**Australian
Competition &
Consumer
Commission**

Transmission Network Service Providers

Electricity Regulatory Report for 2002/03

Table of Contents

Glossary

ACCC	Australian Competition and Consumer Commission
Capex	Capital expenditure
Code	National Electricity Code
DRP	Draft Statement of Regulatory Principles
EBIT	Earnings before interest and taxes
GWh	Gigawatt hours
MAR	Maximum Allowed Revenue
MW	Megawatts
NECA	National Electricity Code Administrator
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NPAT	Net profit after taxes
Opex	Operating and maintenance expenditure
PS	Prescribed services
RAB	Regulatory Asset Base
SKM	Sinclair Knight Merz
SMHEA	Snowy Mountains Hydro-Electric Authority
TNSP	Transmission Network Service Provider

Summary

Under the National Electricity Code (the Code), the Australian Competition and Consumer Commission (ACCC) is responsible for the regulation of transmission revenue in the National Electricity Market (NEM). This report reviews the performance of the transmission network service providers (TNSPs) regulated by the ACCC. The report provides stakeholders with access to comparative data on the financial and service performance of the TNSPs. It also includes a comparison with financial forecasts incorporated in the ACCC's revenue cap decisions.

Information regarding the following TNSPs is included in this report:

- Powerlink;
- TransGrid;
- SPI PowerNet;
- VENCorp; and
- ElectraNet.

The transmission revenues of Energy Australia were also regulated by the ACCC in 2002/03. However, as Energy Australia did not provide consent to disclose information, its details were not included in this report. The ACCC will have further discussions with Energy Australia regarding publication of information.

The ACCC regulates the transmission revenues of eight TNSPs at present including the above networks and the Murraylink Transmission Company and Transend. The transmission revenues of the latter two networks, however, were not regulated by the ACCC during the 2002/03 reporting year.

The TNSPs regulated by the ACCC are required to provide certified annual statements containing details of their financial and operational (service standards) performance.

The financial information is submitted in accordance with the ACCC's Information Requirements Guidelines (5 June 2002). The 2002/03 financial year is the first year for which SPI PowerNet, VENCorp and ElectraNet have lodged statements under the guidelines.

Service quality information is submitted in accordance with the ACCC's Service Standards Guidelines (12 November 2003). The 2003 calendar year is the first year that performance figures have been required under the ACCC's Performance Incentive Scheme. SPI PowerNet and ElectraNet were the only TNSPs participating in the scheme at that time.

In considering the information presented herein it is important to bear in mind the differing network characteristics of the businesses.

1 Summary of financial performance

Table A compares the actual performance of the TNSPs against the forecast maximum allowed revenue (MAR), operating expenditure (opex) and capital expenditure (capex) from the ACCC's revenue cap decisions. Forecasts are made for expected expenditure levels over the five year period of the revenue cap and actual costs can vary over that time for a variety of reasons. Circumstances may change with higher than expected load growth, for example, necessitating additional expenditure and/or accelerating construction programs.

The summary figures are presented to provide an overall view of the average level of variances from revenue cap decisions. However, individual TNSP variances may differ markedly from the average due to the influence of regional factors, and should therefore be assessed in that context. These individual variations are not a large problem provided they do not constitute systemic under- or over-spending, and should be examined over the full five year period of the revenue cap before any conclusions are drawn.

Table A Summary of TNSPs' Financial Performance for 2002/03

$ Million	Actual	Forecast*	Variance $	Variance %
MAR	1151.5	1147.3	4.2	0.4%
Opex	291.6	290.9	(0.7)	-
Capex	514.8	380.3	134.5	35.4%

*Includes adjustment to TransGrid's MAR, opex and capex due to the acquisition of the Snowy Mountains Hydro-Electric Authority's (SMHEA) transmission assets.

Table A discloses a significant variance from the aggregate capex forecast with individual TNSPs having variances of up to 163%. These variances are explored in more detail in Chapter 4.

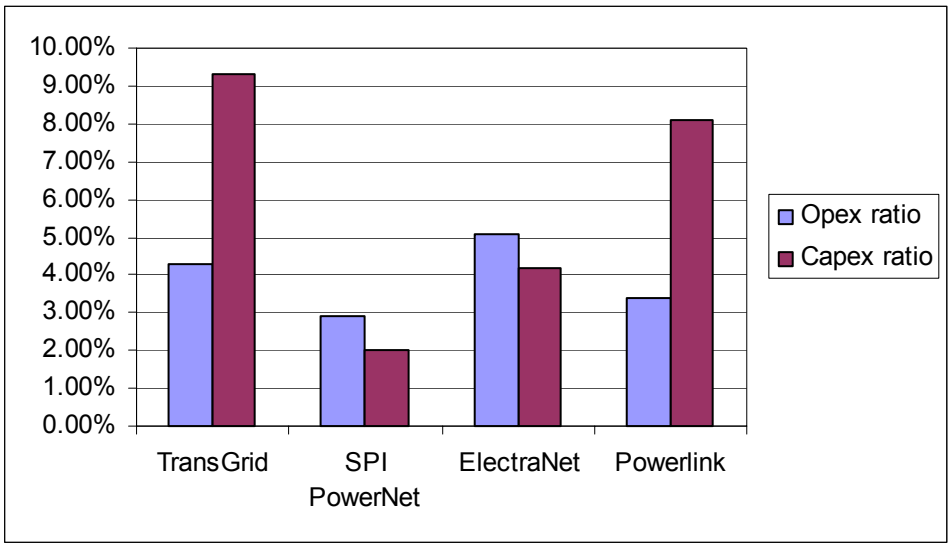
While there was little apparent variance from the aggregate opex forecast, individual TNSPs experienced variances of up to 48% from the amount forecast in their revenue cap decision. These variances are discussed in Chapter 5.

Table B and Figure A compare the TNSPs' capex and opex as a percentage of their regulatory asset base (RAB).

Table B Summary of TNSPs' expenditure/RAB for 2002/03

	Average RAB ($million)	Opex ratio	Capex ratio
TransGrid	2632.5	4.3%	9.3%
SPI PowerNet	1811.3	2.9%	2.0%
ElectraNet	824.0	5.1%	4.2%
Powerlink	2487.0	3.4%	8.1%
	7754.8		

Figure A Summary of TNSPs' expenditure/RAB for 2002/03



Source: 2002/03 figures for RAB and expenditure from Regulatory Accounts

The figures above demonstrate that expenditure as a percentage of RAB varied amongst the TNSPs, with TransGrid and Powerlink having more capex than opex as a proportion of the RAB (see Chapter 4 for further details of the TNSPs' capex programs).

2 Summary of service standards performance

A TNSP's revenue cap is based on forecast efficient costs and the TNSP is able to maximise its profits by reducing actual costs below the forecast levels. While such cost reductions could occur because of improved efficiency, it may also be a sign of reduced service quality. This would result in a perverse incentive for TNSPs to maximise profits at the expense of service quality and the ACCC has developed a Performance Incentive Scheme to link each TNSP's revenue cap to its service standards performance.

In the ACCC's view, the service standards should influence the revenue cap to ensure that TNSPs are rewarded when performance standards increase and penalised when performance standards decline, thus providing incentives for continued performance improvement. Chapter 6 provides further details of the incentive scheme.

Appendix 2 provides a summary of the service standards performance of SPI PowerNet and ElectraNet for the 2003 calendar year. The ACCC concluded the following after reviewing their performance:

- an increase of $1.119 million in ElectraNet's MAR for 2004/05; and
- a reduction of $75,037 in SPI PowerNet's MAR for 2004/05.

1. Introduction

1.1 Scope of the report

This report provides information on the financial and operational (service standards) performance of TNSPs in the NEM whose revenue caps are set by the ACCC. The information relates to the 2002/03 financial year and includes a comparison with the financial forecasts incorporated in the revenue cap decisions.

The report aims to provide customers and interested parties with information and comparative data on expenditure and service levels of the TNSPs. In particular, it details and analyses overall financial performance, capital and operating expenditure, and outlines the service standards Performance Incentive Scheme.

1.2 Sources of information

The report draws upon information from the following sources:

- annual regulatory financial statements and service standards data provided by the TNSPs in accordance with the ACCC's Information Requirements Guidelines (5 June 2002) and Service Standards Guidelines (12 November 2002);
- revenue cap applications made by the TNSPs (which include information provided in accordance with the Information Requirements Guidelines);
- annual statutory reports made by the TNSPs; and
- revenue cap determinations made by the ACCC.

1.3 Transmission network regulation timetable

The Code provides the framework for the NEM, which establishes a single wholesale market across southern and eastern Australia and an access regime for the transmission and distribution networks in participating jurisdictions. The NEM commenced on 13 December 1998. The Code also establishes a regulatory framework which:

- provides that the ACCC will determine the revenue caps to be applied to the non-contestable elements of participating transmission networks; and
- sets out how those regulated revenues, combined with the networks' contestable revenues, will be translated into network charges.

In accordance with its responsibilities under the Code, the ACCC commenced regulating the revenues of transmission networks in the NEM on 1 July 1999, with the timetable outlining the date at which the ACCC commenced responsibility in each jurisdiction outlined below.

Table 1.1 NEM transmission network regulation timetable

Jurisdiction	ACCC transmission regulation start date
Victoria	1 January 2003 [1]
South Australia	1 January 2003 [2]
Queensland	1 January 2002
Australian Capital Territory	1 July 1999
New South Wales	1 July 1999

1) The ACCC commenced administration of the Victorian Tariff Order for transmission services on 1 January 2001.
2) The ACCC commenced administration of the South Australian Electricity Pricing Order for transmission services on 1 January 2001.

1.4 Setting a revenue cap

The objectives of the regulatory regime include the elimination of monopoly pricing, providing a fair return to network owners and creating incentives for TNSPs to pursue ongoing efficiency gains through cost reductions. In achieving these aims the ACCC is aware of the need to ensure compliance costs are minimised and that the regulatory process is objective, transparent and as light handed as possible.

Consistent with the proposals contained in its draft Statement of Regulatory Principles for the Regulation of Transmission Revenue (May 1999) (DRP), the ACCC has adopted an accrual building block approach in setting revenue caps. In implementing this framework, the 'post-tax nominal' accrual building block approach calculates the maximum allowed revenue (MAR) as the sum of the return on capital, the return of capital, an allowance for operating and maintenance (non-capital) expenditure, income tax payable and the ACCC's Performance Incentive Scheme; that is:

$$MAR = \text{return on capital} + \text{return of capital} + \text{opex} + \text{taxes} \pm \text{service standards}$$

$$= (WACC * WDV) + D + \text{opex} + \text{taxes} \pm \text{service standards}$$

where:

WACC = post-tax nominal weighted average cost of capital;

WDV = written down (depreciated) value of the asset base;

D = depreciation allowance;

opex = operating and maintenance expenditure;

taxes = tax liability allowance; and

service standards = ACCC's Performance Incentive Scheme.

Furthermore, in implementing the CPI-X incentive mechanism the MAR will increase each year in line with inflation but decrease by a smoothing factor.

1.5 The ACCC's regulatory functions

The ACCC is now responsible for regulating the revenues of eight TNSPs: Powerlink; TransGrid; Energy Australia; SPI PowerNet; VENCorp; ElectraNet; Murraylink Transmission Company; and Transend.

Under the Code, the ACCC is required to annually collect a wide range of financial and operational information from the TNSPs. This is done for a variety of reasons, including:

- to monitor compliance with the revenue cap;
- to identify cross-subsidisation of costs between the regulated and unregulated parts of the business;
- to use the information as an input for setting future revenue caps; and
- to monitor performance against service standards.

As part of this data collection process, the ACCC's Information Requirements Guidelines were finalised on 5 June 2002, completing a process that had commenced with the release of the DRP in 1999.

1.6 The benefits of publication

The ACCC's objective in monitoring and publishing the performance of TNSPs is to increase accountability for performance through transparency and yardstick competition. In particular, the ACCC considers that there are significant benefits in publishing information it collects under the Code, including:

- facilitating informed public input into future decisions by the ACCC (including the form of regulation to apply, setting revenue caps and changes to revenue caps during regulatory periods);
- public scrutiny of performance against revenue caps (particularly given the interrelationship between revenue and the standard of service);
- greater transparency and accountability of the regulatory process; and
- through comparison of the financial and operational performance of the TNSPs, facilitating the Code objectives of an incentive-based regime, and fostering efficient investment, operating practices and use of infrastructure.

The ACCC is aware that there are valid confidentiality concerns held by TNSPs which must be recognised. These concerns are reflected in the scope of the information presented in this report.

This is the first electricity regulatory report the ACCC has published. Comments from interested parties regarding the contents and format of the report are welcomed.

2. Transmission Network Characteristics

2.1 The National Electricity Market

The NEM commenced operation on 13 December 1998 and consists of six regions: South Australia, Victoria, the ACT, New South Wales, Snowy, and Queensland. Tasmania is scheduled to join the market in 2005 with the completion of the Basslink interconnector.

The NEM pools registered generators' output into a single wholesale market and allows electricity to be traded across the regions where it is mainly purchased by retailers. High voltage transmission networks carry the electricity from the generators to the distribution networks in the towns and cities and, in some cases, directly to major customers. The pool is managed by the National Electricity Market Management Company (NEMMCO) which is owned by the participating state and territory governments.

The TNSPs differ from one another in areas such as geographical constraints, customer distribution, and load growth. An overview of their operating environment is provided below. The ACCC notes that differing network characteristics may affect financial and service standards performance.

2.2 The TNSPs in this report

TransGrid

TransGrid is a state-owned corporation responsible for the management of the high voltage electricity transmission network in NSW, a system comprising 81 substations and power station switchyards, and approximately 12,400 kilometres of transmission lines operating up to 500 kV. Summer demand peaked at over 12,300 MW in 2002/03, while electricity transmitted for the year exceeded 71,000 GWh, both figures the highest in the NEM.

In addition to operating and managing the NSW transmission networks in NSW, TransGrid is the jurisdictional planning body for the State and is registered with NEMMCO as a TNSP in the NSW region of the NEM.

TransGrid's regulated asset base was valued at more than $2.6 billion and generated regulated revenues of $389.8 million for the 2002/03 financial year.

Powerlink

Powerlink is a government-owned corporation that operates more than 11,400 kms of transmission lines and 92 substations throughout Queensland. Its network stretches over 1700 km from the far north to the major load centre in the south east corner of the state. The network is experiencing rapid load growth demand and in 2002/03 had a maximum demand for electricity of 7,081 MW (annual electricity transmitted was 43,120 GWh). The subsequent summer peak has seen this figure increase by 12%.

Powerlink had a regulated asset base in 2002/03 of almost $2.5 billion and regulated revenues of $348.8 million.

SPI PowerNet

SPI PowerNet is a privately owned transmission business that owns, operates and maintains over 6,500 kms of lines as well as 44 switching and transformation facilities throughout Victoria. The network is built around a 500 kV backbone running from the major generating source in the Latrobe Valley, through Melbourne and across the southern part of the state to Heywood near the South Australian border.

For 2002/03, SPI PowerNet's regulated asset base was valued at $1.8 billion and its regulated revenues were $262.7 million. Summer demand peaked at more than 8,200 MW (annual electricity transmitted was 48,124 GWh).

VENCorp

The Victorian Energy Networks Corporation (VENCorp) is wholly owned by the Victorian government and was established in 1997 under an act of Parliament. It is the monopoly provider of shared transmission network services in Victoria, acquiring bulk network services from SPI PowerNet and other service providers under network agreements. It operates on a full cost recovery but no operating surplus basis, recovering its costs through transmission use of system charges. VENCorp plans and directs the augmentation of the shared network. The separation of the network asset owner (SPI PowerNet) from the investment decision maker (VENCorp) is unique within the NEM.

VENCorp's gross regulated revenues for 2002/03 were $261.8 million.

ElectraNet

ElectraNet is owned by a group of four companies which includes a subsidiary of the Queensland TNSP, Powerlink. ElectraNet is the principal TNSP in South Australia, operating and maintaining the high voltage network throughout the state. The network comprises over 5,500 kms of transmission lines and 72 substations or switchyards.

The South Australian network is characterised by long distances, a low energy density and a small customer base compared to other states. It also has a peaky demand profile mainly due to air conditioning load over summer.

ElectraNet's regulated asset base was valued at $824 million in 2002/03 and its regulated revenues were $150.2 million. Maximum summer demand was almost 2,800 MW with 12,500 GWh of electricity transmitted annually.

Table 2.1: Summary of Network Characteristics

	ElectraNet 2003	Powerlink 2003	Powerlink 2002	TransGrid 2003	TransGrid 2002	SPI PowerNet 2003
Network line length (km)	5579	11441	11196	12400	12400	6553
Substations (no.)	72	92		81		44
Electricity transmitted (GWh)	12500	43120	42291	71574	70101	48124
Maximum demand (MW)	2794	7081	7003	12332	12068	8203

This table provides a snapshot of the network characteristics and loads experienced by the TNSPs in their respective regions. Load growth can be particularly volatile in some regions which can present challenges for network planners in the timing and size of augmentations to the grid.

3. Financial Performance

3.1 Aggregate TNSP performance

3.1.1 Revenue and expenditure

Chapter 1 outlined the method by which the ACCC sets the revenue cap for a TNSP. Essentially, efficient forecast costs are provided for in the decision as well as a reasonable rate of return on assets employed to provide the transmission service.

Under the Code, the ACCC must balance the interests of the TNSPs and customers in reaching its revenue cap decision. TNSPs are provided with a sustainable commercial revenue stream for the period of the revenue cap (usually five years). The ACCC has a prime objective to encourage efficient expenditure, whether it is investment in infrastructure or operating and maintenance expenditure (opex), and businesses are given incentives to manage their costs.

The RAB is the largest determinant of a TNSP's MAR due to the capital intensive nature of electricity transmission. TNSPs receive a return on the value of the RAB which will include forecast capital expenditure (capex) rolled into it over the course of the regulatory period. Altogether, this return on capital plus the return of capital (depreciation) represents about 70% of the MAR. Opex may constitute more than 25% of the MAR. Where efficiency carryover arrangements have been agreed upon with the ACCC, the TNSPs may keep any cost savings achieved within the current regulatory period and a proportion thereafter.

It is therefore apparent that TNSPs have some measure of control over their financial performance. The ACCC sets the revenue they may earn, but the TNSPs can control their ultimate profitability through efficient cost management. Capex and opex are major factors in this regard. The drivers that determine the TNSPs' capex and opex performance are raised in Chapters 4 and 5.

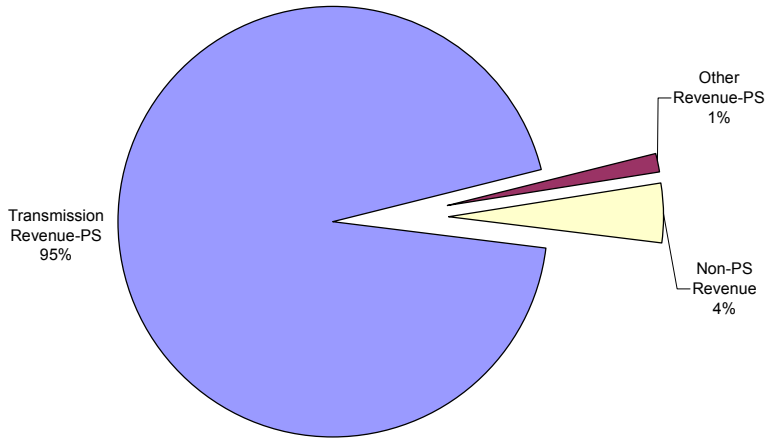
This chapter deals with the financial performance of the TNSPs. It compares the TNSPs' actual performance with the assumptions contained in the ACCC's revenue cap decisions. Depreciation emerges as a significant expense as asset bases grow and, while it does not affect the cash position of the businesses, it will impact on profits and return on equity. The ACCC also takes into account the TNSPs' historical performance at their next revenue reset, when considering forecasts of expenditure.

The five TNSPs forming the subject of this report had the following aggregate financial performance for 2002/03. Please note that VENCorp data was not included in the aggregate figures below as it is a non-profit business that operates on a full cost-recovery but no operating surplus basis. Importantly, unlike the other TNSPs, VENCorp does not have a RAB upon which to earn a rate of return or

subject to depreciation. Its financial performance data was therefore omitted from the aggregate figures. Financial information for each TNSP may be found in Appendix 1.

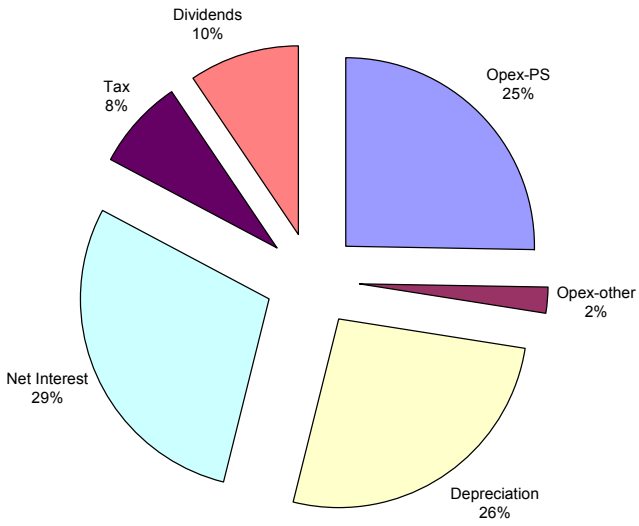
Figure 3.1 dissects the overall performance of the TNSPs. Transmission revenue accounts for approximately 95% of total revenue, the remainder coming from non-regulated areas of their business such as project consultancies. Figure 3.2 shows that opex, interest payments and depreciation account for about 80% of the TNSPs' total expenses.

Figure 3.1 Aggregate TNSP revenue for 2002/03



Source: Regulatory Accounts 2002/03

Figure 3.2 Aggregate TNSP expenses for 2002/03



Source: Regulatory Accounts 2002/03

3.1.2 Financial performance

Clause 6.2.4(b) in Part B of Chapter 6 of the Code requires the ACCC to set a revenue cap (which determines the maximum allowed revenue) to apply to each TNSP. The MAR is then used by the TNSP to determine transmission prices in accordance with Part C of Chapter 6 of the Code. Usually, there are small annual variances from the MAR. If the TNSP exceeds its revenue cap, it must adjust its transmission prices in the following year.

Under the terms of the revenue cap, the MAR is adjusted annually for changes in the CPI thereby preserving the real value of the revenue stream.

Measures of profitability such as EBIT (earnings before interest and taxes) will therefore fluctuate according to how well the TNSPs manage their costs, revenue being a constant.

Regulated TNSPs experience relatively low business risk as they have a consistent cash flow, independent of seasonal fluctuations or volume changes, with which to finance their operations and capital investments, as well as service debt. With stable revenues, TNSPs may operate with higher leverage levels than other businesses. In conducting a comparative analysis of the TNSPs' performance, this report has focussed on such areas as cash flow, debt levels and interest coverage. These and the other measures detailed below are useful to detect trends within the industry.

Transmission networks are capital intensive businesses. As a general matter, higher profitability better enables a business to either generate funds internally to finance its activities or to raise the necessary capital externally. Variable and unexpectedly high load growth in some regions, as well as reliability concerns, can accelerate a TNSP's planned capex program. Chapter 4 further explores this matter.

This report utilises ratios such as return on equity and return on capital to measure the TNSPs' profitability. Year on year figures are provided where applicable to aid analysis of trends and sustainability in financial performance.

Table 3.1 Aggregate TNSP financial performance for 2002/03

	$ millions
Financial performance	
Transmission revenue(PS)	1151.5
Opex(PS)	291.6
Depreciation(PS)	314.7
EBIT(PS)	573.0
Financial position	
Property, plant & equipment (average RAB)	7754.8
Total assets	9277.4
Total debt	5206.8
Total liabilities	6254.4
Total shareholders' equity and notes	3229.8
Financial indicators	
EBIT(PS)/interest cover	1.6x
Return on assets	7.4%
Return on equity	4.9%
Gearing ratio	61.7%

Source: Regulatory Accounts 2002/03

Performance highlights – Prescribed Services (PS)

Revenue caps set by the ACCC apply only to those services provided by the TNSPs that are not reasonably expected to be offered on a contestable basis, that is, to prescribed services. Prescribed services revenue typically makes up about 95% of a TNSP's total revenue.

Table 3.1 provides aggregate figures for the TNSPs and reveals total prescribed services revenue of more than $1.15 billion for the 2002/03 financial year. The aggregate financial performance and indicators which are discussed below highlight the significant effect of opex and depreciation on the operating profits of the businesses, while interest payments and taxes finally determine their net profit. The items of interest are listed below.

EBIT (earnings before interest and tax)

EBIT measures the operating profit of the TNSPs before interest and income tax are paid. After major expenses were deducted (Opex(PS) of $291.6 million and Depreciation(PS) of $314.7 million), aggregate operating profit or EBIT(PS) was $573.0 million (no comparison for 2001/02 due to the different composition of the TNSP reporting group).

NPAT (net profit after tax)

NPAT measures the net profit of the businesses after tax. The aggregate figure for the TNSPs, after interest payments of $351.5 million and taxes of $95.2 million were deducted, was $159.3 million. Total dividends of $119.1 million were paid to owners from this amount.

RAB (regulatory asset base)

The RAB is the value of the assets covered by the revenue cap. Most values assigned to the asset bases of the TNSPs were originally determined by state regulators prior to the ACCC assuming responsibility for setting the TNSPs' revenue caps under the Code. An ODRC (optimised, depreciated, replacement cost) valuation methodology was normally employed by the states for this purpose. The RAB will vary over time due to the net effect of capex, depreciation and asset disposals on the asset base.

The aggregate average RAB for the four TNSPs for 2002/03 was approximately $7.7 billion.

It is important to note that almost $3 billion in capex has been approved by the ACCC to date in its revenue cap decisions. This is reflected in the significant growth in the RABs of the businesses over the last five years and a corresponding increase in the depreciation expense incurred.

The capex approved by the ACCC highlights its approach to encouraging efficient levels of investment in the industry, one of the major objectives of the Code.

3.1.3 Financial indicators

Trends in financial indicators allow assessment of the performance of the businesses. Profitability indicators such as return on assets and return on equity provide a consistent basis for presenting information. With none of the TNSPs listed on the Australian Stock Exchange, the indicators provide a guide to their financial performance and operating efficiency in the absence of market valuations. The TNSPs' regulated income is not subject to volume fluctuation. Therefore, control of expenses becomes vitally important to ultimate profitability.

The indicators listed below were employed for their usefulness in assessing the financial performance of the businesses. Variances from one year to the next are noted and over time trends in performance may emerge.

EBIT(PS)/interest expense – The interest coverage ratio provides a measure of a TNSP's ability to service debt. It is important to understand the reasons for changes in the cash position of the business. For example, higher or lower than forecast capex or opex will affect the TNSP's cash flow position. An appropriate level of cover may vary from industry to industry and business to business, but higher numbers are to be preferred. The interest coverage ratio is influenced by the financial structure of the businesses. For the TNSPs as a whole in 2002/03 the ratio was 1.6 times.

Return on assets (EBIT(PS)/average RAB) - this ratio measures the efficiency in the use of the business's assets to produce profits. With stable revenues, the measure will vary according to changes in opex and/or RAB. The aggregate figure was 7.4% for 2002/03.

Return on equity (NPAT/equity) – this ratio measures profitability and efficiency as it indicates the return to shareholders who would be expected to compare that figure with the return provided by alternative investments of similar risk. The aggregate figure was 4.9%. It should be noted that this figure relates to the entire business, regulated and non-regulated, but is considered relevant as the regulated portion accounts for approximately 95 % of the total business.

Gearing ratio (total debt/total debt + equity**)** – this ratio reflects the capital structure of the business and is affected by changes in liabilities. The aggregate figure for 2002/03 was 61.7%. The overall debt level of the TNSPs was influenced by the addition of SPI PowerNet and ElectraNet to the reporting group for 2002/03, both of which had relatively higher levels of gearing. Interest expense is also increasing for the group. As noted for the return on equity figures, the gearing ratio relates to the entire business.

Table 3.2 Aggregate financial performance for 2002/03

	All TNSPs
	FY2003
EBIT(PS)/ interest cover	1.6x
Return on assets	7.4%
Return on equity	4.9%
Gearing ratio	61.7%

Source: ACCC calculations based on Regulatory Accounts 2002/03.

3.1.4 Operating ratios

Benchmarking comparisons through the use of ratios are presented for the information of readers who should be aware that there are many environmental and geographic factors that can influence these ratios (refer to Chapter 5 Opex for a further discussion of these factors). In particular, as electricity transmission is essentially a transportation activity, geographical distances are a significant influence, and should be considered when comparing ratios which are quoted on a "per MW" basis.

Table 3.3 Aggregate operating ratios for 2002/03

Opex/line length ($/km)	8106
Opex/RAB	3.8%
Opex/MW peak ($/MW)	9589
Capex/RAB	6.6%
Capex/MW peak ($/MW)	16929
Revenue/MW peak ($/MW)	37866
RAB/MW peak ($/MW)	255008

Source: ACCC calculations based on Regulatory Accounts 2002/03.

3.1.5 Tax and dividends paid

The TNSPs pay tax and dividends from the profits of the business as a whole, regulated and non-regulated. State owned TNSPs pay income tax equivalents to their state treasuries to emulate privately owned businesses.

State owned TNSPs also pay dividends to their owners on the same principle – as a return on equity invested by government. This policy aims to facilitate competitive neutrality and give the businesses a commercial focus.

Table 3.4 Aggregate tax and dividends paid for 2002/03*

$ Millions	2002/03
Income tax (or equivalent)	95.2
Dividends	119.1
Total	214.3

Source: Regulatory Accounts 2002/03
*Relates to whole of business, regulated and non-regulated

3.2 Individual TNSP performance

As noted in Chapter 2, each TNSP operates in a distinctly different environment which should be kept in mind when reading the following analysis of their financial performance.

The ACCC has established an ongoing monitoring and compliance program through the collection and analysis of specified information. The information is mainly sourced from the Regulatory Accounts provided annually by the TNSPs.

The ACCC's Information Requirements Guidelines detail the information required to be reported and set out pro-formas to ensure consistency. The information includes data relating to the businesses' financial performance and financial position on a disaggregated and prescribed services basis. Other information includes capex variances, an asset aging schedule and a summary of provisions.

Chapter 1 outlined the ACCC's responsibilities for gathering information from TNSPs. The ACCC believes that performance monitoring will enhance accountability, particularly in expenditure decisions. Reporting of TNSPs' performance should provide a basis for comparison and yield further incentive for improvement. The facilitation of accountability and performance comparisons will be achieved where the information provided is consistent over time.

Ratio analysis enables the relative financial performance of the TNSPs to be compared. It should be noted that 2002/03 is the first year that data has been required from SPI PowerNet, VENCorp and ElectraNet under the Information Requirements Guidelines. Accordingly, comparisons with the previous year's performance has not been provided for these businesses but will be made in future years as the data becomes available.

The ACCC notes that the actual depreciation reported by the TNSPs is approximately 50% higher than the figures assumed in the revenue cap decisions. This has impacted indicators such as the return on assets which is sensitive to changes in EBIT, depreciation forming a significant part of its calculation.

Presented below are summary tables of each TNSP's performance.

Table 3.5 TNSP financial indicators for 2002/03

	Powerlink	**TransGrid**	**SPI PowerNet**	**Electra Net**
EBIT(PS)/ interest cover	2.2x	1.9x	1.8x	1.2x
Return on assets – actual	6.9%	6.3%	9.2%	8.6%
Return on assets – as per revenue cap	8.7%	10.1%	8.6%	10.0%
Return on equity	5.5%	4.2%	8.3%	(17.6%)
Gearing Ratio	49.3%	55.3%	69.8%	91.7%*

Source: ACCC calculations based on Regulatory Accounts 2002/03.

*ElectraNet advise that credit rating agencies treat shareholder loan notes as equity rather than debt for the purpose of determining its credit rating. On this basis ElectraNet's gearing ratio would be 72.6%.

Table 3.6 TNSP operating ratios for 2002/03

	Powerlink	TransGrid	SPI PowerNet	Electra Net
Opex(PS)/line length ($/km)	7333	9177	7890	7550
Opex(PS)/RAB (%)	3.4	4.3	2.9	5.1
Opex(PS)/MW peak ($/MW)	11849	9228	6303	15093
Capex/RAB (%)	8.1	9.3	2.0	4.2
Capex/MW peak ($/MW)	28301	19753	4439	12312
Revenue/MW peak ($PS/MW)	49252	31625	32025	53747
Assets/MW peak ($RAB/MW)	351222	213465	220773	294918

Source: ACCC calculations based on Regulatory Accounts 2002/03.

3.2.1 Powerlink

Financial indicators

Powerlink's financial performance and indicators remained relatively constant. EBIT(PS) and NPAT have increased over the previous financial year (by 6.2% to $170.8 million and 3.2% to $76.7 million respectively) while the dividend paid also rose by 3.2% to $72.9 million. The return on equity was lower at 5.5%, down from 5.8%.

The actual return on assets was 6.9%, the same as for 2001/02. The return on assets assumed by the revenue cap decision for 2002/03 was higher at 8.7%, due to the combination of a lower EBIT and a slightly higher RAB than forecast in the original decision.

Operating ratios

Powerlink's opex ratios have improved over the last financial year. Opex(PS)/line length was $7333/km ($7865/km for 01/02), while Opex(PS)/RAB was 3.4% (3.8% the previous year) - refer to Chapter 5 for more details.

Revenue and expenditure - summary

Powerlink's performance against the forecasts in its revenue cap decision shows that the only significant variance is in the area of capex (refer to Chapter 4 for more details).

Table 3.7 Powerlink financial performance for 2002/03

$Millions	Actual	Forecast	Variance $	Variance %
MAR	348.7	346.2	2.5	0.7%
Capex	200.4	179.0	21.4	11.9%
Opex	83.9*	84.2	(0.3)	(0.3%)

*Includes grid support of $10.7m.

3.2.2 TransGrid

Financial indicators

TransGrid's financial performance and indicators have varied significantly in the area of NPAT which increased by 87% to $47.4 million over the previous financial year. The return on equity rose accordingly from 2.3% to 4.2%. EBIT(PS) declined by almost 3% from $168.9 million to $165.1 million and this is reflected in a decrease in the return on assets (6.9% to 6.3%). Dividend paid has increased to $46.2 million from nil in 2001/02.

TransGrid's actual return on assets was 6.3% (down from 6.9% for the previous year). The return on assets assumed by the revenue cap decision for 2002/03 was higher at 10.1%, due to the combination of a significantly lower EBIT and higher RAB than forecast in the original decision.

Operating ratios

TransGrid's opex ratios have increased over the last year. Opex(PS)/line length was $9177/km ($8339/km for 01/02), while Opex(PS)/RAB was 4.3% (4.2% the previous year) - refer to Chapter 5 for more details.

Revenue and expenditure

TransGrid's performance against the forecasts in its revenue cap decision discloses a significant capex variance (refer to Chapter 4 for more details).

Table 3.8 TransGrid financial performance for 2002/03

$Millions	Actual	Forecast	Variance $	Variance%
MAR	389.9	387.4	2.5	0.6%
Capex	243.6	92.7	151.4	162.8%
Opex	113.8	109.3	4.5	4.1%

3.2.3 SPI PowerNet

The ACCC determined SPI PowerNet's revenue for the 2002/03 financial year as follows: revenue for April-December 2002 was set under the provisions of the Victorian Tariff Order; revenue for January-March 2003 was set under the provisions of the National Electricity Code.

This is the first year of SPI PowerNet's revenue cap under the Code and information is provided as a basis for comparison with later years' performance and with the aggregate figures in section 3.1.

SPI PowerNet's actual return on assets was 9.2%. The return on assets implied by the revenue cap decision for 2002/03 was 8.6%, due to the combination of a slightly higher EBIT and lower RAB for 2002/03 than forecast in the original decision.

Revenue and expenditure

SPI PowerNet's performance against forecast expenditure in its revenue cap decision reveals that capex is about 50% less than expected (refer to Chapter 4 for more details) and opex is 5.9% less than forecast (refer to Chapter 5 for more details).

Table 3.9 SPI PowerNet financial performance for 2002/03

$Millions	Actual	Forecast	Variance $	Variance%
MAR	262.7	265.6	(2.9)	(1.1%)
Capex	36.4	73.1	(36.7)	(50.2%)
Opex	51.7	54.9	(3.2)	(5.9%)

3.2.4 VENCorp

Revenue and expenditure

As noted in Chapter 2, VENCorp is a not for profit organisation which operates on a full cost recovery but no operating surplus basis, recovering its costs through transmission use of system charges. VENCorp's actual performance against forecasts in its revenue cap reveals a variance in gross revenue received. The net surplus is $26.6 million (see financial details in Appendix 1) which was taken into account when setting customer charges for 2003/04 in accordance with its not for profit charter.

Table 3.10 VENCorp financial performance for 2002/03

$Millions	Actual	Forecast*	Variance $	Variance%
MAR	261.8	240.2	21.6	9.0%
Augmentation charges	9.4	12.6	(3.2)	(25.4%)
Opex	2.9	5.6	(2.7)	(48.2%)

*Forecast figures originally in 2002 dollars – escalated by CPI.

3.2.5 ElectraNet

The ACCC determined ElectraNet's revenue for the 2002/03 financial year as follows: revenue for July-December 2002 was set under the provisions of the South Australian Electricity Pricing Order; revenue for January-June 2003 was set under the provisions of the National Electricity Code.

This is the first year of ElectraNet's revenue cap under the Code and the information is provided as a basis for comparison with later years' performance and with the aggregate figures in section 3.1.

ElectraNet's actual return on assets was 8.6%. The return on assets assumed by the revenue cap decision for 2002/03 was higher at 10.0%, due to the combination of a lower EBIT and a slightly higher RAB than forecast in the original decision.

Revenue and expenditure

ElectraNet's performance against its revenue cap shows relatively small variances from forecast.

Table 3.11 ElectraNet financial performance for 2002/03

$Millions	Actual	Forecast	Variance $	Variance %
MAR	150.2	148.0	2.2	1.3%
Capex	34.4	35.5	(1.1)	(3.1%)
Opex	42.2*	42.5	(0.3)	(0.7%)

*Includes grid support of $4.4m.

4. Capital expenditure

4.1 Introduction

Capital expenditure (capex) is used to augment the existing transmission system or to replace or refurbish existing assets. In setting a revenue cap, the ACCC forms a view on the efficiency of the proposed capex program having regard to future demand and service quality. The Code also requires the ACCC to foster an efficient level of investment by the TNSP.

This chapter presents the TNSPs' reported capex compared with the forecasts that were included in the ACCC's revenue cap decisions for the 2002/03 financial year.

The information on TNSPs' actual capex for 2002/03 was obtained from the Regulatory Accounts provided to the ACCC by each TNSP, as required by section 6.2.5 of the Code.

4.2 Aggregate TNSP performance

The TNSPs' reported actual total capex for the period 2002/03 is shown in Table 4.1. These figures denote total capex, including both network augmentation and replacement/refurbishment capex. It should be noted that VENCorp pays augmentation charges under network services agreements to successful tenderers who build/own/operate additions to the transmission network in Victoria. VENCorp's augmentation payments for 2002/03 were $9.4 million, against forecast expenditure of $12.6 million.

Table 4.1 TNSPs' capex for 2002/03: forecast/actual*

$ million (nominal)	Actual	Forecast	Variance ($)	Variance (%)
TransGrid	243.6	92.7	151.4	162.8%
SPI PowerNet	36.4	73.1	(36.7)	(50.2%)
ElectraNet	34.4	35.5	(1.1)	(3.1%)
Powerlink	200.4	179.0	21.4	11.9%
Total	**514.8**	**380.3**	**134.5**	**35.4%**

Source: Regulatory Accounts 2002/03 and ACCC revenue cap decisions.
*On an in-service basis

To put the above figures in perspective, in 2002/03, capex totalled $514.8 million for all TNSPs, about 75% more than was expended on operating and maintaining their networks. Table 4.1 demonstrates the difference between the actual and forecast expenditure.

Although the table shows that total actual capex was 35% higher than the forecast amount, results vary widely among the TNSPs.

The reasons for variances from the forecasts differ between TNSPs. The age of the assets, load growth, climate and natural disasters such as bushfires may all play a part to varying degrees. The expenditure of each TNSP and the reasons for the variance from forecast expenditure are discussed below.

4.3 Individual TNSP performance

Powerlink

Powerlink recorded capex of $200.4 million for 2002/03, which was $21.4 million (11.9%) higher than forecast for that year.

It commented that higher than expected load growth in Queensland has driven an acceleration in the network development program.

TransGrid

TransGrid recorded capex of $243.6 million during 2002/03, which was $151.4 million (162.8%) higher than forecast.

TransGrid commented that transmission is a capital intensive business and the return on capital and return of capital represents a far greater proportion of customer prices than does opex. Capital investment can be 'lumpy' due to the demands on the system created by continuing higher levels of load growth. It stated that further substantial upgrades are expected to be required in the foreseeable future.

SPI PowerNet

SPI PowerNet's capex was considerably less than the forecast for 2002/03. SPI PowerNet delivered $36.4 million capex in-service for the year, which was $36.7 million (50.2%) less than the forecast figure of $73.1 million.

SPI PowerNet commented that it has rearranged several large replacement projects in response to customer plans and internal capital requirements. As such, it has several station replacements in progress at the same time. This includes the rebuilding of Eildon, Brunswick, Kerang and Mount Beauty Terminal Stations. At least a further nine station rebuilds will commence over the next two years. As these station rebuilds can take up to three years, very large amounts of capital expenditure will be work in progress rather than in-service during the early years of the regulatory period. At the end of 2002/03, SPI PowerNet had over $50 million of capital expenditure as work in progress in addition to the $36 million brought into service over 2002/03.

Therefore, SPI PowerNet expects to deliver its agreed in-service capex program in full by the end of the regulatory period but expects large variations, both negative and positive, to the in-service targets in the interim.

ElectraNet

ElectraNet's capex for 2002/03 was marginally lower than the forecast for that year. ElectraNet recorded capex of $34.4 million which was $1.1 million (3.1%) lower than the forecast figure.

ElectraNet commented that the marginally lower than forecast capex followed a later than expected ACCC revenue cap decision, which introduced delays into the development of plans to implement the capex program (approvals, service contracts etc.).

5. Operating and maintenance expenditure

5.1 Introduction

In setting a revenue cap, the ACCC must assess the TNSP's capacity to achieve realistic efficiency gains in its proposed opex program, given future demand and service quality issues. However, the regulatory framework is also designed to give TNSPs an incentive to improve efficiency by allowing a TNSP to retain in part the profits arising where the TNSP achieves costs which are less than those used to set the revenue cap. Opex represents a large proportion of the TNSP's variable costs and is an important source of savings and productive efficiencies.

The ACCC in reaching its revenue cap decision will also assess if the TNSP has adopted an appropriate balance between opex and capex. As with capex, the Code requires the ACCC to seek to achieve an environment that fosters efficient opex practices. The majority of opex outlays are in the form of salaries for staff or payments for outsourced labour, with the main activities undertaken being network operation and maintenance or corporate related activities.

This chapter presents the TNSPs' reported opex compared with the forecasts that were included in the ACCC's final revenue cap decisions for the 2002/03 period.

5.2 Aggregate TNSP performance

In 2002/03, opex for all TNSPs totalled approximately $294.5 million.

Table 5.1 TNSPs' opex for 2002/03: forecast/actual

$ Millions (nominal)	Actual	Forecast	Variance $	Variance (%)
TransGrid	113.8	109.3	4.5	4.1%
SPI PowerNet	51.7	54.9	3.2	(5.9%)
ElectraNet	42.2*	42.5*	(0.3)	(0.7%)
Powerlink	83.9**	84.2**	(0.3)	(0.3%)
VENCorp	2.9	5.6	(2.7)	(48.2%)
Total	**294.5**	**296.5**	**(2.0)**	**(0.7%)**

Source: Regulatory Accounts 2002/03 and ACCC revenue cap decisions.
* ElectraNet - actual opex included $4.4m for grid support (forecast figure contained allowance of $4.0m)
** Powerlink - actual opex included $10.7m for grid support (forecast figure contained allowance of $5.2m).

The table above shows that the overall amount of actual opex incurred in 2002/03 was relatively close to the forecast for that year. However, this result does not reflect the large differences between forecast and actual opex reported by individual TNSPs. As is the case with the capex reports, there is no general trend in the outcome of actual expenditure compared to the forecast. Instead, the results vary widely among the TNSPs.

The reasons for the variances from the forecasts differ for each TNSP. The expenditure of each TNSP and the potential reasons behind the variances from the forecasts are discussed below.

Several factors affect the fair comparison of opex among transmission companies. These include varying load profiles, load densities, asset age profiles, network designs, local regulatory requirements, topography and climate.

The ACCC in its August 2003 DRP Discussion Paper recognised that a substantial component of the differences in cost observations between firms is due to legitimate or "uncontrollable" differences in factors which affect the level of costs incurred by the firms.

For example, the costs of electricity transmission or distribution businesses might differ due to differences in:

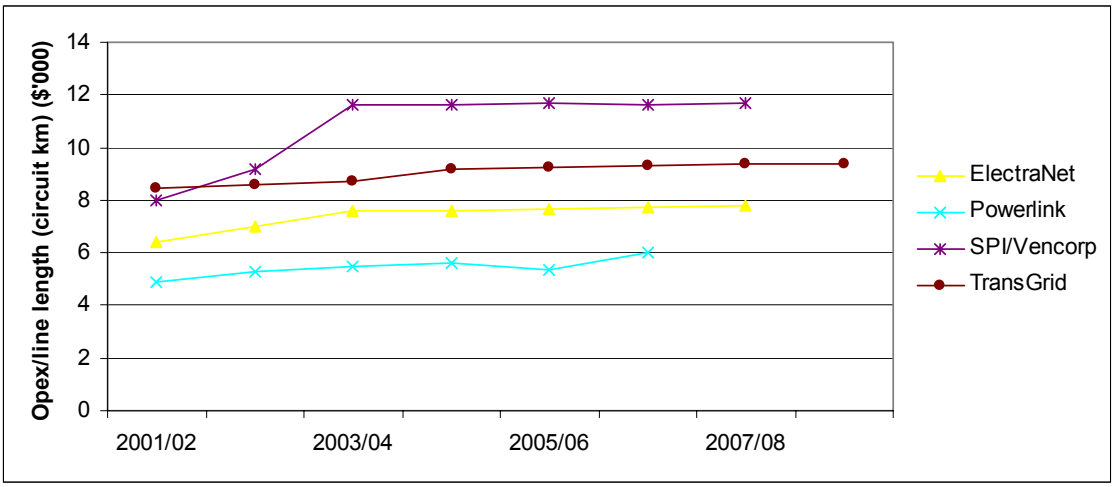
- the *nature of the services* provided by each firm (for example, a transmission network designed to provide reliability services might appear to have quite different average costs than an otherwise identical network designed to provide transportation services);
- the *range of services* provided by the firm (a distribution business might appear as higher average cost if it is required to provide additional services, such as street lighting or heating, which are not provided by the comparator firms);
- the *volume of services* provided (a transmission or distribution business carrying smaller volumes might appear as higher average cost if there are economies of scale);
- the *quality of services* provided (a firm which offers *n-2* reliability might appear as higher average cost than a firm which offers *n-1* reliability);
- the *price of inputs* (firms in rural areas might have to pay more to attract particular labour skills);
- *Government regulations* (companies which must control noise emissions may face higher average costs than those which do not);
- the *number, density, load factor and size distribution of the customers they serve* (companies which have a higher load factor or customer density may have lower average cost than those companies which do not);
- *environmental factors* (companies in regions with high temperatures or a greater propensity to electrical storms may have to take more precautions than those in more temperate areas); and
- the *age and quality of the capital stock*.

Figures 5.1 to 5.3 show the following opex ratios: opex/line length ($/circuit kilometres); opex/RAB (%); and opex/megawatt peak ($/MW). It is important to note that the ratios will be affected by the factors listed above to varying degrees.

With regard to the opex/RAB ratio, Powerlink, SPI PowerNet and VENCorp commented that it would be preferable to use the undepreciated replacement cost of the assets to provide a more meaningful comparison, rather than the depreciated value of the assets. SPI PowerNet and ElectraNet also stated that easement values should be excluded from the asset base value due to the different treatments applied to each TNSP.

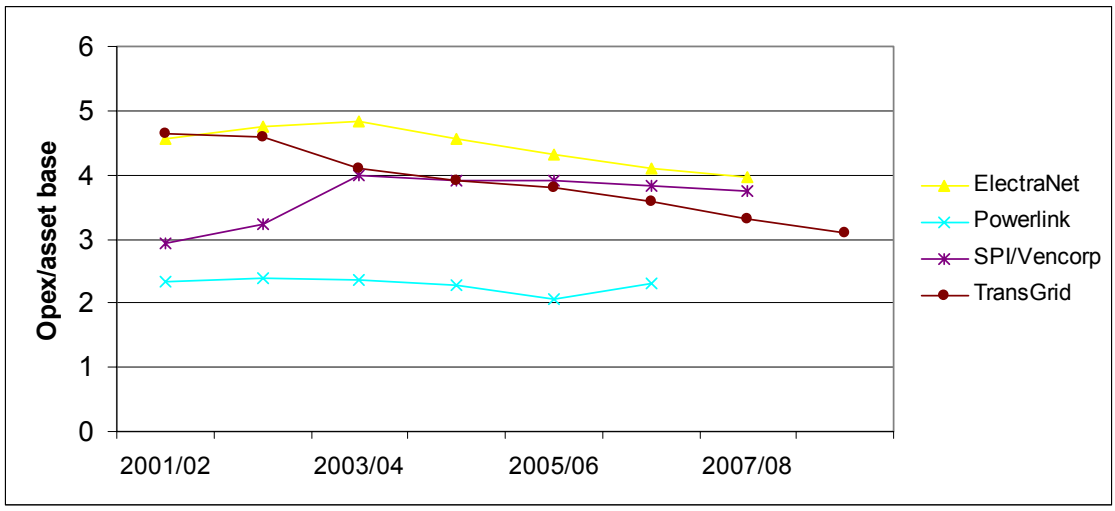
The ACCC will establish a working group by April 2005 to benchmark the opex performance of the TNSPs.

Figure 5.1 Opex/line length



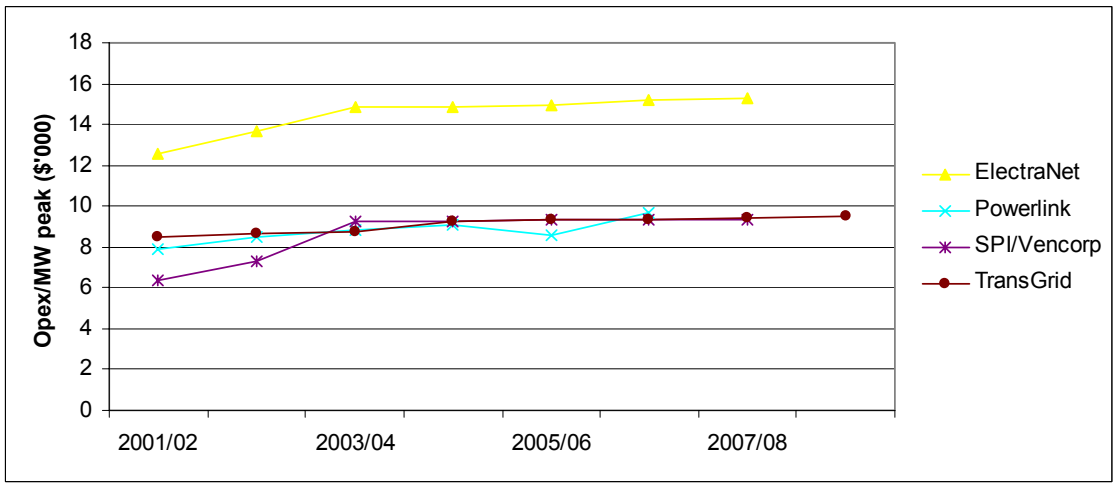
Source: TNSP revenue cap applications and ACCC decisions.

Figure 5.2 Opex/RAB (%)



Source: TNSP revenue cap applications and ACCC decisions.

Figure 5.3 Opex/MW peak



Source: TNSP revenue cap applications and ACCC decisions.

Benchmarking

The ACCC recognises that differences in operating conditions and scale can explain why some ratios are higher or lower. As such, the ratios can only provide a measure of reasonableness. Accordingly, the ACCC does not use benchmarking to establish opex allowances for TNSPs, but rather as a guide to whether the allowances are within a reasonable range.

5.3 Individual TNSP performance

Powerlink

Powerlink's actual opex of $83.9 million was almost identical to its forecast expenditure of $84.2 million.

Powerlink commented that the above figures included grid support costs which can vary significantly from year to year and distort year on year comparisons for a TNSP. Powerlink stated further that the inclusion of grid support costs in opex can distort comparisons between those TNSPs that have it and those that do not (only Powerlink and ElectraNet contracted for grid support in 2002/03 in lieu of capex on a network augmentation).

TransGrid

TransGrid recorded opex of $113.8 million for 2002/03, which was 4.1% above its forecast expenditure of $109.3 million (adjusted for the acquisition of SMHEA assets).

TransGrid commented that it is important to consider service outcomes when analysing opex, which represents only a very small percentage of end user electricity costs. It stated that it supplies the largest load and sits in the heart of the NEM trading arrangements with interconnection to the north and south. Further, TransGrid noted that there are unpredictable flow patterns, both short term and long term.

SPI PowerNet

SPI PowerNet's opex of $51.7 million was 5.9% lower than the forecast amount for 2002/03 of $54.9 million.

SPI PowerNet commented that it actively pursues efficiencies on the understanding that a glide path on savings generated is offered under the current regime in the next regulatory period. Nonetheless, SPI PowerNet expects its opex costs to trend upwards over the regulatory period.

VENCorp

VENCorp's net opex was $2.9 million, 48.2% less than forecast for 2002/03.

It commented that the major variances between the forecast and actual 2002/03 opex related to interest income received (as a result of the unplanned 2002/03 surplus that was returned to transmission customers in 2003/04 by way of reduced TUOS charges) and reduced corporate overhead charges.

ElectraNet

ElectraNet recorded opex of $42.2 million, 0.7% less than its forecast expenditure of $42.5 million.

ElectraNet commented that it is actively seeking opex efficiencies in line with opex efficiency incentives provided for in the revenue cap decision. ElectraNet noted, however, that opex costs are likely to trend up during the regulatory period.

6. Service Standards

6.1 Background

The Code requires the ACCC to set a revenue cap for TNSPs. The ACCC initially decides a TNSP's revenue cap based on forecast efficient costs. TNSPs can then maximise their profits by reducing actual costs below the forecast levels. While such cost reductions could occur because of improved efficiency, it could also be a sign of reduced service quality. This results in a perverse incentive for TNSPs to maximise profits at the expense of service quality.

The ACCC aims to improve these incentives by linking each TNSP's revenue cap to their performance, or service standards. The service standards should influence the revenue cap to ensure that TNSPs are rewarded when performance standards increase and penalised when performance standards decline, thus providing incentives for continued performance improvement.

To place such an incentive on TNSPs, the ACCC engaged Sinclair Knight Merz (SKM) to recommend a performance-incentive scheme to link TNSP performance to their revenue cap.

Having regard to SKM's recommendations, on 12 November 2003 the ACCC finalised its Service Standards Guidelines. The Service Standards Guidelines outline the ACCC's approach to setting service standards within the revenue cap framework provided by the Code, and detail a scheme that provides economic incentives for TNSPs to improve service quality. This performance incentive scheme aims to reduce the incentive for TNSPs to achieve cost reductions at the expense of reduced service quality to market participants.

In response to issues raised that the ACCC's Service Standards Guidelines do not measure the market impact of TNSP behaviour, the ACCC established a service standards working group to discuss ways of developing economic incentives around such measures. As a result, on the 6 August 2004 the ACCC released a draft decision outlining market impact transparency measures which include the publication of information on the market impact of transmission constraints in the National Electricity Market. This is seen as a first step towards developing an economic incentive regime based on market outcomes. As the ACCC intends to publish the transparency measures on a quarterly basis, it does not propose to include such information in this report.

6.2 Performance incentive scheme

The performance incentive scheme uses the TNSP's past performance as a benchmark (or target) for future performance. The scheme provides the TNSP with the financial incentive to achieve performance greater than their benchmark. The financial reward/penalty is calculated using the formula set out in the guidelines and in the TNSP's revenue cap determination.

The ACCC uses five measures of performance:

- circuit availability;
- frequency of 'off-supply' events;
- average outage duration;
- hours constrained (intra-regional); and
- hours constrained (inter-regional).

The standard definitions of these performance measures are outlined in schedule 1 of the Service Standards Guidelines.

The performance benchmarks are usually based on the TNSP's historical performance. However, the ACCC will consider the impact that planned capex will have when setting the benchmarks. The performance targets are set in each revenue cap decision for the duration of the regulatory period.

At this early stage of the scheme's development, the financial incentive is capped at ±1% of the MAR. This will limit the risk of TNSPs. However, this cap could be raised in future with more experience of the scheme.

Force Majeure

It is not possible to apply a specific rule to cover all potential force majeure events therefore each event is considered on a case-by-case basis. The ACCC considers the following in regard to these events:

- was it unforeseeable and its impact extraordinary, uncontrollable or unmanageable?
- does the type of event occur frequently and if so how did the impact of the particular event differ?
- could the TNSP, in practice, have prevented the impact of the event though not necessarily the event itself?
- could the TNSP have effectively reduced the impact of the event by adopting better practices?

6.3 Implementation of the scheme

The ACCC implements this scheme through the TNSP's revenue cap set under clause 6.2.4(b) of the Code.

In setting a revenue cap, clause 6.2.4(c) requires the ACCC to take into account the TNSP's revenue requirement, having regard for, amongst other things, the service standards applicable to the TNSP (see clauses 6.2.4(c)(2) and (3)).

The ACCC has applied the performance incentive framework in the revenue caps for ElectraNet, SPI PowerNet, the Murraylink Transmission Company and Transend.

ElectraNet and SPI PowerNet are the first TNSPs to report on their performance results. Appendix 2 provides a summary of their reports for calendar year 2003.

The ACCC proposes to use a three to six-month lag between the annual performance being measured and the financial incentive being added to or subtracted from the annual revenue limit. Evaluating performance measured by calendar years would reduce the difference between measurement and reward/ penalty because most revenue cap decisions are based on the financial year cycle.

6.4 Compliance issues

As part of the information requirements, TNSPs are required to report their performance standards to the ACCC annually. The ACCC audits these annual reports to ensure that TNSPs have complied with the parameters of their respective revenue caps.

For the purpose of ElectraNet and SPI PowerNet's reporting, the ACCC engaged SKM to audit the information provided and assist in determining the appropriate incentive that should be applied to the TNSPs.

Information provided by ElectraNet and SPI PowerNet on their performance results can be found in their reports on the ACCC's website (www.accc.gov.au).

Appendix 1: Summary financial performance and indicators

VENCorp – Statutory electricity segment summary
- Financial performance and indicators

$Millions	FY2003
Financial performance	
Transmission revenue	261.8
Less network charges	229.2
Total electricity transmission revenue	32.6
Other revenue	1.4
Total revenue	34.0
Less expenses	4.3
Net result for period	29.7
Financial position	
Current assets	51.7
Non-current assets	0.3
Total assets	52.0
Current liabilities	24.9
Non-current liabilities	0.5
Total liabilities	25.4
Net assets	26.6
Stakeholders funds	
Contributed capital	0
Accumulated surplus	26.6

ElectraNet – Summary - Financial performance and indicators

$ Millions	**FY2003**
Financial performance	
Transmission revenue(PS)	150.2
Opex(PS)	42.2
Depreciation(PS)	38.5
EBIT(PS)	70.7
Financial position	
Average RAB	824.0
Total assets	1174.5
Total debt	1033.5
Total liabilities	1081.4
Total equity	93.1
Financial indicators	
EBIT(PS)/interest cover	1.2x
Return on assets	8.6%
Return on equity	(17.6%)
Gearing ratio	91.7%*

*ElectraNet advise that credit rating agencies treat shareholder loan notes as equity rather than debt for the purpose of determining its credit rating. On this basis ElectraNet's gearing ratio would be 72.6%.

Powerlink – Summary - Financial performance and indicators

$ Millions	FY2003	FY2002
Financial performance		
Transmission revenue(PS)	348.8	318.5
Opex(PS)	83.9	88.1
Depreciation(PS)	99.1	86.9
EBIT(PS)	170.8	160.8
Financial position		
Average RAB	2487.0	2337.9
Total assets	3050.5	2820.5
Total debt	1351.8	1277.4
Total liabilities	1658.4	1541.7
Total shareholders' equity	1392.1	1278.9
Financial indicators		
EBIT(PS)/interest cover	2.2x	2.1x
Return on assets	6.9%	6.9%
Return on equity	5.5%	5.8%
Gearing ratio	49.3%	50.0%

SPI PowerNet – Summary - Financial performance and indicators

$ Millions	FY2003
Financial performance	
Transmission revenue(PS)	262.7
Opex(PS)	51.7
Depreciation(PS)	51.7
EBIT(PS)	166.3
Financial position	
Average RAB	1811.3
Total assets	2245.1
Total debt	1432.8
Total liabilities	1830.6
Total shareholders' equity	621.2
Financial indicators	
EBIT(PS)/interest cover	1.8x
Return on assets	9.2%
Return on equity	8.3%
Gearing ratio	69.8%

TransGrid – Summary - Financial performance and indicators

$ Millions	FY2003	FY2002
Financial performance		
Transmission revenue(PS)	389.9	363.4
Opex(PS)	113.8	103.4
Depreciation(PS)	108.0	101.4
EBIT(PS)	165.1	168.9
Financial position		
Average RAB	2632.5	2464.5
Total assets	2807.4	2673.3
Total debt	1388.7	1324.7
Total liabilities	1684.0	1566.0
Total shareholders' equity	1123.4	1107.3
Financial indicators		
EBIT(PS)/interest cover	1.9x	2.1x
Return on assets	6.3%	6.9%
Return on equity	4.2%	2.3%
Gearing ratio	55.3%	54.5%

Appendix 2: Service standards data

Summary of ElectraNet and SPI PowerNet performance reports together with SKM's recommendations and the final outcome.

1 ElectraNet's performance incentive scheme report for 2003 calendar year

On 27 February 2004, ElectraNet submitted its annual performance incentive scheme report for 2003 calendar year to the ACCC. The report was prepared in accordance with the ACCC's Service Standards Guidelines.

The performance measures implemented for ElectraNet are defined in its revenue cap decision. Below are its historical performances for the years 1996/97 – 2001/02 and its reported performance for 2003.

Indicator	Historical Performance						Current Performance
	96/97	97/98	98/99	99/2000	00/01	01/02	2003
Total circuit availability (%)	99.23	99.25	98.82	99.29	99.32	99.3	99.59
Loss of Supply Event Frequency Index							
>0.2 minutes per annum	5	5	3	9	5	5	2
>1.0 minutes per annum	3	2	0	2	1	1	1
Average outage duration (mins)	239.1	205.7	82.7	70.9	141.3	108.6	70.13
Minutes constrained (inter-regional)	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Minutes constrained (intra-regional)	N/a	N/a	N/a	N/a	N/a	N/a	N/a

ElectraNet requested a single force majeure exclusion from the average outage duration performance measure. Details of this force majeure event can be found in its report on the ACCC's website.

ElectraNet proposed a MAR bonus for 2004/05 of $1,118,748.

SKM's audit reviewed the performance results submitted by ElectraNet, in particular:

- the adequacy and accuracy of the recording system used to measure performance;
- the accuracy of the calculations of the final performance; and
- whether the force majeure and other exclusions are in accordance with the Service Standards Guidelines.

As a result of the audit activities undertaken, SKM formed the opinion that:

- the performance reporting by ElectraNet was free from material errors and was in accordance with the requirements of the ACCC's Service Standards Guidelines;
- ElectraNet correctly applied the performance incentive scheme formulas and coefficients to calculate the performance incentive amount using the equations contained in the revenue cap decision;

- the recording system used by ElectraNet to capture outage data is accurate and reliable;
- the categorisation of assets was consistent with the historical categorisation;
- the application of exclusions was in accordance with historical calculation of performance; and
- the application of the force majeure to the incident at Mannum-Adelaide no. 2 pumping station substation was within the agreed definition.

SKM recommendations

SKM recommended the following:

- ElectraNet's calculation of its S-factor and performance incentive be accepted as free from material errors;
- the ACCC accept the force majeure exclusion sought by ElectraNet; and
- the bonus for ElectraNet under the ACCC's PI scheme for 2003 be $1,118,748.

ACCC's conclusion

The ACCC has accepted SKM's recommendations and, accordingly, considers that an increase of $1,118,748 for ElectraNet's MAR for 2004/05 complies with its revenue cap. In reaching this conclusion, the ACCC considered the revenue cap decision, Service Standards Guidelines, SKM's report and ElectraNet's correspondence.

2 SPI PowerNet's performance incentive scheme report for 2003 calendar year

On 27 February 2004, SPI PowerNet submitted its annual performance incentive scheme report for the 2003 calendar year to the ACCC. The report was prepared in accordance with the ACCC's Service Standards Guidelines.

The performance measures implemented for SPI PowerNet are defined in its revenue cap decision. Below is a comparison of its historical performance for the years 1996/97 – 2000/01 and its actual performance for 2003.

Indicator	Historical Performance					Current Performance
	96/97	97/98	98/99	99/2000	00/01	2003
Total circuit availability (%)	99.41	99.46	99.19	99.54	99.49	99.323
Peak critical availability	99.95	99.94	99.9	99.94	99.95	99.787
Peak non-critical availability	99.93	99.9	99.75	99.97	99.96	99.841
Intermediate critical availability	99.88	99.92	99.89	99.93	99.92	99.479
Intermediate non-critical availability	99.74	99.81	99.89	99.77	99.83	99.338
Loss of Supply Event Frequency Index						
>0.05 minutes per annum	0	3	0	2	2	3
>0.3 minutes per annum	0	0	0	1	1	0
Average outage duration (mins)						
Lines	6.32	24.14	14.46	7.52	6.41	9.978
Transformers	6.93	8.52	3.13	5.92	3.97	7.659
Minutes constrained (inter-regional)	N/a	N/a	N/a	N/a	N/a	N/a
Minutes constrained (intra-regional)	N/a	N/a	N/a	N/a	N/a	N/a

SPI PowerNet provided a report which set out its performance against each individual appropriate measure. SPI PowerNet requested two force majeure exclusions which affected its average outage duration, total availability and peak critical availability performance measures. Details of this exclusion are included in SPI PowerNet's report.

SPI PowerNet proposed a MAR bonus for 2004/05 of $202,349.

SKM's audit reviewed the performance results submitted by SPI PowerNet, in particular:

- the adequacy and accuracy of the recording system used to measure performance;
- the accuracy of the calculations of the final performance; and
- the force majeure events and other exclusions to ensure compliance with the revenue caps and the ACCC's Service Standards Guidelines.

As a result of the audit activities undertaken, SKM formed the opinion that:

- the performance reporting by SPI PowerNet was free from material errors and in accordance with the requirements of the ACCC's Service Standards Guidelines, subject to the clarification of the definition of some exclusions noted;

- SPI PowerNet has correctly applied the PI scheme formulas and coefficients to calculate the potential performance bonus/penalty amongst the S-factor equations contained in the revenue determination;
- the recording system used by SPI PowerNet to capture the relevant details for outages is accurate and reliable;
- the application of exclusions was generally in accordance with historical calculation of performance and with the definitions historically applied, though there appears to be some ambiguity in some of the definitions;
- the exclusions for the specified events relating to shunt reactors and connection transformers appear to be in accordance with historical performance reporting; and
- the application of the force majeure to the Newport Power Station and Fisherman Bend Terminal Station events was consistent with the agreed definition.

SKM recommendations:

SKM recommended the following:

- SPI PowerNet's calculation of its S-factor and performance incentive be accepted as free from material errors, subject to the ACCC's acceptance of the exclusions sought by SPI PowerNet;
- the ACCC accept SPI PowerNet's exclusion of the Kerang Terminal Station Shunt Reactors, on the basis that the outage was conducted in accordance with good practice, and the PI scheme contains a perverse incentive in the case of shunt reactors;
- the ACCC accept SPI PowerNet's exclusion of outages associated with connection asset outages at Morwell and Hazelwood Terminal Stations;
- the ACCC accept SPI PowerNet's force majeure exclusion relating to a fire in the battery room of a 3rd party, noting that SPI PowerNet has only sought to exclude the period by which the outage was extended due to force majeure, and has included the remaining portion of this outage as being under its control; and
- the penalty for SPI PowerNet under the ACCC's PI scheme for 2003 be ($75,037).

A penalty was recommended by SKM primarily because of one particular event — an outage due to the faulty transformer in the Dederang Terminal Station. SPI PowerNet requested that this item be excluded for this time only in calculating the incentive because the contractor was engaged before the service standards scheme was in place. SKM found that there was no provision for the exclusion of this event in the service standards guidelines.

ACCC's conclusion

The ACCC has accepted SKM's recommendations, including its recommendation that the faulty transformer in the Dederang Terminal Station should not be excluded from the scheme. The impact of this on the maximum allowed revenue is around $270,000. Had this item been excluded the bonus under the scheme would have been around $200,000.

Accordingly, the ACCC considers that a reduction of $75,037 for SPI PowerNet's MAR for 2004/05 complies with its revenue cap. In reaching this conclusion, the ACCC considered the revenue cap decision, Service Standards Guidelines, SKM's report and SPI PowerNet's communications.

SPI PowerNet's comments

SPI PowerNet commented that the new reporting systems set up for the measurement of the ACCC PI scheme are allowing a far more detailed study of historical outages and the disaggregated impact of the forward capex program for the regulatory period. At this stage, SPI PowerNet suspects that the historical data may have been incorrect and is investigating whether current targets have been set with sufficient allowance for capital works.