Initial capital base

Underlying methodology and justification for the value of $740m. Explanation for the increase (more than $70m) over the value for the ICB originally proposed by EAPL. in May 1999.

The initial capital base proposed by EAPL in the 1999 Access Arrangement reflected the DORC valuation undertaken by EAPL at that time. In several submissions since that time, EAPL has argued that the methodology employed in the 1999 DORC valuation is inconsistent with the Commission's stated meaning and interpretation of DORC, and that an NPV-based DORC valuation is consistent with the stated meaning[1]. This position is supported by a report by Professor Stephen King. When the NPV-based DORC methodology is applied, the DORC value of the pipeline is $972.7m ($July 2000).

EAPL's submission of 14 March 2001 discussed the range of values for the initial capital base arising from the different valuation methodologies described in section 8.10 of the Code. The conclusion of that submission was that the upper limit of the possible values is in excess of $1,700m, and that the DORC value of the pipeline was at least $940m. An updated DORC valuation prepared since the submission was lodged shows that the DORC value of the pipeline is approximately $970m ($1 July 2000)[2].

The Draft Decision proposed that the initial capital base should be set at $539m[3], based on the valuations discussed in the Draft Decision. As EAPL's submission of March 2001 demonstrates, there were several significant errors in valuations relied on in the Draft Decision, all of which had the effect of substantially understating the range of possible values for the initial capital base. When these errors are corrected, key considerations in the determination of the initial capital base are increased materially.

As $539m was regarded by the Commission as a reasonable value for the initial capital base on the basis of the incorrect values in the Draft Decision, then the value of the initial capital base must be significantly higher when the corrected values are taken into account. It is EAPL's view that when the correct values are taken into account, a valuation of the initial capital base at no less than $740m represents a reasonable balancing of the interests of EAPL and Users as required under the Code.

Breakdown of initial capital base by asset class (pipelines, compressors, metering etc).

The initial capital base in the Revised Access Arrangement was allocated to the individual pipelines and associated assets proportionally according to the ORC valuation in the original Access Arrangement. The values arising from this allocation are as follows:

[1] Refer to Section A of EAPL's March 2001 response to the Draft Decision for a detailed discussion of this issue, and a copy of Professor King's report.
[2] When calculated individually, the sum of the DORC values for the separate pipelines is $977m.
[3] Before deduction of any amount in relation to tax.

Table 1: Initial Capital Base by Pipeline
($m, 1 July 2000)

	ICB ($m)	% of ORC
Moomba to Wilton Pipeline	624.4	84.4
Canberra Lateral	13.6	1.8
Wagga Lateral	23.9	3.2
Regional Laterals	57.1	7.8
Interconnect	21.0	2.8
Total	740.0	100.0

APT's estimates of optimised replacement cost (ORC) and depreciated optimised replacement cost (DORC) by pipeline (Moomba to Wilton, Canberra lateral etc) and asset class.

EAPL has not undertaken a revised valuation of the ORC. However, EAPL believes that there is no basis to assume that the ORC valuation would be less than that proposed in 1999. Given changes in the exchange rate and labour costs, it is not unreasonable to anticipate that the ORC value of the pipeline will have increased since the original ORC valuation was undertaken.

The DORC value of the Moomba Sydney Pipeline System and each individual pipeline has been determined by applying the NPV based DORC methodology discussed on page 1. The values are as follows:

Table 2: EAPL ORC and DORC by Pipeline
($m, 1 July 2000)

	ORC	DORC
Moomba to Wilton	893.0	817.6
Canberra Lateral	19.5	18.4
Young to Lithgow	50.4	48.5
Junee to Griffith	31.3	30.7
Young to Wagga	34.1	32.2
Wagga to Culcairn	30.0	29.9
Total	1,058.6	977.3

Table 3: EAPL ORC and DORC by Asset Class
($m, 1 July 2000)

	ORC	DORC
Pipelines – Moomba to Wilton	819.9	N/A
Pipelines – Young to Culcairn	59.4	N/A
Pipelines – Laterals	90.8	N/A
Compressors	58.1	N/A
Metering	14.0	N/A
Plant, Machinery, Equipment	10.3	N/A
Mobile Equipment	6.0	N/A
Total	1,058.6	977.3

EAPL has not calculated an NPV based DORC for the individual classes of assets.

Rate of return

Parameters, formulae and underlying assumptions.

Table 4: WACC Parameters

	Initial Access Arrangement	Revised Access Arrangement
Real Risk Free Rate (rr_f)	3.3%	3.35%
Inflation (f)	2.5%	2.69%
Nominal Risk Free Rate (r_f)	5.85%	6.13%
Debt to Total Assets	60%	60%
Effective Tax Rate (T_e)	36%	30%
Asset Beta (β_a)	0.55-0.65	0.62
Debt Beta (β_d)	0.12	0.06
Equity Beta (β_e)	1.2-1.45	1.45
Market Risk Premium (MRP)	6.0%	6.0%
Nominal Cost of Equity (r_e)	13.1%-14.6%	14.8%
Nominal Cost of Debt (r_d)	7.2%-7.3%	7.33%
Pre Tax Real WACC (W_{tr})	7.9%-9.0%	8.0%

Justification for each parameter.

- **Nominal risk free rate**: EAPL has taken the 40 day average 10 year bond rate to 28 March 2002 to arrive at the proposed nominal risk free rate of 6.13%. This is consistent with ACCC approach in EAPL Draft Decision.
- **Inflation rate:** EAPL has taken the 40 day average 5 year bond rate to 28 March 2002 and the August 2005 Treasury Indexed Bonds to arrive at the inflation rate of 2.69% (by Fisher Equation). This is consistent with ACCC approach in EAPL Draft Decision.
- **Real risk free rate:** EAPL has calculated the real risk free rate as the difference between the nominal risk free rate and the inflation rate (by Fisher Equation). This is consistent with ACCC approach in EAPL Draft Decision.
- **Gearing:** EAPL has adopted the industry standard structure of 60% debt. This is consistent with the approach in EAPL Draft Decision, and other regulatory decisions by the Commission, Essential Services Commission (Victoria)[4] and the Independent Pricing and Regulatory Tribunal (NSW).
- **Asset beta:** EAPL has set the asset beta to 0.62 to reflect the pipeline's exposure to:
  - increased competition from alternative energy sources.
  - increased competition from the EGP.
  - uncertainties with deliverability from Moomba and the development of alternative gas sources.
  - the development of coal seam methane in NSW. The recent announcement of Coal Seam Methane winning the tender to supply the proposed Townsville power station in Queensland is an example of the impact of risks faced by a pipeline.
- **Debt beta:** EAPL has adopted the ACCC estimate of the debt beta of 0.06.
- **Equity Beta:** EAPL has calculated the equity beta from the asset and debt betas.

[4] Previously, Office of the Regulator General.

- **Effective tax rate:** EAPL has adopted the current statutory tax rate.

Capital expenditure

Description of the nature of, and justification for, the capital expenditure.

Table 5: Forecast of Capex
($m, 1 July 2001)

	2003	2004	2005	2006	2007	2008
Northern Lateral Capacity Expansion		2.500				
Canberra Lateral Capacity Expansion					3.500	
Southern Lateral Capacity Expansion						13.900
In-line Inspections		2.700				
Compressor overhaul			1.100			1.100
SIB Capital and other	0.645	0.396	0.398	0.380	0.398	0.897
TOTAL	0.645	5.596	1.498	0.380	3.898	15.897

Note: The forecast capital expenditure for 2003 is from 1 October 2002 onwards only.

The amounts allowed for expansion capital reflect EAPL's forecast increases in demand in the respective areas. SIB capital and other is generally scheduled routine capital expenditure.

Depreciation

Depreciation schedules by asset class. Methodologies used to determine these schedules and the rationale for them.

EAPL has assumed an asset life of 80 years for the pipelines. Asset lives for other asset classes are not directly relevant to the calculation of revenues and tariffs under the Revised Access Arrangement as revenues are calculated using the NPV methodology that incorporates backended depreciation.

The life of 80 years is adopted for the pipelines consistent with industry and regulatory practice. Based on current information, EAPL does not believe it is appropriate to assume that the Moomba to Wilton Pipeline has an economic life less than 80 years.

Table 6: Forecast Depreciation
($m, 1 July 2001)

	2003	2004	2005	2006	2007	2008
Depreciation	+2.04	-3.70	-0.30	+7.34	+15.00	+16.48

Note: The depreciation for 2003 is from 1 October 2002 onwards only.

The residual value of the pipeline at 30 June 2008 is $697 million ($1 July 2000).

The depreciation represents the difference between the opening regulatory asset base at 1 July 2000 and the closing asset base on 30 June 2008. The basis for adopting the NPV approach is the inability of EAPL to recover sufficient revenues from its customers over certain periods, hence the positive depreciation in the above table.

The life of 80 years is adopted for the pipelines consistent with industry and regulatory practice. Based on current information, EAPL does not believe it is appropriate to assume that the Moomba to Wilton Pipeline has an economic life less than 80 years.

Operating costs

Breakdown of costs by category.

Table 7: Forecast Operating Expenditure
($m, 1 July 2001)

	2003	2004	2005	2006	2007	2008
Marketing	1.285	1.694	1.674	1.656	1.638	1.621
O&M	13.254	17.929	17.813	17.786	17.758	17.731
General & Admin	2.635	3.558	3.604	3.649	3.693	3.738
TOTAL	17.174	23.181	23.091	23.090	23.090	23.090

Note: The forecast operating expenditure for 2003 is from 1 October 2002 onwards only.

Explanation for the increase over the figures originally proposed be EAPL.

The forecast operating costs reflected in the Revised Access Arrangement are based on EAPL's current and anticipated costs of operating the Moomba Sydney Pipeline System.

Since the submission of the original Access Arrangement in May 1999, there have been several significant changes affecting the ownership and operation of the Moomba Sydney Pipeline System, including establishment of the Australian Pipeline Trust and associated increases in corporate costs.

The impact of September 11 has significantly increased insurance premiums throughout the industry.

In addition, at the time of the establishment of the Australian Pipeline Trust, EAPL disposed of various assets used in the performance of operations and maintenance of the pipeline. The capital base has been adjusted to reflect the disposal of those assets. The impact of the disposals has increased the operating expenditure of the pipeline.

Throughput

Sources of the forecasts and underlying assumptions.

The forecasts for the Revised Access Arrangement were prepared by EAPL having regard to recent ABARE forecasts and updated market information since the previous forecasts were submitted in May 1999.

Explanation for any differences between these estimates and those originally put forward by EAPL.

The forecasts are essentially the same as the 1999 forecasts, updated to reflect changes in the market since then. The main differences arise from changes in the timing of major new projects and of forecast loss of load to EGP.

Tariffs and revenue

Details of total revenue requirements.

Table 8: Forecast Revenue Requirement
($m 1 July 2001)

	2003	2004	2005	2006	2007	2008
Revenue Requirement	61.125	75.490	79.497	87.271	94.378	94.930

Note: The forecast revenue requirement for 2003 is from 1 October 2002 onwards only.

Methodology for calculating each year's tariffs.

The Reference Tariffs described in the Revised Access Arrangement are designed to provide EAPL with the opportunity to recover forecast revenue from sales of the Reference Service.

Consistent with the cost allocation methodology in the 1999 Access Arrangement, Reference Tariffs are designed to recover the total revenue requirement through the use of capacity reservation charges and throughput charges (at 96% and 4% of total revenue requirement respectively). This ratio is maintained over the Access Arrangement period and is consistent with the Draft Decision.

The capacity reservation charge reflects our forecasts of the MDQ of capacity required by customers and the distance between the customers' nominated receipt and delivery points. The commodity charge reflects the actual volume transported by customers and the distance between the customers' nominated receipt and delivery points.

The timetable for the phasing in of more cost-reflective pricing for Regional Laterals proposed in the 1999 Access Arrangement has been revised to provide for a shorter transition period.

Cost allocation methodology (if different to that originally proposed by EAPL).

Where elements of Capex and Opex were explicitly related to only the a particular pipeline they were treated as such. Otherwise, system wide costs were allocated proportionally according to their ORC value.