated business.[346] That is, it can provide a useful check on the reasonableness of its regulatory decisions.

Financial indicators developed by credit rating agencies for analysing company financial risk include:

- funds flow net interest cover;
- net debt payback period;
- total debt/total capital; and
- internal financing.

Other financial indicators are also used to assist in analysing company profitability, cash flow protection and capital structure.

For such analysis to be effective, the Commission would require:

- accurate demand and cost projections;
- assumptions of the firm's financial and dividend policies, including gearing ratio and dividend payments; and
- a set of comparable benchmarks.[347]

The Commission has not at this stage undertaken an analysis of the likely impact of this draft decision on Epic's financial indicators. Epic's revenues over the access arrangement period are determined almost entirely by existing contracts. Therefore, the

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[345] In the interests of comparison between pipeline systems, the ORC figure may be used as a measure of the value of the capital assets employed.
[346] ACCC, *Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, p. 107.
[347] In previous decisions, the Commission has utilised benchmark data published by reputable credit rating agencies, such as Standard and Poors.

Commission considers that the draft decision will have very little impact on Epic's financial indicators.

However, the Commission invites further submissions, from Epic and other interested parties, as to whether the Commission should consider undertaking this analysis prior to the release of the final decision.

5. Draft decision

Pursuant to section 2.13(b) of the code, the Commission proposes not to approve in its present form Epic's proposed access arrangement for the Moomba to Adelaide Pipeline System.

The amendments (or, as appropriate, the nature of amendments) that would have to be made in order for the Commission to approve the proposed access arrangement are recorded in this draft decision.

As stated in chapter 1, the code obliges the Commission to make its draft decision on the access arrangement as originally lodged on 1 April 1999. Accordingly, this document sets out the Commission's draft decision on the corrected version, lodged on 16 April 1999, of Epic's proposed access arrangement of 1 April 1999. However, in drafting the amendments to the access arrangement that the Commission requires in order to approve it, the Commission has taken into consideration and discussed in this draft decision Epic's proposed revisions of 2 March 2000 to the arrangement.

In respect of those of Epic's proposed revisions not specifically discussed in this draft decision, the Commission proceeds on the assumption that Epic will make the changes to the access arrangement proposed in its lodgement of 2 March 2000 and in supplementary correspondence with the Commission.

Australian Competition and Consumer Commission

Annexure 1

Submissions received by Commission in response to *Issues Paper*

Note: **In some cases, additional information has been provided to the Commission on a confidential basis.**

Submission No	Interest	Abbreviation	Date of Document
1	Regulator, Office of Energy Policy	OEP	7 October 99
2	Osborne Cogeneration Pty Ltd	Osborne	7 October 99
3	The Australian Gas Light Company	AGL	7 October 99
4	Boral Energy Holdings Limited	Boral	12 October 99
5	NAdb Energy Services Pty Ltd	NAdb	13 October 99
6	Santos Limited	Santos	15 October 99
7	United Energy	UE	18 October 99
8	S.A. Gas & Electricity Users Group	SAGEUG	18 October 99
9	Deputy Premier and Minister for Primary Industries, Natural Resources and Regional Development, SA – submission by Primary Industries and Resources SA	PIRSA	19 October 99
10	TXU Trading	TXU	20 October 99
11	ETSA Power Pty Ltd	ETSA	25 October 99
12	AGL Energy Sales & Marketing Limited	AGLES&M	25 October 99
13	Terra Gas Trader Pty Ltd	TGT	26 October 99

Annexure 2

Commission ORC Analysis

Epic determined its Option B[348] to be its least-cost option. However, consultant Connell Wagner engaged by the Commission concluded that Epic's Option D should be the least-cost and therefore preferred option, particularly after taking into account the NPV of operating costs. This view was supported by Santos, which derived a significantly lower initial capital cost for that option.

To test these conclusions, the Commission has undertaken its own analysis of an optimised replacement for the MAPS based generally on Epic's Option B and D models but with some further optimisation by comparison with Epic's approach. The Commission's results also favour Option D as the least-cost option.

Epic has indicated that the pipeline capacity to which this access arrangement applies is fully contracted. A common assumption in both Epic's and the Commission's analyses is that each line segment and facility is optimised for the flow at today's current maximum capacities, using standard pipe diameters. The maximum capacity of the chosen configuration is stated by Epic to be 393TJ per day. The Commission's analysis with both its Option B and D models generally confirms this capacity figure and the sizing of the main and loop lines in Epic's ORC Attachment reproduced in Tables A2.1 and A2.2 below. (For ease of comparison, the terminology and layout shown in the Tables generally follows that in Epic's ORC Attachment to the access arrangement information.)

The Commission's optimisation models differ from Epic's mainly in the treatment of the Port Pirie−Whyalla lateral and differences in compression requirements.

- The Commission's Option D retains a maximum Port Pirie−Whyalla lateral operating pressure of 10MPa, but assumes an 8 inch lateral pipeline from the mainline offtake to Whyalla. This eliminates the need for the Whyte Yarcowie compressor station at the inlet to that lateral. The Commission's model further requires 3 mainline compressor stations - two with 2 x 4500kW and one 2 x 2000kW. (Epic requires two 3 x 3000kW unit stations and one 2 x 570kW unit station at Whyte Yarcowie. Epic has retained the existing 6-inch size of the Port Pirie−Whyalla lateral as far as Port Pirie.)
- The Commission's Option B assumes a maximum lateral operating pressure of 10MPa (Epic adopted 15 MPa) but assumes no further optimisation of the laterals. It retains the Whyte Yarcowie compressor station[349] and Epic's mainline compressor stations.
- Epic appears to have wrongly included an additional 11.57km of pipeline length in the Port Pirie−Whyalla lateral and to have understated the size of the 'Gulf

[348] See Epic, access arrangement information, ORC Attachment.

[349] The Whyte Yarcowie compressor station can be eliminated from either of the Commission's options by adopting the larger pipe size for the section from the mainline offtake to Pt Pirie.

crossing' as 4 inch. The main crossing is 8 inch. A 4-inch pipeline was also installed at the same time but is not required at current maximum capacities.

Pipeline costs are dependent upon a range of variables including size, pipeline location, terrain, rock, the tendering process, competition between pipeline suppliers, the exchange rate and project management, any of which may at any stage have a major influence on the total cost. Competition between suppliers of the major materials such as pipe or of pipeline construction services, improvements in industrial relations and changes in technology have, if anything, tended to ensure that Australian unit pipeline construction costs have declined over time. The Commission's analysis has attempted where possible to start from unit costs that reflect current conditions, and to take the preceding factors into account. As such, it relies on a more detailed methodology than that employed by Epic in its submission. The analysis addresses the effect of factors such as the price of the pipe and the difficulty of construction by breaking up the mainline and lateral pipelines into smaller, individual sections and takes into account factors such as pipe specification, design pressure, locality and terrain. Compressor, pressure regulating, meter, scraper and valve stations and other facilities normally found on a pipeline system are also costed separately, again taking into account factors similar to those listed for the pipeline.

For its part, Epic has chosen to divide the system into essentially four pipeline segments, applying a common unit cost to the total length and diameter of the main and loop pipelines and other unit costs to the lateral and underwater pipelines. The unit costs for the lateral and underwater pipelines are increased by 20 per cent in Epic's preferred (higher pressure) Option B. As such, the four pipeline segments represent over 75 per cent of the total cost of the system. While other components of the system, such as compressor and meter stations, are considered separately, the overall result is a considerably simplified approach, which is highly sensitive to the unit costs adopted.

Given the differences in the approach between Epic's and the Commission's estimates a direct comparison based on unit costs is not entirely relevant. Nevertheless, to enable some comparison, average unit costs for the Commission's estimates were derived for individual items shown in Tables A2.1 and A2.2. These were obtained by the summation of corresponding individual cost components (the details of which are outlined in a confidential document not annexed to this draft decision) and division by the applicable factors shown in the Tables.[350]

Epic's costs are set out in the access arrangement information as at December 1998. As observed above, the unit cost of pipelines in Australia has, if anything, declined over time. Nevertheless, the Commission has allowed for inflation by adjusting Epic's unit rates to account for changes in CPI in the intervening 18 months.

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[350] The figures in the table for total costs have been rounded.

Table A2.1 ORC comparison Option B

	Epic ORC - Option B ($ June 2000)				Commission ORC - Option B ($ June 2000)			
Item/description	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $
PIPELINE	**km**	**inch**			**km**	**inch**		
Main line	781	22	22,774	391,300,000	781	22	21,000	361,000,000
Loop line	42	20	22,774	19,100,000	42	20	24,500	20,600,000
Land laterals	218.8	6.8	24,845	36,900,000	218.8	6.8	18,000	26,700,000
Underwater laterals	14.1	6.5	124225	11,500,000	14.1	8.5	103000	12,300,000
Native title compensation				5,500,000				0
COMPRESSORS	**No**	**kW**	**$/kW**		**No**	**kW**	**$/kW**	
Compressor stn #1	3	6,000	2,065	37,300,000	3	6,000	2,185	39,300,000
Compressor stn #4	2	2,000	2,581	10,400,000	2	2,000	3,420	13,700,000
Whyte Yarc comp stn	2	570	5,161	5,900,000	2	570	5,900	6,200,000
METER STATIONS								
Meter & regulator stns				17,000,000				17,900,000
SCADA & COMMS								
SCADA & communications				7,200,000				3,100,000
LINEPACK	**GJ**		**$/GJ**		**GJ**		**$/GJ**	
Linepack	1000020		2.75	2,800,000	910300		2.75	2,500,000
OPERATIONS & MAINTENANCE								
Maintenance depot				6,200,000				6,200,000
Spares				3,600,000				included elsewhere
Head office/gas control				3,600,000				3,600,000
SUB TOTAL				**558,300,000**				**513,100,000**
INTEREST			**%**				**%**	
Interest on capital			5.7	31,900,000			5.0	25,700,000
GRAND TOTAL				**590,200,000**				**538,800,000**

Table A2.2 ORC comparison Option D

	Epic ORC - Option D ($ June 2000)				Commission ORC – Option D ($ June 2000)			
Item/description	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $	Unit	Pipeline diameter	Unit cost $/inch .km	Cost $
PIPELINE	**km**	**inch**			**km**	**inch**		
Main line	781	24	22,774	426,900,000	781	24	18,400	344,600,000
Loop line	42	20	22,774	19,100,000	42	20	24,500	20,600,000
Land laterals	218.8	6.8	20,704	30,700,000	218.8	7.5	18,000	29,600,000
Underwater laterals	14.1	6.5	103520	9,500,000	14.1	8.5	103000	12,300,000
Native title compensation				5,500,000				0
COMPRESSORS	**No**	**kW**	**$/kW**		**No**	**kW**	**$/kW**	
Compressor stn #1	3	3,000	2588	23,300,000	2	4,500	2,680	24,100,000
Compressor stn #3					2	4,500	2,680	24,100,000
Compressor stn #5	3	3,000	2588	23,300,000	2	2,000	3,420	13,700,000
Whyte Yarc comp stn	2	570	5176	5,900,000	0			
METER STATIONS								
Meter & regulator stns				17,000,000				17,400,000
SCADA & COMMS								
SCADA & communications				7,200,000				3,100,000
LINEPACK	**GJ**		**$/GJ**		**GJ**		**$/GJ**	
Linepack	800000		2.75	2,200,000	845000		2.75	2,300,000
OPERATIONS & MAINTENANCE								
Maintenance depot				6,200,000				6,200,000
Spares				3,600,000				included spare
Head office/gas control				3,600,000				3,600,000
SUB TOTAL				**584,000,000**				**501,600,000**
INTEREST			**%**				**%**	
Interest on capital			5.7	33,300,000			5.0	25,100,000
GRAND TOTAL				**617,300,000**				**526,700,000**

The main differences between the Epic and Commission estimates are as follows:

- Compared with Epic's unit costs the Commission's corresponding unit costs are lower overall for the mainline, and particularly for the Commission's Option D, largely because of a 20 per cent saving in steel pipe for the lower pressure option, even after accounting for a slightly larger diameter.[351] Unit costs are marginally higher (reflecting terrain and location) for the loop line.[352] The Commission's costs are significantly lower for the laterals, as discussed below.
- The Commission's unit costs for compressors are higher than Epic's, however an allowance for spares is included.
- Epic had costed lateral pipelines in its Option B on the basis of a high pressure design (15MPa), which Epic states adds 20 per cent to its unit costs for this item by comparison with the lower pressure design adopted for its other options.
- There is no allowance for growth in demand in Epic's proposed system as it is based solely on existing demand. (Future expansion of capacity is to be accounted for under the queuing and extensions and expansions provisions.) Therefore hydraulic flow modelling undertaken by the Commission has been based on historical demand profiles for the various laterals (provided on a confidential basis by Epic) and these form the design basis of the optimised system. The results confirm that it is unnecessary to adopt a higher design pressure for the laterals. Accordingly, in its analysis the Commission's optimised system for the laterals is the existing lateral configuration and existing maximum operating pressures, accurate to the extent that could be determined from details provided by Epic. For Option B, this explains in part the difference in the estimates for the laterals.
- Epic has identified separately an allowance for native title compensation. The Commission has not been persuaded that this allowance is a valid inclusion at this stage and has not included any amount in its estimate.
- While the overall amount is insignificant, the Commission has derived a lower amount for SCADA and communications than that included by Epic. This reflects the fact that the main communications backbone system is provided by third parties in the existing system. It is understood that the costs of this communications system rental are included in the annual operating costs submitted by Epic in its proposal, and so an allowance for the capital cost of that system in the initial capital base would result in double-dipping.
- Epic's figures for linepack are slightly different to the Commission's, possibly owing to difference in methodology.[353] As far as the price is concerned, the Commission is not aware of the commercial arrangements for supply of linepack gas and has accepted Epic's cost, but without allowance for inflation.

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[351] The mass of steel per unit length of pipe varies approximately with the design pressure times the diameter squared.

[352] This influence is also present in the section of mainline downstream of Wasleys, which is the north junction point of the loop line and the mainline.

[353] For Option B, to a small degree, the difference may also be explained by Epic's choice of a higher operating pressure for the laterals, which as explained above is unnecessary in the Commission's view.

- The Commission has not included a separate item for spares. Generally they have been costed by way of an allowance on specific items (for example, compressors) and elsewhere in a small percentage allowance in the overheads component.
- While no detail has been provided by Epic, the amounts allowed by it for operations and maintenance facilities appear reasonable and the Commission has used the same figures.
- Interest during construction is a valid cost to the owner or developer of a new facility. The difference between the Epic and Commission figures shown in the Tables is mainly due to the difference in sub-total amounts and a lower effective interest rate employed by the Commission.
- As can be seen, the Commission's ORC estimate is lower than that of Epic by approximately 9 per cent for Option B and 15 per cent for Option D. Epic's ORC values in December 1998 terms were $570.1 million for Option B and $596.6 million for Option D, and compared with those figures the Commission's estimates are respectively 5 per cent and 12 per cent lower. Both outcomes are within the level of accuracy that could normally be expected, particularly given the differences in methodology.

The conclusion that the Commission's Option D is the preferred option is further supported by the fact that the Commission's modelling indicates a lower level of compressor fuel consumption for its Option D by comparison with its Option B. Given that the number of compressor stations is identical, the NPV of future operating costs for the Commission's Option D could be expected to be less than for Option B.

Annexure 3

Epic's proposed GST and impost clauses clauses 30.4 and 30.5

30.4 DELIVERIES ON THE MAP GST

(a) GST Exclusive Basis

The parties acknowledge and agree that all fees and charges set out in the Agreement have been calculated on a GST-exclusive basis.

(b) Increase for GST

Where any payment to be made by one party ('**GST Recipient**') to the other party ('**GST Supplier**') pursuant to the Agreement constitutes (in whole or in part) Consideration for a Taxable Supply by the GST Supplier, then the amount of that payment will be increased by the prevailing GST Rate (to the intent that the GST Supplier will retain, after paying GST in respect of that payment, the same amount that it would have received and retained had that GST not been payable.)

(c) Credits

Where any payment to be made by the GST Recipient is a reimbursement or an indemnification of an expense or other liability incurred or to be incurred by the GST Supplier, and the GST Supplier is entitled to an input tax credit in respect of that expense or other liability, the amount of that payment will be reduced by the amount of that input tax credit before the payment is then increased in accordance with clause 30.4(b).

(d) Tax Invoices

The GST Supplier must issue a Tax Invoice to the GST Recipient within 7 days of receiving any payment to which clause 30.4(b) applies.

(e) Trade Practices Act

If, as a result of the New Tax System Changes, there is a reduction in or abolition of any wholesale sales taxes or other indirect taxes ('**Existing Taxes**') then, as from the date of such reduction or abolition, the Consideration (excluding GST) payable by the GST Recipient for any Regulated Supply will be reduced by the same proportion as the actual total costs of the GST Supplier (including the Existing Taxes, but excluding any GST effectively borne by the GST Supplier on its own inputs) are reduced as a consequence of such reduction or abolition.

(f) Definitions

In this clause 30.4, unless the context otherwise requires:

'**Consideration**', '**GST**', '**Tax Invoice**' and '**Taxable Supply**' have the same meanings as are given to them in the GST Act;

'**GST Act**' means the *A New Tax System (Goods and Services Tax) Act 1999*;

'**GST Rate**' at a particular time, is a reference to the rate at which GST is imposed at that time (expressed as a percentage of the GST exclusive price);

'**New Tax System Changes**' has the same meaning as is given to that term in the *Trade Practices Act 1974*; and

'**Regulated Supply**' has the same meaning as is given to that term in the *Trade Practices Act 1974*.

30.5 Imposts

(a) Obligations of Parties

If, during a Month:

(i) any new Impost arises; or

(ii) there is an increase in the amount of an existing Impost; or

(iii) there is a reduction in the amount of, or the removal of, an existing Impost,

then:

(iv) in the case of paragraphs (a) and (b) above, the User must pay to the Service Provider the User's share that new or increased Impost; and

(v) in the case of paragraph (c) above, the Service Provider will credit the User with the User's share of that reduced or removed Impost.

(b) User's Share

For the purposes of clause 30.5(a), the User's share will be determined on the basis of the proportion that the deliveries of Gas to the User during the relevant Month bears to the aggregate deliveries of Gas to the User and all Other Users during that Month.

(c) Timing of Payment/Credit

Any amount to be paid or credited under clause 30.5(a) in respect of a Month will be set out in the Invoice for that Month.

Also – replace the definition of 'Impost' in clause 43 with the following:

'**Impost**' means any tax (excluding income tax and any goods and services tax referred to in clause 30.4), duty, excise, impost, levy, royalty, fee, rate or other charge imposed

by any government or governmental agency on, or incurred by, the Service Provider and attributable in any way to the provision of a Service, a charge made under the Agreement, or the giving effect by the Service Provider to the provisions of the Agreement;

Public version of Annexure 4

Clauses in existing haulage agreements identified by the Commission as material to its reasoning in the draft decision

The content of the substantive annexure is confidential to the parties to the existing haulage agreements (Epic Energy South Australia Pty Ltd, Terra Gas Trader Pty Ltd and Origin Energy Limited).

The Commission intends to follow the processes provided in section 42 of the *Gas Pipelines Access (South Australia) Law* with a view to making material in this Confidential Annexure publicly available.