AUSTRALIAN ENERGY REGULATOR

Transmission Network Service Providers

Electricity Regulatory Report for 2005/06

June 2007

TNSP Electricity Regulatory Report 2005/06

Foreword

The role of the Australian Energy Regulator

The Australian Energy Regulator (AER) was established on 1 July 2005, as part of the energy reform process undertaken by the Ministerial Council for Energy (MCE). The purpose of establishing a single national energy regulator is to reduce regulatory costs and uncertainty to business, and to allow both the gas and electricity markets to develop, as much as possible, within a consistent regulatory framework.

The AER is responsible for regulating the revenues associated with the non-contestable elements of the electricity transmission services provided by transmission network service providers (TNSPs) in the National Electricity Market (NEM). The AER also has responsibility for the economic regulation of the electricity wholesale market and responsibility for monitoring and reporting on compliance and enforcing the National Electricity Law (NEL) and the National Electricity Rules (NER).

As established in the Australian Energy Market Agreement (AEMA), the transfer of economic regulation of the non-contestable elements of the electricity distribution sector from jurisdictional regulators to the AER is expected to occur in the second half of 2007. At this time, the AER will also assume responsibility for the regulation of gas transmission and other gas regulatory functions for all jurisdictions except Western Australia. In the interim the Australian Competition and Consumer Commission (ACCC) continues to regulate gas transmission pipelines assisted by the AER. The AEMA also provides for the transfer of distribution and retail consumer protection functions to the AER and AEMC and is currently scheduled to occur by 1 January 2008.

Following the transition of these functions, the AER will be responsible for:

- regulating around forty businesses across the electricity and gas transmission and distribution sectors
- monitoring the NEM wholesale electricity market
- enforcing the National Electricity Law, National Gas Law, Regulations and Rules

This report

This is the second electricity regulatory report published by the AER following two previous reports issued by the ACCC. This report covers the performance of eight transmission network service providers for the 2005/06 regulatory year: ElectraNet, EnergyAustralia, Murraylink Transmission Company, Powerlink, SP AusNet, Transend, TransGrid and VENCorp. The regulatory cycle has now reached the point where TransGrid and EnergyAustralia have had their revenue caps re-set for a second five year period. The other businesses detailed in this report are at various stages of their first regulatory period. The AER has released its Draft Decision on Powerlink's second regulatory period commencing July 2007, with the Final Decision expected shortly. SP AusNet and VENCorp have submitted applications for their second regulatory period commencing in 2008, and ElectraNet's second regulatory period also commences in 2008.

The report provides an overview of the operating environment of the transmission businesses and summarises their performance against the financial assumptions and service standards underlying their respective revenue caps.

While caution should be exercised in drawing conclusions from a single year's data, there are some emerging trends after four years of reporting TNSP performance:

- capital expenditure – aggregate actual spending is significant at close to $2.4 billion over the past four years, and was almost 10 per cent higher than forecast for 2005/06
- value of networks – reflecting this continued investment in infrastructure, the aggregate value of the TNSPs' regulated assets has increased by more than 22 per cent over the past four years and now stands at almost $10.6 billion
- operating and maintenance expenditure – TNSPs have been spending close to forecast levels with aggregate spending over the past four years approaching $1.4 billion and marginally below that forecast in the revenue determinations
- service standards – most TNSPs continue to exceed the reliability standards specified in their revenue caps, with incentive payments totalling almost $5.4 million for the 2005 calendar year.

The State of the Market Report

The AER will also shortly publish the first of its annual reports on the state of the national energy market. The report will cover electricity and gas issues related to transmission, distribution and retail areas, and will incorporate some of the financial information included in this Regulatory Report.

Feedback

I hope that this report will provide interested parties with information to enable critical evaluation of TNSPs' performance under their existing revenue caps. I encourage you to read this report and provide feedback to the AER.

Steve Edwell
Chairman

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Glossary

ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
capex	capital expenditure
EBIT	earnings before interest and taxes
GWh	Gigawatt hours
IRG	Information Requirements Guidelines
kV	kilovolt
MAR	maximum allowed revenue
MCC	Marginal Cost of Constraints
MW	Megawatts
MWh	Megawatt hour
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NER	National Electricity Rules
NPAT	net profit after taxes
ODRC	optimised depreciated replacement cost
opex	operating and maintenance expenditure
PI Scheme	performance incentive scheme
PS	prescribed services
RAB	regulatory asset base
regulatory compendium	*Compendium of Electricity Transmission Regulatory Guidelines*, AER, August 2005
SKM	Sinclair Knight Merz
SRP	*Statement of Principles for the Regulation of Electricity Transmission Revenues*, ACCC, December 2004
TCC	Total Cost of Constraints
TNSP	transmission network service provider

Summary

This is the second annual electricity transmission regulatory report published by the AER. The AER is the economic regulator of transmission networks in the National Electricity Market (NEM), assuming those responsibilities from the Australian Competition and Consumer Commission (ACCC). The AER published its first annual electricity transmission regulatory report in 2006 and this report followed on from two previous reports issued by the ACCC for the years 2002/03 and 2003/04.

The objective of this report is to review the performance of transmission network service providers (TNSPs) regulated by the AER and provide stakeholders with access to comparative data on the financial performance of TNSPs, including comparisons with the forecasts incorporated in the regulatory revenue cap decisions.

Information regarding the following TNSPs is included in this report:

- ElectraNet
- EnergyAustralia
- The Murraylink Transmission Company (Murraylink)
- Powerlink
- SP AusNet
- Transend
- TransGrid
- VENCorp.

The TNSPs regulated by the AER are required to provide certified annual statements containing details of their financial performance. This information is submitted in accordance with the AER's Information Requirements Guidelines[1].

Service quality information is submitted in accordance with the AER's Service Standards Guidelines. The AER has so far applied the service standards regime to seven transmission entities. The 2007 calendar year will be the first year that the AER's performance incentive scheme (PI scheme) applies to Powerlink. TransGrid, EnergyAustralia, Transend and Murraylink have participated since the 2004 calendar year and SP AusNet and ElectraNet have participated in the scheme since the 2003 calendar year.

[1] Note these guidelines (as well as the service standard guidelines) are currently under review as required by the revised chapter 6A of the NER. This report has been (largely) compiled on the basis of the existing guidelines.

This report is structured as follows:

- Chapter 1 overviews the AER's methodology for setting revenue caps and its information gathering functions under the National Electricity Rules (NER).
- Chapter 2 describes the physical characteristics of each TNSP's network.
- Chapter 3 sets out the industry's overall performance and each TNSP's financial performance.
- Chapter 4 provides details of each TNSPs' maximum allowed revenue.
- Chapters 5 and 6 overview capital expenditure (capex) and operating expenditure (opex) including information on variations between actual expenditure and that forecast in the TNSPs' revenue caps.
- Chapter 7 sets out information on service standards for the TNSPs.

Revenue cap outcomes

Table A compares the actual revenue and expenditure outcomes against the forecast maximum allowed revenue (MAR), which reflects opex and capex allowances in the TNSPs' revenue cap decisions. The summary figures are presented to provide an overall view of the average variations from forecast amounts. However, the outcomes for individual TNSPs may differ markedly from the average due to the influence of regional factors, and should therefore be assessed in that context. In addition, these individual variations do not necessarily raise regulatory concerns provided they do not constitute systemic under or over-spending, and should be examined over the full five year period of the revenue cap for each TNSP before any conclusions are drawn.

Table A: TNSPs' revenue cap outcomes, 2005/06

	Actual	Forecast	Difference	
	$m	$m	$m	%
Revenue*	1613.8	1599.0	14.8	0.9
Opex**	390.5	404.0	-13.5	-3.3
Capex*	689.8	627.9	61.9	9.9

Source: 2005/06 Regulatory Accounts and the ACCC's revenue cap decisions.
*Aggregate figures exclude VENCorp
**Excludes grid support

Table A shows that the aggregate actual revenue and forecast MAR of the TNSPs differed by 0.9% in 2005/06. Differences in 2003/04 and 2004/05 were -0.3% (showing actual revenue was less than forecast) and 0.7% respectively.

Table A also shows that actual aggregate capex is 9.9% above forecast capex. This compares to an underspend of around 18.8% for the previous financial year. Each TNSP's contribution to the overall difference is discussed in Chapter 5.

While the difference between aggregate actual and forecast opex (-3.3%) was not significant, some TNSP's opex did vary substantially from the amount forecast in their revenue cap decision. These variations are discussed in Chapter 6.

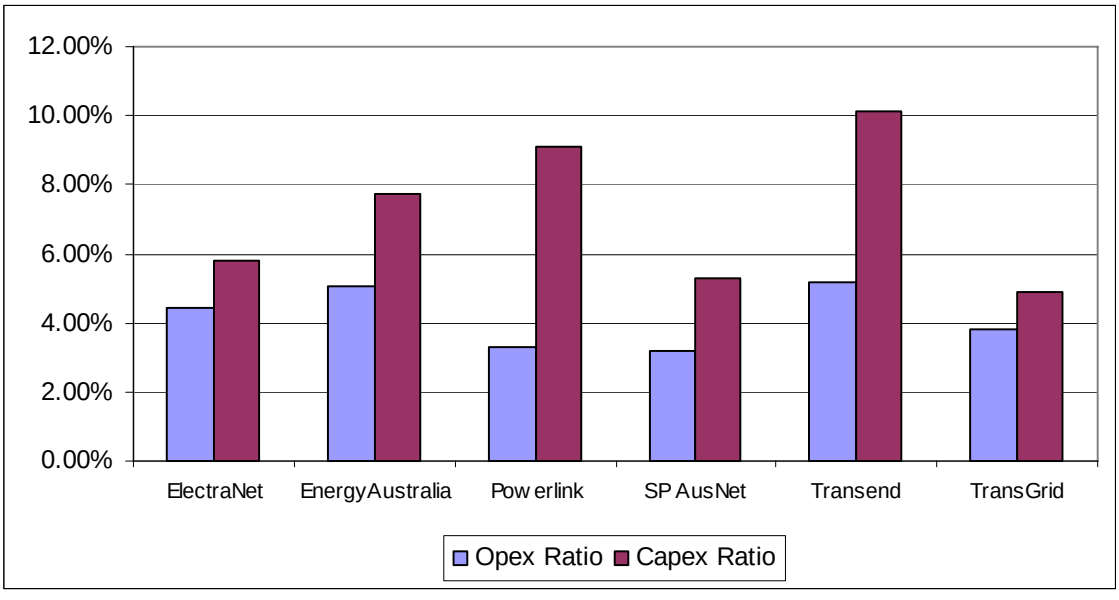
Table B and Figure A compare the TNSPs' capex and opex as a percentage of their regulatory asset base (RAB). The data demonstrates that expenditure as a percentage of RAB varied amongst the TNSPs, particularly the capex ratio. These variances may be explained by key drivers of expenditure such as load growth and the ageing of assets which can vary significantly among individual TNSPs. The differences in the network characteristics of individual TNSPs is discussed in further detail in Chapter 2.

Table B: TNSP's expenditure as a proportion of the regulatory asset base 2005/06

	Average RAB ($m)	Opex/RAB Ratio* (%)	Capex/RAB Ratio** (%)
ElectraNet	941.5	4.4	5.8
EnergyAustralia	556.3	5.1	7.7
Murraylink	99.0	3.0	N/A
Powerlink	2955.6	3.3	9.1
SP AusNet	1919.8	3.2	5.3
Transend	667.1	5.2	10.1
TransGrid	3162.8	3.8	4.9

*Opex/RAB Ratios for ElectraNet, Powerlink and Transend exclude grid support. Opex/RAB ratio for SP AusNet does not include network planning which is undertaken in Victoria by VENCorp.
**Due to the regulatory arrangements in Victoria, SP AusNet's capex does not include augmentation work. VENCorp does not have a RAB as it does not own transmission assets. Murraylink does not have a capex allowance as part of its revenue cap.

Figure A: TNSP's expenditure as a proportion of the regulatory asset base, 2005/06

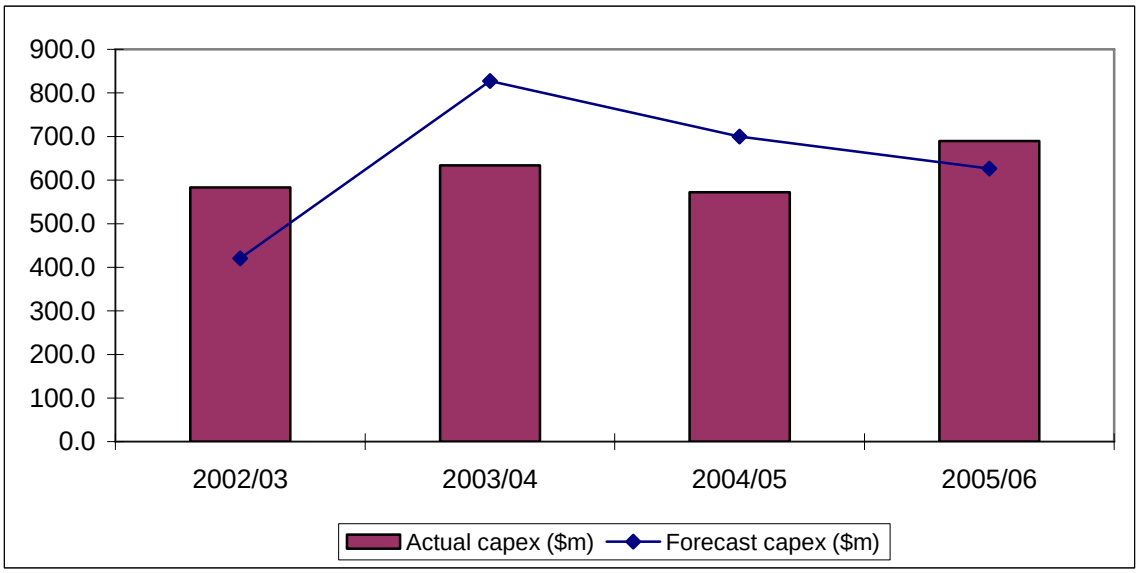


Source: 2005/06 Regulatory Accounts.
*Opex Ratio excludes grid support.

Figures B and C illustrate the TNSPs' aggregate actual capex and opex (in real terms) against the forecasts contained in their revenue caps.

Figure B shows that actual aggregate capex was greater than forecast this financial year, the first time since 2002-03, and significantly greater than actual capex in the previous financial year. Over the past four years aggregate actual capex has been almost $2.5b (real terms 2005/06) as TNSPs upgrade and extend their networks to meet demand and reliability requirements.

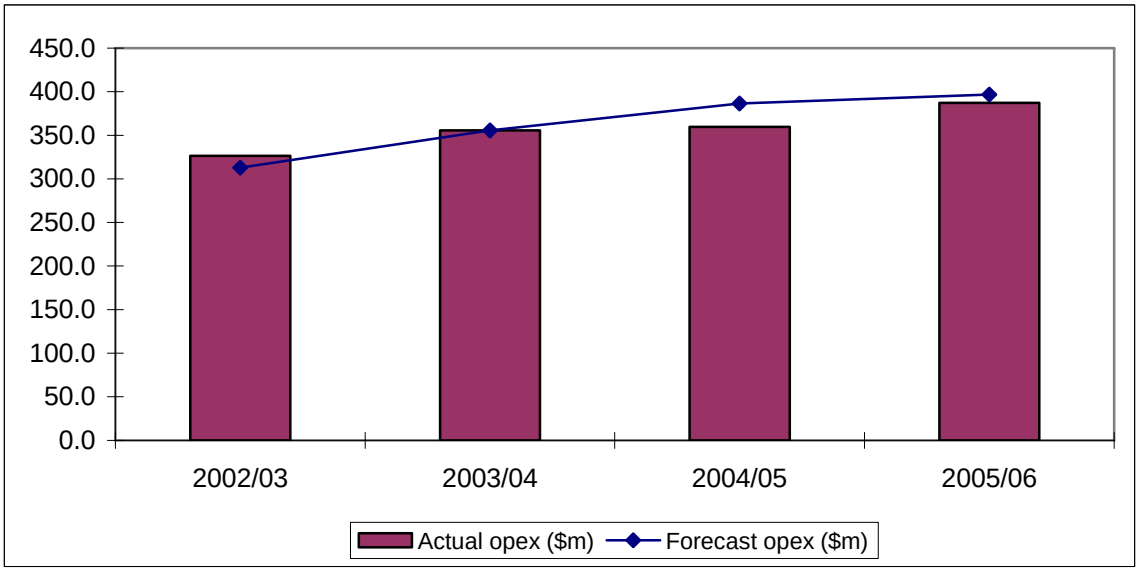
Figure B: Aggregate actual and forecast capex, 2002/03 – 2005/06* ($05/06m)



*Transend commenced reporting data for inclusion in this report from 2003/04. Murraylink does not have a capex allowance in its revenue cap.

Figure C shows that TNSPs as a group have spent close to the forecast opex levels on maintaining their networks.

Figure C: Aggregate actual and forecast opex, 2002/03 – 2005/06* ($05/06m)



*Excludes Murraylink in 2002/03 and 2003/04. Transend commenced reporting data for inclusion in this report from 2003/04. Opex figures exclude grid support.

Service standards performance

The AER applies its Performance Incentive Scheme (PI Scheme) to encourage TNSPs to continually improve the standard of service provided to customers through efficiency gains. The PI Scheme provides financial bonuses for improvements in service performance and financial penalties for deteriorations in service performance against specified measures. These financial results impact on TNSP's annual MAR allowances. The PI Scheme also ensures that TNSPs consider how their operations are valued by the NEM. Chapter 7 deals with the PI Scheme in more detail and Appendix B gives details of individual TNSP service standards performance.

The PI Scheme has been implemented through TNSP revenue caps set by the AER. In setting a revenue cap, the AER takes into account the TNSP's revenue requirement, having regard for, amongst other things, the service standards applicable to the TNSP.

The AER has so far applied the service standards regime to the following transmission entities:

- Powerlink
- ElectraNet
- EnergyAustralia
- Murraylink
- SP AusNet
- Transend
- TransGrid.

Table C shows the financial incentive based on performance outcomes for each relevant TNSP for the 2003, 2004 and 2005 calendar years. However, for the 2006 calendar year a separate service standards report will be published later in 2007 due to the timing of the availability of this information.

Directlink and Powerlink are not included as they will not commence reporting their performance against their service standards until 1 July 2006 and 1 July 2007 respectively. Whilst the PI Scheme with financial bonuses and penalties does not apply to Powerlink until the next regulatory reset determination, a range of service standard measures were established for the current regulatory period. Powerlink reports performance against these service standards to the AER in accordance with the information requirements.

Table C Financial Incentives for 2003 – 2005 ($nominal m)

	2005 calendar year ($000s)	2005 s-factor* %	2004 calendar year ($000s)	2004 s-factor* %	2003 calendar year ($000s)	2003 s-factor* %
ElectraNet	1,168.9	0.7	997.7	0.6	1,118.7	0.74
EnergyAustralia	637.5	0.67	456.4	1.0	N/A	N/A
Murraylink	(19.6)	(0.2)	(87.8)	(0.80)	N/A	N/A
SP AusNet**	272.7	0.1	609.8	0.2	(75.0)	(0.03)
Transend	207.6	0.2	573.9	0.6	N/A	N/A
TransGrid	3,115.0	0.7	2,007.3	0.9	N/A	N/A

*Financial incentives are capped at ± 1.0% of each TNSP's MAR for that year. For example, an s-factor of 0.50 would result in a financial incentive of 0.5% of the TNSP's MAR, or half of the potential maximum financial incentive available under the PI Scheme.
**SP AusNet's financial incentive is capped at + 0.5% of its MAR, as SP AusNet is also required to comply with the Victorian Government's performance incentive regime administered by VENCorp.

The results above show that service performance in the NEM remains high, with TNSPs generally continuing to exceed the performance levels specified in their revenue caps. This resulted in aggregate incentive payments for 2005 totalling almost $5.4m, as compared to payments in 2004 of around $4.6m.

For the 2006 calendar year, service standards data will be progressively available for each TNSP at **www.aer.gov.au** during the first half of 2007.

1 Introduction

1.1 Scope of the report

This report presents 2002/03, 2003/04, 2004/05 and 2005/06 financial and operational performance data and information on the physical characteristics of TNSPs operating in the NEM.

This is the second annual performance report on TNSPs published by the AER. The report provides customers and interested parties with information and comparative data on expenditure and service levels of the TNSPs. In particular, it details overall financial performance, capital expenditure, operating expenditure, and service standards performance. A comparison of the financial and operational performance levels achieved by the TNSPs must allow for basic differences between networks such as the diverse geographical and other environmental factors.

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

- facilitating informed public input into future decisions by the AER
- allowing public scrutiny of performance against revenue caps
- enhancing transparency of the regulatory process and the outcomes that are generated.

The AER is aware that there are valid confidentiality concerns held by TNSPs which must be recognised. These concerns have been assessed against the overall benefits of publication. The TNSPs have all been given the opportunity to comment on the information shown in this report, and have given their permission for the information to be published.

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 AER's *Compendium of electricity transmission regulatory guidelines* (regulatory compendium)[2]
- revenue cap applications made by the TNSPs
- annual statutory reports and reviews published by the TNSPs
- current revenue cap determinations made by the AER/ACCC.

[2] *Compendium of electricity transmission regulatory guidelines*, AER, August 2005. These guidelines are currently under review in accordance with Chapter 6A of the NER, which requires new guidelines to be issued by September 2007.

1.3 The AER's role

The AER is responsible for compliance monitoring, reporting and enforcement in the NEM. In carrying out these functions, the AER collects a wide range of regulatory, financial and operational information from TNSPs each year. This is done for a variety of reasons, including:

- monitoring compliance with revenue caps
- identifying cross-subsidisation of costs between the regulated and unregulated parts of the TNSP's business
- using the information as an input for setting future revenue caps
- monitoring performance against the PI Scheme
- assessing whether the NEM objective is being achieved through regulation and the revenue cap determination in particular.

Collection of data under the Information Requirements Guidelines

TNSPs are required to submit certified annual financial statements to the AER. This is done in accordance with the AER's Information Requirements Guidelines (IRG). The IRG contain information templates which provide the source data for this report.

The types of information collected may be categorised as:

- Financial information – mainly sourced from the TNSP's income statement and balance sheet prepared in accordance with the relevant accounting standards. This information is presented in Chapter 3 and Appendix A of the report and has been submitted by TNSPs in accordance with the AER's guidelines. While the AER's PTRM will provide much of the ongoing data for future revenue cap decisions, this information is useful in providing a general guide for assessing progress in achieving the NEM objective between regulatory reviews, and identifying areas of interest that may need to be explored during upcoming revenue cap processes; and

- Revenue cap related information – actual revenue, opex and capex outcomes are gathered and compared to the underlying forecasts contained in the TNSP's revenue cap determination (adjusted for actual CPI). This information is presented in Chapters 4, 5 and 6 of the report. TNSPs are able to comment on the reasons for any variances between actual and forecast figures.

This information should be read as a whole and, when combined with the service standards data in the report, is intended to present an overall picture of the TNSPs' performance.

Presentation of data

The following points should be taken into account when considering the data presented in this report:

- Capex - there are two alternatives under which capex data may be reported by TNSPs:

  - on an as-commissioned basis: the expenditure is not reported until the project is completed or commissioned (i.e. in operation) or
  - on an as-incurred basis: the expenditure is reported on a progressive basis as it is made or incurred by the TNSP.

- Opex – some TNSPs' opex allowances include an amount for network or grid support. Grid support figures are shown separately from opex in the report as it is essentially a substitute for capex and volatile in nature. This change enhances the comparability of TNSPs' opex outcomes.
- Forecast figures – throughout the report, where forecast figures are compared with actual outcomes (eg. revenue, capex, opex), forecast figures have been taken from final ACCC/AER decisions and adjusted for March quarter CPI figures for the later year of the relevant period.[3]
- Regulatory framework – there have been changes in recent years to the regulatory framework under which TNSPs' revenue caps are set. For example, the ex ante approach to determining capex allowances was introduced in the AER's Statement of Regulatory Principles (SRP) (released December 2004).
- The calculations that appear in this report, such as the financial indicators and operating ratios detailed in Chapter 3, are made by the AER and not the TNSPs. The AER uses data provided by the TNSPs in the calculations.

Comments from interested parties

This is the second electricity regulatory report the AER has published, and it follows on from two earlier reports published by the ACCC.[4] Comments from interested parties regarding the contents and format of the report are welcomed. Comments can be submitted via email to aerinquiry@aer.gov.au, or by mail to:

Chris Pattas
General Manager
Network Regulation South
Australian Energy Regulator
GPO Box 520
Melbourne Victoria 3001

[3] For example, forecast MAR for the period 2005/06 is adjusted for March quarter 2006 CPI. Note that SP AusNet's forecast figures have been adjusted for December quarter CPI figures. CPI data is taken from the ABS website (www.abs.gov.au).

[4] The earlier reports by the ACCC are available on the AER's website (www.aer.gov.au).

2 Network characteristics

2.1 The National Electricity Market

The NEM consists of six interconnected state based regional markets: South Australia, New South Wales, Victoria, Queensland, Tasmania and the Snowy region (the Australian Capital Territory is included in the New South Wales region). Tasmania joined the NEM in May 2005 and is linked to the mainland via the Basslink interconnector, an undersea cable that connects the Tasmanian power system to the mainland system in Victoria, commissioned in April 2006.

The National Electricity Market Management Company (NEMMCO) is responsible for managing and operating the NEM in accordance with the National Electricity Rules. NEMMCO is responsible for managing the wholesale spot market in electricity and the transmission elements of the physical power system that underpin the operation of the NEM. NEMMCO is responsible for ensuring that electricity supply and demand are balanced in each of the NEM's six regions.

NEMMCO collects volume and price bids from all participating generators and stacks the bids in a merit order from lowest to highest. Generators are then dispatched according to this merit order subject to transmission ramp rates and other relevant constraints to ensure the most cost-efficient supply solution. Interconnectors between NEM regions allow trade to occur between regions and, where there are no binding constraints on the network, ensure that the lowest priced generators (taking into account transmission losses) are dispatched first, regardless of the region in which they are located.

In accordance with the state origins of the NEM, the majority of states retain a single transmission entity that plans, owns and operates the high voltage transmission network. South Australia and Victoria are exceptions to differing degrees. In South Australia, ElectraNet owns and operates the transmission system, and is privately owned. The Electricity Supply Industry Planning Council (ESIPC) assists in planning electricity supply in South Australia, however its scope is limited to making recommendations to South Australian Government and the Essential Services Commission of South Australia (ESCOSA). In Victoria, VENCorp, a state-owned corporation, is the transmission planner for the shared transmission network. In its capacity as transmission planner it is responsible for directing augmentations to the transmission network. VENCorp, however does not own any transmission assets. Rather, SP AusNet, a publicly listed company, owns the transmission assets and is responsible for their ongoing maintenance and operation.

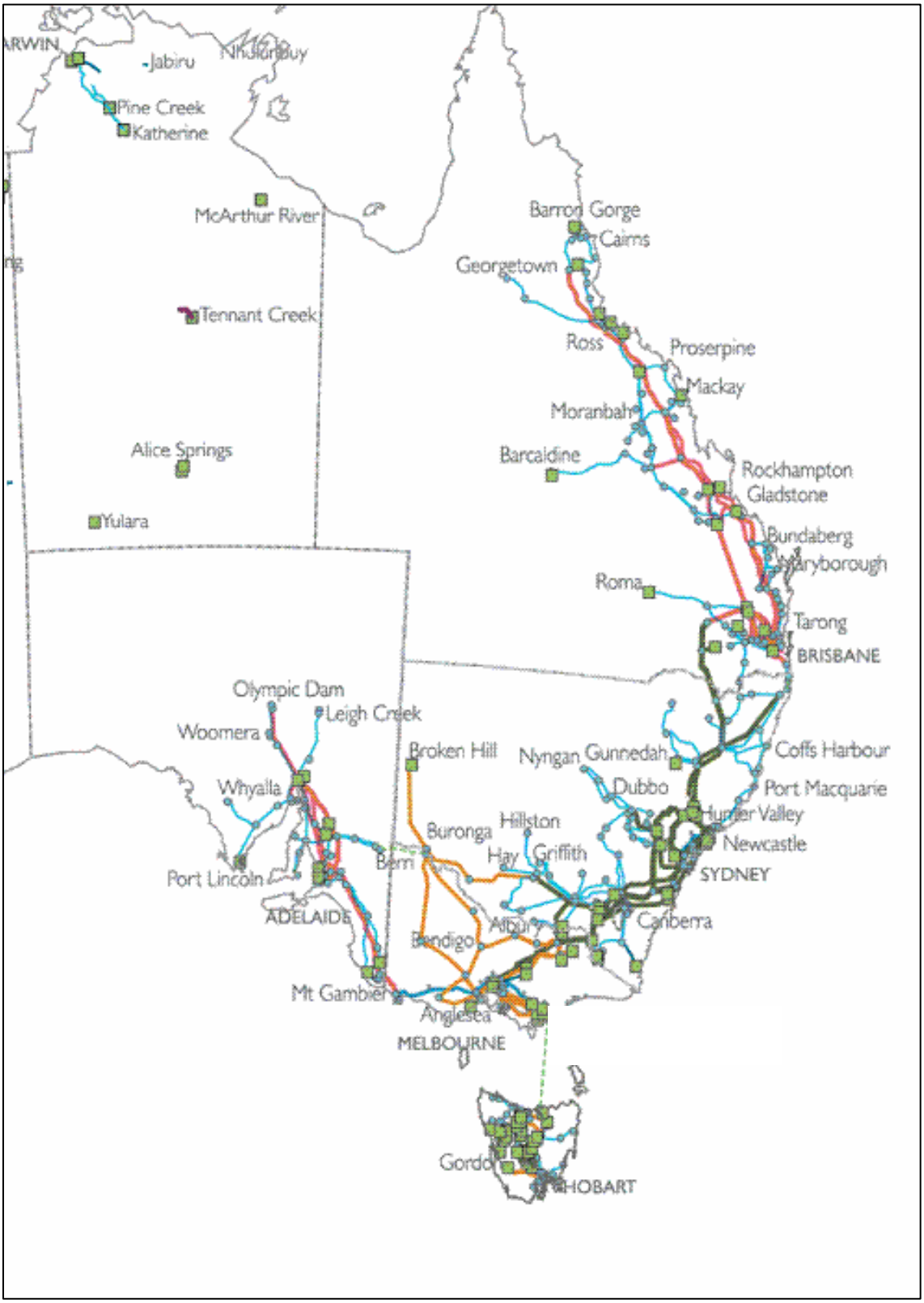
The high voltage transmission networks operated by TNSPs carry the electricity from the generators to the distribution networks in the metropolitan and regional areas and, in some cases, directly to customers. The following table sets out transmission operators and ownership in all regions.

Table 2.1: Summary of State TNSP ownership

State	Entity	Ownership
VIC	VENCorp	State government owned
	SP AusNet	Publicly listed company, 51% owned by Singapore International Pte Ltd.
SA	ElectraNet	Privately owned corporation, major shareholders include: ▪ Harold Street Holdings a subsidiary of Powerlink Queensland ▪ YTL Power Investments ▪ Hastings Funds Management ▪ Macquarie Specialised Management Limited
VIC/SA	Murraylink	Privately owned partnership, major partners include: ▪ Murraylink HQI Australia Pty Ltd ▪ SNC-Lavalin Investment Australia Pty Ltd In March 2006, Murraylink was acquired by the Australian Pipeline Group (APA). Murraylink continues to be a partnership but all partners are subsidiaries of APT Energy Pty Limited, which is part of APA.
TAS	Transend Networks Ltd	State government owned
NSW	TransGrid (includes ACT)	State government owned
	EnergyAustralia	State government owned
QLD	Powerlink Qld	State government owned

Chart 2.1 below shows the transmission network in all of the NEM jurisdictions

Chart 2.1: Electricity transmission networks in the NEM[5]



[5] *Source:* Energy Taskforce, *Securing Australia's Energy Future*, Department of Prime Minister and Cabinet, 2004, p.76.

Summary of statistics

The following table provides a summary of the key statistics for the TNSPs discussed in this chapter. Detailed analysis and discussion follows throughout this report.

Table 2.2 Key TNSP statistics

	2002/03	2003/04	2004/05	2005/06
Regulatory asset base – closing ($ nominal m)				
ElectraNet[#1]	822	862	894	989
EnergyAustralia	604	615	646	547
Murraylink			100	98
Powerlink	2577	2684	2841	3070
SP AusNet[#2]	1813	1841	1880	1959
Transend		616	644	690
TransGrid	2427	2727	3102	3224
Revenue – actual ($ nominal m)				
ElectraNet	150	157	164	170
EnergyAustralia	76	77	91	99
Murraylink			12	13
Powerlink	349	384	416	466
SP AusNet	263	272	281	291
Transend		86	108	115
TransGrid	390	408	435	459
VENCorp	262	222	312	251
Line length (km)				
ElectraNet	5579	5579	5663	5611
EnergyAustralia	1040	1040	1040	1040
Murraylink			180	180
Powerlink	11456	11590	11902	12013
SP AusNet	6553	6553	6553	6553
Transend		3537	3580	3580
TransGrid	12420	12446	12485	12480
Maximum demand (MW)				
ElectraNet	2794	2607	2659	2938
EnergyAustralia	5051	5165	5280	5460
Murraylink			220	220
Powerlink	7081	7934	8232	8295
SP AusNet	8203	8572	8535	8730
Transend		1691	1780	2111
TransGrid	12332	12476	13126	13292

#1 The figure for ElectraNet's closing RAB excludes an adjustment amount of $218m relating to easements.
#2 The figure for SP AusNet's closing RAB excludes an adjustment amount of $660m.

2.2 The Transmission Network Service Providers

The individual characteristics of each TNSP are discussed in detail below.

2.2.1 ElectraNet (South Australia)

As noted above, ElectraNet is the principal TNSP in South Australia. Its main shareholders include:

- Harold Street Holdings a subsidiary of Powerlink Queensland
- YTL Power Investments
- Hastings Funds Management and
- Macquarie Specialised Management Limited.

ElectraNet's network comprises over 5 600 km of transmission lines with 76 substations and switching stations. The network operates at 275kV, 132kV and 66kV, and is characterised by long distances, a low energy density and a relatively small customer base. South Australia's demand for electricity is characterised by a peaky profile due to high air conditioning load over the summer period.

ElectraNet's closing RAB for 2005/06 was $989.3m and its regulated revenue from electricity transmission services was $170.4m. ElectraNet's maximum summer demand in 2005/06 was 2 938MW (an increase of 10.5% over the previous period) and electricity sent out was 12 856GWh (an increase of 5.9% over the previous period).

2.2.2 EnergyAustralia (New South Wales)

EnergyAustralia is a NSW state owned corporation and is predominantly a distribution and retail business. EnergyAustralia also owns and operates a part of the NSW transmission network. Its network extends from the south of Sydney to north of Newcastle and into the Hunter Valley, spanning 1 040km and includes 19 substations. EnergyAustralia's network has a dual role of supporting TransGrid's network, the main transmission network in NSW, as well as supplying its customers. A significant portion of EnergyAustralia's network is located underground, feeding urban and CBD locations, therefore a relatively high proportion of its costs are incurred as a result of the requirements for undergrounding.

EnergyAustralia's total assets exceed $6.5b and total revenues exceed $2.8b (including distribution and retail businesses). Within these totals, EnergyAustralia reported a closing RAB for transmission assets of $547.4m and regulated revenues from transmission services of $99m for the 2005/06 period. EnergyAustralia's maximum demand in 2005/06 was 5 460MW while energy transmitted was 31 669GWh.

2.2.3 Murraylink (Victoria/South Australia)

Murraylink operates as a regulated DC interconnector between the Red Cliffs substation in Victoria and the Monash substation in South Australia. Murraylink is a partnership consisting of the following partners:

- Murraylink HQI Australia Pty Ltd (49.5%),
- SNC-Lavalin Investment Australia Pty Ltd (49.5%)
- Murraylink Transmission Company Pty Ltd (MTC) (1%).

In March 2006, Murraylink was acquired by the Australian Pipeline Group (APA). Murraylink continues to be a partnership but all partners are subsidiaries of APT Energy Pty Limited, which is part of APA.

Murraylink consists of approximately 180km of transmission line, with the majority of the cable being underground, and a converter terminal station at either end (to convert the direct current flow to/from alternating current, compatible with the transmission networks in Victoria and South Australia). Murraylink, which began operation in October 2002, is capable of delivering 220MW into the NEM.

Murraylink's closing RAB for 2005/06 was $97.9m, and its regulated revenue from transmission services was $12.7m.

2.2.4 Powerlink (Queensland)

Powerlink is a Queensland government owned corporation. Powerlink owns, develops, operates and maintains Queensland's high voltage electricity transmission network which spans more than 1 700km from Cairns in far north Queensland to the New South Wales border in the south. Its network includes 12 013 circuit km of transmission lines and cables, as well as 98 substations throughout Queensland. It is the most decentralised network in the NEM and operates at 330kV, 275kV, 132kV and 110kV.

The main sources of generation in Queensland are located at considerable distances (500km to 1000km) from the major load centres in the south east and as a result distance plays a large part in determining transmission costs in Queensland. Additionally, Queensland's hot and humid climate produces high and constant air conditioning load throughout the summer months producing large intra-day demand peaks. Powerlink's maximum demand in 2005/06 was 8 295MW while energy transmitted was 47 734GWh.

Powerlink had a closing RAB for 2005/06 of $3070.3m and regulated network charges of $466.0m.

2.2.5 SP AusNet (Victoria)

SP AusNet is Victoria's largest utility company, providing electricity transmission, gas transmission and electricity distribution services. SP AusNet is publicly listed on the Australian and Singapore Stock Exchanges and Singapore Power International Pte Ltd, a wholly-owned subsidiary of Singapore Power, owns a 51% interest in SP AusNet and public investors own the remaining 49%.

SP AusNet owns, operates and maintains over 6 500km of electricity transmission lines as well as 44 switching and transformation facilities throughout Victoria. The network is built around a 500kV 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. The network provides key physical links in

the NEM, connecting with networks in South Australia, New South Wales and Tasmania and operates at 500kV, 330kV, 275kV and 220kV.

SP AusNet's closing RAB for 2005/06 was $1959.1m and its regulated revenue from network fees was $291.3m. Maximum demand in 2005/06 was 8 730MW while energy transmitted was 50 267GWh.

2.2.6 VENCorp (Victoria)

At the time of the privatisation of the Victorian transmission network, the Victorian Government established a separate entity under government ownership to plan and direct augmentations to the shared transmission network, known as the Victorian Energy Networks Corporation (VENCorp). While VENCorp is a network service provider it does not own the network assets itself. These assets are predominantly owned and operated by SP AusNet. The separation of the network asset ownership from the investment decision maker is unique within the NEM.

VENCorp operates on a full cost recovery not-for-profit basis, recovering its costs through transmission use of system charges levied by the transmission service providers (mainly SP AusNet). VENCorp also plays a major role in the gas market in Victoria, however VENCorp's revenues and costs referred to in this report exclude its gas transmission, gas retail and gas wholesale market operations functions. VENCorp's gross transmission revenue for 2005/06 was $250.6m of which only $3.4m related to VENCorp's direct operating costs. Its network charges for the year were $263.2m.

2.2.7 Transend (Tasmania)

Transend is a state-owned corporation that owns and operates the electricity transmission system in Tasmania. Transend transmits electricity from power stations to substations around the state. It owns over 3 500 circuit km of transmission lines, 46 substations and nine switching stations operating at voltages of 220kV and 110kV. Over 90% of the generation in Tasmania is hydro generation and characterised by a comparatively large number of small generators, which are widely dispersed. Tasmania's generators are usually energy constrained rather than capacity constrained. Hydro generation's variable nature (with a requirement for more transmission network to deliver the same amount of generation to customers) has also been a major contributor to the evolution of the network. World heritage status in some areas contributes to increased transmission costs.

Tasmania joined the NEM in May 2005 and linked to mainland Australia in April 2006, when the Basslink interconnector was commissioned. The Basslink interconnector transfers energy at 480MW continuously or 630MW for 10 hours at a time. The interconnector operates between Loy Yang substation in Gippsland and George Town substation in Tasmania.

Transend's closing RAB for 2005/06 was $689.8m with reported revenue from network charges of $115m. Transend's maximum demand for the 2005/06 period prior to Basslink's connection to the NEM was 1 808MW and maximum demand after Basslink's connection was around 18% higher at 2 111MW. Transend transmitted 10 945GWh of energy this financial year.

2.2.8 TransGrid (New South Wales)

TransGrid is a state-owned corporation responsible for the management of the high voltage electricity transmission network in NSW and the ACT. The network comprises 82 substations and switching stations, and 12 480km of transmission lines and underground cables operating at voltages of 500kV, 330kV, 220kV, 132kV and 66kV. It occupies a central position in the NEM with links to the networks in Queensland, Victoria and South Australia. In terms of maximum demand and energy transmitted, TransGrid is the largest entity in the NEM.

TransGrid's closing RAB for 2005/06 was $3223.5m. It received regulated revenue from network charges of $459.5m. Summer demand peaked during the 2005/06 period at just over 13 292MW. Electricity sent out for the year exceeded 76 383GWh.

2.3 Factors affecting TNSP costs

This regulatory report has considerable focus on TNSP costs. Chapters 5 and 6 deal with capex and opex outcomes respectively, detailing the actual and forecast expenditure of TNSPs. Chapters 5 and 6 also provide a comparison between forecast and actual capex and forecast and actual opex. The following list provides examples of factors that affect the configuration, cost and operation of the transmission network and result in differences between individual TNSPs:

- The *age and quality of the capital stock* - A number of TNSPs manage assets approaching 60 years of age. To maintain network reliability these assets require additional maintenance until they are replaced or upgraded.
- *Government regulations* - companies which must control noise emissions may face higher average costs than those which do not. World heritage status of regions contributes to increased transmission costs.
- *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. TNSPs operating in tropical locations face increased risk of damage to infrastructure. Companies operating in terrain with access difficulties, such as mountainous regions will incur larger costs than those in more accessible terrain.
- The *number, density, load factor and size distribution of customers* - companies which have a higher load factor or customer density may have lower average cost than those companies which do not. Companies which have to transmit over larger distances may have higher costs than those operating in a relatively compact geography. Additionally, TNSPs with generation located at a considerable distance to major load centres face increased costs.
- The *mix of assets* owned and operated – the boundary to the distribution network (in particular voltage level) determines whether a TNSP is a straight transmission network or also an owner of sub-transmission assets. A transmission network with many low voltage connection assets (such as 11kV and 22kV equipment) may have higher costs relative to a higher-voltage transmission network.

- The *volume of services* provided - a company carrying smaller volumes may have a higher average cost than where economies of scale exist.
- *Type of generation* - TNSPs with a high reliance on hydro generation need to be able to accommodate the variable availability of hydro generation.
- The *scope of services* provided - in Victoria, a separate entity incurs the costs of network planning.
- The *quality of services* provided - a company which offers *n-2* reliability may have a higher average cost than a company which offers *n-1* reliability.
- The *price of inputs* - Australia is currently experiencing a skills shortage and many organisations are experiencing difficulty in attracting suitably qualified staff. Coupled with this challenge is the escalating price of raw materials. Worldwide demand for raw materials is driving up the cost of transmission works. The increasing cost of inputs is reflected in TNSP's costs.

Accordingly, caution must be exercised in making comparisons between TNSPs due to the influence of these and other factors.

2.4 Network data

2.4.1 Demand in the NEM

Maximum demand in all regions (except Tasmania) occurs in the summer months when air conditioning load is high. In Tasmania, demand falls over the summer period and climbs during the winter period when demand for heating increases. Maximum demand is particularly volatile in NSW and Victoria while Queensland experiences a sustained period of high demand during summer.

Maximum demand

Growth in maximum demand for electricity is driven by general economic growth. The community's increasing use of electrical goods, particularly air conditioners in the summer period, coupled with industrial users' demand for electricity results in increasing maximum demand for electricity (the AER is considering adjusting for weather effects in the presentation of this information for future reports). NEMMCO publishes energy and demand projections for the NEM regions each year which show that extreme summers affect maximum demand.

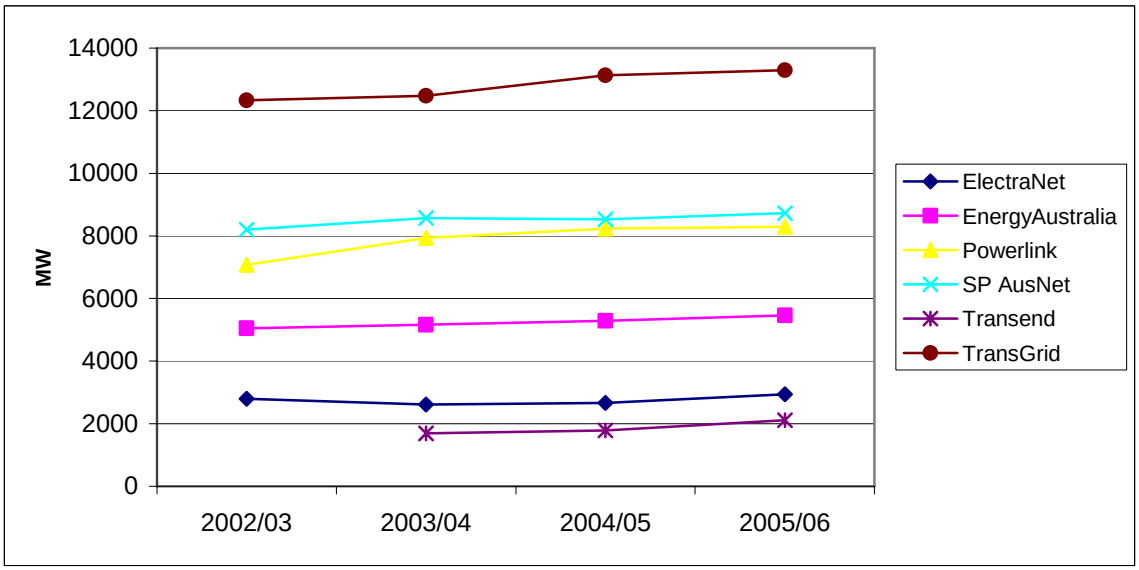
Table 2.3 below shows maximum demand data from 2002/03 to 2005/06. The data shows that maximum demand has continued to increase in 2005/06 compared to 2004/05. Transend experienced a significant rise with a new maximum demand peak of 2 111MW being recorded on 30 May 2006, approximately one month after the Basslink interconnector was commissioned.

Table 2.3 Growth in annual maximum demand 2002/03 – 2005/06 (%)

	Max demand (02/03) MW	Max demand (03/04) MW	Max demand (04/05) MW	Max demand (05/06) MW	Growth 04/05 to 05/06 %
ElectraNet	2794	2607	2 659	2 938	10.5%
EnergyAustralia	5051	5165	5280	5 460	3.4%
Powerlink	7081	7934	8 232	8 295	0.8%
SP AusNet	8203	8572	8 535	8 730	2.3%
Transend		1691	1 780	2 111	18.6%
TransGrid	12332	12476	13 126	13 292	1.3%

Chart 2.3 below plots maximum demand for TNSPs over the period 2002/03-2005/06. Most TNSPs experienced a steady or increasing maximum demand over this period. Predicting growth in maximum demand presents network planners with challenges in determining the location, size, and timing of grid augmentations.

Chart 2.3 Maximum demand (MW), 2002/03 – 2005/06



2.4.2 Electricity delivered

Table 2.4 below shows data on electricity delivered over the period 2002/03-2005/06. In 2005/06, all TNSPs experienced growth in electricity delivered in the range of 3.0%-11.0%. Table 2.4 highlights a general increase in electricity usage across the NEM reflecting increasing industrial and domestic electricity usage. The increased use of air conditioning is reflected in data on electricity delivered as well as maximum demand data.

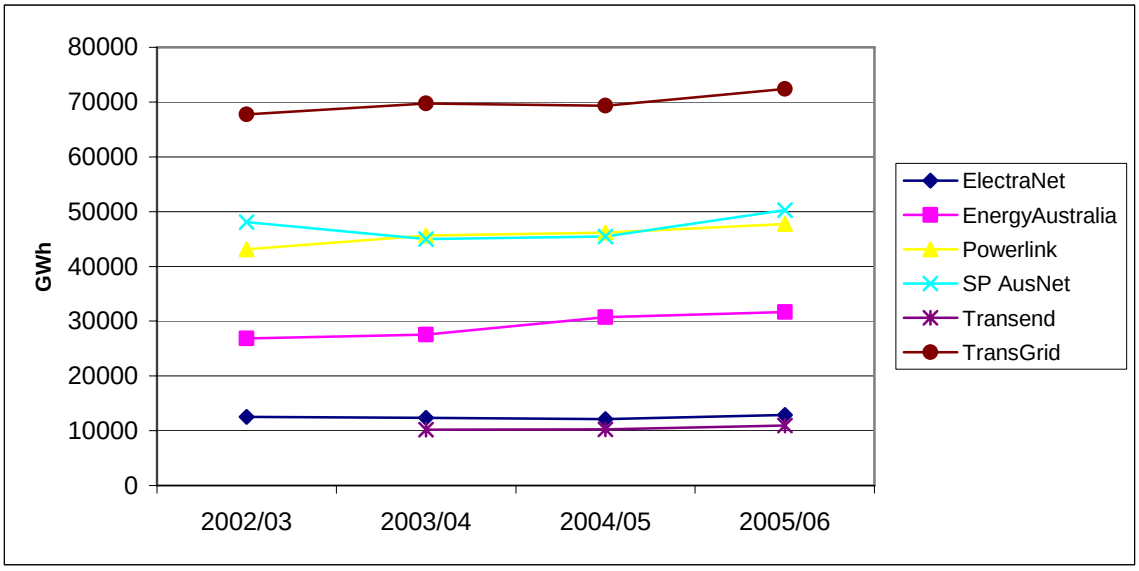
Table 2.4 Growth in electricity transmitted/sent out 2002/03 – 2005/06 (GWh)[6]

	02/03 GWh	03/04 GWh	04/05 GWh	05/06* GWh	Growth 04/05 to 05/06 %
ElectraNet	12 511	12 336	12 137	12 856	5.9%
EnergyAustralia	26 862	27 563	30 713	31 669	3.1%
Powerlink	43 120	45 625	46 170	47 734	3.4%
SP AusNet	48 124	45 006	45 467	50 267	10.6%
Transend		10 187	10 266	10 945	6.6%
TransGrid	67 744	69 736	69 338	72 383	4.4%

* Data gathered from annual report

Chart 2.4 below plots electricity delivered for each of the TNSPs from 2002/03 to 2005/06. Growth in electricity delivered has generally remained static over the period 2002/03-2004/05, however over the 2005/06 financial year all TNSPs experienced increases in electricity delivered of between 3% and 11%. Caution must be exercised in drawing conclusions from this data. Weather extremes in one particular year can have a substantial impact on energy usage, which may not be replicated in later years.

Chart 2.4 Electricity transmitted / sent out (GWh), 2002/03 – 2005/06

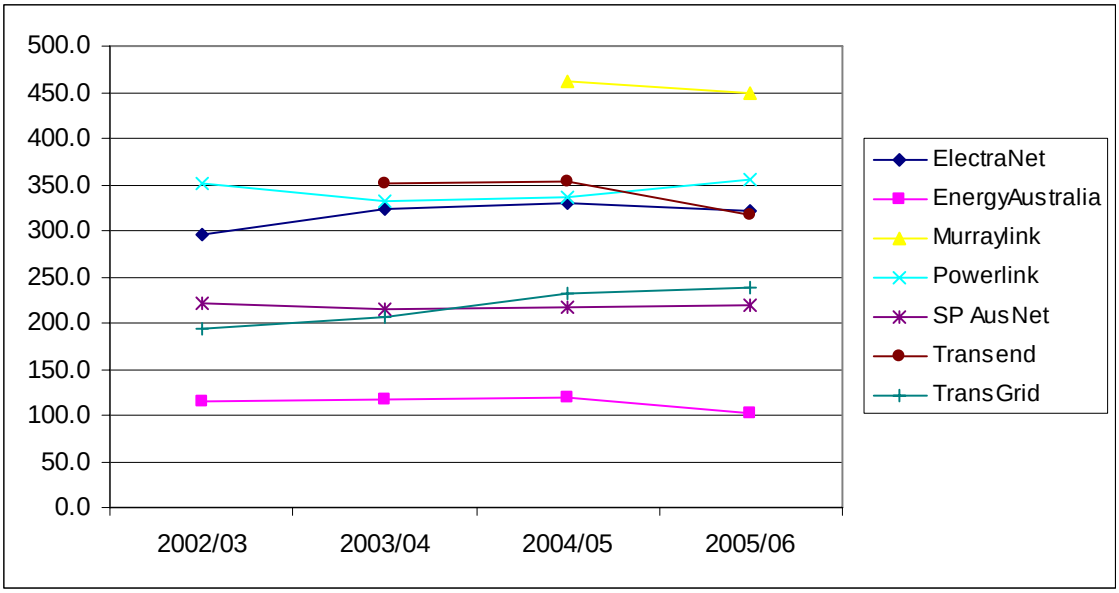


[6] Some TNSPs report electricity transmitted whereas other TNSPs report electricity sent out.

2.4.3 Comparison of RAB to Maximum Demand

Chart 2.5 below plots the average RAB to maximum demand ratio for the period 2002/03-2005/06. The chart shows that the average RAB to maximum demand ratio has been relatively stable for most TNSPs between 2003/04 and 2005/06. Transend, however experienced a noticeable decline from 2004/06-2005/06 and Powerlink experienced an increase over the same period. Fluctuations in this ratio may be due to unexpected variations in weather conditions, which result in a change in maximum demand, which has not as yet been reflected in changes to investment levels.

Chart 2.5 Average RAB / MW peak ($nominal 000's/MW), 2002/03 -2005/06



3 Financial indicators

3.1 Introduction

This chapter discusses the financial performance of the TNSPs. It compares the TNSPs' financial performance in 2005/06 against their performance in previous years.[7] Operating ratios are also included for each TNSP with additional information on the operating performance of the TNSPs found in other chapters. Selected items from each TNSP's income statement, balance sheet and financial ratios can be found in Appendix A.

TNSPs have a measure of control over their financial performance. The AER sets the revenue they may earn, but the TNSPs can control their profitability through efficient cost management. TNSPs must comply with a variety of regulatory requirements including defined service and network performance and security outcomes, and licence conditions. These obligations (the costs of which are considered in revenue cap decisions) can impact upon both capex and opex and consequently affect profitability.

Capex and opex are key factors in determining the profit of TNSPs and are discussed further in Chapters 5 and 6. Depreciation is also a significant expense as asset bases grow and, while it does not affect the cash position of the businesses, it will impact upon profits and return on equity.

Regulated TNSPs experience relatively low business risk as they have a consistent and relatively predictable cash flow, independent of seasonal fluctuations or volume changes, with which to finance their operations and planned capital investments, as well as service debt.

3.1.1 Financial ratios

This chapter discusses a variety of financial ratios applied to analyse the financial performance of each of the TNSPs. The ratios applied in this report have been adopted on the basis that they are generally well accepted accounting ratios. Each of these ratios is discussed below.

Return on Equity (ROE) - NPAT / Average Equity[8]

ROE is a measure of the profitability of a firm and allows investors to compare returns provided by alternative investments of similar risk. The return on assets (ROA) and leverage are the drivers of ROE and accordingly a change in ROE will usually result

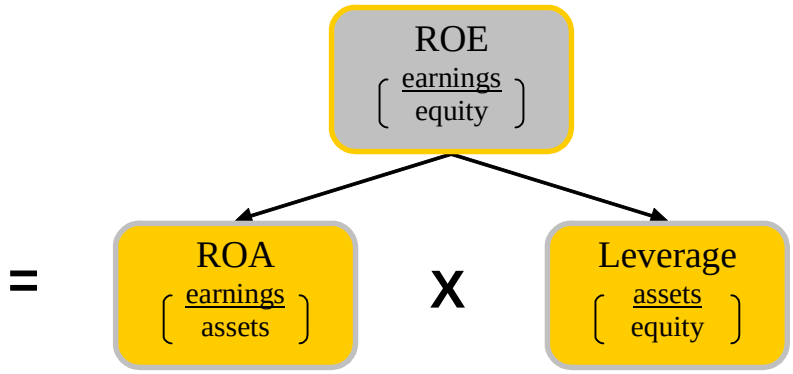
[7] VENCorp's data was not included in this chapter as it is a non-profit business that operates on a full cost-recovery but no operating surplus basis. Unlike the other TNSPs VENCorp does not have a RAB upon which to earn a rate of return or which is subject to depreciation (return of capital). Its financial performance data was therefore omitted from the aggregate figures.

[8] Previous regulatory reports calculated ROE as NPAT / *Closing* Equity. The change in this report has been made to reflect the general principle in ratio analysis that flow items (e.g. revenue) should be compared to averaged stock items (e.g. assets). This change also brings the methodology in line with how ROA has been calculated in this and previous regulatory reports.

from a change in either or both of these drivers. An increase in ROE may appear to always be favourable, however if this is largely driven by an increase in leverage investors will demand a higher return (ROE) to compensate them for the associated increased financial risk.

Figure 3.1 illustrates the relationship, in its simplest form, between ROA, leverage and ROE. In calculating ROE this report uses earnings (NPAT) and equity figures that apply for the whole of the business, whereas in calculating ROA this report uses earnings, (EBIT (PS)) and asset (RAB) figures that relate only to the transmission side of the business. However, the prescribed services provided by these assets typically account for around 90% of the total revenue of the business.

Figure 3.1 ROE decomposition



Return on Assets (ROA) - EBIT (PS) / Average RAB

ROA measures the efficiency of the business's assets to produce operating profits. Revenue caps with higher x-factors may tend to result in an increasing ROA pattern.

Gearing ratio - Debt / (Debt + Equity)

This report uses the gearing ratio as the measure of a firm's leverage. The gearing ratio is defined as the percentage of the firm's funding that is attributed to debt.

Interest coverage ratio – EBIT (PS) / Gross interest expense

The interest coverage ratio is measured in "times", therefore, an interest coverage ratio of five means that the firm has enough earnings to pay its interest payments five times over.

As with all financial ratios, the interest coverage ratio should be interpreted in the context of the business and industry being analysed. Regulated industries, such as the electricity transmission sector, generally experience positive and relatively stable or increasing revenue streams, and therefore can afford to have smaller interest coverage.

3.2 Aggregate TNSP performance

Chart 3.1 below shows that in 2005/06, opex, gross interest payments and depreciation accounted for around 69% of aggregate expenditure, around 10% less than for the previous year. Table 3.1 below lists the entities included in the aggregate financial indicators.

Chart 3.1 Aggregate expenses, 2005/06[9]

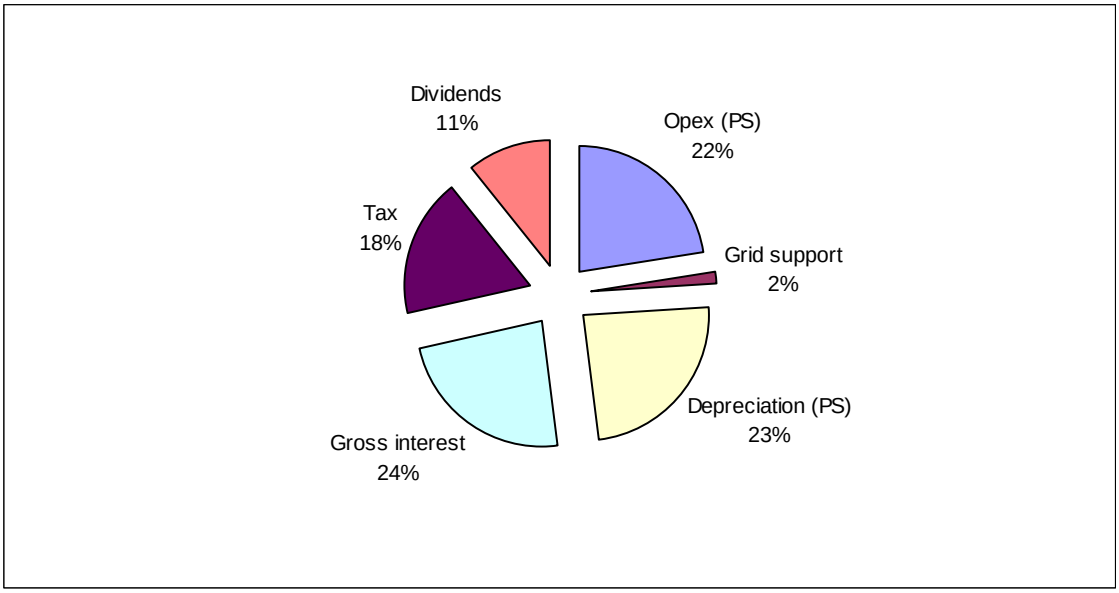


Table 3.1 Comparison of entities comprising aggregate financial indicators

ACCC Report 2002/03	ACCC Report 2003/04	AER Report 2004/05	AER Report 2005/06
ElectraNet	ElectraNet	ElectraNet	ElectraNet
EnergyAustralia	EnergyAustralia	EnergyAustralia	EnergyAustralia
Powerlink	Powerlink	Murraylink	Murraylink
SPI PowerNet	SPI PowerNet	Powerlink	Powerlink
TransGrid	Transend	SPI PowerNet	SP AusNet
VENCorp	TransGrid	Transend	Transend
	VENCorp	TransGrid	TransGrid
		VENCorp	VENCorp

[9] Figures for opex, grid support, and depreciation relate to prescribed services only. Figures for gross interest, tax and dividends are aggregate figures for prescribed and non-prescribed services as these figures are not reported on a disaggregated basis.

Chart 3.2 illustrates aggregate expenditure in both percentage and absolute (i.e. dollar) terms across the last four years. Between 2002/03 and 2004/05, opex accounted for approximately 25% of total expenses, whilst increasing each year in absolute terms. In 2005/06, opex decreased to around 22% of aggregate expenses but continued to increase in absolute terms. Over the four years, depreciation and gross interest have both decreased in percentage terms, while continuing to increase in absolute terms. Tax expenditure increased significantly in 2005/06 due mainly to an increase in SP AusNet's income tax expenditure. Dividends increased in absolute terms whilst remaining relatively stable in relative terms. In 2005/06, the TNSPs paid out an aggregate of $190.3m in dividends.

Chart 3.2 Aggregate expenses (%, $nominal m), 2002/03 – 2005/06

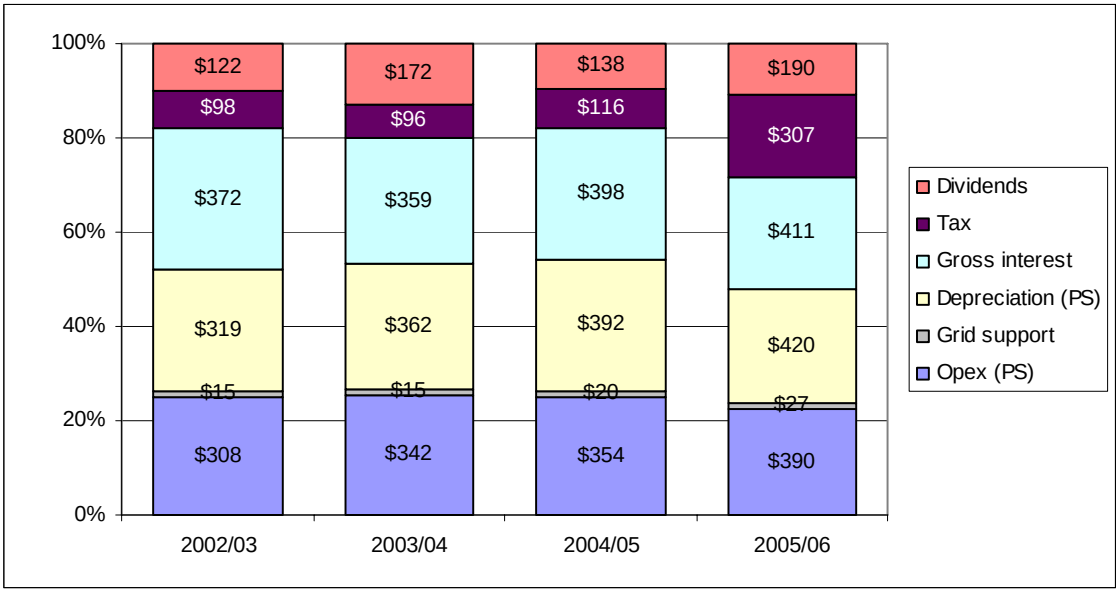


Table 3.2 below shows aggregate financial outcomes for all TNSPs in 2004/05 and 2005/06.

Table 3.2 Aggregate financial performance 2004/05 – 2005/06 ($nominal m)

	2004/05	2005/06
Income statement		
Transmission revenue (PS)	1508.3	1613.8
Opex (PS)	353.8	390.4
Grid support	19.9	26.6
Depreciation (PS)	392.2	419.9
EBIT (PS)	756.4	786.9
Gross interest expense	397.7	410.6
Tax	115.7	307.1
NPAT	289.8	208.2
Dividends	138.3	190.3
Balance sheet		
Closing RAB	10108.3	10577.2
Total assets	12236.1	13330.7
Total debt	5903.2	6028.8
Total liabilities	7261.9	8428.4
Total equity	5190.3	5179.0

Table 3.3 below shows the aggregate of the income tax and dividends paid out by all the TNSPs between 2002/03 and 2005/06. The large tax expense of $497.4m in 2005/06 is principally attributable to SP AusNet's unusually high tax expense of $181m.

Table 3.3 Aggregate tax and dividends paid ($nominal m), 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Income tax (or equivalent)	98.2	95.7	115.7	307.1
Dividends	122.4	172.4	138.3	190.3
Total	220.6	268.1	254.0	497.4

3.3 Individual TNSP performance

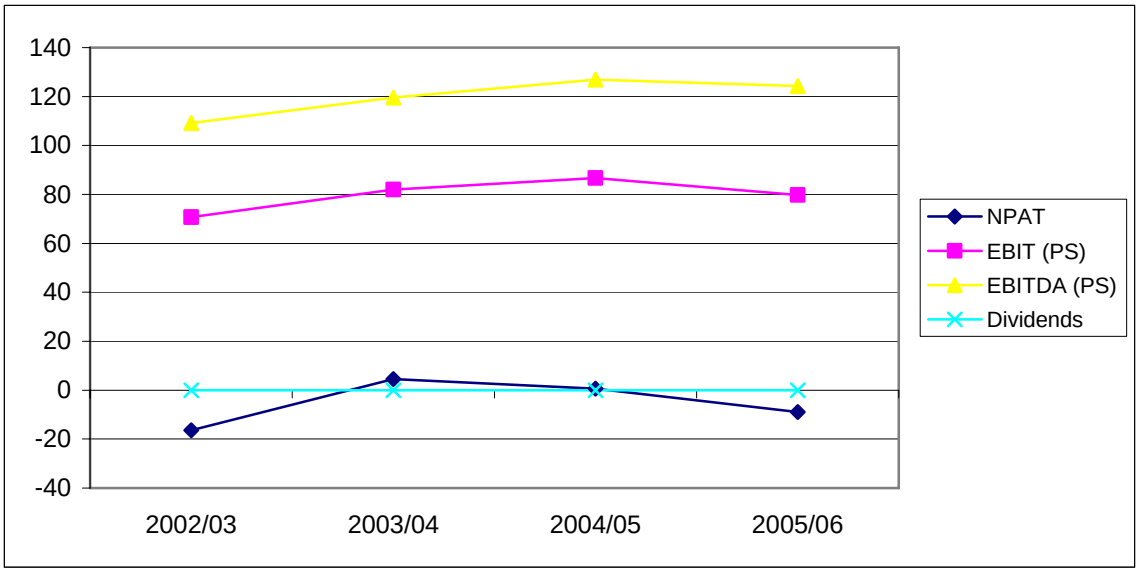
Each TNSP operates in a distinctly different environment that will have a direct impact on its financial and operating performance. These differences must be kept in mind when analysing the financial ratios and figures that follow.

3.3.1 ElectraNet

Financial indicators

In 2005/06 ElectraNet's EBIT(PS) was $79.7m, around 8% below the 2004/05 level of $86.6m. EBITDA(PS) was $124.3m in 2005/06, about 2% below 2004/05 level of $126.9m. NPAT has fluctuated between -$16.4m and $4.6m over the four year period. ElectraNet has not paid any dividends during this time.

Chart 3.3 Earnings and dividends for ElectraNet, 2002/03 – 2005/06 ($nominal m)



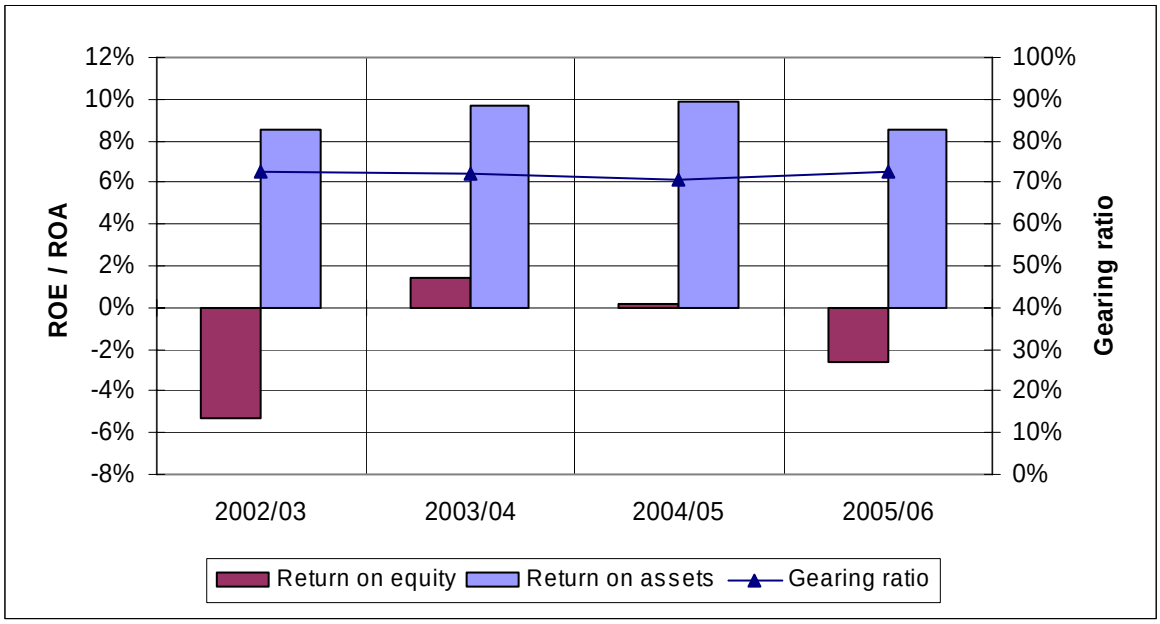
The financial ratios are shown in table 3.4 and chart 3.4 below. The ratios show a decrease of around 14% in the return on assets in 2005/06 to 8.5%. Return on equity also decreased over the financial year from 0.2% to -2.6% reflecting the NPAT loss for 2005/06. The gearing ratio increased slightly compared with the previous year though has remained steady over the period 2002/03-2005/06.

Table 3.4 Financial ratios for ElectraNet, 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Return on equity*	-5.3%	1.5%	0.2%	-2.6%
Return on assets - PS	8.6%	9.7%	9.9%	8.5%
Gearing ratio	72.6%	71.9%	70.7%	72.6%
Interest cover (times)** - PS	0.8	1.0	1.0	0.8

***** ElectraNet advise that credit rating agencies generally treat shareholder loan notes as equity rather than debt for the purposes of determining its credit rating. Hence, ElectraNet's shareholder loan notes have been classified as equity in this report.
****** (EBIT (PS) / gross interest expense)

Chart 3.4 ROE decomposition for ElectraNet, 2002/03 – 2005/06



Operating ratios

In calculating ElectraNet's opex ratios, grid support costs have been excluded from the calculations. This is because these costs are essentially a substitute for augmentation capex, and can be very volatile from year to year.

ElectraNet has experienced increases in its three opex ratios over the last year, which measure opex against line length, RAB and MW peak demand. The Opex(PS)/line length ratio increased from $5800/km to $7500/km, and the Opex(PS)/RAB ratio has increased from 3.7% to 4.4%. However, both capex ratios which measure capex against average RAB and MW peak demand have decreased marginally compared with the 2004/05 levels. Significantly, both the revenue/MW peak demand ratio and the average RAB/ MW peak demand ratio have decreased likely due to the increasing maximum demand in South Australia.

Table 3.5 Operating ratios for ElectraNet, 2002/03 – 2005/06 ($nominal)

	2002/03	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	6.8	6.0	5.8	7.5
Opex (PS) / MW peak ($000's/MW)	13.5	12.9	12.3	14.2
Opex (PS) / Average RAB	4.6%	4.0%	3.7%	4.4%
Capex / Average RAB	4.2%	4.0%	6.1%	5.8%
Capex / MW peak ($000's/MW)	12.3	12.9	20.1	18.5
Revenue / MW peak ($000's/MW)	53.7	60.0	61.6	58.0
Average RAB / MW peak ($000's/MW)	294.9	322.9	330.1	320.5

Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

3.3.2 EnergyAustralia

Financial indicators

EnergyAustralia's EBIT(PS) and EBITDA(PS) have increased in 2005/06 consistent with the upward trend over the last four years. The annual increment between 2004/05 and 2005/06 for both these indicators was, however, less than for the previous year. In 2005/06 EBIT(PS) increased 8.8% to $48.0m and EBITDA(PS) increased 4.4% to $71.7m. Over the previous year these indicators increased by 52% and 37% respectively. EnergyAustralia's NPAT(PS) was $14.3m in 2005/06, slightly lower than the previous year's figure of $16.7m. EnergyAustralia has steadily increased its dividend payments over the period 2002/03-2005/06 and paid dividends of $11.9m in 2005/06, an increase of 54% compared with the 2004/05 payment of $7.7m.

Chart 3.5 Earnings and dividends for EnergyAustralia, 2002/03 – 2005/06 ($nominal m)

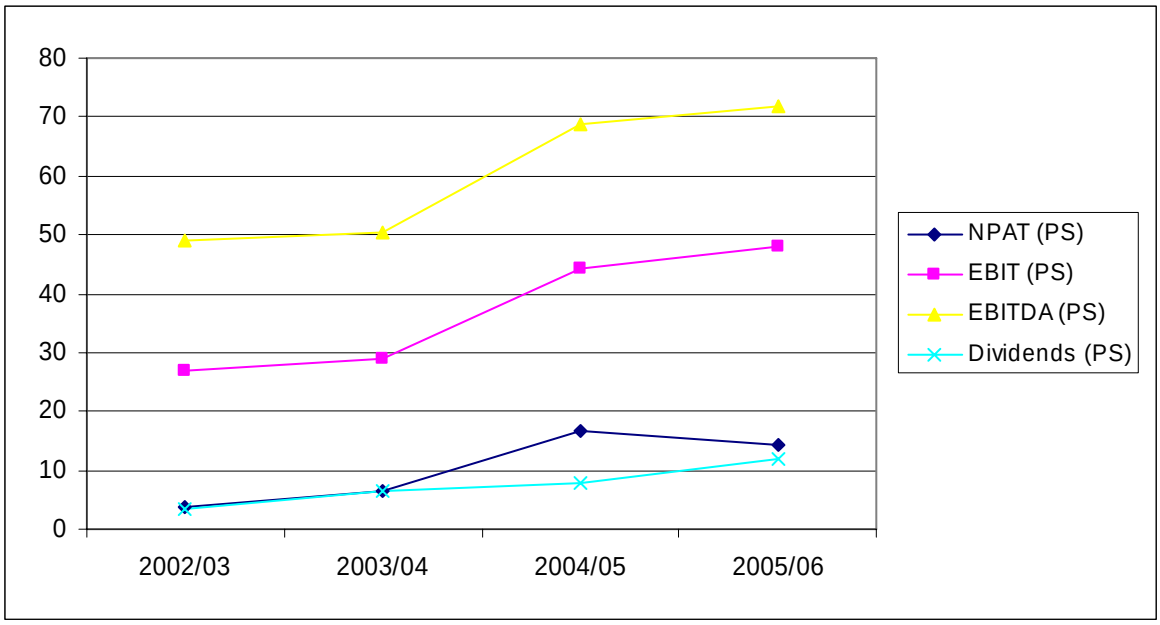


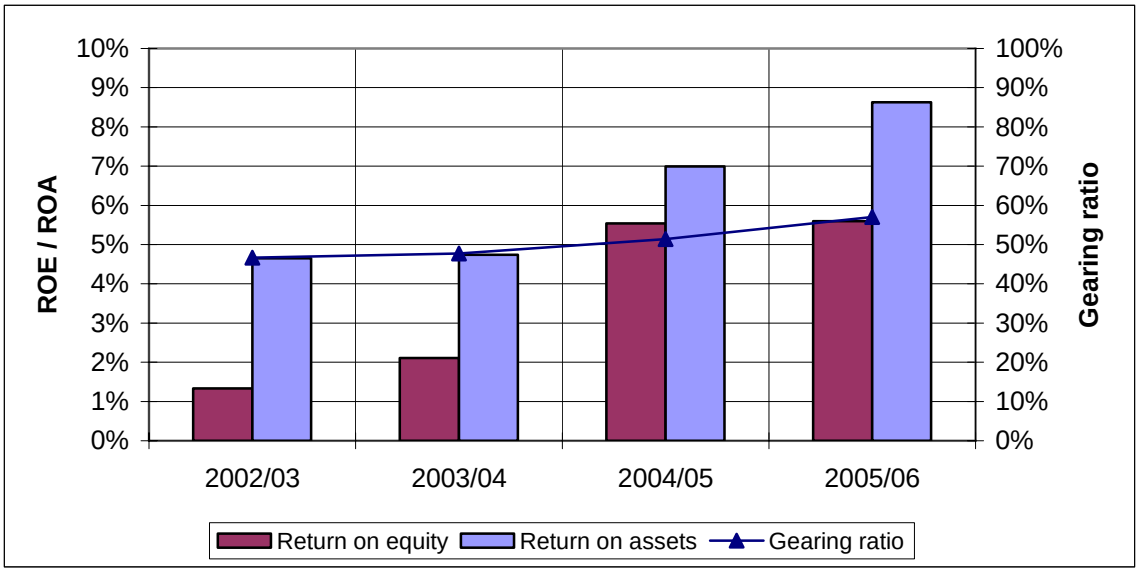
Table 3.6 and chart 3.6 show EnergyAustralia's financial ratios. EnergyAustralia's return on equity increased marginally over the year from 5.5% to 5.6%. This increase in return on equity has been driven in part by steady increases in return on assets and in part by steady increases in leverage. Both the return on assets and gearing ratio also increased from the previous year's levels to 8.6% and 57.0% respectively.

Table 3.6 Financial ratios for EnergyAustralia, 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Return on equity	1.3%	2.1%	5.5%	5.6%
Return on assets -PS	4.6%	4.7%	7.0%	8.6%
Gearing ratio	46.7%	47.7%	51.4%	57.0%
Interest cover (times)* - PS	1.3	1.5	2.1	2.7

*(EBIT / gross interest expense)

Chart 3.6 ROE decomposition for EnergyAustralia, 2002/03 – 2005/06



Operating ratios

EnergyAustralia's opex(PS)/line length and opex/MW peak demand ratios increased over the reporting year. Both the capex ratios also increased in 2005/06 compared to 2004/05 levels, however the average RAB/MW peak demand ratio decreased over the year from $119 500/MW to $101 900/MW.

Table 3.7 Operating ratios for EnergyAustralia, 2002/03 – 2005/06 ($nominal)

	2002/03	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	26.1	25.5	22.1	27.0
Opex (PS) / MW peak ($000's/MW)	5.4	5.1	4.4	5.1
Opex (PS) / Average RAB	4.7%	4.3%	3.6%	5.1%
Capex / Average RAB	4.7%	4.9%	6.0%	7.7%
Capex / MW peak ($000's/MW)	5.4	5.8	7.2	7.9
Revenue / MW peak ($000's/MW)	15.0	14.9	17.3	18.1
Average RAB / MW peak ($000's/MW)	115.0	118.0	119.5	101.9

Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

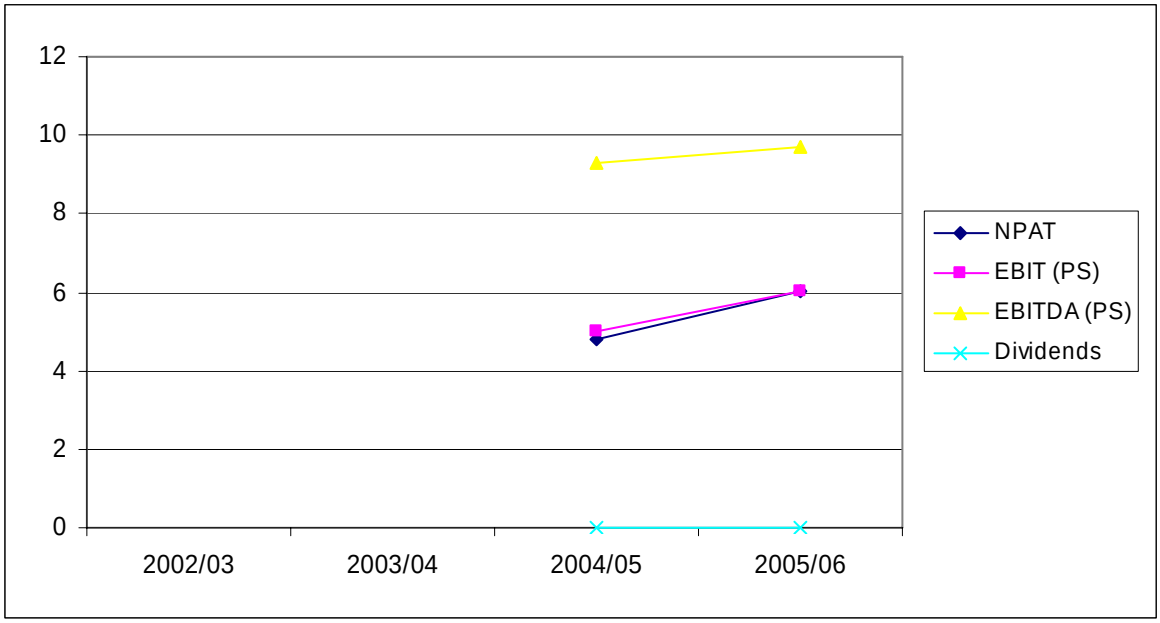
3.3.3 Murraylink

This is the second year that Murraylink's data has been included in the regulatory report.

Financial indicators

Murraylink's EBIT(PS) increased marginally from $5.0m to $6.0m over the reporting period and EBITDA(PS) increased from $9.3m to $9.7m. Murraylink's net profit after taxes increased 25% from $4.8m in 2004/05 to $6.0m in 2005/06. Murraylink did not pay dividends in 2004/05 and 2005/06.

Chart 3.7 Earnings and dividends for Murraylink, 2004/05 – 2005/06 ($nominal m)



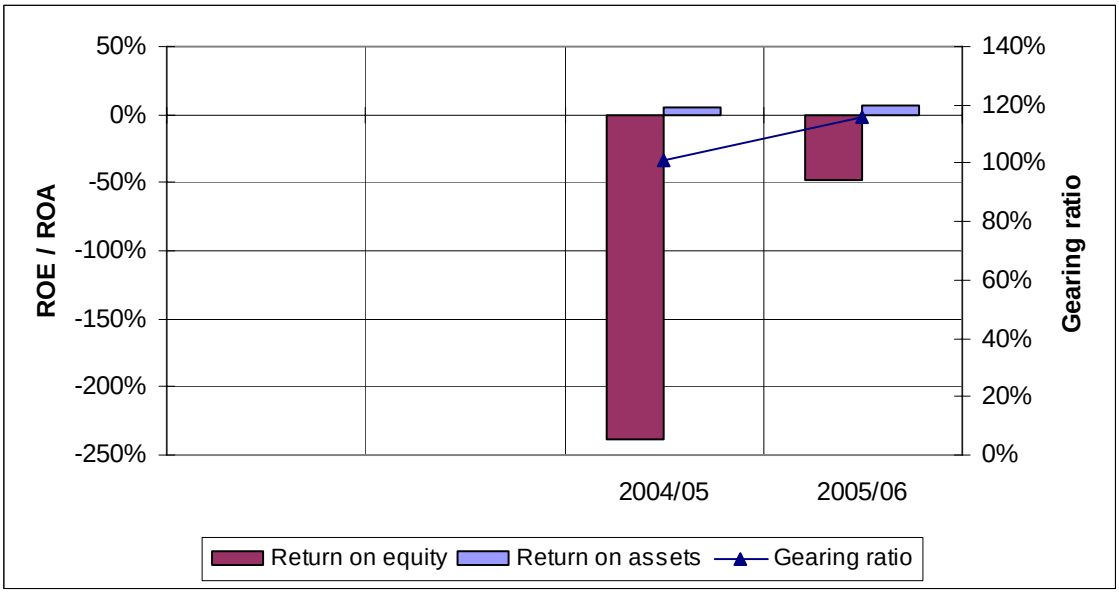
Murraylink had negative returns on equity in 2004/05 and 2005/06 due to negative retained earnings on its balance sheet in those years. Murraylink's gearing ratio was over 100% in 2004/05 and 2005/06. Over the last two years, Murraylink's return on assets has increased from 4.9% to 6.1%.

Table 3.8 Financial ratios for Murraylink, 2004/05 – 2005/06

	2004/05	2005/06
Return on equity	-237.8%	-48.1%
Return on assets - PS	4.9%	6.1%
Gearing ratio	101.2%	115.9%
Interest cover (times)* - PS	31.1	751.3

*(EBIT / gross interest expense)

Chart 3.8 ROE decomposition for Murraylink, 2004/05 – 2005/06



Operating ratios

Murraylink has experienced slight decreases in its three opex ratios over the reporting year, however its Revenue/MW peak demand ratio has increased marginally from $56 200/MW in 2004/05 to $57 500/MW in 2005/06. In 2005/06 Murraylink's RAB/MW peak demand ratio was $450 000/MW, around 2.5% below the 2004/05 value of $461 600/MW. Murraylink's revenue cap does not contain an allowance for capex and accordingly no capex related ratios are calculated.

Table 3.9 Operating ratios for Murraylink, 2004/05 – 2005/06 ($nominal)

	2004/05	2005/06
Opex (PS) / line length ($000's/km)	17.1	16.4
Opex (PS) / MW peak ($000's/MW)	14.0	13.4
Opex (PS) / Average RAB	3.0%	3.0%
Capex / Average RAB	N/A	N/A
Capex / MW peak ($000's/MW)	N/A	N/A
Revenue / MW peak ($000's/MW)	56.2	57.5
Average RAB / MW peak ($000's/MW)	461.6	450.0

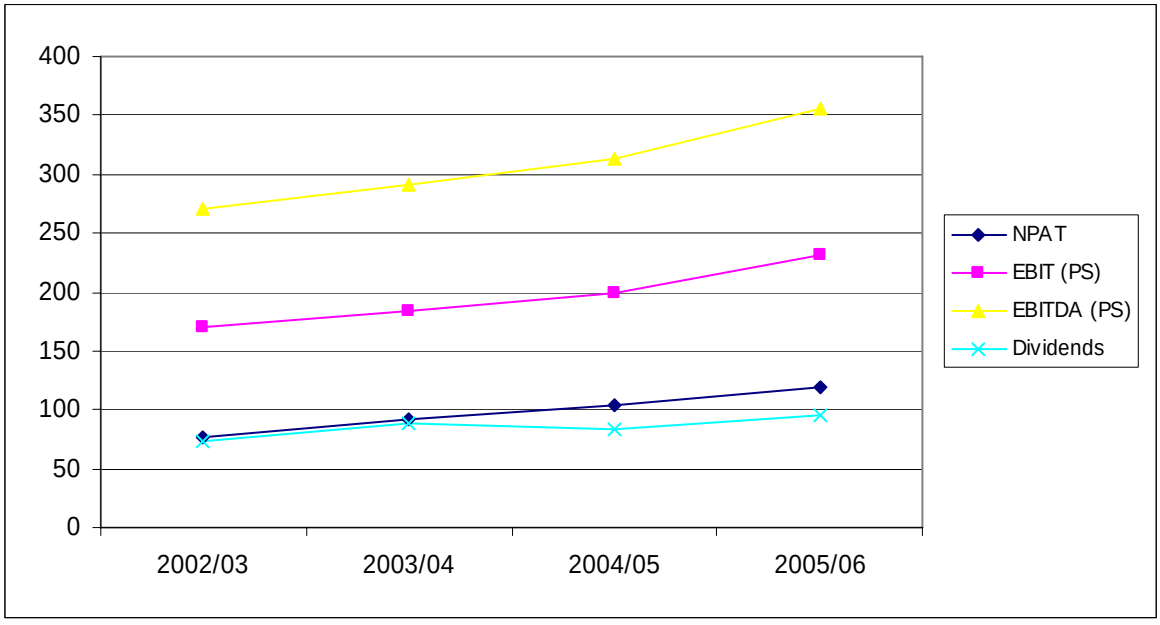
Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

3.3.4 Powerlink

Financial indicators

Powerlink's EBIT(PS), EBITDA(PS) and NPAT have all increased. This year Powerlink's EBIT(PS), EBITDA(PS) and NPAT were $231.0m, $355.4m and $119.0m respectively, up from $199.2m, $313.2m and $103.3m in the previous year. This annual increase is consistent with the steady upward trend of these indicators over the period 2002/03-2005/06. Powerlink has paid high levels of dividends over the reporting period, paying $95.2m in 2005/06 around 15% above the 2004/05 dividend of $82.6m.

Chart 3.9 Earnings and dividends for Powerlink, 2002/03 – 2005/06 ($nominal m)



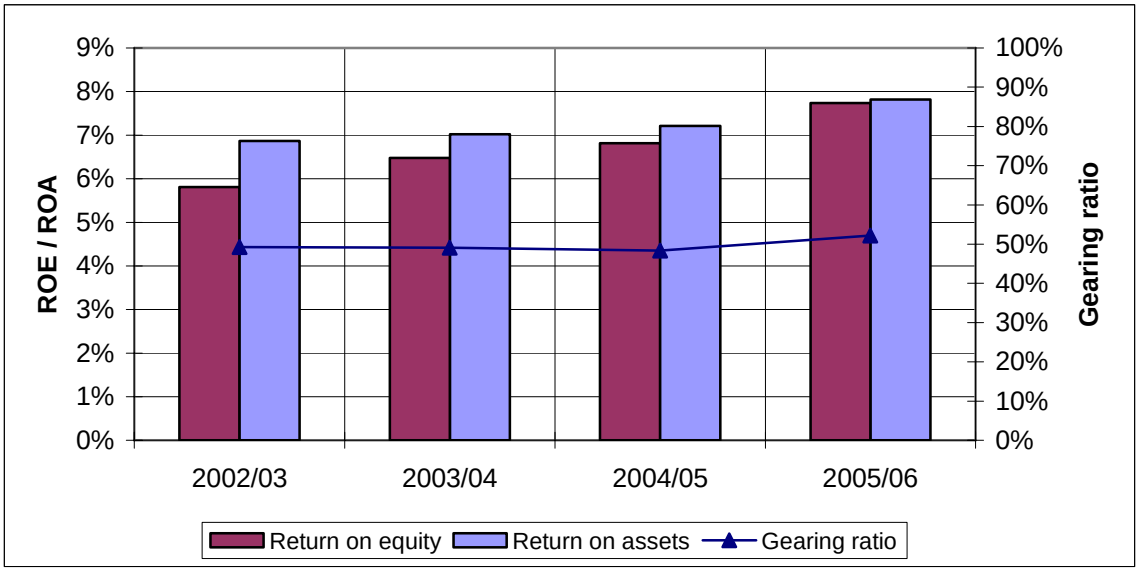
Powerlink's return on equity, return on assets and gearing ratios have all increased over the last reporting year. In 2005/06 the value of these ratios were 7.7%, 7.8% and 52.2% respectively compared to their 2004/05 values of 6.8%, 7.2% and 48.4%.

Table 3.10 Financial ratios for Powerlink, 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Return on equity	5.8%	6.5%	6.8%	7.7%
Return on assets -PS	6.9%	7.0%	7.2%	7.8%
Gearing ratio	49.3%	49.1%	48.4%	52.2%
Interest cover (times)* - PS	2.2	2.3	2.3	2.4

*(EBIT / gross interest expense)

Chart 3.10 ROE decomposition for Powerlink, 2002/03 – 2005/06



Operating ratios

In calculating Powerlink's opex ratios, grid support costs have been excluded from the calculations. This is because these costs are essentially a substitute for augmentation capex. Powerlink's opex and capex ratios increased from the last financial year. The Opex(PS)/line length ratio was $8100/km in 2005/06 compared to $7400/km in 2004/05.

Table 3.11 Operating ratios for Powerlink, 2002/03 – 2005/06 ($nominal)

	2002/03	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	6.4	6.8	7.4	8.1
Opex (PS) / MW peak ($000's/MW)	10.3	9.9	10.6	11.7
Opex (PS) / Average RAB	2.9%	3.0%	3.2%	3.3%
Capex / Average RAB	8.1%	6.2%	7.7%	9.1%
Capex / MW peak ($000's/MW)	28.3	20.7	25.7	32.4
Revenue / MW peak ($000's/MW)	49.3	48.4	50.6	56.2
Average RAB / MW peak ($000's/MW)	351.2	331.5	335.6	356.3

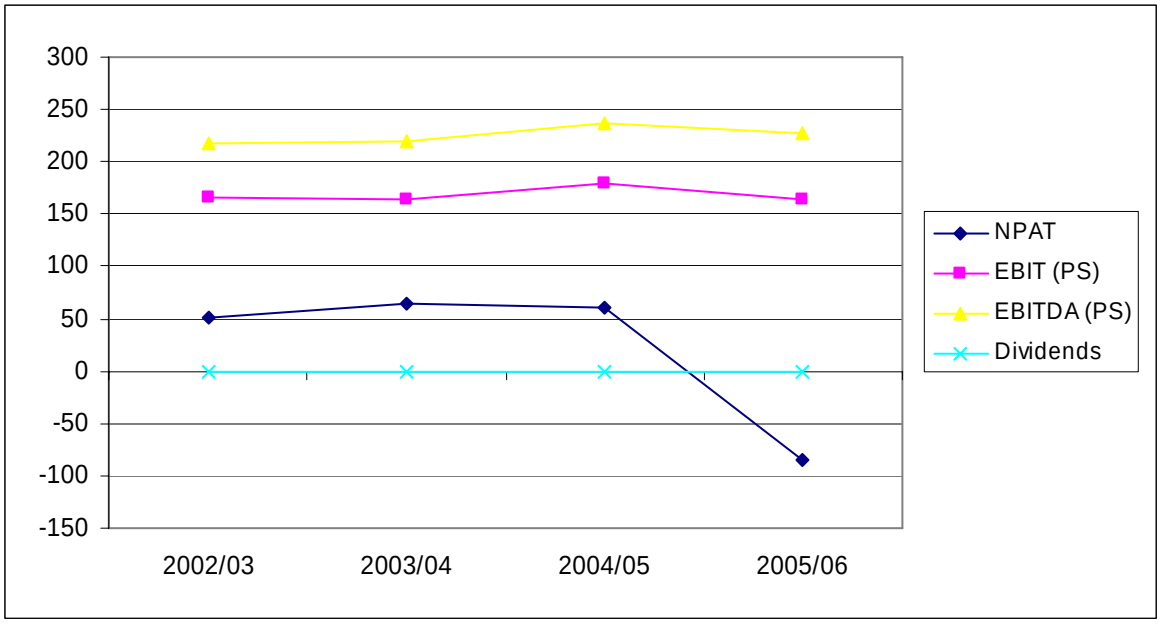
Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

3.3.5 SP AusNet

Financial indicators

SP AusNet's EBIT(PS) and EBITDA(PS) decreased compared to their 2004/05 levels. In 2005/06 EBIT(PS) was $164.3m and EBITDA(PS) was $227.7m compared to $179.5m and $236.3m respectively in 2004/05. Significantly, SP AusNet's NPAT declined from $61.2m in 2004/05 to -$84.3m in 2005/06. This large decrease in profits was principally due to an income tax expense of $181.1m in 2005/06, an increase of 790% from the average tax expense in the preceding three years. This tax expense is due to SP AusNet adopting a tax consolidation regime when it consolidated its distribution and transmission businesses prior to issuing securities on 25 October 2005. SP AusNet has not paid dividends over the period 2002/03-2005/06.

Chart 3.11 Earnings and dividends for SP AusNet, 2002/03 – 2005/06 ($nominal m)



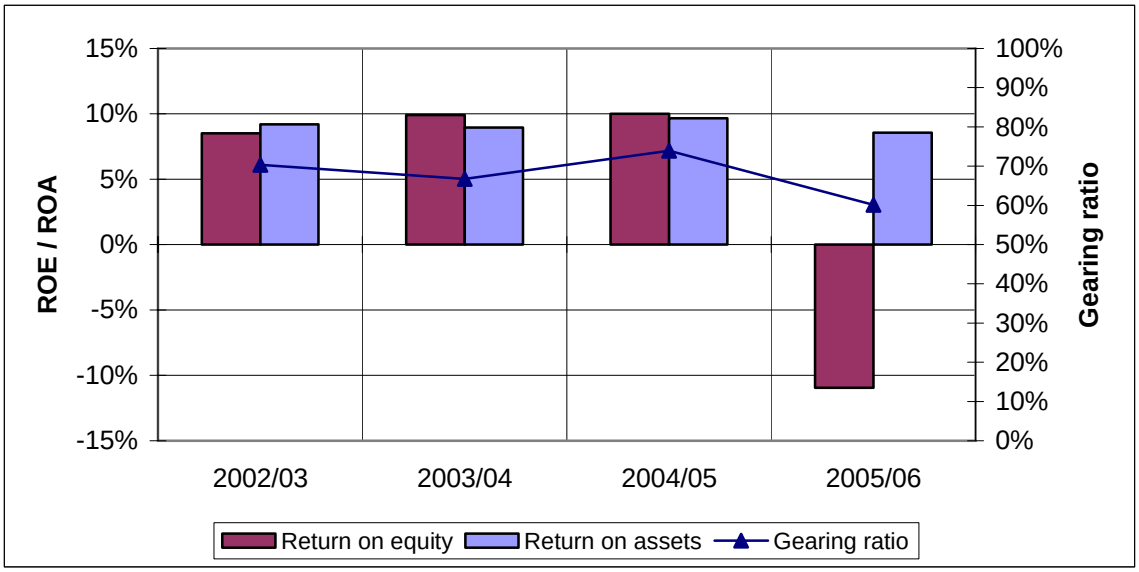
In 2005/06 SP AusNet had a negative return on equity of -11% compared to a positive return of 10% over the previous financial year. SP AusNet's return on assets has also decreased from 9.7% to 8.5% over the reporting year. In 2005/06 SP AusNet's gearing ratio was 60.1%, the lowest value over the period 2002/03 to 2005/06 and down 23% from 73.9% in the previous year.

Table 3.12 Financial ratios for SP AusNet, 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Return on equity*	8.5%	9.9%	10.0%	-11.0%
Return on assets - PS	9.2%	8.9%	9.6%	8.6%
Gearing ratio	70.4%	66.8%	73.9%	60.2%
Interest cover (times)** - PS	1.7	1.9	2.0	1.8

*2002/03 ROE is calculated using closing equity rather than average equity due to a lack of data.
**(EBIT / gross interest expense)

Chart 3.12 ROE decomposition for SP AusNet, 2002/03 – 2005/06



Operating ratios

This year SP AusNet's operating ratios were stable and continued the upward trend evidenced over the period 2002/03-2005/06. The largest changes were in relation to the Capex/Average RAB ratio which increased from 3.7% to 5.3% over the financial year and the Capex/MW peak demand ratio which increased from $8200/MW to $11 600/MW.

Table 3.13 Operating ratios for SP AusNet, 2002/03 – 2005/06 ($nominal)

	2002/03	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	7.9	8.7	8.6	9.4
Opex (PS) / MW peak ($000's/MW)	6.3	6.6	6.6	7.1
Opex (PS) / Average RAB	2.9%	3.1%	3.0%	3.2%
Capex / Average RAB	2.0%	2.8%	3.7%	5.3%
Capex / MW peak ($000's/MW)	4.4	6.1	8.2	11.6
Revenue / MW peak ($000's/MW)	32.0	31.7	33.0	34.1
Average RAB / MW peak ($000's/MW)	220.8	213.8	218.0	219.9

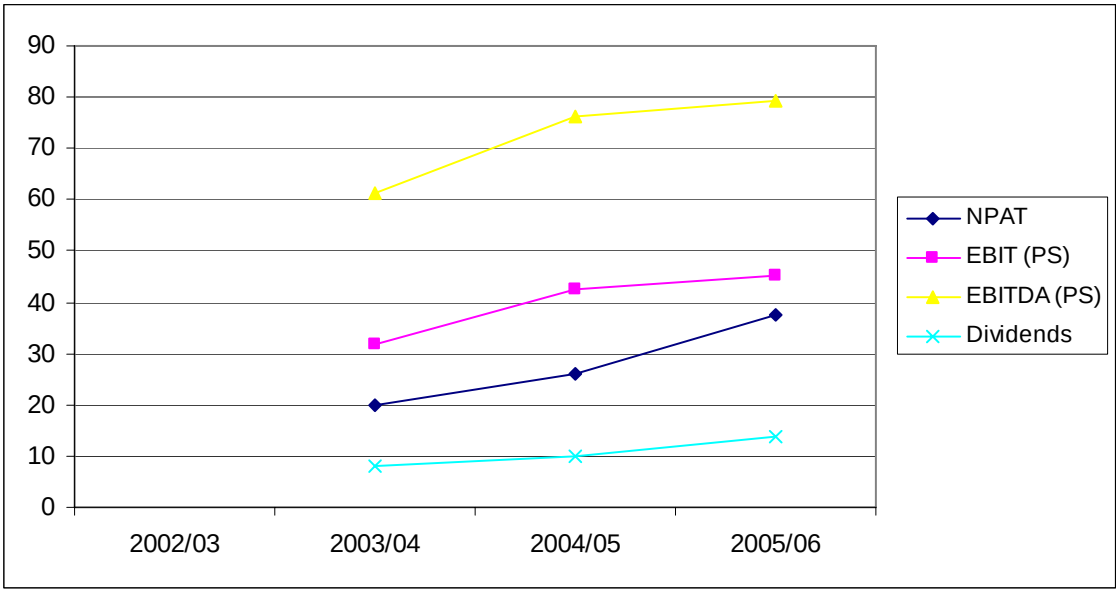
Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

3.3.6 Transend

Financial indicators

Transend's EBIT(PS) and EBITDA(PS) both increased over the financial year, however the increase was not as significant as it was the previous year. EBIT(PS) increased from $42.6m in 2004/05 to $45.1m in 2005/06 and EBITDA(PS) was up from $76.4m to $79.2m. Its NPAT increased by 44.6% to $37.5m in 2005/06. In 2004/05 and 2005/06 Transend maintained an average dividend payout ratio of 37.4% of NPAT, slightly down from its 2003/04 payout ratio of 41.2% of NPAT.

Chart 3.13 Earnings and dividends for Transend, 2003/04 – 2005/06 ($nominal m)



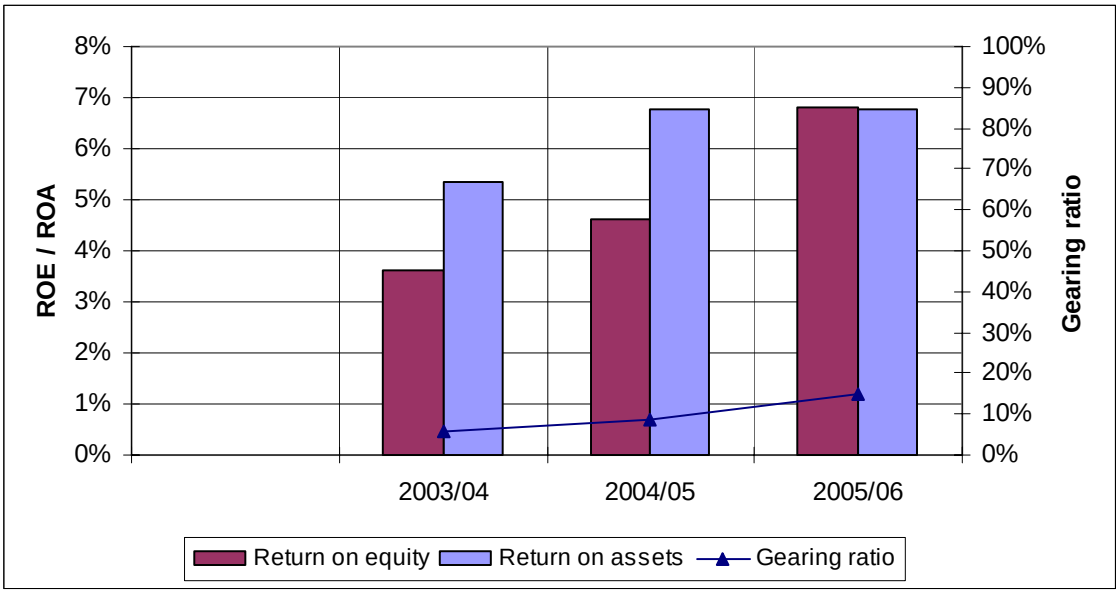
Transend's return on equity was up by around 48% to 6.8% in 2005/06 and its gearing ratio increased by 76% to 14.9% in 2005/06. Despite this increase, Transend remains the least geared of all the TNSPs. Its interest coverage has decreased around 38% to 10.9 times in 2005/06 after being at 17.4 times and 15.5 times in 2004/05 and 2003/04 respectively.

Table 3.14 Financial ratios for Transend, 2003/04 – 2005/06

	2003/04	2004/05	2005/06
Return on equity	3.6%	4.6%	6.8%
Return on assets - PS	5.4%	6.8%	6.8%
Gearing ratio	6.0%	8.5%	14.9%
Interest cover (times)* - PS	15.5	17.4	10.9

*(EBIT / gross interest expense)

Chart 3.14 ROE decomposition for Transend, 2003/04 – 2005/06



Operating ratios

Transend's operating ratios remained steady increasing marginally over the reporting period. However, both the Revenue/MW peak demand ratio and the Average RAB/MW peak demand ratio, which are $54 500/MW and $316 000/MW in 2005/06 respectively, are below the 2004/05 levels of $60 700/MW and $354 200/MW.

Table 3.15 Operating ratios for Transend, 2003/04 – 2005/06 ($nominal)

	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	7.1	8.1	9.6
Opex (PS) / MW peak ($000's/MW)	14.8	16.3	16.4
Opex (PS) / Average RAB	4.2%	4.6%	5.2%
Capex / Average RAB	9.5%	8.3%	10.1%
Capex / MW peak ($000's/MW)	33.4	29.4	32.0
Revenue / MW peak ($000's/MW)	50.8	60.7	54.5
Average RAB / MW peak ($000's/MW)	350.5	354.2	316.0

Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

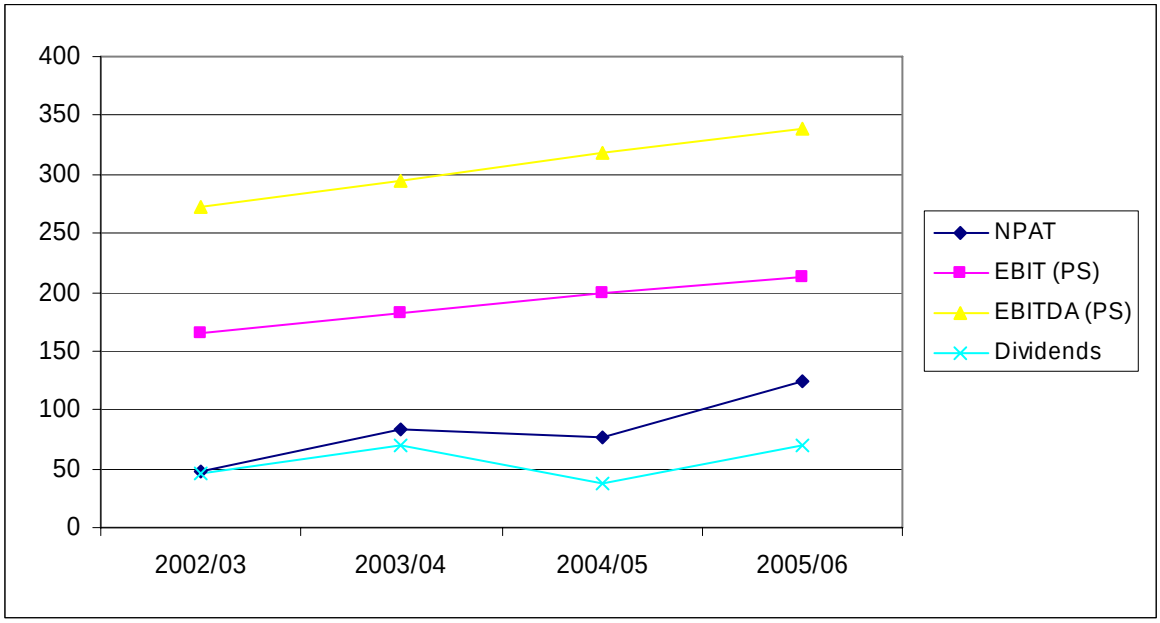
3.3.7 TransGrid

Financial indicators

TransGrid's EBIT(PS) and EBITDA(PS) have consistently increased over the period 2002/03-2005/06 and were $212.8m and $338.8m respectively in 2005/06, up from $199.4m and $317.9m in the previous year. TransGrid's net profit after tax has been more volatile increasing from $47.4m in 2002/03 to $83.2m in 2003/04, decreasing to $77.1m in 2004/05 and increasing again to $124.7m in 2005/06. TransGrid stated that these fluctuations are primarily due to financial market performance in regard to TransGrid's defined benefits superannuation liabilities as structured in the state of NSW.

Over the same period TransGrid reduced its dividend payments as a proportion of NPAT from 97.5% and 84.2% in 2002/03 and 2003/04, to 49.3% and 55.7% in 2004/05 and 2005/06. TransGrid stated that this reduction was in line with the defined negotiation process with its shareholder.

Chart 3.15 Earnings and dividends for TransGrid, 2002/03 – 2005/06 ($nominal m)



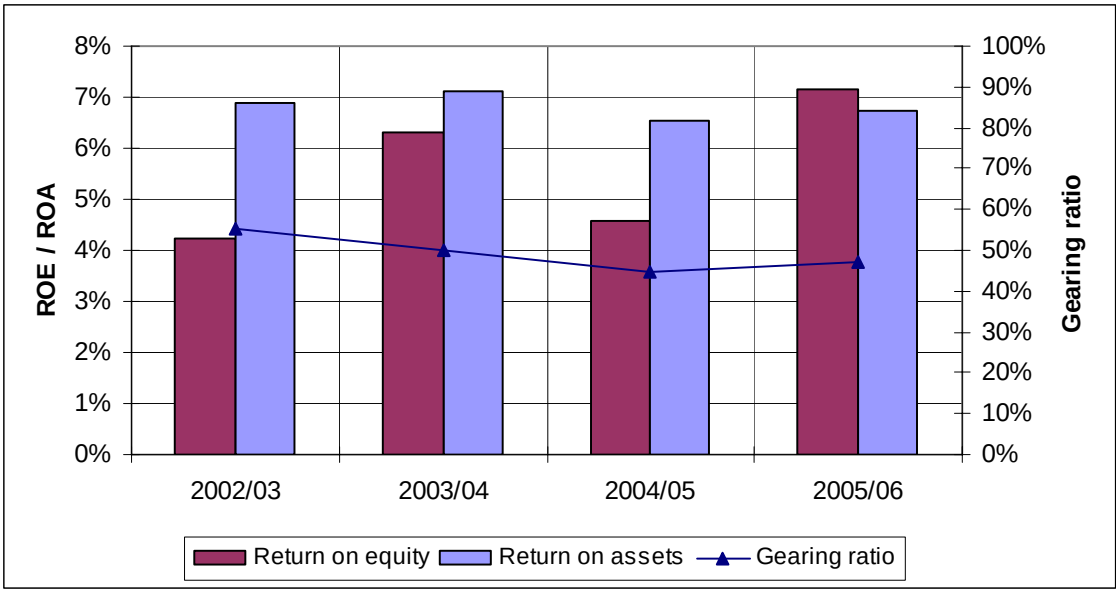
TransGrid's return on assets has remained relatively stable over the last four years, however its return on equity was 7.1% in 2005/06 up by 54% compared to the 2004/05 figure of 4.6%. Its gearing ratio rose marginally to 47.3% (44.9% in 2004/05) and its interest coverage ratio increased from 1.9 times in 2004/05 to 2.1 times in 2005/06.

Table 3.16 Financial ratios for TransGrid, 2002/03 – 2005/06

	2002/03	2003/04	2004/05	2005/06
Return on equity	4.2%	6.3%	4.6%	7.1%
Return on assets - PS	6.9%	7.1%	6.5%	6.7%
Gearing ratio	55.3%	50.1%	44.9%	47.3%
Interest cover (times)* - PS	1.9	2.1	1.9	2.1

*(EBIT / gross interest expense)

Chart 3.16 ROE decomposition for TransGrid, 2002/03 – 2005/06



Operating ratios

TransGrid's opex ratios have remained steady compared to the last financial year. The Opex (PS)/line length ratio increased slightly to $9700/km and the Capex (PS)/Average RAB ratio increased from 4.3% in 2004/05 to 4.9% in 2005/06.

Table 3.17 Operating ratios for TransGrid, 2002/03 – 2005/06 ($nominal)

	2002/03	2003/04	2004/05	2005/06
Opex (PS) / line length ($000's/km)	9.2	9.4	9.4	9.7
Opex (PS) / MW peak ($000's/MW)	9.2	9.4	8.9	9.1
Opex (PS) / Average RAB	4.7%	4.5%	3.8%	3.8%
Capex / Average RAB	10.2%	10.3%	4.3%	4.9%
Capex / MW peak ($000's/MW)	19.8	21.3	9.9	11.7
Revenue / MW peak ($000's/MW)	31.6	32.7	33.2	34.6
Average RAB / MW peak ($000's/MW)	194.6	206.5	232.9	238.0

Comparison charts for each of the above ratios, showing all of the TNSPs in the one chart, can be found in the opex, capex, revenue or network characteristics chapter to which the ratio relates.

4 Revenue

4.1 Introduction

The AER is responsible for regulating the revenues associated with non-contestable elements of the electricity transmission services provided by TNSPs. Chapter 6 of the National Electricity Rules (NER) and the AER's *Statement of Principles for the Regulation of Electricity Transmission Revenues* (SRP) have set out the regulatory framework and the process the AER applies to determine a TNSPs revenue cap.[10] The AER must also satisfy the NEM Objective, which is stated in section 7 of the NEL and reads as follows:

> The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.

In accordance with the regulatory framework, the AER is required to set a revenue cap that determines the revenue a TNSP is entitled to recover from its network customers, according to the requirements and procedures set out in the NER and related guidelines. In determining the revenue for each year of the regulatory period, the AER adopts the accrual building block approach which requires that the maximum allowed revenue (MAR) is calculated as the sum of the return on capital, the return of capital, an allowance for operating and maintenance expenditure (opex) and an income tax allowance. The TNSP then uses the MAR to determine transmission prices (tariffs) in accordance with the NER.

A TNSP's revenue allowance can vary over the regulatory period. As part of the revenue reset process a TNSPs MAR is determined using a forecast inflation rate for the duration of the regulatory period. The MAR is adjusted annually for actual CPI to preserve the real value of the revenue stream. This adjustment explains the majority of discrepancies between forecast and actual revenue reported by TNSPs. Payments and penalties awarded under the service standards performance incentive scheme and any approved pass through amounts also affect the actual revenue.

This chapter presents the TNSPs' reported revenues compared with MAR forecasts included in revenue determinations made by the ACCC/AER. In this chapter, forecast figures for MAR have been taken from final ACCC/AER decisions and adjusted for March quarter CPI figures for the later year of the relevant period.[11]

[10] This regulatory framework is now largely reflected in the new Chapter 6A of the NER.

[11] For example, forecast MAR for the period 2005/06 is adjusted for March quarter 2006 CPI. Note that SP AusNet's forecast MAR figures have been adjusted for December quarter CPI figures. CPI data is taken from the ABS website (www.abs.gov.au).

4.2 Aggregate and comparative TNSP performance

Due to the capital intensive nature of electricity transmission businesses the Regulatory Asset Base (RAB) is the single greatest determinant of the quantum of revenue received by a TNSP. TNSPs receive a return on capital {RAB * [weighted average cost of capital (WACC)]}, which represents the minimum return a TNSP can expect to earn on its assets to compensate it for its past investment and to provide an incentive to reinvest in the business. The return on capital plus the return of capital (depreciation) represents about 70% of the TNSPs' notional revenue requirement. It therefore has a significant impact on the financial outcomes for a TNSP and ultimately on end-user prices. Opex constitutes around 25% of TNSPs' revenue and the income tax allowance comprises the remainder.

Efficiency incentives are incorporated into the building block model through service standards, opex and capex incentive schemes. These incentive mechanisms aim to foster efficient investment and operating practices within the electricity transmission industry.

Table 4.1 shows the actual and forecast aggregate revenue of the TNSPs (excluding VENCorp). Between 2002/03 and 2004/05 there were only minor variations between actual and forecast aggregate revenue. The difference was greatest in 2005/06 (around 1%). During the period 2002/03 to 2005/06 aggregate actual revenue has grown at an average rate of 9.6%, and the overall difference between total aggregate actual and forecast revenue was just 1.9%.

Table 4.1 Aggregate actual revenue and forecast MAR, 2002/03 – 2005/06 ($nominal m)

	2002/03	2003/04	2004/05	2005/06	Total
Actual revenue	1227.4	1382.7	1508.3	1613.8	5732.2
Forecast MAR	1231.9	1373.0	98.4	1598.9	5702.3
Difference ($m)	-4.5	9.7	9.9	14.8	29.9
Difference (%)	-0.4%	0.7%	0.7%	0.9%	1.9%

Note 1: The total column reflects only TNSPs that reported in each years regulatory report.
Note 2: VENCorp data has not been included in the aggregate MAR figures in table 4.1.

Chart 4.1 shows total TNSP revenue, which is equivalent to total transmission charges for transmitting electricity along the transmission networks. In 2005/06 aggregate TNSP revenue was $1.61 billion (excluding VENCorp), an increase of $105.5m (7.0%) from the previous year and around 0.9% greater than forecast. During the period 2002/03 to 2005/06 aggregate actual revenue has grown at an average rate of 9.6% per annum.

Chart 4.1 Actual revenue ($nominal m), 2002/03 – 2005/06

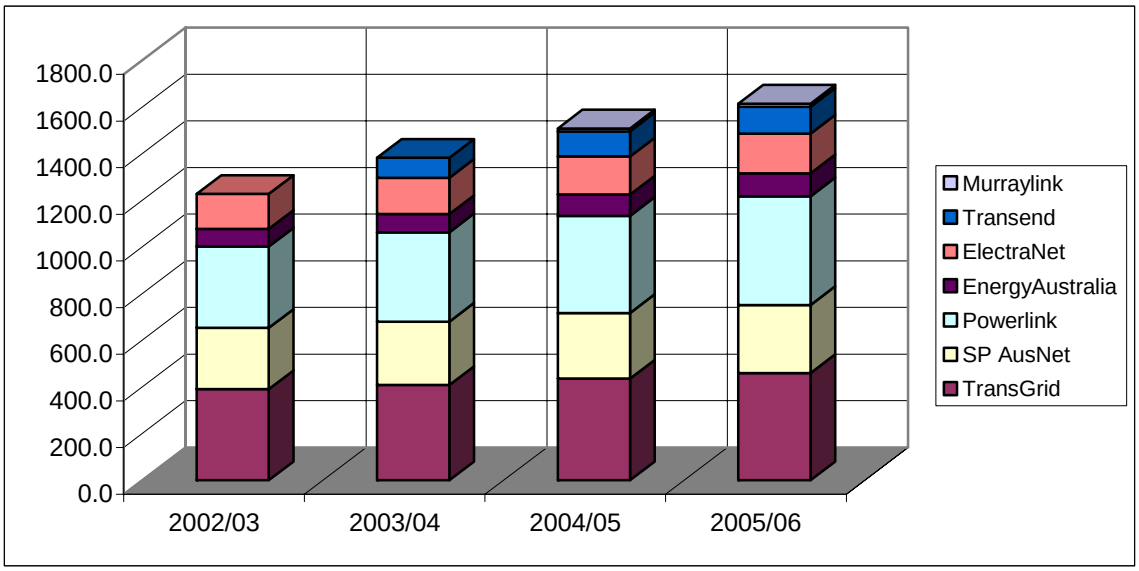
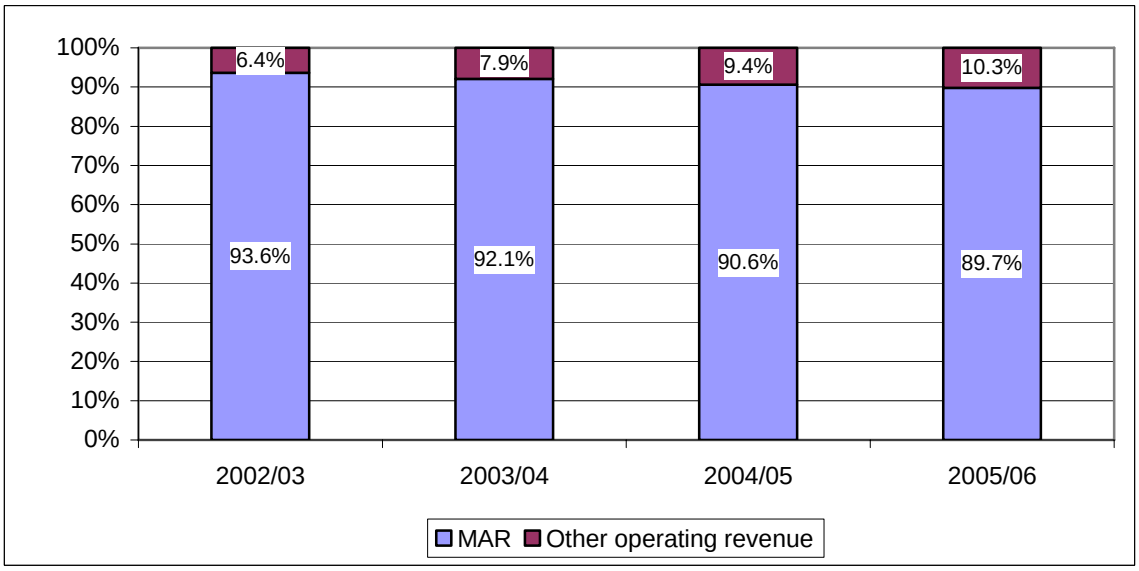


Chart 4.2 shows TNSPs aggregate actual revenue as a percentage of total operating revenue. In 2005-06 TNSPs earned aggregate revenue of $1.61 billon (excluding VENCorp), which is 89.7% of total operating revenue. Aggregate revenue as a proportion of total revenue has declined from 94.6% in 2002/03 (almost 5%) illustrating that the proportion of revenue TNSPs are earning from contestable and other services is slowly increasing.

Chart 4.2 Actual revenue as percentage of total revenue, 2002/03 – 2005/06*



*Revenue for EnergyAustralia is from Prescribed Services (Electricity Transmission) only.

4.2.1 Comparative TNSP performance

Chart 4.3 compares actual and forecast revenue for each TNSP in 2005/06.

Chart 4.3 Difference between actual revenue and forecast MAR, 2005/06

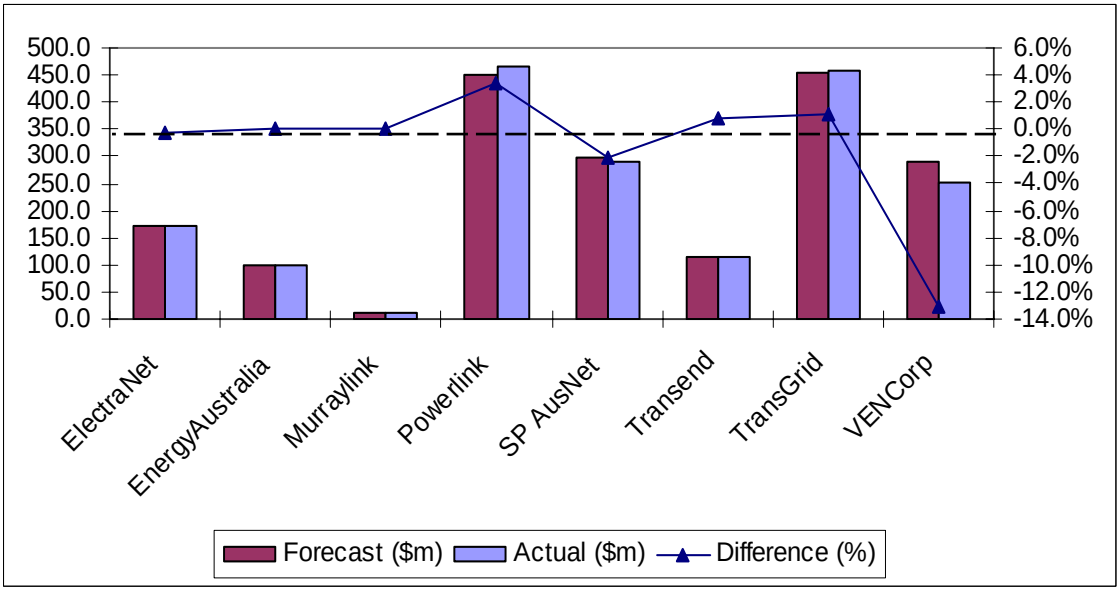


Chart 4.4 shows the relative percentage difference between individual TNSPs forecast MAR and actual revenue, on a yearly basis, from 2002/03-2005/06. The difference between forecast and actual revenue for most TNSPs over the period was within a narrow range of +/- 4%.

Chart 4.4 Percentage difference between actual revenue and forecast MAR, 2002/03 – 2005/06

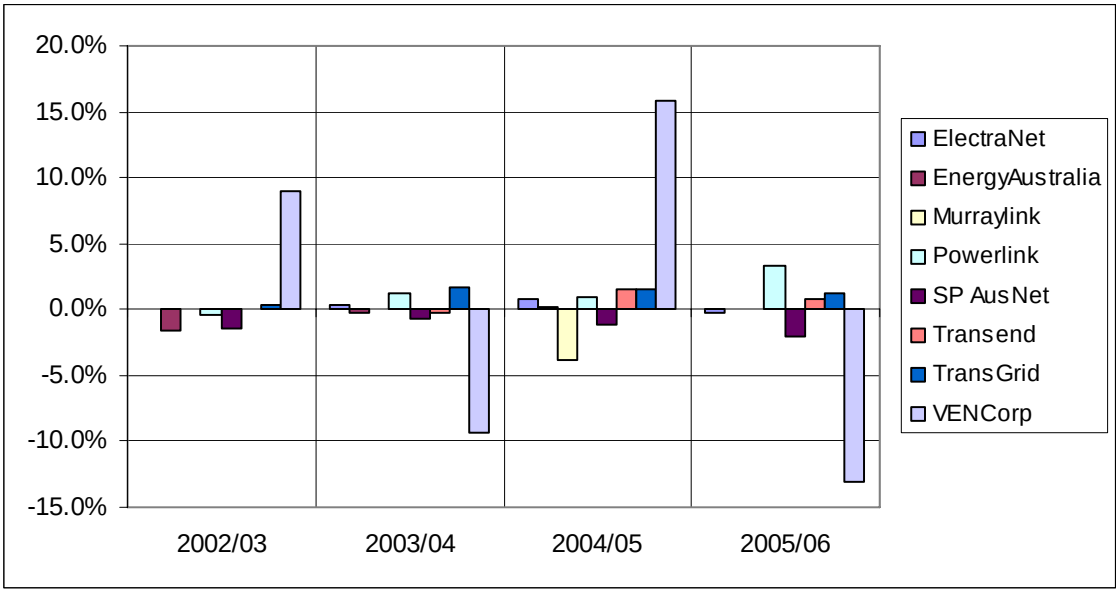
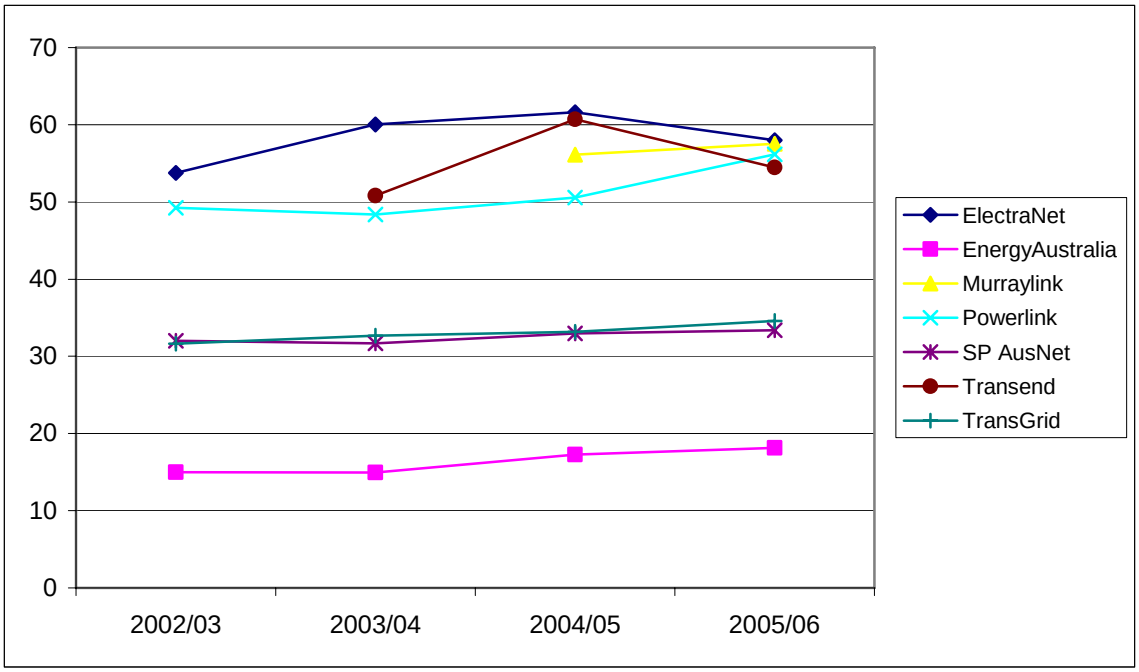


Chart 4.5 below shows the transmission revenue to MW peak demand ratio for each TNSP (except VENCorp). This ratio provides a measure of the revenue required to

maintain a transmission network with a given maximum MW demand. Over the period 2002/03-2005/06, EnergyAustralia has had the lowest ratio (between $10m and $20m per MW of peak demand), while ElectraNet has had the highest ratio (between $50m and $65m per MW of peak demand) over the same period.

Chart 4.5 Actual revenue / MW peak ($nominal m/MW 000's), 2002/03 – 2005/06

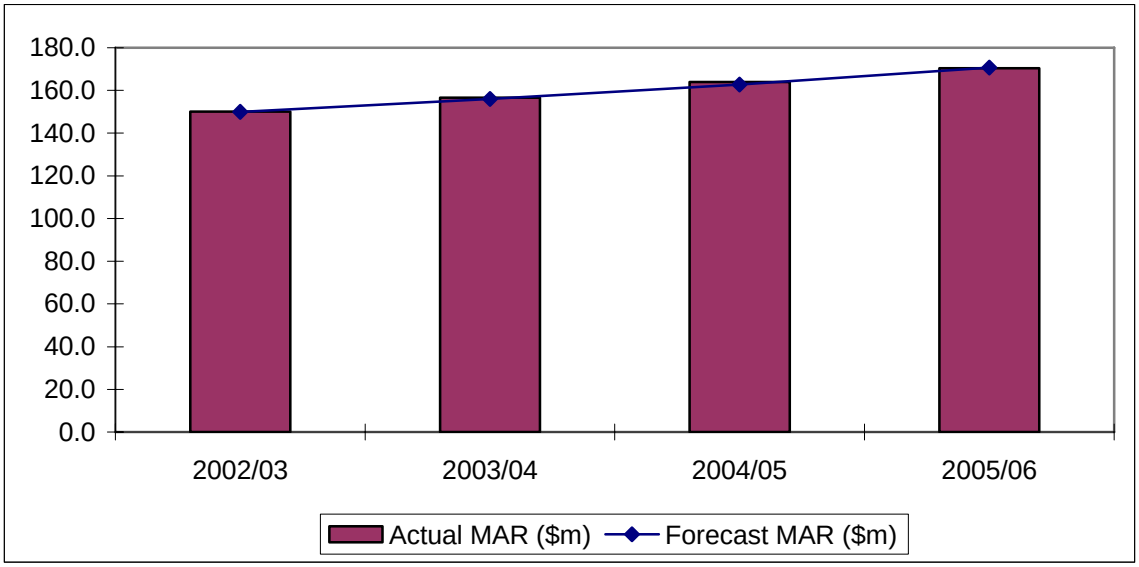


4.3 Individual TNSP performance

4.3.1 ElectraNet

In 2005-06 ElectraNet's actual revenue was $170.4m, marginally below forecast revenue of $170.7m. Actual revenue in 2005/06 was, however $6.5m (4%) above actual revenue of $163.9m in the previous financial year. Its 2005/06 forecast revenue of $170.7m was $8.1m above the 2004/05 forecast figure of $162.7m. This is the first year ElectraNet has reported its actual revenue below forecast. In the previous years 2002/03 to 2004/05, actual revenue has been greater than forecast revenue, albeit by less than 1%.

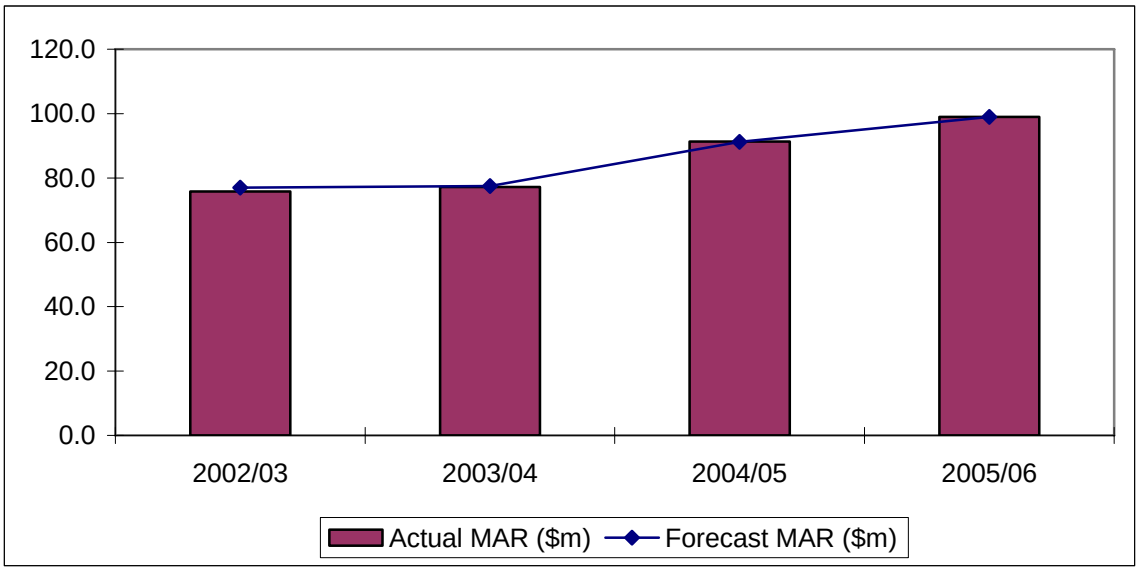
Chart 4.6 Actual revenue and Forecast MAR for ElectraNet, 2002/03 – 2005/06 ($nominal m)



4.3.2 EnergyAustralia

EnergyAustralia's actual revenue in 2005/06 was $99.0m, marginally above forecast revenue of $98.9m. This year EnergyAustralia's actual revenue was 8.4% ($7.7m) above actual revenue of $91.3m in the previous year. EnergyAustralia's actual revenue has been close to forecast in all years over the period 2002/03-2005/06.

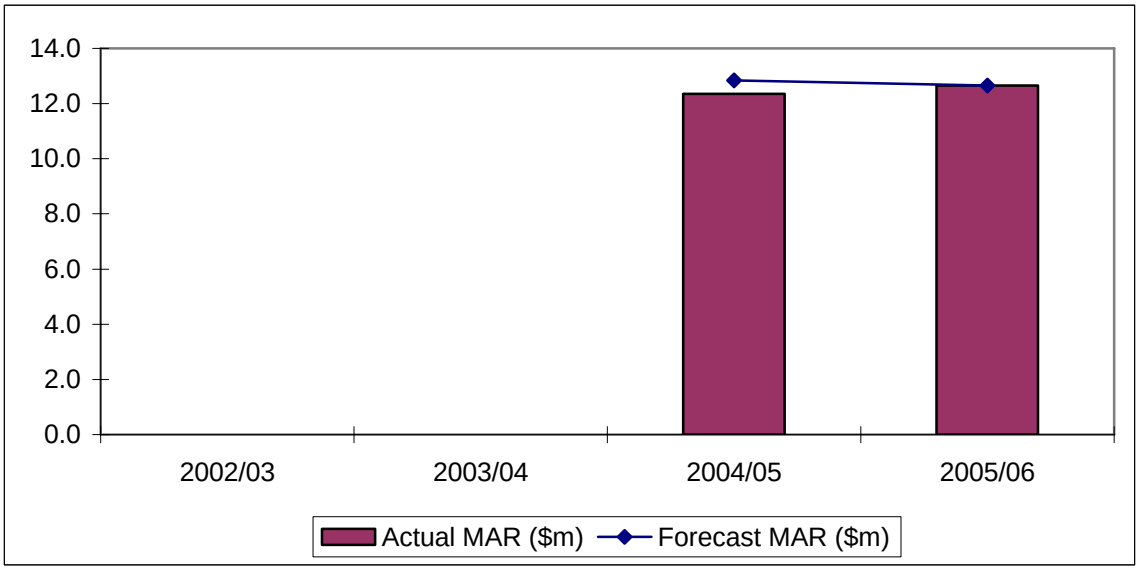
Chart 4.7 Actual revenue and Forecast MAR for EnergyAustralia, 2002/03 – 2005/06 ($nominal m)



4.3.3 Murraylink

Murraylink's actual revenue of $12.7m was in line with forecast MAR for 2005/06. Between 2004/05 and 2006/06, Murraylink's actual revenue increased from $12.4m to $12.7m.

Chart 4.8 Actual revenue and Forecast MAR for Murraylink, 2004/05 – 2005/06* ($nominal m)

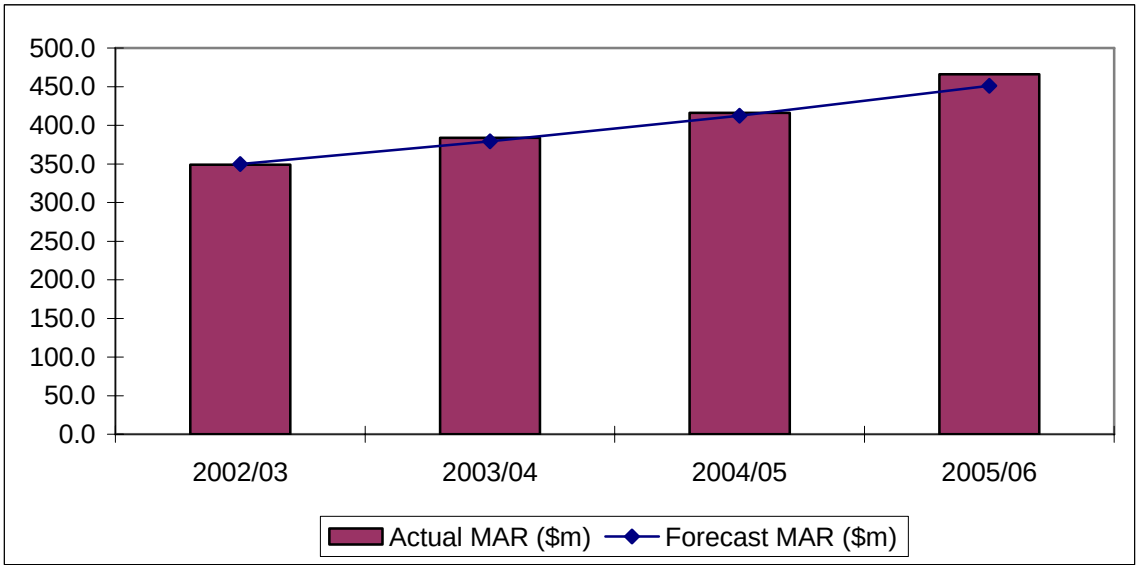


*Murraylink's forecast MAR is taken from the ACCC's final Revocation and Substitution Determination, April 2004.

4.3.4 Powerlink

Powerlink's revenue was $466.0m in 2005/06, 3.3% ($15.0m) above the forecast figure of $451.0m. Actual revenue increased around 12% over the financial year and Powerlink's actual revenue increased, on average, by 10.1% per annum over the period 2002/03-2005/06. Its forecast revenue increased by an average 8.8% per annum over the same period.

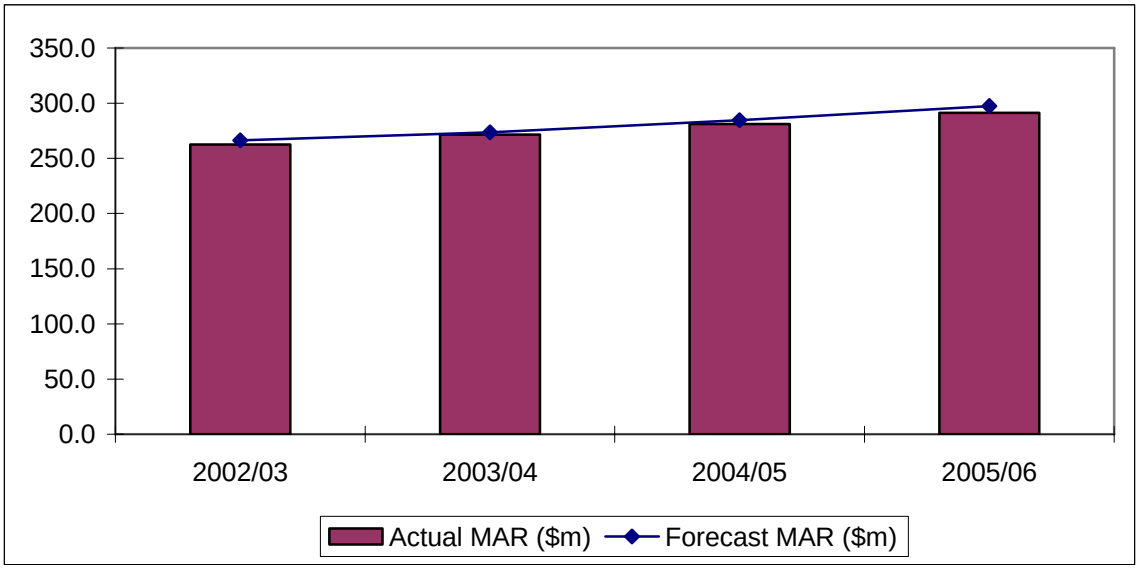
Chart 4.9 Actual revenue and Forecast MAR for Powerlink, 2002/03 – 2005/06 ($nominal m)



4.3.5 SP AusNet

This year SP AusNet's actual revenue was $291.3m, $6.1m (2.0%) below the forecast figure of $297.3, but 3.6% above actual revenue of $281.2m in the previous year. In all years SP AusNet's actual revenue has been below forecast. Over the period 2002/03-2005/06 actual revenue has increased by an average of 3.5% per annum while forecast revenue has increased by 3.7% per annum.

Chart 4.10 Actual revenue and Forecast MAR for SP AusNet, 2002/03 – 2005/06* ($nominal m)*



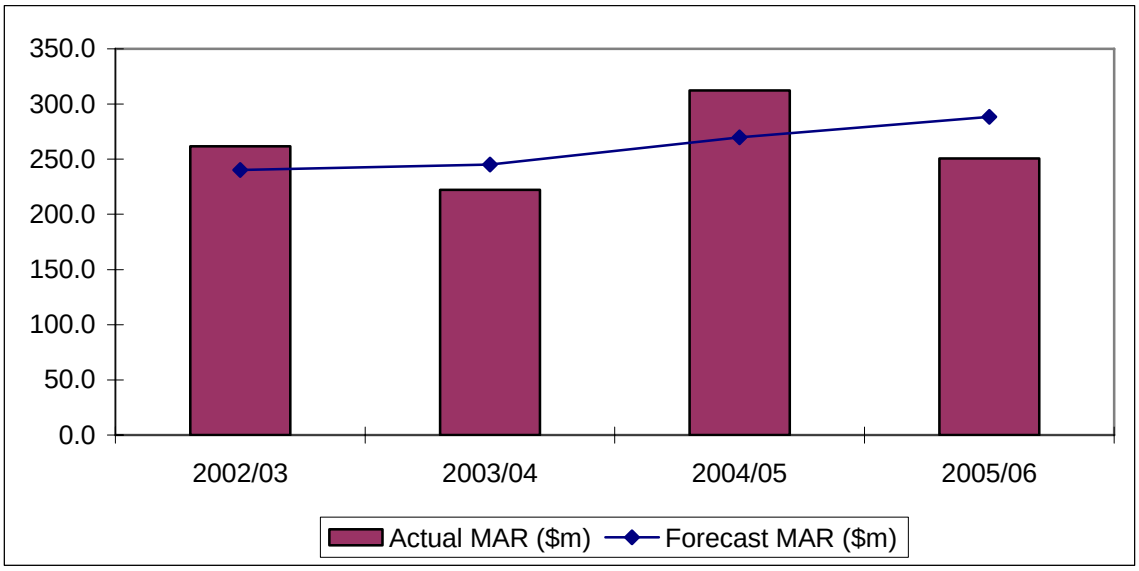
*SP AustNet's forecast and actual revenue figures exclude a easement land tax tax pass-through that has been approved by the AER each regulatory year since 2004/05. For 2005-06, the amount of the pass-through was around $77.89 million.

4.3.6 VENCorp

This year VENCorp's revenue of $250.6m was 13.1% ($37.8m) below forecast revenue of $288.4m, and actual revenue of $312.3m in 2004/05 was 15.8% ($42.6m) above the forecast figure of $269.7m.[12]

In 2004/05 and 2005/06 VENCorp received an increase in its revenue requirements due mainly to an easement land tax expense and the conversion of the Murraylink interconnector from an unregulated to a regulated network service provider.

Chart 4.11 Actual revenue and Forecast MAR for VENCorp, 2002/03 – 2005/06 ($nominal m)

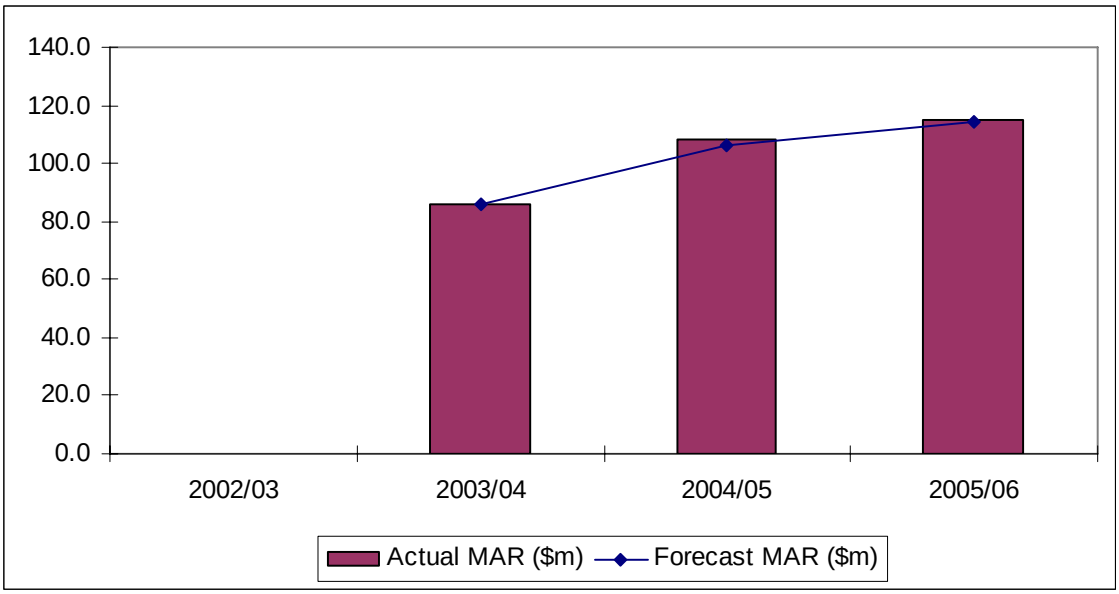


[12] The annual amount of the easement land tax pass-through has been excluded from VENCorp's actual revenue for the years 2004/05 and 2005/06 to allow like-for-like comparison with VENCorp's forecast MAR.

4.3.7 Transend

In 2005/06 Transend's actual revenue of $115.0m was $0.9m above the forecast figure of $114.1m and $7.0m (6.5%) above actual revenue in the previous financial year. Combined with the significant annual increment in actual revenue of $22.1m (25.7%) in 2004/05, the average annual increase in actual revenue over the period 2003/04-2005/06 is 16.0%.

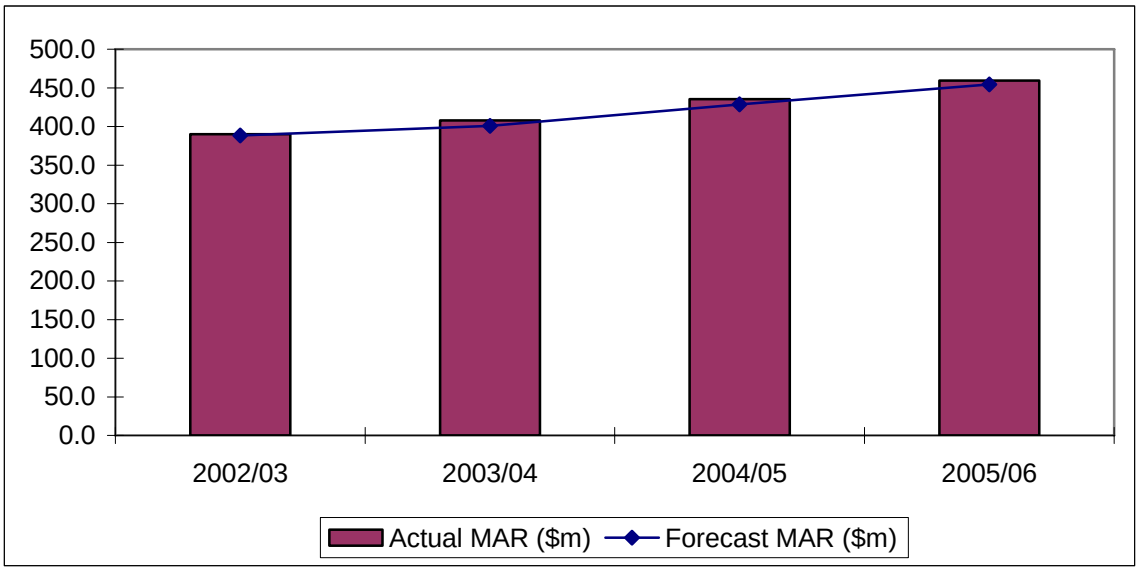
Chart 4.12 Actual revenue and Forecast MAR for Transend, 2003/04 – 2005/06 ($nominal m)



4.3.8 TransGrid

TranGrid's actual revenue of $459.5m in 2005/06 was 1.2% above forecast revenue of $454.2m and 5.6% above actual revenue of $435.3m in the previous year. TransGrid's actual revenue has consistently been marginally above forecast revenue but by no more than 2% in any year over the reporting period.

Chart 4.13 Actual revenue and Forecast MAR for TransGrid, 2002/03 – 2005/06 ($nominal m)



5 Capital expenditure

5.1 Introduction

The capital expenditure (capex) regulatory framework involves the AER setting an efficient capex allowance at the start of the regulatory period that is intended to cover a TNSP's expected investments including augmentation, replacement, refurbishment and business support. This is as an ex-ante allowance as it involves the AER forming a view on the efficiency of a TNSP's proposed investment program at the start of the regulatory period. The TNSP is allowed to determine which capital investments (projects) it will undertake within this allowance, subject to service level considerations. The objective of the ex-ante allowance is to provide certainty and a strong incentive for efficient investment. The requirement that the capex allowance is efficient reflects the provisions in the NER. It should be noted, however, that some TNSPs continue to operate under an ex-post capex approach until their next regulatory determinations[13].

As part of the capex incentive framework, should a TNSP spend less than the allowance set by the AER, it retains the benefit of that lower expenditure (both the return on and of capital) until the end of the regulatory period. Conversely, should a TNSP exceed the allowance set by the AER it would forgo both return on and of capital associated with the overspend within the regulatory period.

This chapter overviews each TNSPs' reported capex compared with the forecasts that were included in the ACCC's revenue cap decisions for each TNSP. In this chapter, forecast figures for capex have been taken from final ACCC/AER decisions and adjusted for March quarter CPI figures for the later year of the relevant period.[14]

The information on the TNSPs' actual capex for 2005/06 was obtained from the regulatory accounts provided to the AER.

There are two general exclusions from the aggregate capex measures:

- Murraylink is a DC interconnector between Victoria and South Australia. It commenced operating in October 2002 and the majority of its assets are underground. No capex is forecast during its current regulatory period (2003/12) and therefore is not included in this chapter.

- VENCorp's accounts are structured to reflect the regulatory arrangements, under which it does not own, build or maintain electricity transmission assets. However, it does pay augmentation charges under network services agreements to successful tenderers who build/own/operate additions to the transmission network in Victoria.

[13] At their next revenue resets, ElectraNet, SP AustNet and Transend will be assessed, in terms of their current capital expenditures, under an ex-post framework as provided in the previous ACCC draft statement of regulatory principles (DRP).

[14] For example, forecast capex for the period 2005/06 is adjusted for March quarter 2006 CPI. Note that SP AusNet's forecast capex figures have been adjusted for December quarter CPI figures to take account of its different financial year. CPI data is taken from the ABS website (www.abs.gov.au).

VENCorp's augmentation payments for 2005/06 were $15.4m, compared to forecast expenditure of $24.9m (this means that users were charged this lower figure). VENCorp is not included in the aggregate measures of capex below.

5.2 Aggregate and comparative TNSP performance

Table 5.1 sets out the yearly aggregate actual capex reported by all TNSPs. Total forecast capex includes network augmentation and replacement/refurbishment capex.

5.2.1 Aggregate TNSP performance

Table 5.1 Difference between aggregate actual and forecast capex ($nominal m)

	Actual	Forecast	Difference ($m)	Difference (%)
2005-06	689.8	627.9	61.9	9.9%
2004-05	555.2	683.8	-128.6	-18.8%
2003-04	601.6	790.8	-189.1	-23.9%
2002-03	542.2	391.5	150.7	38.5%

* Murraylink and VENCorp are excluded from capex comparisons.

Table 5.1 shows that in 2005/06 actual investment in the NEM remained strong at over 6% of the aggregate RAB of $10.96b. Significantly, in 2005-06 aggregate actual capex was 9.9% higher than aggregate forecast capex. This is the first time since 2002/03 that aggregate actual capex has exceeded aggregate forecast capex. Aggregate actual expenditure was $689.8m in 2005/06, up 24.2% from $555.2m in 2004/05.

5.2.2 Comparative TNSP performance

Table 5.2 shows total actual and forecast capex for each TNSP for 2005/06. Individual results vary amongst TNSPs, the reasons for the variations between forecast and actual capex for an individual TNSPs may be due to the age of the assets, load growth, climate change and incidences of natural disaster.

Table 5.2 Difference between actual and forecast capex, 2005-06

	Actual	Forecast	Difference ($m)	Difference (%)
ElectraNet	54.4	87.4	-33.0	-37.8%
EnergyAustralia	43.0	33.7	9.3	27.5%
Murraylink	0.0	0.0	0.0	0.0%
Powerlink	268.6	202.5	66.1	32.7%
SP AusNet	101.0	59.2	41.8	70.5%
Transend	67.6	54.0	13.6	25.4%
TransGrid	155.1	191.1	-36.0	-18.8%
Total*	**689.8**	**627.9**	**61.9**	**9.9%**

*Excludes VENCorp

Chart 5.1 compares forecast and actual expenditure for each TNSP over the financial year.

Chart 5.1 Difference between actual and forecast capex, 2005/06

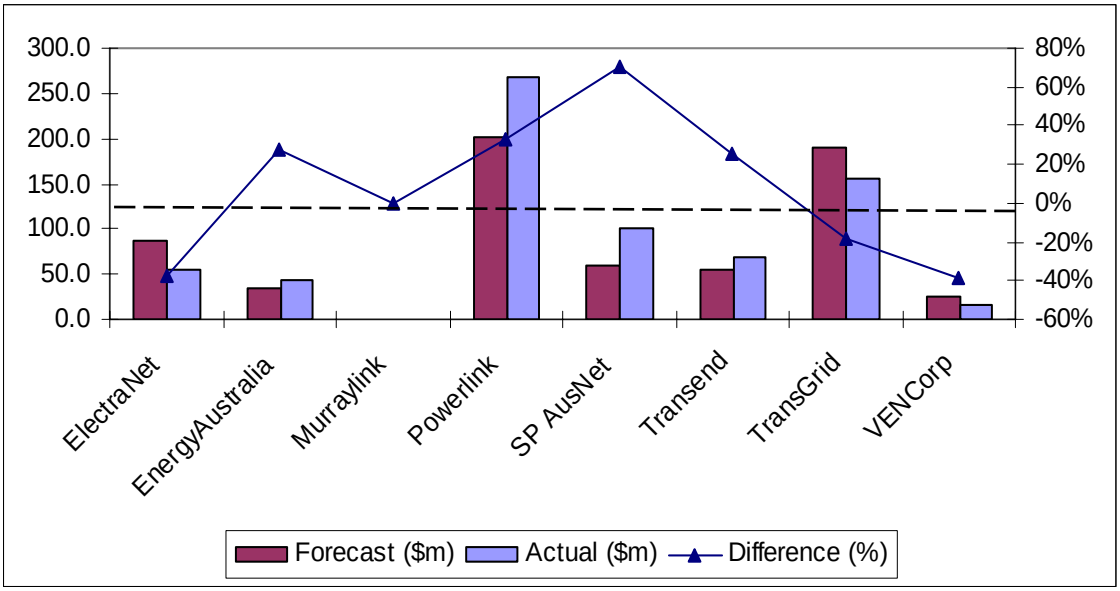
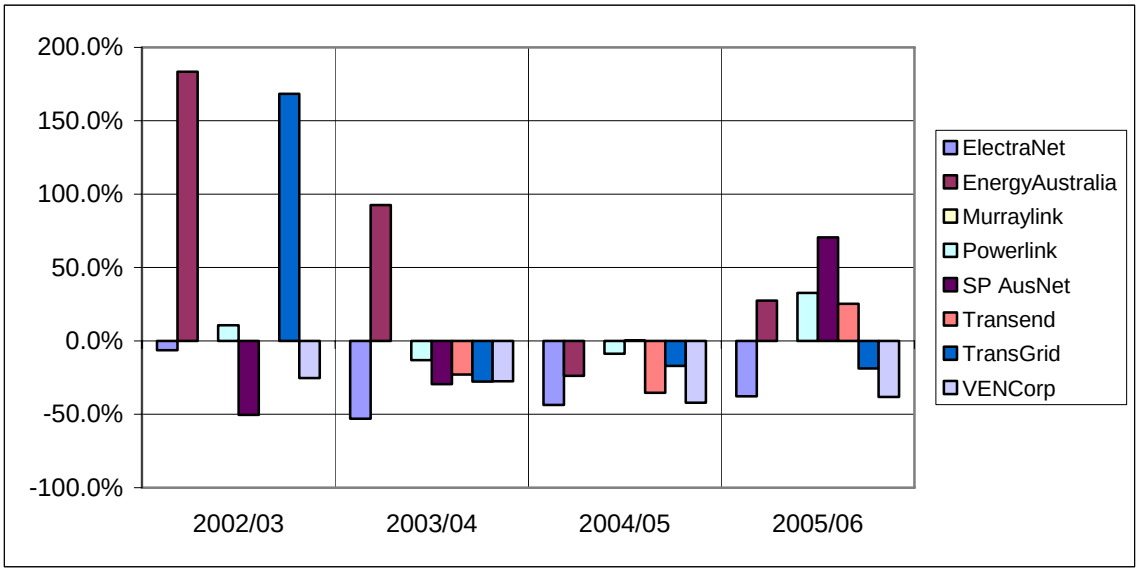


Chart 5.2 shows the percentage difference between actual and forecast capex for individual TNSPs between 2002/03 and 2005/06. Chart 5.2 highlights that most TNSPs' expenditure was greater than the forecast allowance in their revenue determinations in 2005/06. The exceptions were ElectraNet, VENCorp and TransGrid. This compares to most TNSPs spending below the forecast allowance for the two prior financial years.

Chart 5.2 Percentage difference between actual and forecast capex, 2002/03-2005/06



* Capex as-commissioned

Chart 5.3 below shows the ratio of actual capex to average RAB for all TNSPs. This is a measure of expenditure per dollar value of the RAB. This year the ratio increased strongly for all TNSPs except ElectraNet, reflecting higher than forecast actual spending by most TNSPs and significantly higher spending than in the previous two years.

Chart 5.3 Actual capex / Average RAB, 2002/03 – 2005-06

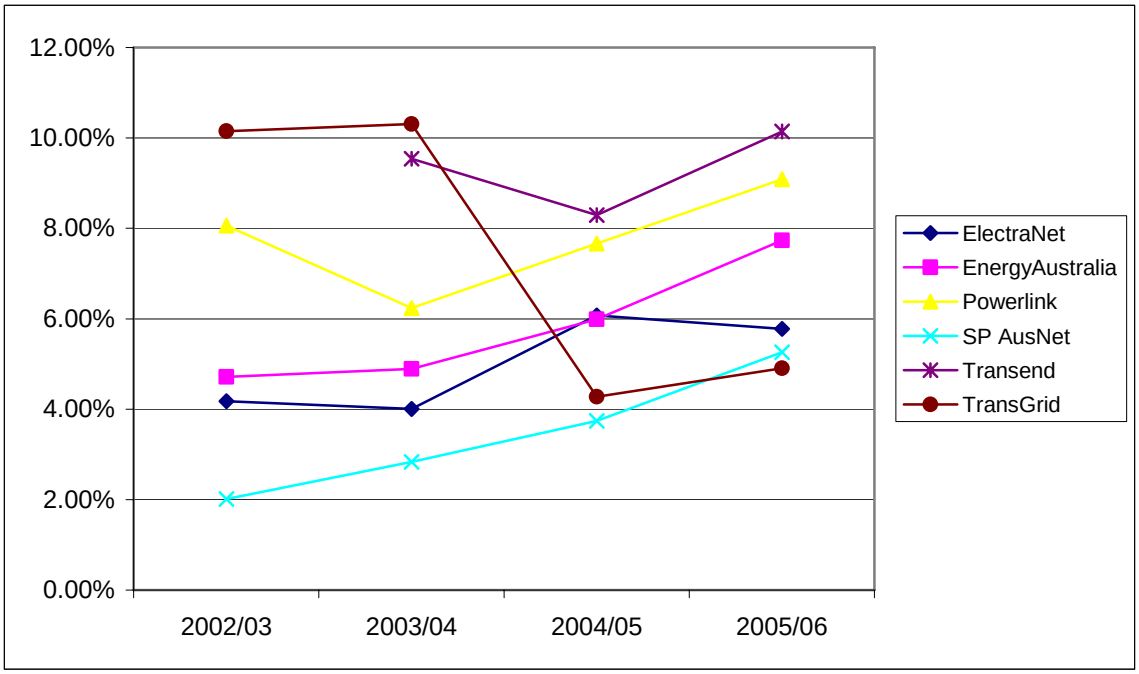
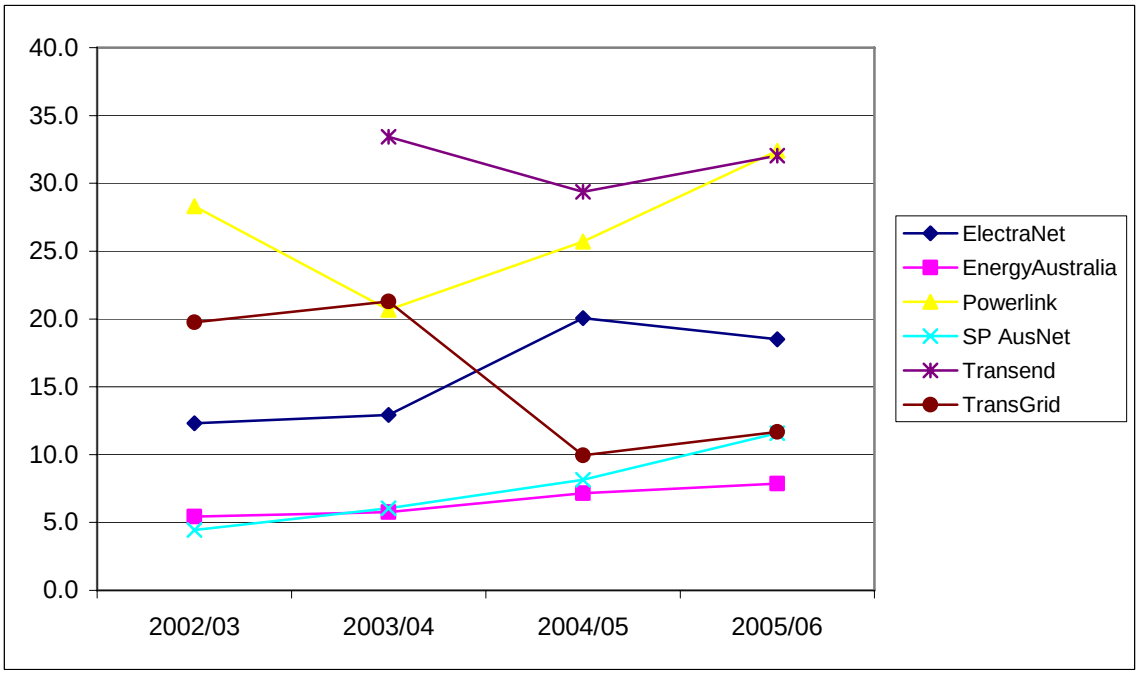


Chart 5.4 Actual capex / MW peak ($nominal m/MW 000's), 2002/03 – 2005-06



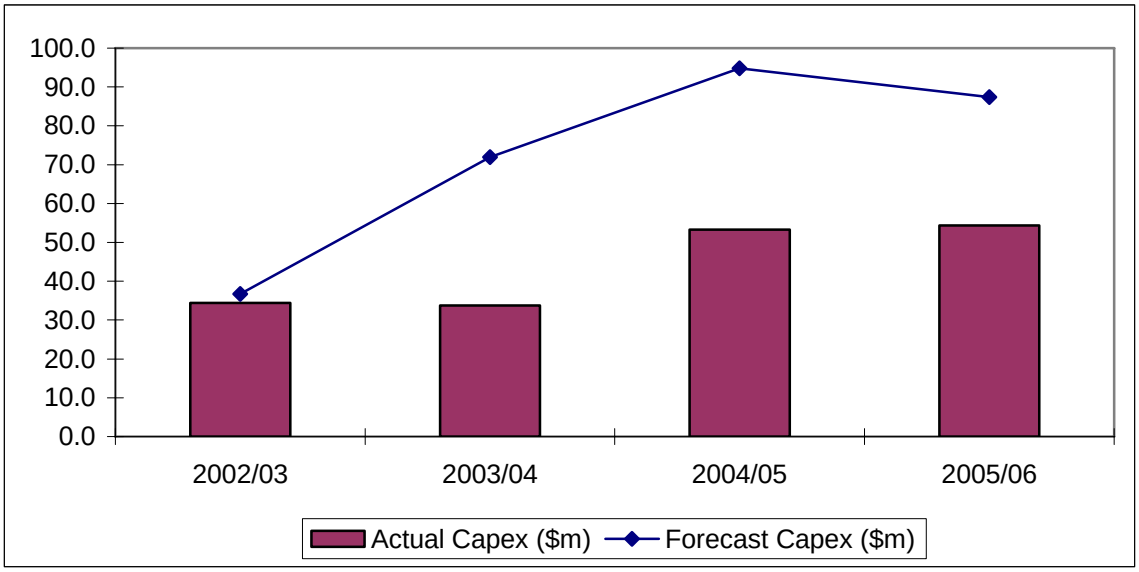
5.3 Individual TNSP performance

The expenditure of each TNSP and the reasons for the differences between actual and forecast expenditure are discussed below.

5.3.1 ElectraNet

ElectraNet's recorded capex of $54.4m was $33.0m (37.8%) lower than the forecast amount of $87.4m. Actual capex increased slightly in comparison to the 2004/05 figure of $53.3m.

Chart 5.5 Actual and forecast capex for ElectraNet, 2002/03 – 2005-06 ($nominal m)

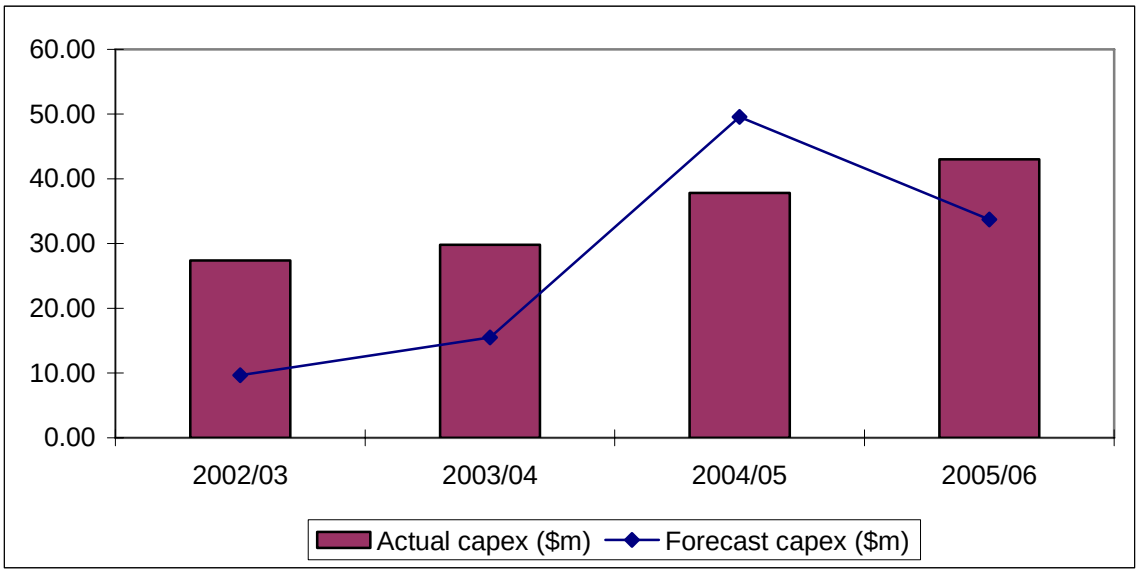


ElectraNet commented that it is on track to deliver its allowed capex program for the regulatory period, having delivered capex in excess of $100m in 2005/06 (on an as-incurred basis) with capex in 2006/07 also on track to exceed $100m.

5.3.2 EnergyAustralia

EnergyAustralia's recorded capex of $43.0m in 2005/06 was significantly higher, around $9.3m (27.5%), than its forecast capex of $33.7m. Despite being forecast to decrease capex by around 32% between 2004/05 and 2005/06, Energy Australia's actual capex has increased by around 13.8%.

Chart 5.6 Actual and forecast capex for EnergyAustralia, 2002/03 – 2005-06 ($nominal m)



Energy Australia commented that its annual capital expenditure is approximately $9.2m more than was forecast in the ACCC's 2005 Transmission Decision (in 2005/06 dollar terms). This is primarily the result of projects that were delayed from 2004/05 as discussed in last year's report.

The largest deferred projects contributing to the higher than forecast expenditure in the 2005/06 financial year are:

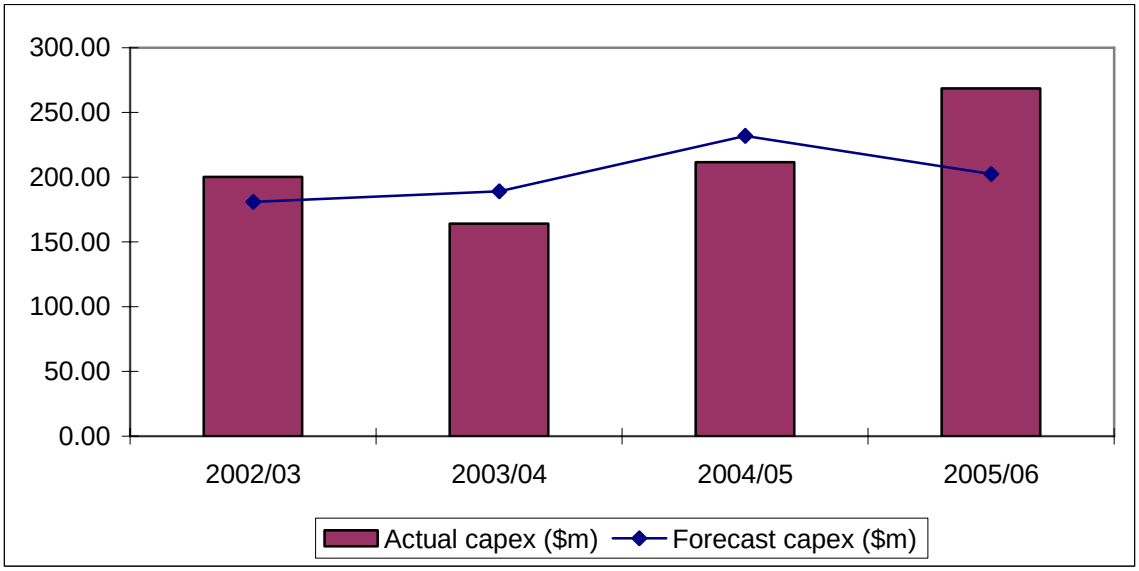
- Beresfield Subtransmission Substation construction delayed resulting in $3m additional expenditure in 2005/06,
- Network Metering Projects delayed resulting in an additional $1.5m expenditure in 2005/06, and
- 132kV Connections to Haymarket and Campbell Street were delayed and increased costs by $6.5m in 2005/06.

Despite the additional expenditure this year, Energy Australia's overall capital expenditure for the current regulatory period is approximately $2.5m under the forecast nominal costs based on the ACCC's April 2005 transmission decision.

5.3.3 Powerlink

Powerlink recorded capex of $268.6m in 2005/06 which is $66.2m (or 33%) higher than forecast. This is also an increase over actual expenditure of $211.6m in 2004/05.

Chart 5.7 Actual and forecast capex for Powerlink, 2002/03 – 2005-06 ($nominal m)



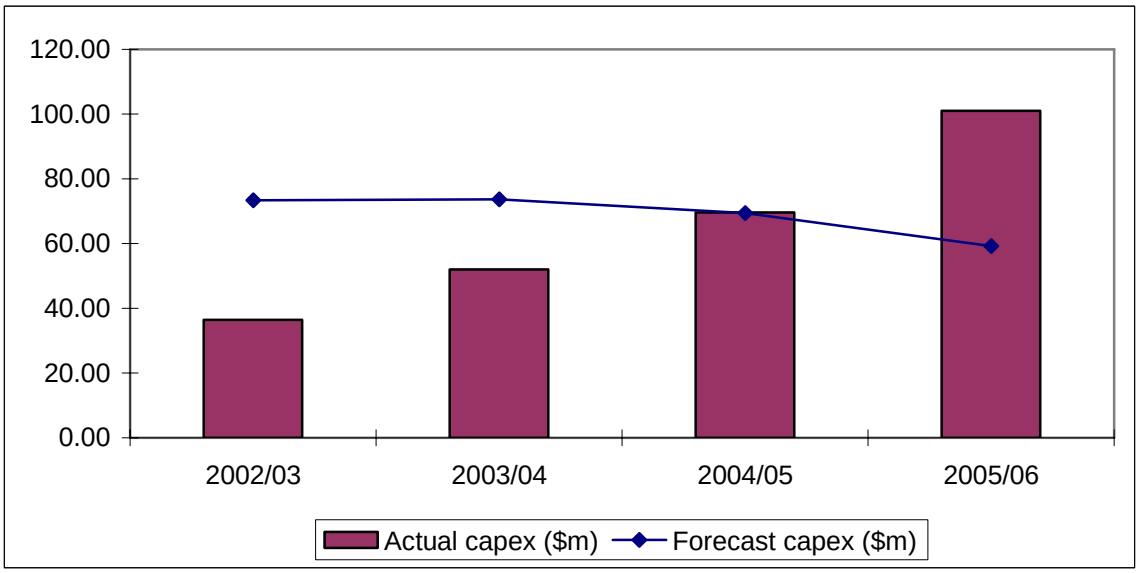
Powerlink commented that high demand in Queensland (higher than the rest of the NEM) and an environment of high input costs – materials, labour resources and contractor margins – have resulted in higher capital expenditure.

These factors have also been incorporated into Powerlink's revenue proposal to the AER for the coming regulatory period.

5.3.4 SP AusNet

This year SP AustNet's actual capex of $101.0m is significantly higher, $41.8m (71%) than the forecast figure of $59.2m, and represents a significant increase over actual spending for 2004/05 and 2003/04. The 2005/06 forecast capex of $59.2m is, however, below the 2004/05 figure of $69.4m[15].

Chart 5.8 Actual and forecast capex for SP AusNet, 2002/03 – 2005-06 ($nominal m)



SP AusNet commented that, as stated in previous reports, 2003/04 was the last year where in-service targets were expected to be substantially below the ACCC forecast due to the long lead times involved with many of the capital projects underway. As predicted, in 2005/06 the amount of capex placed in service increased substantially as more projects reached completion.

SP AusNet further commented that, as indicated in previous reports, it expects future years to be above the ACCC forecast as further large amounts of work in progress associated with the station rebuild program is commissioned.

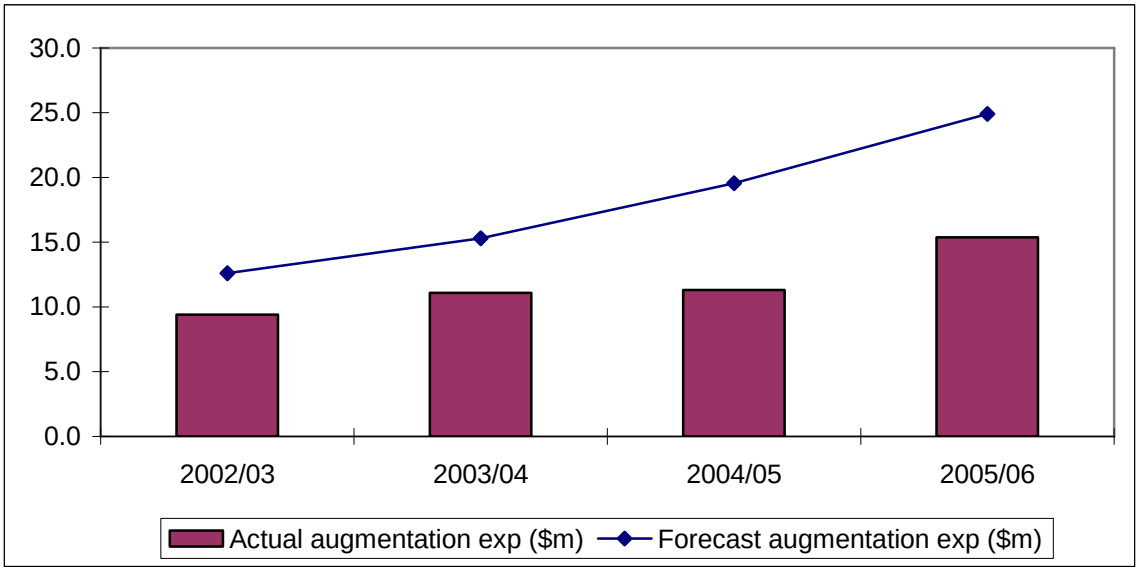
[15] SP AusNet's capex allowance only covers replacement and refurbishment capex – i.e. capex to update the existing network. Expansion (augmentation) of the Victorian network is planned and commissioned by VENCorp.

5.3.5 VENCorp

VENCorp reported augmentations to the value of $15.4m that was $9.5m (38%) lower than its forecast allowance of $24.9m. However, both actual and forecast capex were significantly higher than that recorded in 2004/05 of $11.3m and $19.5m respectively.

However unlike other TNSPs, VENCorp is a not-for-profit organisation. Therefore, VENCorp only recovers an amount which is equivalent to its actual expenditure and any under expenditure is retained by Victorian customers.

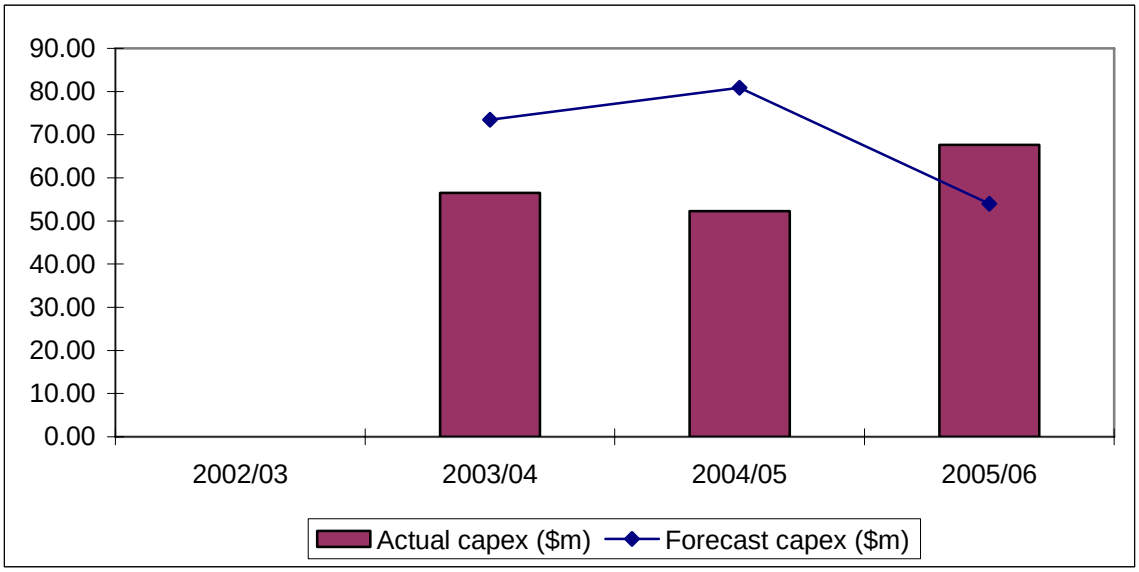
Chart 5.9 Actual and forecast augmentation for VENCorp, 2002/03 – 2005/06 ($nominal m)



5.3.6 Transend

Transend's actual capex for 2005/06 was $67.6m, which is $13.6m (25%) higher than the forecast figure of $54.0m. Transend's actual capex also increased significantly when compared to its 2004/05 figure of $52.3m. However, Transend's 2005/06 forecast capex of $54.0m is $26.9m (33.3%) less than the 2004/05 forecast of $80.9m.

Chart 5.10 Actual and forecast capex for Transend, 2003/04 – 2005-06 ($nominal m)

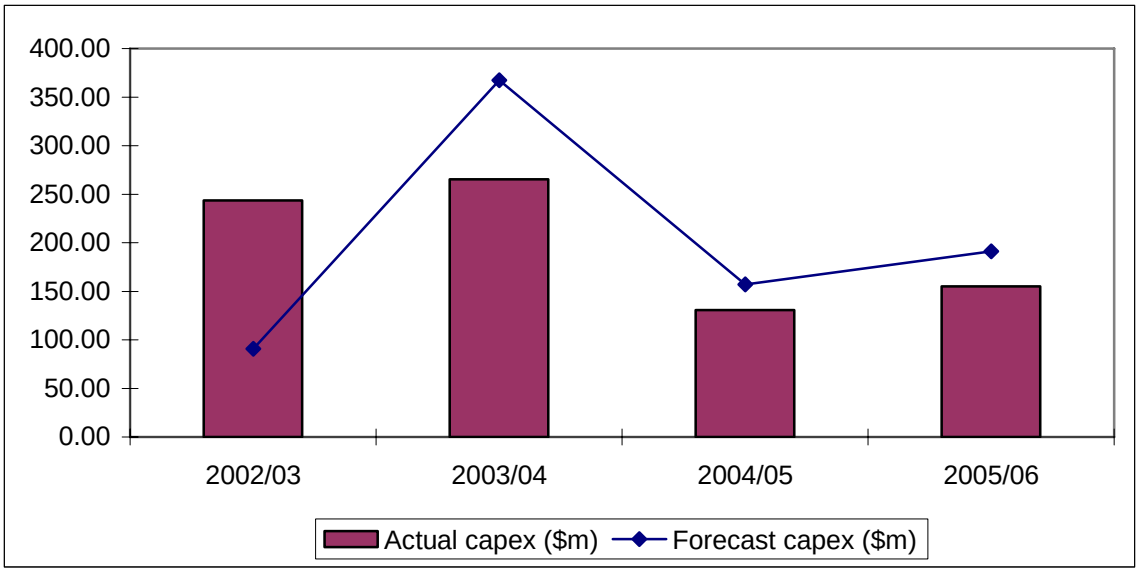


Transend advised that the figures reflect the value of commissioned capital expenditure rather than actual expenditure. Transend has actually continued to increase capital expenditure, however differences between the actual and forecast figures as detailed reflect that some significant works are still in progress.

5.3.7 TransGrid

TransGrid's recorded capex of $155.1m was $36.0m (18.8%) lower than the forecast figure of $191.1m. However, both actual and forecast capex are greater than the previous years figures of $130.6m and $157.2m respectively.

Chart 5.11 Actual and forecast capex for TransGrid, 2002/03 – 2005-06 ($nominal m)



TransGrid commented that the regulatory process for TransGrid's capital expenditure program for 2004-2009 was not finalised until April 2005, and well into the current period while the ACCC and TransGrid worked on the development of an ex-ante capex incentive regime. This created some uncertainty regarding the capex targets to apply to TransGrid beyond the first year of the regulatory control period. In addition, there has been an increased focus on delivering non-network solutions.

TransGrid stated that as a result, there have been some initial delays in achieving planning and regulatory approvals, and subsequent committed status for projects. The expenditure in 2004/05 and 2005/06 reflect this lack of certainty and the large number of projects in the planning and design phases. TransGrid's capital expenditure is ramping up in 2006/07 and will be fully committed in 2007/08 and 2008/09 to ensure TransGrid's full capital expenditure program is achieved, and service obligations are met.

6 Operating and maintenance expenditure

6.1 Introduction

A TNSP's operating and maintenance expenditure (opex) typically includes items such as wages and salaries, leasing costs, costs associated with maintaining transmission assets, input costs and other service contract expenses paid to third parties. As with capex, the NER requires the AER to seek to achieve an environment that fosters efficient opex practices. The AER's regulatory approach to determining a TNSP's opex allowance is outlined in the SRP. A key feature of the AER's approach is the incentive to reduce actual opex, balanced against incentives to improve service standards and statutory reliability obligations.

As a first step in the incentive scheme, the AER sets opex targets for each TNSP as part of the revenue determination process. The opex program is based on an assessment of the TNSP's capacity to achieve realistic efficiency gains given future demand, its service standards obligations and other relevant technical requirements. The AER incentive scheme then allows a TNSP to retain any underspend against target as a reward for fulfilling its obligations at a lower than forecast cost to customers. The AER's Efficiency Benefit Sharing Scheme (EBSS) allows the TNSP to retain these savings into the next regulatory period, before they are passed onto transmission customers.

This chapter presents the reported opex compared with forecasts included in TNSPs' revenue determinations made by the ACCC/AER. In this chapter, forecast figures for opex have been taken from final ACCC/AER decisions and adjusted for March quarter CPI figures for the later year of the relevant period.[16]

This chapter also includes a number of operating ratios that provide a useful insight into the underlying cost structures and characteristics of the TNSPs analysed.

6.2 Aggregate and comparative TNSP performance

6.2.1 Aggregate TNSP performance

Table 6.1 shows the difference between aggregate actual and forecast opex over the period 2002/03-2005/06. Aggregate actual opex (excluding grid support) for 2005/06 was $390.5m, around $13.4m (3.3%) below the forecast figure for 2005/06 and about 10% higher than the aggregate actual expenditure in 2004/05 of $353.8m.

Over the period 2002/03-2005/06 the annual difference between aggregate actual and forecast opex has not been significant, ranging from -7.8% in 2004/05 to 3.7% in 2002/03. In 2004/05 aggregate actual opex was about $30.0m less than forecast, resulting from significant differences between actual and forecast expenditure for individual TNSPs.

[16] For example, forecast opex for the period 2005/06 is adjusted for March quarter 2006 CPI. Note that SP AusNet's forecast opex figures have been adjusted for December quarter CPI figures to take account of its different financial year. CPI data is taken from the ABS website (www.abs.gov.au).

Table 6.1 Difference between aggregate actual and forecast opex ($nominal m), 2002/03 – 2005/06*

	Actual	Forecast	Difference ($m)	Difference (%)
2005/06	390.4	403.5	-13.1	-3.3%
2004/05	353.8	383.4	-29.5	-7.7%
2003/04**	341.8	344.7	-3.0	-0.9%
2002/03***	307.9	296.8	11.1	3.7%

Source: Regulatory Accounts 2002/03, 2003/04, 2004/05, 2005/06 and ACCC/AER revenue cap decisions.
*Excludes grid support payments
**Excludes Murraylink
***Excludes Murraylink and Transend

6.2.2 Comparative TNSP performance

Table 6.2 shows actual and forecast opex by TNSP for 2005/06. There are some significant differences between actual and forecast opex for individual TNSPs. The actual expenditure of each TNSP and the reasons for differences between actual and forecast opex are discussed in section 6.3 below. Opex figures are presented net of network (grid) support payments, which are shown separately in table 6.3 below to enhance comparability of opex figures[17].

Table 6.2 Actual and forecast opex by TNSP ($nominal m), 2005/06

	Actual	Forecast	Difference ($m)	Difference (%)
ElectraNet	41.8	48.4	-6.5	-13.5%
EnergyAustralia	28.1	24.8	3.3	13.4%
Murraylink	2.9	3.2	-0.3	-8.1%
Powerlink	97.3	96.1	1.2	1.2%
SP AusNet	61.5	67.9	-6.3	-9.3%
Transend	34.5	33.8	0.8	2.3%
TransGrid	120.7	122.8	-2.1	-1.7%
VENCorp	3.4	6.6	-3.2	-48.7%
Total	**390.4**	**403.5**	**-13.1**	**-3.3%**

[17] Grid support payments are excluded from opex data throughout the chapter.

Table 6.3 Grid support: 2002/03 – 2005/06 ($nominal m)

		2002/03	2003/04	2004/05	2005/06
ElectraNet	actual	4.4	3.7	4.6	4.2
	forecast	4.1	4.2	4.3	4.4
Powerlink	actual	10.7	11.2	15.3	21.5
	forecast	5.3	16.7	15.6	0.7
Transend*	actual				0.9

* Transend's grid support costs are treated as a pass through, so only actual costs are recovered
** Forecast grid support figures are taken from final ACCC/AER decisions and adjusted for March quarter CPI for the later year of the relevant period.

Powerlink commented that under the regulatory "pass-through" principles applying to Powerlink, the AER has approved Powerlink's actual grid support costs for the regulatory period.

Chart 6.1 illustrates actual and forecast opex by TNSP for 2005/06. The percentage actual and forecast opex is also shown on the right-axis.

Chart 6.1 Difference between actual and forecast opex, 2005/06

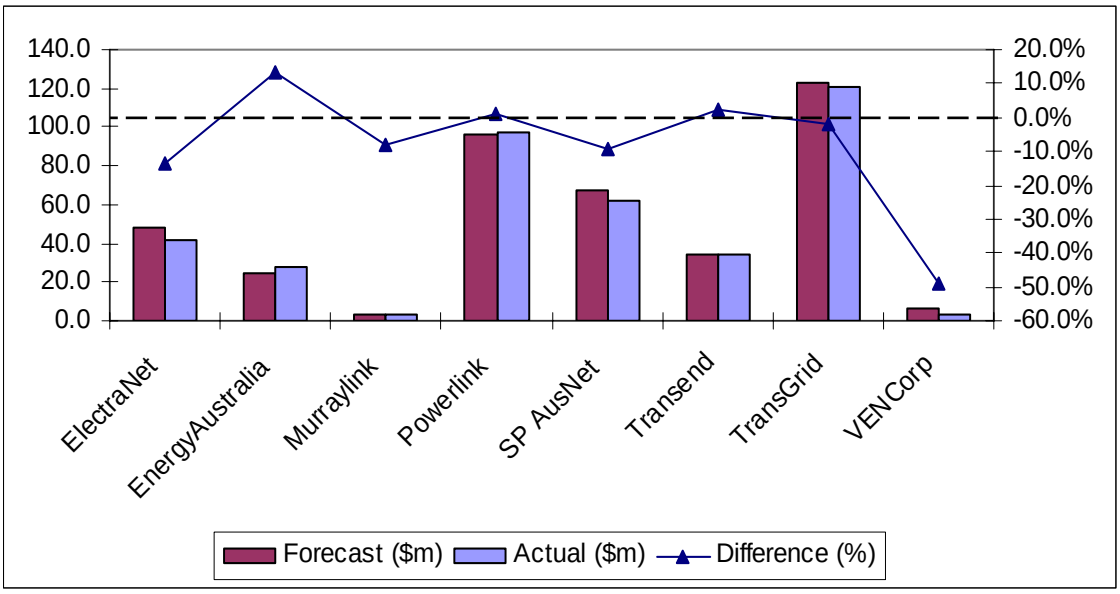
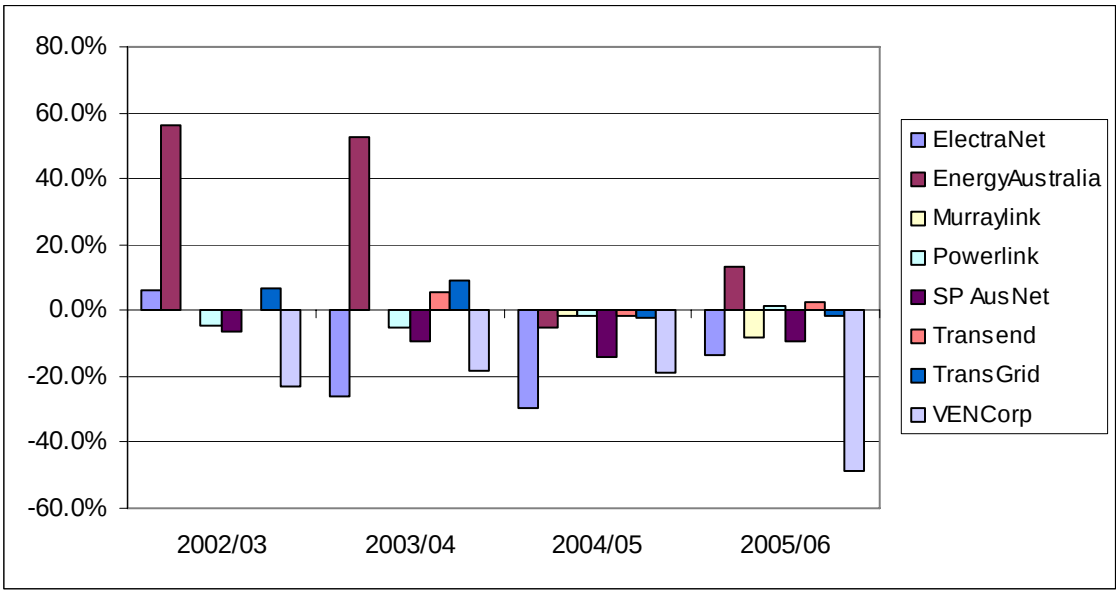


Chart 6.2 shows, for all TNSPs, the percentage difference between actual and forecast opex over the period 2002/03 to 2005/06. Over the four year period the annual percentage difference between actual and forecast opex for all TNSPs was within a range of approximately 20% with only a few significant outliers including VENCorp in 2005/06 with an underspend close to 50% and Energy Australia with overspends of more than 50% in 2002/03 and 2003/04.

The AER considers that this analysis does not provide a definitive basis for comparisons between TNSPs because there are several factors affecting the comparability of TNSPs' reported opex outcomes. These can include varying load profiles, load densities, asset

age profiles, networks designs, local regulatory requirements, topography and climate. These were discussed in more detail in Chapter 2, which examines the different network characteristics of each of the TNSPs.

Chart 6.2 Percentage difference between actual and forecast opex, 2002/03 – 2005/06



6.2.3 Operating ratios

Charts 6.3, 6.4 and 6.5 below compare opex ratios for each TNSP. As noted, the AER considers that these ratios do not provide a definitive basis for comparisons between TNSPs due to differences in operating conditions and scale. These differences can explain some of the observed variance in ratios such as opex/line length.

Chart 6.3 shows the opex to line length ratio, which measures the relative cost to maintain a transmission network of a given length. Most TNSPs incurred actual opex of between $5,000 and $10,000 for each kilometre of line length operated over the period 2002/03-2005/06. ElectraNet has consistently had the lowest opex/line length ratio over the period 2002/2003-2005/06, followed closely by Powerlink.

Chart 6.3 Actual opex / Line length ($nominal 000's/km), 2002/03 – 2005/06

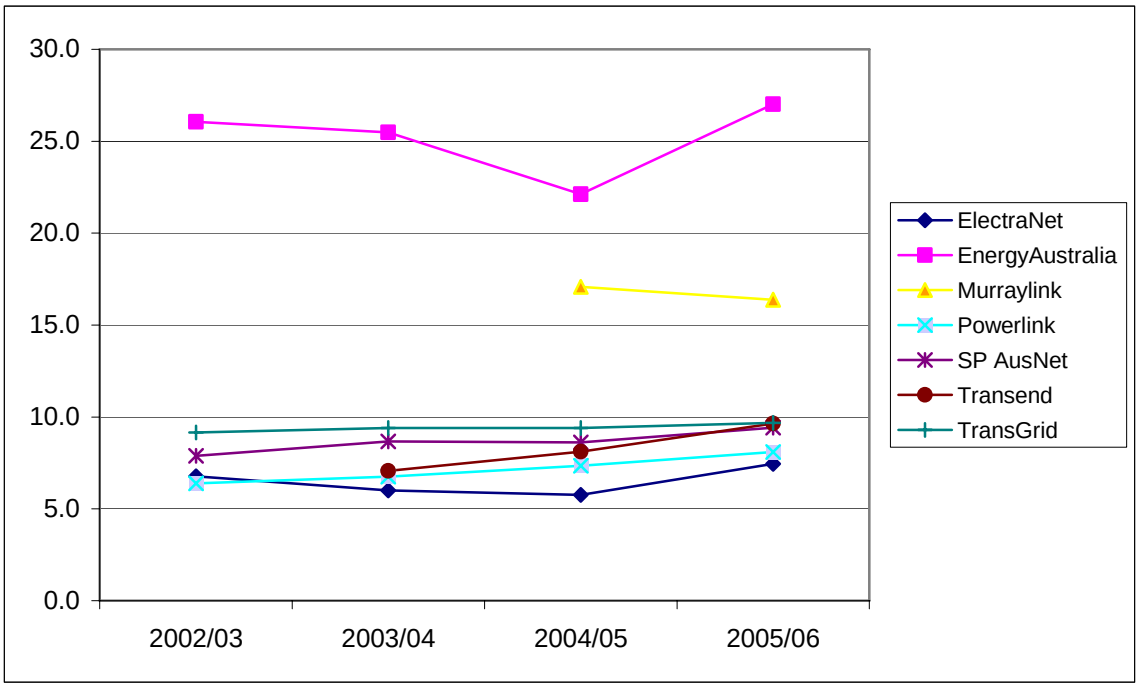
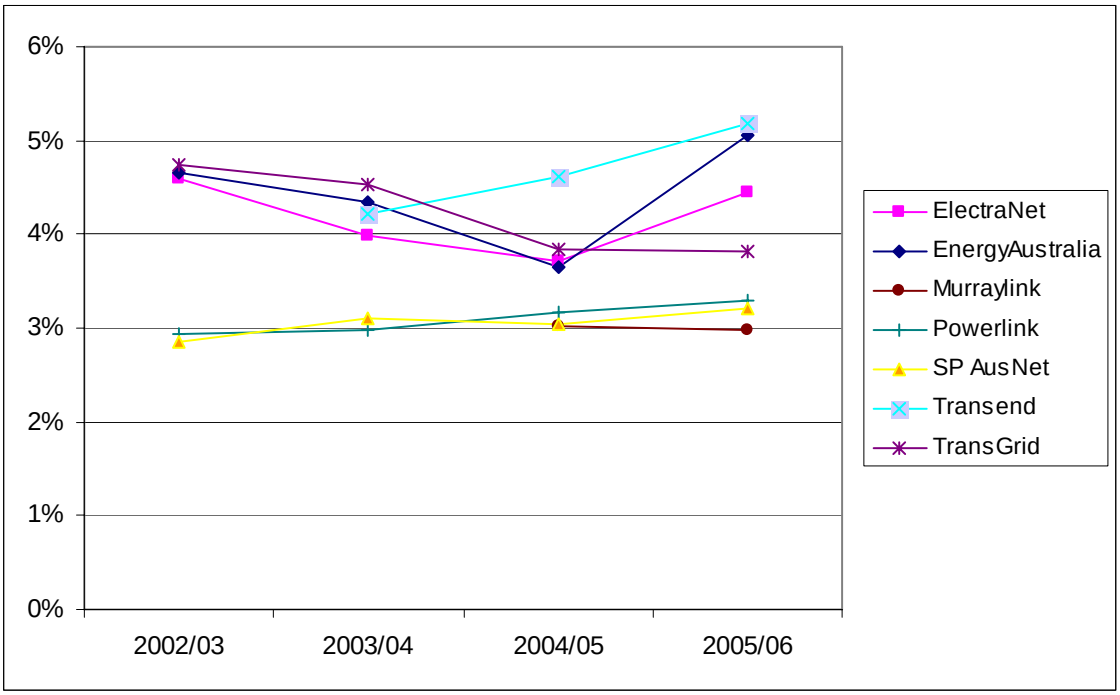


Chart 6.4 shows the opex to average RAB ratio, which is a measure of the operational expenditure incurred per dollar value of the regulatory asset base.

Murraylink had the lowest opex/RAB ratio of all TNSPs in 2005/06 and SP AusNet and Powerlink have consistently had the lowest ratios over the period 2002/03-2005/06. EnergyAustralia, ElectraNet and TransGrid all experienced a decline in the ratio over the period 2002/03-2004/05 and EnergyAustralia and ElectraNet experienced an increase from 2004/05-2005/06. Transend's opex/RAB ratio has consistently increased over the period 2003/04-2005/06.

Chart 6.4 Actual opex / Average RAB, 2002/03 – 2005/06

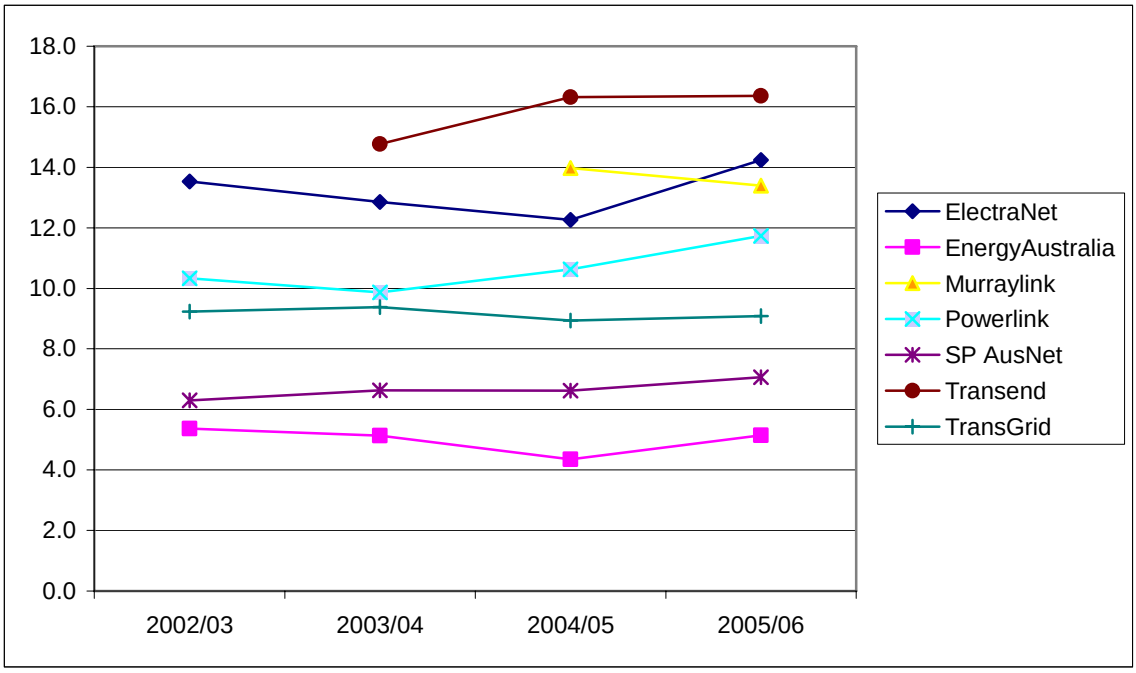


Note 1: The figure for ElectraNet's average RAB excludes an adjustment amount of $218,571 relating to easements.
Note 2: The figure for SP AusNet's average RAB excludes an adjustment amount of $660,663.

Chart 6.5 shows the opex to peak demand ratio, which is a measure of the cost to maintain a transmission network with a given maximum MW demand.

EnergyAustralia and SP AusNet have had the lowest ratio over the period 2002/03-2005/06 and most TNSPs have maintained a relatively constant opex/peak demand ratio over the period 2002/03-2005/06. However, ElectraNet experienced an increase over the period 2004/05-2005/06 and Powerlink's opex to peak demand has steadily increased from 2003/04-2005/06.

Chart 6.5 Actual opex / MW peak ($nominal 000's/MW), 2002/03 – 2005/06

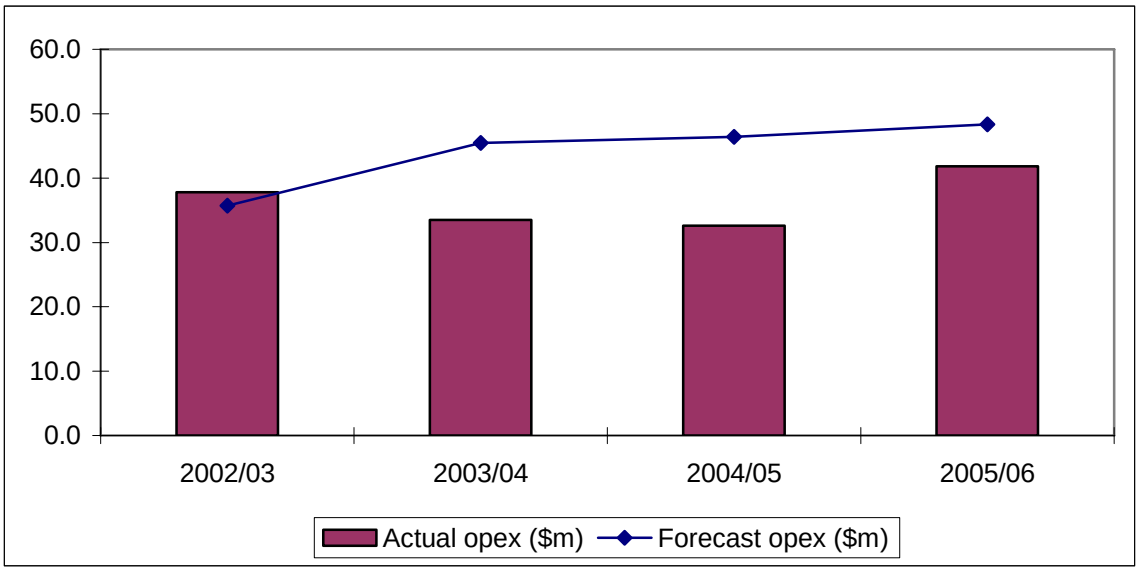


6.3 Individual TNSP performance

6.3.1 ElectraNet

ElectraNet recorded opex (excluding grid support) of $41.8m for 2005/06, 13.5% below its forecast expenditure of $48.4m. Actual opex for 2005/06 was around 28% higher than the 2004/05 figure of $32.6m. ElectraNet's actual expenditure in each of the last three years has been more than 10% below forecast expenditure.

Chart 6.6 Actual and forecast opex for ElectraNet, 2002/03 – 2005/06 ($nominal m)



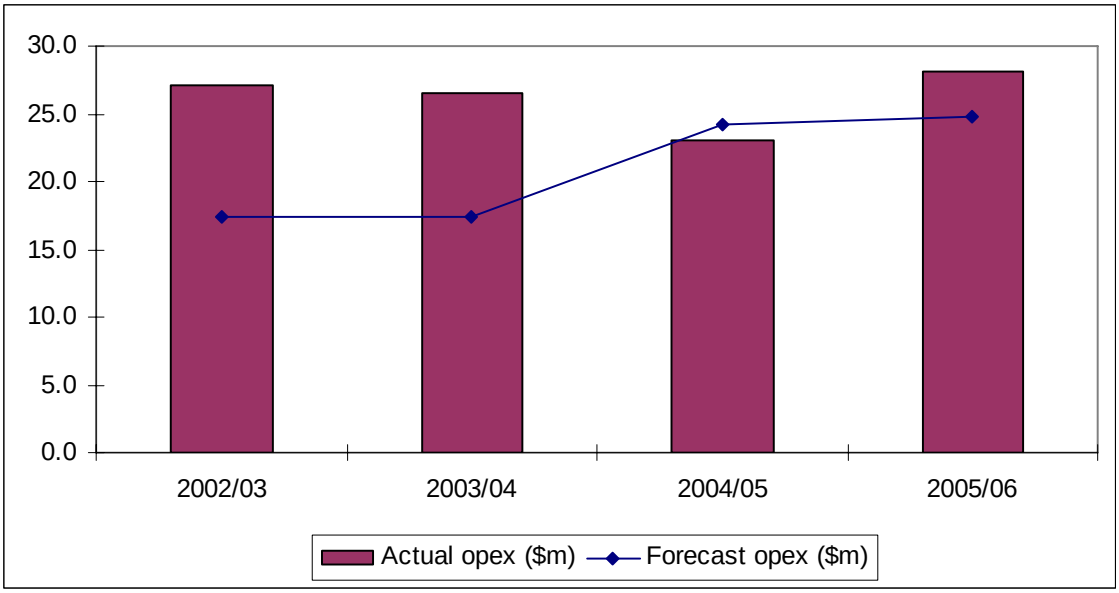
ElectraNet commented that it has actively sought opex efficiencies in response to the incentives included in the revenue cap decision.

ElectraNet further commented that it has undertaken a review of asset maintenance and refurbishment practices that will require increased routine and condition-based maintenance expenditure for the remainder of the regulatory period.

6.3.2 EnergyAustralia

EnergyAustralia's recorded opex of $28.1m in 2005/06 was around 13% above the forecast figure of $24.8m. Actual expenditure for 2005/06 was around 22% higher than the 2004/05 expenditure of $23.0m. EnergyAustralia has exceeded the opex forecasts in all years (2002/03-2005/06) except 2004/05 in which its actual opex figure was marginally below forecast expenditure. In 2002/03 and 2003/04 actual expenditure was more than 50% above forecast.

Chart 6.7 Actual and forecast opex for EnergyAustralia, 2002/03 – 2005/06 ($nominal m)



Energy Australia commented that operating expenditure for the 2005/06 financial year was approximately $2.8m above the nominal operating expenditure (in actual 2005/06 dollar terms) forecast in the ACCC's 2005 Determination.

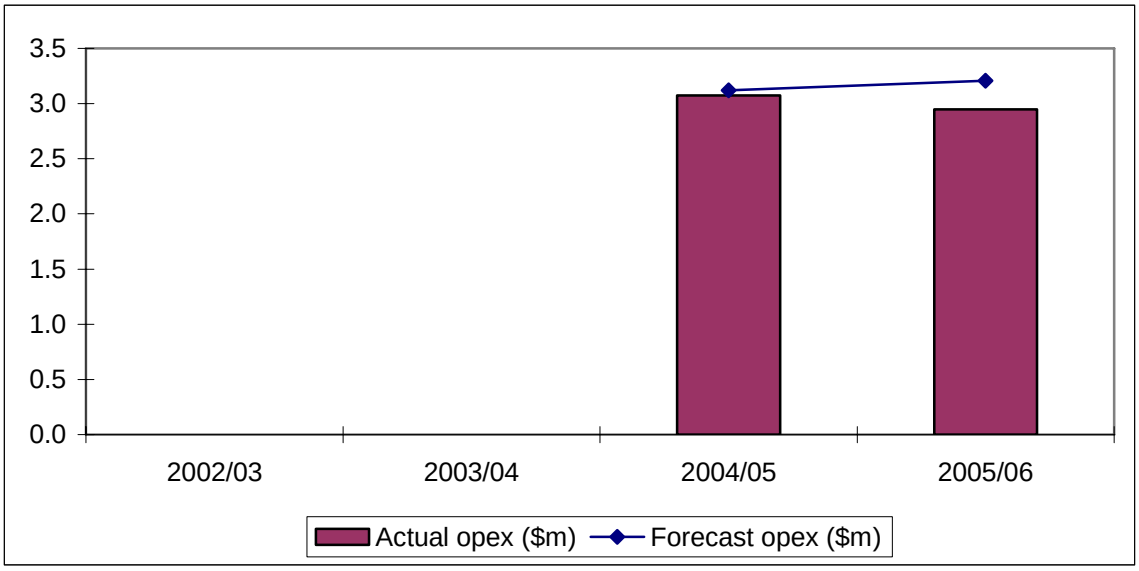
The main contributing factor to the result was a year-end adjustment to the employee retirement entitlements based on an actuarial assessment ($3.0m). Further, Energy Australia faces ongoing input cost pressures and increase in real labour costs that have been observed throughout the electricity industry.

Despite the additional expenditure in this year, Energy Australia's overall operating expenditure costs for the current regulatory period remains just $1.1m above the forecast nominal costs from the ACCC's 2005 Transmission Decision.

6.3.3 Murraylink

This year Murraylink recorded actual opex of $2.9m, about 8% lower than its forecast figure of $3.2m. Expenditure in 2005/06 was marginally below (4.1%) actual expenditure in 2004/05.

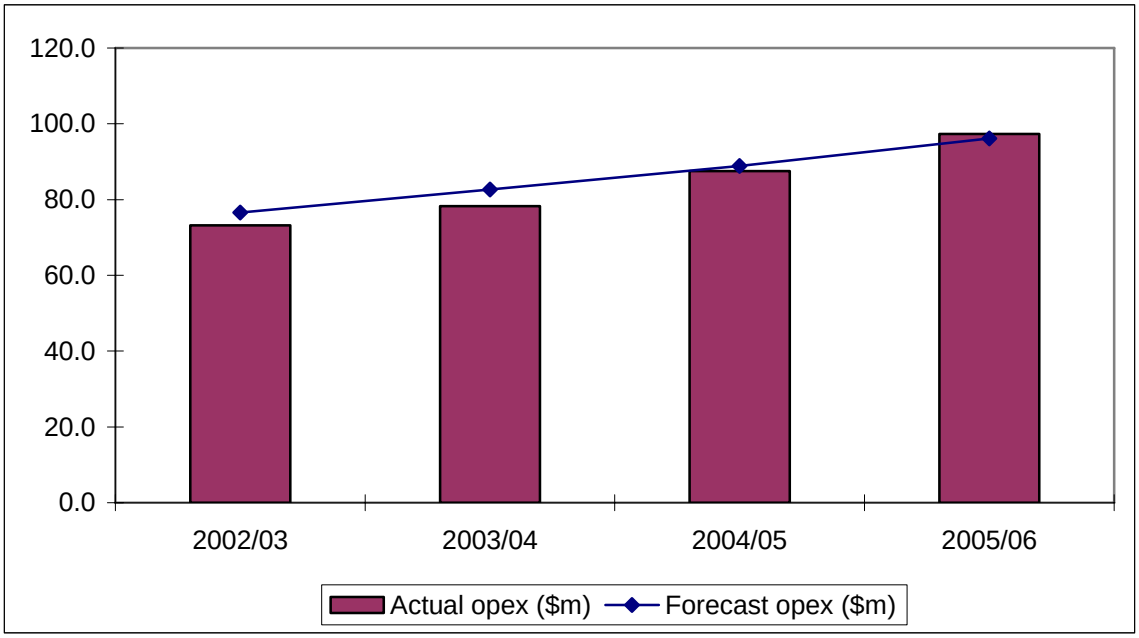
Chart 6.8 Actual and forecast opex for Murraylink, 2004/05 – 2005/06 ($nominal m)



6.3.4 Powerlink

Powerlink's recorded actual opex (excluding grid support) of $97.3m for 2005/06 was $1.2m (1.2%) higher than forecast expenditure of $96.1m. Actual expenditure for 2005/06, excluding grid support payments, was around 11% higher than actual expenditure of $87.5m in the previous year. The average annual increase in actual expenditure from 2002/03-2005/06 is around 8%.

Chart 6.9 Actual and forecast opex for Powerlink, 2002/03 – 2005/06 ($nominal m)



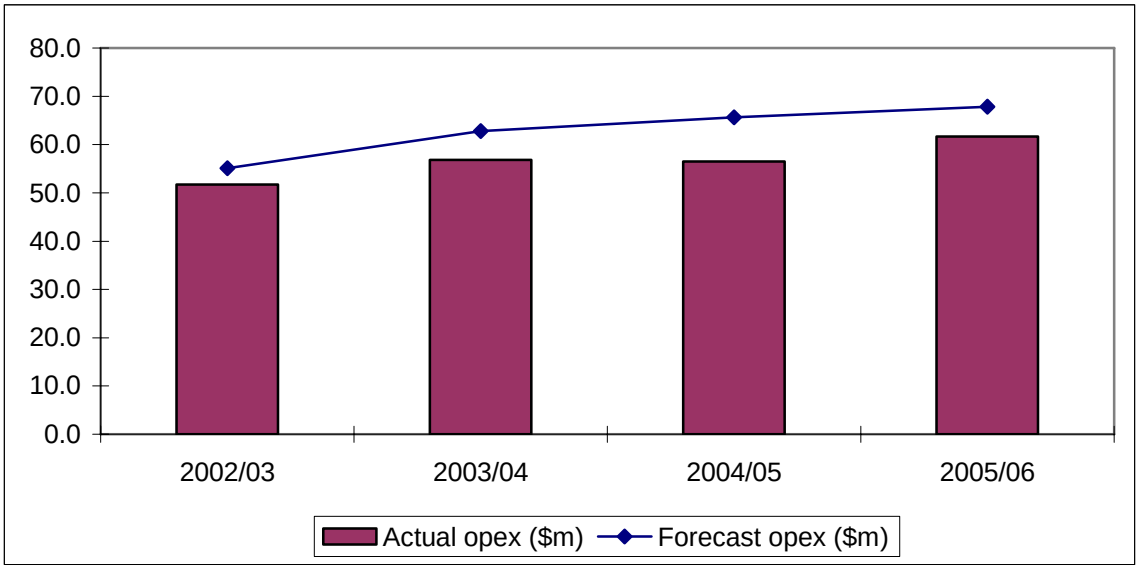
Powerlink commented that as is the case with capital works, an environment of high input costs due to external factors has resulted in higher operating expenditure.

In addition, Powerlink has been subject to increasing legislative obligations that result in increasing operating costs.

6.3.5 SP AusNet

This year SP AusNet's actual expenditure was $61.5m, about 6.3% lower than forecast expenditure of $67.9m. SP AusNet's actual expenditure for 2005/06 was $5.2m (9.2%) above actual expenditure in 2004/05 of $56.5m. SP AusNet's average annual increase in actual expenditure from 2002/03-2005/06 is around 6.2%, and actual expenditure over this period has been consistently below forecast.

Chart 6.10 Actual and forecast opex for SP AusNet, 2002/03 – 2005/06 ($nominal m)



* SP AusNet's forecast and Actual revenue/opex figures exclude an amount for a land easement tax pass-through. For 2005/06, the amount of the pass-through was approximately $77.8m.

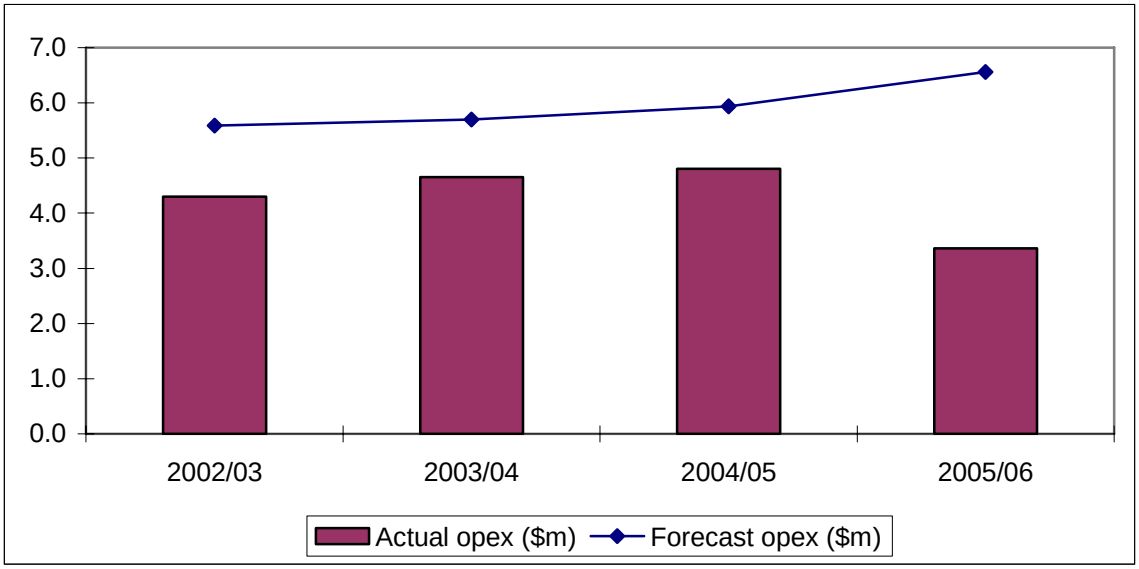
SP commented that it actively pursues efficiencies in response to the incentives offered under the current regime. SP AusNet expects efficiency benefits associated with the merger of the SP AusNet's distribution and transmission operations to affect the 2006/07 year. Despite this step change, SP AusNet continues to expect its opex costs to trend upwards in the future regulatory periods.

6.3.6 VENCorp

VENCorp's actual opex was $3.4m, significantly below its forecast expenditure of $6.6m. Expenditure in 2005/06 also represents a decline of around 30% compared to actual expenditure in 2004/05. The underspend of actual against forecast expenditure in 2005/06 reflects a continuing trend over the last four years.

However, unlike other TNSP's, VENCorp is a not-for-profit organisation. Therefore, VENCorp only recovers an amount which is equivalent to its actual expenditure and any under expenditure on the MAR is retained by Victorian customers.

Chart 6.11 Actual and forecast opex for VENCorp, 2002/03 – 2005/06 ($nominal m)

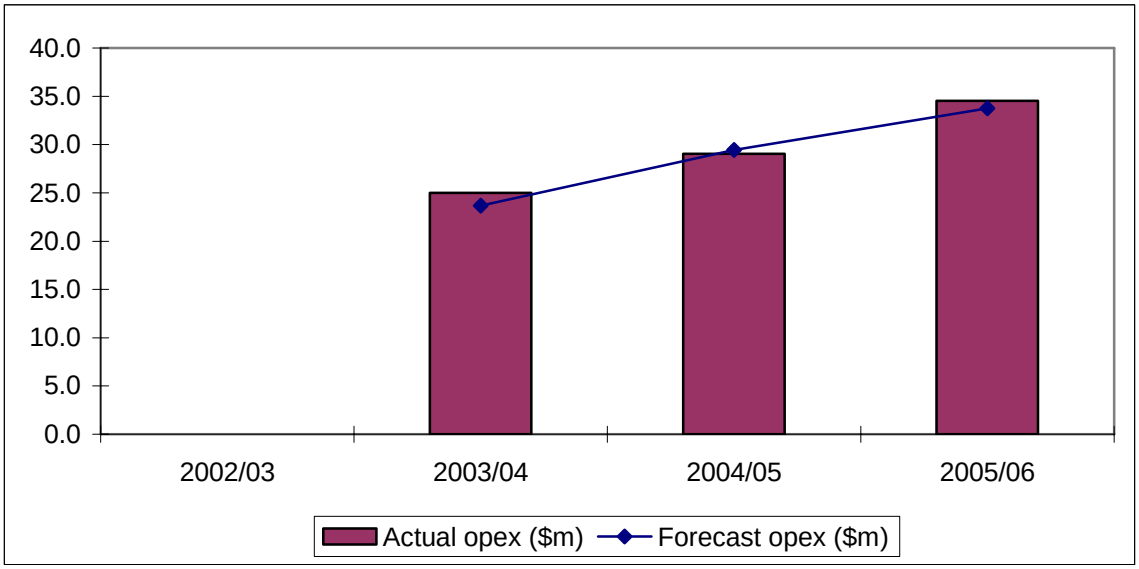


VENCorp commented that the 2005/06 result was primarily the result of adjustments to its defined benefit superannuation obligations and a lower allocation of VENCorp's corporate overheads than expected.

6.3.7 Transend

Transend's recorded opex of $34.5m in 2005/06 (excluding grid support) was 0.7m (2.3%) above forecast expenditure of $33.8m. Actual expenditure in 2005/06 represents an increase of $5.5m (19%) compared to expenditure of $29.0m in 2004/05. This bought the average annual increase in expenditure to around 17.5% from 2003/04-2005/06 and actual expenditure has been close to forecast in all years over this period.

Chart 6.12 Actual and forecast opex for Transend, 2003/04 – 2005/06 ($nominal m)

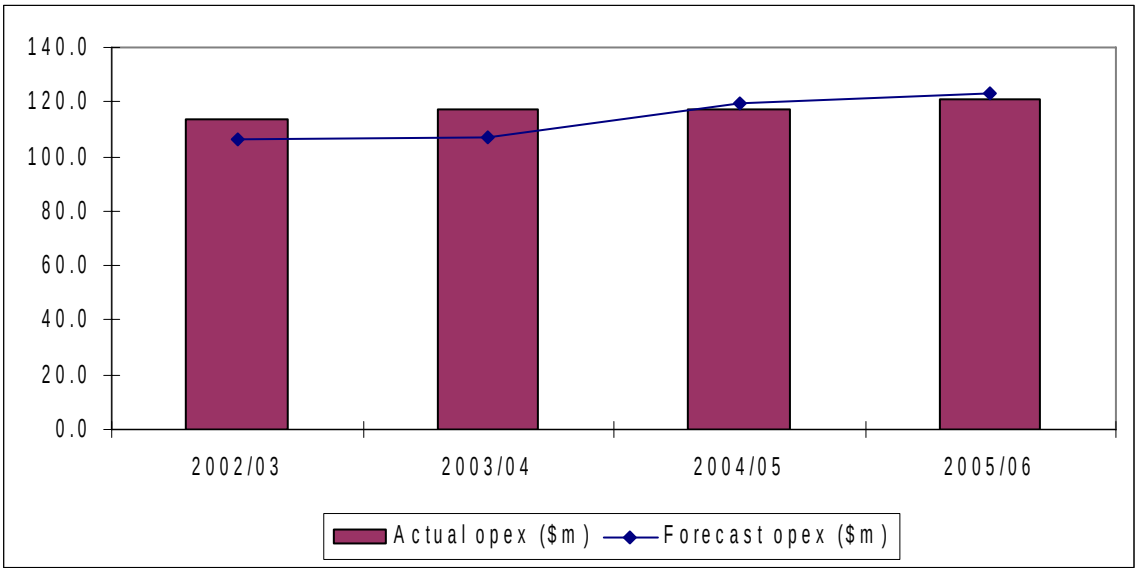


Transend commented that the increase in actual and forecast opex is broadly in line with the operating expenditure allowance recognised by the ACCC in its revenue cap decision for the period 2004-09. Increases from 2004/05 levels are also consistent with the increases anticipated in Transend's revenue application for this period.

6.3.7 TransGrid

TransGrid recorded actual opex of $120.7m for 2005/06, which was 1.7% below its forecast expenditure of $122.8m. Over the period 2002/03-2005/06 TransGrid's actual expenditure has remained relatively constant. The annual average increase in expenditure is around 2.0%, and annual actual expenditure has been similar to forecast expenditure for each year in the period 2002/03-2005/06.

Chart 6.13 Actual and forecast opex for TransGrid, 2002/03 – 2005/06 ($nominal m)



TransGrid commented that despite being set an efficiency target of 2% reduction in operating expenditure per annum in the 2004-2009 regulatory determination, TransGrid has been able to 'out perform' the regulatory ex-ante operating expenditure targets. However, with an expanding network and increasing costs, the cost savings are being absorbed and it is anticipated that out performance will be challenging to sustain for the remainder of the regulatory period finishing on 30 June 2009.

TransGrid further commented that it will continue to review its processes and seek further cost savings in an attempt to benefit from the operating expenditure efficiency incentive scheme.

7 Service standards

7.1 Background

In accordance with the provision of the NER, the AER is required to determine each TNSP's revenue cap. Under a revenue cap, TNSPs are unable to increase their revenue above the MAR. The only way a TNSP can increase its profits for regulated activities is by reducing its costs. While such cost reductions could occur from improved efficiency, they could also result from reducing service quality or increasing service risk, which would impose costs on other market participants. The AER's service standards scheme provides an incentive to address this potential decline in service levels.

The ACCC published Service Standards Guidelines (guidelines) on 12 November 2003 and the AER adopted these guidelines in August 2005. The guidelines seek to balance the cost efficiency incentive above with the need to provide a secure and reliable network service. The guidelines outline the AER's approach to establishing service standards and a PI Scheme within the revenue cap framework set out in the NER.

7.2 Performance Incentive Scheme

The PI Scheme is aimed at deterring TNSPs from cutting costs that would reduce service standards. The scheme is forward-looking and uses targets based on historical performance to compare future performance by a TNSP within a regulatory period. Following the measurement of performance against the established service standards targets, a TNSP's MAR can be adjusted by the prescribed amount. Therefore, the scheme provides TNSPs with a financial incentive to improve service performance and financial penalties for deterioration in service performance. These financial incentives and penalties affect the TNSPs annual revenue calculation. The PI Scheme also ensures that TNSPs consider how their network operations are valued in the NEM. The guidelines set out five core performance measures:

- transmission circuit availability
- average outage duration
- frequency of lost supply events
- inter-regional constraints
- intra-regional constraints

The standard definitions of these performance measures are outlined in Schedule 1 of the guidelines. Both the inter and intra-regional constraint measures are referred to as market impact performance measures. These measures are still being developed by the AER and presently the PI Scheme only uses the first three measures listed above.

As noted, the PI Scheme uses the TNSP's historical performance in relation to a specific measure as a target for future performance. The AER also takes into account the impact of planned capex on performance. The performance targets are then set in each revenue

cap decision and last the duration of the regulatory period. Performance benchmarks and the weighting of performance measures are based on factors unique to each TNSP, therefore, performance benchmarks vary between individual TNSPs.

The financial incentive or penalty is calculated using the formula set out in the guidelines and in each TNSP's revenue cap decision. This formula applies a weighting to each performance measure. To date the financial incentive (or penalty) has been limited to one per cent of each TNSPs MAR for that year, which reflects the relatively early stage of development of the service standards incentive scheme. However, there is flexibility under the current arrangements for the incentive to be altered as the scheme is further developed.

The new clause 6A.7.4 of the NER requires the AER to publish Service Target Performance Incentive Scheme Guidelines (STPIS) by 28 September 2007. The STPIS must comply with clause 6A.7.4(b) of the NER. The AER intends the STPIS to promote the NEM objective and principles set out in the NER by encouraging TNSPs to consider how their actions are valued by customers and how their investment and operational decisions can affect market outcomes. The aim of the revised requirements is to particularly encourage TNSPs to improve the reliability of the transmission networks at times which are most valued by transmission customers and on those elements of the transmission network that are most important in determining spot prices. In developing the STPIS the AER must follow the consultation process outlined in clause 6A.20 of the NER.

7.2.1 Exclusions

To maintain the integrity and appropriate balance of performance incentives the guidelines permit TNSPs to exclude certain categories of events. The nature and number of excludable events differs between TNSPs.[18] An event may be excluded if it was outside of the TNSP's control or the event resulted from the actions of a third party. All TNSPs are permitted to exclude 'force majeure' events from their performance calculations provided the AER is satisfied that each event satisfies the appropriate definition.

When considering the classification of an event as being force majeure, the AER will consider the following:[19]

- was it unforeseeable and its impact extraordinary, uncontrollable and not manageable
- does this 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.

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[18] See Appendix B

[19] AER Transmission Network Standards Guidelines, August 2005, Schedule 2, pg 46

7.2.2 Market Impact Transparency Report

To assess the possibility of further refining incentives relating to the impact of transmission constraints, a service standards working group has been formed. The working group's efforts led to the development of the Decision - Indicators of the Market Impact of Transmission Congestion. The AER's has subsequently released reports of the same title for the 2003-04, 2004-05 and 2005-06 financial years which include the Marginal Cost of Constraints (MCC), Outage Cost of Constraints and Total Cost of Constraints (TCC).

Work relating to the development of market impact parameters is continuing with the intent of devising one or more economic incentive parameters for inclusion in the AER's STPIS. The AER is currently developing an issues paper and will consult with its working group and industry on the development of these parameters. The AER will incorporate any necessary amendments or additional parameters into the STPIS as a result of this work.

7.3 Implementation of the scheme

The PI Scheme for 2005 was implemented through TNSP revenue caps set under clause 6.2.4(b) of the NER (as it applied to the 2005 calendar year). In setting a revenue cap, clause 6.2.4(c) requires the AER to take into account the TNSP's revenue requirement, having regard for, amongst other things, the service standards applicable to the TNSP.

The AER has so far applied the service standards regime to the following transmission entities:

- Directlink[20]
- Powerlink[21]
- ElectraNet
- EnergyAustralia
- Murraylink
- SP AusNet
- Transend
- TransGrid

The PI Scheme measures performance based on calendar year rather than by financial year. This results in a three to six-month lag between service standards performance being measured and the financial incentive being added to or subtracted from the MAR based on a July-June financial year[22]. This allows sufficient time for the data submitted by TNSPs to be audited and the resultant financial incentive or penalty to be included in the following financial year's MAR.

[20] Directlink will report is first performance against its service standards from 1 July 2006
[21] Powerlink will report its first performance against its service standards from 1 July 2007
[22] SP AusNet is the exception as they operate under a Singapore financial year (April-March)

7.4 Annual Compliance Review

TNSPs are required under the revenue cap decisions and the guidelines, to report their service standards performance each year to the AER. Clause 6.5.7(b) of the NER (as it applied to the 2005 calendar year) also requires each TNSP to publish its service standards results based on the measures set out in their revenue cap decision. The AER reviews each report to ensure that the reporting of performance, treatment of exclusions and proposed incentives by TNSPs comply with the guidelines and their respective revenue cap decisions. At the conclusion of the review process the AER notifies all relevant TNSPs of their performance outcome and resultant financial incentive or penalty for that year.

7.4.1 Summary of Performance 2005

During 2006, the AER conducted its third service standards compliance review. The AER engaged Sinclair Knight Merz (SKM) to audit the performance reports provided by TNSPs and assist in determining the appropriate financial incentive or penalty to be applied to each TNSP. This review included six TNSPs. Directlink and Powerlink were not included as they will not commence reporting performance against their service standards until 1 July 2006 and 1 July 2007 respectively.

Table C shows the financial incentive based on performance outcomes for each relevant TNSP for the 2003, 2004 and 2005 calendar years.

Table 7.1 Financial Incentives for 2003 – 2005

	2005 calendar year ($000s)	2005 s-factor* %	2004 calendar year ($000s)	2004 s-factor* %	2003 calendar year ($000s)	2003 s-factor* %
ElectraNet	1,168.9	0.71	997.7	0.63	1,118.7	0.74
EnergyAustralia	637.5	0.67	456.4	1.00	N/A	N/A
Murraylink	(19.6)	(0.15)	(87.8)	(0.80)	N/A	N/A
SP PowerNet**	272.7	0.09	609.8	0.22	(75.0)	(0.03)
Transend	207.6	0.19	573.9	0.55	N/A	N/A
TransGrid	3,115.0	0.70	2,007.3	0.93	N/A	N/A

*Financial incentives are capped at ± 1.0% of each TNSP's MAR for that year, except in the case of SP AusNet. For example, an s-factor of 0.50 would result in a financial incentive of 0.5% of the TNSP's MAR, or half of the potential maximum financial incentive available under the PI Scheme.
**SP AusNet's financial incentive is capped at + 0.5% of its MAR, as SP AusNet is also required to comply with the Victorian Government's performance incentive regime administered by VENCorp.

A detailed summary of each TNSPs performance outcome for the 2005 calendar year can be found in Appendix B. Complete TNSP performance reports for 2003 - 2005 can be found on the AER website (www.aer.gov.au).

7.4.2 Regulatory Report and Service Standards

Service standards data has been included in two previous Regulatory Reports to date: the 2002-03 report and the 2004-05 report. This data was omitted from the 2003-04 Regulatory Report due to the disparity between the service standards and regulatory

reporting periods affecting the availability of performance data. For the 2006 calendar year, service standards data will be progressively available for each TNSP at **www.aer.gov.au** during the first half of 2007**.**

Appendix A: Financial summary and indicators

A.1 ElectraNet

	2002/03	2003/04	2004/05	2005/06
Income statement ($nominal m)				
Transmission revenue (PS)	150.2	156.5	163.9	170.4
Opex (PS)	37.8	33.5	32.6	41.8
Grid support	4.4	3.7	4.6	4.2
Depreciation (PS)	38.5	37.6	40.2	44.6
EBIT (PS)	70.7	82.0	86.6	79.7
Balance sheet ($nominal m)				
Closing RAB	821.9	861.6	893.8	989.3
Total assets	1174.5	1220.3	1250.7	1372.9
Total debt (excl. SN)	817.5	837.7	843.7	876.4
Total liabilities (excl. SN)	865.4	893.4	901.1	1041.4
Total equity (inc. SN)*	309.1	327.0	349.6	331.5
Financial indicators				
Return on equity	-5.3%	1.4%	0.2%	-2.6%
Return on assets - PS	8.6%	9.7%	9.9%	8.5%
Gearing ratio	72.6%	71.9%	70.7%	72.6%
EBIT(PS)/Gross interest exp	0.8x	1.0x	1.0x	0.8x

*ElectraNet advise that credit rating agencies generally treat its shareholder notes (SN) as equity rather than debt for the purposes of determining its credit rating.

A.2 EnergyAustralia

	2002/03	2003/04	2004/05	2005/06
Income statement ($ nominal m)				
Transmission revenue (PS)	75.8	77.2	91.3	99.0
Opex (PS)	27.1	26.5	23.0	28.1
Depreciation (PS)	21.9	21.4	24.6	23.7
EBIT (PS)	27.0	28.9	44.1	48.0
Balance sheet ($ nominal m)				
Closing RAB	603.6	615.5	646.4	547.4
Total assets	630.2	646.3	674.4	650.9
Total debt	270.2	280.7	312.6	286.0
Total liabilities	321.5	338.6	378.8	435.1
Total equity	308.7	307.7	295.6	215.8
Financial indicators				
Return on equity	1.3%	2.1%	5.5%	5.6%
Return on assets - PS	4.6%	4.7%	7.0%	8.6%
Gearing ratio	46.7%	47.7%	51.4%	57.0%
EBIT(PS)/gross interest exp	1.3x	1.5x	2.1x	2.7x

A.3 Murraylink

	2004/05	2005/06
Income statement ($ nominal m)		
Transmission revenue (PS)	12.4	12.7
Opex (PS)	3.1	2.9
Depreciation (PS)	4.3	3.7
EBIT (PS)	5.0	6.0
Balance sheet ($nominal m)		
Closing RAB	100.1	97.9
Total assets	174.9	144.9
Total debt	175.9	167.1
Total liabilities	176.9	167.9
Total equity	-2.0	-23.0
Financial indicators		
Return on equity	-237.8%	-48.1%
Return on assets - PS	4.9%	6.1%
Gearing ratio	101.2%	115.9%
EBIT(PS)/gross interest exp	23.5x	154.1x

A.4 Powerlink

	2002/03	2003/04	2004/05	2005/06
Income statement ($nominal m)				
Transmission revenue (PS)	348.8	383.7	416.2	466.0
Opex (PS)	73.2	78.3	87.5	97.3
Grid support	10.7	11.2	15.3	21.5
Depreciation (PS)	99.1	105.8	114.0	124.4
EBIT (PS)	170.8	184.7	199.2	231.0
Balance sheet ($ nominal m)				
Closing RAB	2577.0	2683.9	2840.9	3070.3
Total assets	3050.5	3203.3	3370.0	3684.6
Total debt	1351.8	1412.4	1469.3	1645.3
Total liabilities	1658.4	1738.0	1802.3	2175.8
Total equity	1392.2	1465.3	1567.7	1508.7
Financial indicators				
Return on equity	5.8%	6.5%	6.8%	7.7%
Return on assets - PS	6.9%	7.0%	7.2%	7.8%
Gearing ratio	49.3%	49.1%	48.4%	52.2%
EBIT(PS)/gross interest exp	2.2x	2.3x	2.3x	2.4x

A.5 SP AusNet

	2002/03	2003/04	2004/05	2005/06
Income statement ($ nominal m)				
Transmission revenue (PS)	262.7	271.5	281.2	291.3
Opex (PS)	51.7	56.8	56.5	61.5
Depreciation (PS)	51.7	55.8	56.8	63.4
EBIT (PS)	166.3	164.0	179.5	164.3
Balance sheet ($ nominal m)				
Closing RAB	1812.8	1841.2	1880.4	1959.1
Total assets	2245.1	2287.3	2335.8	2945.2
Total debt	1432.8	1375.7	1529.1	1505.8
Total liabilities	1830.6	1809.1	1796.4	1948.2
Total equity	603.3	685.0	539.5	997.0
Financial indicators				
Return on equity	8.5%	9.9%	10.0%	-11.0%
Return on assets - PS	9.2%	8.9%	9.6%	8.6%
Gearing ratio	70.4%	66.8%	73.9%	60.2%
EBIT(PS)/gross interest exp	1.7x	1.9x	2.0x	1.8x

A.6 VENCorp

	2002/03	2003/04	2004/05	2005/06
Income statement ($ nominal m)				
Transmission revenue	261.8	222.2	312.3	250.6
Less network charges	229.2	239.0	292.3	263.2
Total electricity transmission revenue	32.6	-16.8	20.0	-12.6
Other revenue	1.4	1.2	2.2	4.1
Total revenue	34.0	-15.6	22.2	-8.5
Less expenses (opex)	4.3	4.7	4.8	3.4
Net result for period	29.7	-20.3	17.4	-11.8
Balance sheet ($ nominal m)				
Current assets	51.7	29.4	51.6	39.6
Non-current assets	0.3	0.2	0.1	0.1
Total assets	52.0	29.5	51.7	39.7
Current liabilities	24.9	22.6	27.4	28.4
Non-current liabilities	0.5	0.6	0.5	0.0
Total liabilities	25.4	23.2	27.9	28.4
Net assets	26.6	6.3	23.8	11.3
Stakeholders funds				
Contributed capital	0.0	0.0	0.0	0.0
Accumulated surplus	26.6	6.3	23.7	11.3

A.7 Transend

	2003/04	2004/05	2005/06
Income statement ($ nominal m)			
Transmission revenue (PS)	85.9	108.0	115.0
Opex (PS)	25.0	29.0	34.5
Depreciation (PS)	29.4	33.8	34.1
EBIT (PS)	31.8	42.6	45.1
Balance sheet ($nominal m)			
Closing RAB	615.8	644.4	689.8
Total assets	648.6	697.7	782.2
Total debt	35.1	52.9	92.8
Total liabilities	97.0	125.7	253.7
Total equity	551.7	572.0	528.5
Financial indicators			
Return on equity	3.6%	4.9%	6.8%
Return on assets - PS	5.4%	6.8%	6.8%
Gearing ratio	6.0%	8.5%	14.9%
EBIT(PS)/gross interest exp	15.5x	17.4x	10.9x

A.8 TransGrid

	2002/03	2003/04	2004/05	2005/06
Income statement ($ nominal m)				
Transmission revenue (PS)	389.9	407.8	435.3	459.5
Opex (PS)	113.8	117.0	117.3	120.7
Depreciation (PS)	108.0	111.7	118.5	126.0
EBIT (PS)	165.1	182.9	199.4	212.8
Balance sheet ($ nominal m)				
Closing RAB	2427.1	2726.6	3102.2	3223.5
Total assets	2807.4	3383.4	3732.6	3750.0
Total debt	1388.7	1523.6	1519.7	1455.3
Total liabilities	1684.0	1866.9	1864.7	2129.5
Total equity	1123.5	1516.4	1867.9	1620.5
Financial indicators				
Return on equity	4.2%	6.3%	4.6%	7.1%
Return on assets - PS	6.9%	7.1%	6.5%	6.7%
Gearing ratio	55.3%	50.1%	44.9%	47.3%
EBIT(PS)/gross interest exp	1.9x	2.1x	1.9x	2.1x

Appendix B: Service standards performance

Since the formulation of the guidelines (refer to chapter 7), six TNSPs have had service standards and performance incentives included in their revenue cap decisions. A detailed summary of the results of the AER's 2005 review is outlined below.

B.1 ElectraNet

Introduction

On 3 February 2006, ElectraNet submitted its annual performance report for the 2005 calendar year. ElectraNet reported an overall improvement against its historical performance equivalent to an incentive bonus of $1 172 900. This was calculated using an s-factor of 0.71% of ElectraNet's annual regulated revenue.

Performance measures

The performance measures which apply to ElectraNet are outlined in its revenue cap decision.[23] They are:

- transmission line availability
- frequency of lost supply events
    - greater than 0.2 system minutes
    - greater than 1.0 system minutes
- average outage duration

Table B1 shows ElectraNet's performance against these measures for 2005 and the resulting financial incentive.

Exclusions

ElectraNet proposed the following as exclusions from its 2005 performance:

- major line works
- a separation event
- customer initiated outages
- switching to manage network reliability
- failure of third party equipment.

[23] ACCC, *Decision South Australian transmission network revenue cap 2003-2007/08*, 11 December 2002.

ElectraNet also proposed to exclude transmission line outages and load shedding events associated with bush fires across the Eyre Peninsula on 11 January 2005 as force majeure events.

Consultant's report

The AER engaged Sinclair Knight Merz (SKM) to audit ElectraNet's performance report. SKM advised the AER that ElectraNet's performance report was free from material errors and was submitted in accordance with the guidelines. It noted that ElectraNet correctly applied the equations specified in its revenue cap decision, although it identified a rounding error in the performance result for one measure used to calculate its financial incentive.

SKM considered ElectraNet's proposed exclusions were consistent with the requirements of the revenue cap decision and guidelines.

SKM recommended:

- the s-factor and financial incentive calculations be accepted as free from material errors (with the exception of the rounding error)
- major capital works be included in performance calculations but capped at 14 days as consistent with previous reviews
- the Eyre Peninsula bush fires of 11 January 2005 satisfied the definition of a force majeure event and should be excluded
- ElectraNet receive an s-factor of 0.72% of annual regulated revenue. This result was later found to have been miscalculated and corrected in the AER's final decision.

AER's conclusions

The AER had no objections to the exclusions proposed by ElectraNet. The AER considered an increase of $1 168 900 to ElectraNet's revenue in the 2006-07 year, based on an s-factor of 0.71%[24], would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and ElectraNet's report on service standards.

[24] This s-factor differs from that recommended by SKM as the AER identified some errors in SKM's classification of certain excluded events.

Table B1: Measures, results and incentives

Performance indicator	Break even	2004	2005
Transmission line availability (%)	99.25	99.38	99.57
Frequency of lost supply events > 0.2 minutes	5-6	7	0
Frequency of lost supply events >1.0 minutes	2	0	0
Average outage duration (minutes)	100-110	48.92	110.35
s-factor (%)	0	0.63	0.71
Net financial incentive ($000)	0	997.7	1 168.9

B.2 EnergyAustralia

Introduction

On 17 February 2006, EnergyAustralia submitted its annual performance report for the 2005 calendar year. EnergyAustralia reported an overall improvement against its historical performance and proposed an incentive bonus of $638 000. This was calculated using an s-factor of 0.67% of EnergyAustralia's annual regulated revenue.

Performance measures

EnergyAustralia is subject to one financial incentive performance measure, Transmission circuit (feeder) availability, as outlined in EnergyAustralia's transmission revenue cap decision.[25]

EnergyAustralia is also required to report performance data on a number of other performance measures, but these are not subject to financial incentives at the present time.

Table B2 shows EnergyAustralia's performance against transmission circuit (feeder) availability for 2005 and the resulting financial incentive.

Exclusions

EnergyAustralia did not propose any exclusion events for the 2005 calendar year.

Information systems and processes

During the 2005 performance review, SKM identified a number of errors in EnergyAustralia's underlying performance data. These errors had a significant and material impact on EnergyAustralia's performance results. As a result, the AER did not accept EnergyAustralia's initial performance report and EnergyAustralia was required to submit a revised report for the purpose of determining an appropriate s-factor and financial incentive.

[25] ACCC, *Decision NSW and ACT transmission network revenue cap – EnergyAustralia 2004-05 to 2008-09*, 27 April 2005.

In April 2006, EnergyAustralia submitted its revised performance report for 2005.

SKM conducted a review of EnergyAustralia's performance and thorough audit of its underlying performance data. SKM recommended a number of short and long-term solutions to improve EnergyAustralia's performance recording and reporting systems and processes. EnergyAustralia provided the AER with a work plan to implement these recommendations.

The errors in EnergyAustralia's underlying performance data were found by SKM to have been the result of the manual reporting systems and processes used by EnergyAustralia. Robust systems and processes had not been put in place by EnergyAustralia, in particular during the inputting of data at control centres, to improve the accuracy and reliability of its manual reporting systems.

These concerns with EnergyAustralia's information systems had been highlighted by SKM and the AER during the 2004 review and EnergyAustralia had been requested to make improvements to its systems. In the 2004 review, EnergyAustralia stated that the manual recording and reporting systems would be replaced by an automated distributed network management system (DNMS) in early 2007. EnergyAustralia still intends to implement these systems as a long-term solution however it now expects them to be commissioned in July 2008.

Consultant's report

The AER engaged SKM to audit EnergyAustralia's initial and revised performance report for the 2005 calendar year period.

In addition to changes to EnergyAustralia's recording and reporting systems, SKM recommended that EnergyAustralia receive an s-factor of 0.67% of annual regulated revenue.

SKM was not able to verify the figures on EnergyAustralia's non-incentivised measures which were included in EnergyAustralia's second report.[26]

AER's conclusions

The AER considered an increase of $637 460 to EnergyAustralia's revenue in the 2006-07 year, based on an s-factor of 0.67%, would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and EnergyAustralia's report on service standards.

[26] EnergyAustralia, *2005 Transmission Non-incentive Service Standards - Report*

Table B2: Measures, results and incentives

Performance indicator	Break even	2004#	2005
Transmission feeder availability (%)	96.96	98.57	98.30
s-factor (%)	0	1	0.67
Net financial incentive ($000)	0	456.3	637.5

This only represents a financial incentive for performance over the period 1 July 2004 to 31 December 2004 because EnergyAustralia's regulatory period commenced on 1 July 2004.

B.3 Murraylink

On 31 January 2006, Murraylink submitted its annual performance report for the 2005 calendar year. Murraylink calculated a financial penalty of $19 327. This was an improvement upon its performance in 2004 but was still below its performance target.

Performance measures

The performance measures implemented for Murraylink were defined in its revenue cap decision.[27] These are:

- total circuit availability
- forced outage circuit availability in peak periods
- forced outage energy availability in off-peak periods

Table B3 shows Murraylink's performance against these measures for 2005 and the resulting financial incentive.

Exclusions

Murraylink proposed to exclude eight forced and seven scheduled outages in 2005, these were all associated with third parties.

Murraylink proposed to exclude one forced outage associated with an explosion on 16 October 2005 as a force majeure event. This event was caused by the failure of six insulated gate bipolar transistor's (IGBT) that resulted in a trip at the Berri converter station, an outage of approximately 188.5 hours.

Consultant's report

The AER engaged SKM to audit Murraylink's performance report. SKM considered Murraylink's performance report to be free from material errors and was submitted in accordance with the guidelines. It found that the recording system Murraylink used to capture outage data was reliable and accurate. SKM also noted that Murraylink had

[27] *Decision Murraylink Transmission Company application for conversion and maximum allowed revenue*, ACCC, 1 October 2003.

correctly applied the equations specified in its revenue cap decision to calculate its net financial incentive.

SKM recommended:

- that Murraylink's proposed exclusions for forced and scheduled outage events were consistent with the guidelines and should be allowed
- the explosion and subsequent trip at the Berri converter station on 16 October 2005 satisfied the definition of a force majeure event and should be allowed
- Murraylink receive an s-factor of -0.15% of annual regulated revenue.

AER's conclusions

The AER found that Murraylink had reported accurately and in a manner consistent with the guidelines and its revenue cap decision and had no objections to the proposed exclusions.

The AER considered a penalty of $19 600 to Murraylink's revenue in the 2006-07 year based on an s-factor of -0.15% would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and Murraylink's report on service standards.

Table B3: Measures, results and incentives

Performance indicator	Break even	2004	2005
Planned circuit energy availability (%)	99.45	99.27	98.18
Forced outage circuit availability in peak periods (%)	99.38	98.88	99.63
Forced outage energy availability in off-peak periods (%)	99.40	99.38	99.72
s-factor (%)	0	(-0.80)	(-0.15)
Net financial incentive ($000)	0	(87.7)	(19.6)

B.4 SP AusNet

Introduction

On 31 January 2006, SP AusNet submitted its annual performance report for the 2005 calendar year. SP AusNet calculated a net financial incentive of $272 700 using an s-factor of 0.09% of its annual regulated revenue. This result was less than SP AusNet's 2004 service standards result, but was still above its performance target.

Performance measures

The performance measures implemented for SP AusNet were defined in its revenue cap decision.[28] These are:

- Circuit availability
    - total
    - peak critical
    - peak non-critical
    - intermediate critical
    - intermediate non-critical
- Frequency of lost supply events
    - greater than 0.05 system minutes
    - greater than 0.30 system minutes
- Average outage duration
    - lines
    - transformers

Table B4 shows SP AusNet's performance against these measures for 2005 and the resulting financial incentive.

Exclusions

SP AusNet proposed that the de-energised shunt reactors be excluded from circuit availability performance calculations at peak and intermediate periods.

Shunt reactors are used to balance the network voltage when demand for electricity is low. SP AusNet stated that it had been advised by VENCorp to de-energise shunt reactors during periods of peak demand. SP AusNet stated that this practice in periods of peak or intermediate demand was consistent with good electricity industry practice and therefore should be excluded from the peak and intermediate availability measures (but not from the overall availability measure).

Consultant's report

The AER engaged SKM to audit SP AusNet's performance report. SKM considered SP AusNet's performance report to be free from material errors and was submitted in accordance with the guidelines, subject to clarification of some exclusion definitions.

[28] ACCC, *Decision Victorian transmission network revenue caps 2003-2008*, 11 December 2002.

SKM found that the recording system used by SP AusNet to capture outage data was accurate and reliable. It also noted that SP AusNet had correctly applied the equations specified in the revenue cap decision to calculate its financial incentive.

SKM recommended:

- that the de-energising of shunt reactors during peak and intermediate times was in accordance with good engineering and operational practice enhancing the reliability of the network and should be excluded
- SP AusNet receive an s-factor of 0.09% of annual regulated revenue.

AER's conclusions

The AER found that SP AusNet's exclusion of all third party events was consistent with SP AusNet historical practice, but was not consistent with the revenue cap determination. Given that SP AusNet's targets were based on its historical practice this treatment was not objected to.

The AER also considered that SP AusNet's treatment of shunt reactors was appropriate and acceptable.

The AER considered an increase of $272 700 to SP AusNet's revenue in the 2006-07 year, based on an s-factor of 0.09%, would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and SP AusNet's report on service standards.

The AER notes that SP AusNet also has an additional service standards regime applied to it under state regulation which is administered by VENCorp. These service performance arrangements have been in operation in Victoria since 1994 and place two per cent of SP AusNet's annual revenue at risk.

The AER's service standards regime is separate from and does not perfectly mirror the VENCorp scheme. However in recognition of the similarities between the two schemes the AER only places 0.5% of SP AusNet's annual revenue at risk during the current regulatory period.

Table B4: Measures, results and incentives

Performance indicator	Break even	2004	2005
Total circuit availability (%)	99.20	99.27	99.34
Peak critical circuit availability (%)	99.90	99.97	99.94
Peak non-critical circuit availability (%)	99.85	99.57	99.86
Intermediate critical circuit availability (%)	99.85	99.80	99.75
Intermediate non-critical circuit availability (%)	99.75	99.39	98.21
Frequency of lost supply events > 0.05 minutes*	2	2	5
Frequency of lost supply events > 0.30 minutes*	1	0	2
Average outage duration – lines (hours)	10	2.73	7.54
Average outage duration – transformers (hours)	10	4.86	6.64
s-factor (%)	0	0.22	0.09
Net financial incentive ($000)	0	609.75	272.70

* These measures were reported but did not contribute to the final financial outcome of SP AusNet.

B.5 Transend

On 14 February 2006, Transend submitted its annual performance report. Transend reported an overall improvement against its historical performance and proposed an incentive bonus of $206 000. This was calculated using an s-factor of 0.19% of its annual regulated revenue.

Performance measures

The performance measures implemented for Transend were defined in its revenue cap decision.[29] These are:

- circuit availability
    - transmission line
    - transformer
- frequency of lost supply events
    - greater than 0.1 system minutes
    - greater than 2 system minutes.

[29] ACCC, *Decision Tasmanian transmission network revenue caps 2004-2008/09*, 10 December 2003.

Table B5 shows Transend's performance against these measures for 2005 and the resulting financial incentive.

Exclusions

Transend proposed that outages relating to the installation of NEM compliant metering should be excluded from performance calculations.

Transend also proposed to exclude outages associated with the installation of the Network Control System Protection Scheme (NCSPS) project in preparation for Basslink entering the NEM and outages associated with a severe storm and two incidents of lightning strikes as force majeure events.

Consultant's report

The AER engaged SKM to audit Transend's performance report. SKM advised that Transend's performance report was free from material errors and was submitted in accordance with the guidelines, with the exception of the application of some exclusion events.

SKM recommended that:

- outages associated with installation of NEM compliant metering were third party events and should be excluded
- the installation of the NCSPS equipment was similar to other capital work carried out on the network and should not be excluded
- outages caused by a severe storm and lightening strikes satisfied the definition of a force majeure event and should be excluded
- Transend receive an s-factor of 0.19% of annual regulated revenue.

AER's conclusions

The AER accepted SKM's proposed treatment of Transend's exclusions.

The AER considered an increase of $207 600 to Transend's revenue in the 2006-07 year, based on an s-factor of 0.19%, would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and Transend's report on service standards.

Table B5: Measures, results and incentives

Performance indicator	Break even	2004	2005
Transmission line availability (%)	99.10 to 99.20	99.34	98.67
Transformer circuit availability (%)	99.00 to 99.10	99.31	99.20
Frequency of lost supply events > 0.1 minutes	13 to 16	18	13
Frequency of lost supply events >2.0 minutes	2 to 3	0	0
s-factor (%)	0	0.55	0.19
Net financial incentive ($000)	0	573.9	207.6

B.6 TransGrid

Introduction

On 3 February 2006, TransGrid submitted its annual performance report based on the ACCC's final revenue cap decision, released on 27 April 2005.[30] TransGrid reported an overall improvement against its historical performance equivalent to a financial reward of $3 200 290. This was calculated using an s-factor of 0.72% of its annual regulated revenue.[31]

Performance measures

The performance measures implemented for TransGrid are defined in its final revenue cap decision.[32] These are:

- Circuit availability
    - Transmission
    - Transformer
    - Reactive plant
- Frequency of lost supply events

[30] Given the regulatory period began on 1 July 2004, the relevant period is 1 July 2004 to 31 December 2004.

[31] The AER has not included a comparison with TransGrid's 2004 results as these were based on the ACCC's draft revenue cap decision for TransGrid.

[32] ACCC, *Decision NSW and ACT transmission network revenue cap – TransGrid 2004-05 to 2008-09*, 27 April 2005.

  - greater than 0.05 system minutes
  - greater than 0.40 system minutes

- Average outage duration

Table B6 shows TransGrid's performance against these measures for 2005 and the resulting financial incentive.

Exclusions

TransGrid proposed four outage events for exclusion from its 2005 performance data. These outage events resulted from damage caused by third parties during a sewer connection and road works, the breach of a climbing barrier of a 330kV tower by a member of the public and the ongoing exclusion of a capped outage event at Kemps Creek from the 2004 period. TransGrid proposed all these events as exclusions under the definitions of both third party and force majeure exclusions.

TransGrid also proposed a number of minor exclusions that had been applied historically by TransGrid. These included:

- transient interruptions less than one minute
- pumping station supply interruptions
- when a customer's own system trips their plant during a transient voltage fluctuation or other quality of supply events, whether caused by TransGrid or not.

Consultant's report

The AER engaged SKM to audit TransGrid's performance report. SKM found that TransGrid performance incentive reporting systems were largely manual but appeared reliable. It noted that TransGrid could improve its reporting system by automatically linking spreadsheets to reduce potential human error and indicating which outages have been included or excluded.

SKM recommended that:

- outage events caused by a third party sewer connection and road works should not be excluded as they did not meet the definition of a third party or force majeure event
- a further 14 day cap be applied to the ongoing outage at Kemps Creek and that TransGrid should nominate a return to service date
- historical exclusions should be accepted
- TransGrid receive an s-factor of 0.7% of annual regulated revenue.

AER's conclusions

The AER accepted that TransGrid's performance reporting systems, while largely manual, were accurate and reliable. The AER did encourage TransGrid to consider

SKM's recommendations to improve its present reporting systems. The AER also accepted SKM's recommended treatment of TransGrid's exclusions.

The AER considered an increase of $3 115 000 to TransGrid's revenue in the 2006-07 year, based on an s-factor of 0.70%, would comply with its revenue cap decision. In reaching this conclusion, the AER considered the revenue cap decision, guidelines, SKM's advice and TransGrid's report on service standards.

Table B6: Measures, results and incentives

Performance indicator	Break even	2004#	2005
Transmission circuit availability (%)	99.40	99.72	99.57
Transformer availability (%)	99.00	99.30	98.90
Reactive plant availability (%)	98.50	99.47	99.64
Frequency of lost supply events >0.05 minutes	6	0	1
Frequency of lost supply events >0.4 minutes	1	0	0
Average outage duration (minutes)	1500	936.84	716.73
s-factor (%)	0	0.93	0.70
Net financial incentive ($000)	0	2 007.3	3 115.0

This only represents a financial incentive for performance over the period 1 July 2004 to 31 December 2004 because TransGrid's regulatory period commenced on 1 July 2004.