

## REVENUE CAP APPLICATION OVERVIEW

### Purpose of the Revenue Application

The Revenue Application describes the expenditure plans and revenue requirements of Transend Networks Pty Ltd ('Transend', 'the company') from 1 January 2004 to 30 June 2009.

The document sets out Transend's principal submission to the Australian Competition and Consumer Commission ('the Commission'), the regulator responsible for determining Transend's maximum allowed revenue, as a transmission network service provider (TNSP).

### Transend – business characteristics and performance

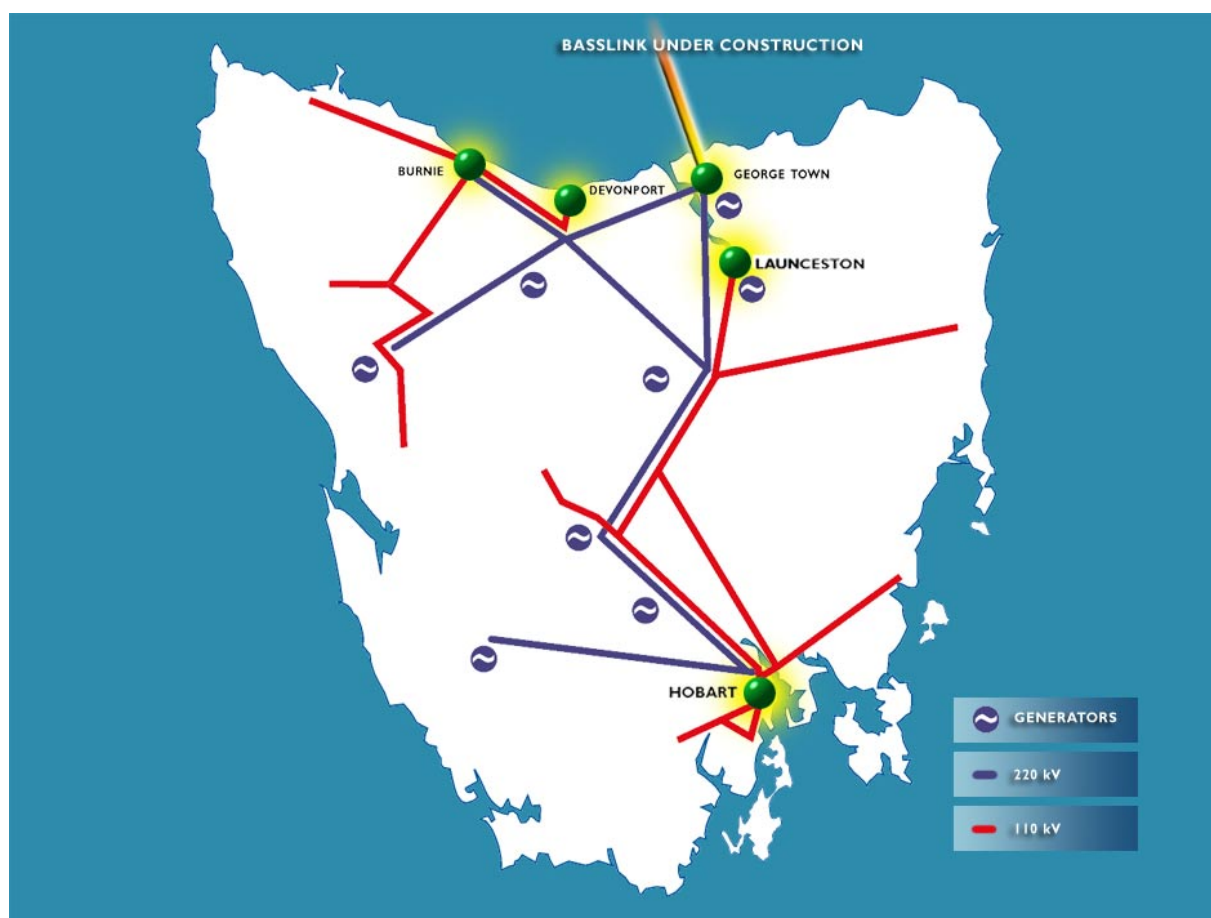
Transend owns and operates the electricity transmission system in Tasmania. Transend commenced trading on 1 July 1998 following the disaggregation of the Hydro-Electric Corporation (HEC).

The company's assets carry electricity from 28 power stations to substations around the State. Transend owns a system of 3,500 circuit kilometres of transmission lines, 45 substations and ten switching stations.

Figure 1.1 shows a simplified map of the transmission system.

### Figure 1.1: Simplified map of Transend's network

(Figure reproduced from Chapter 1)



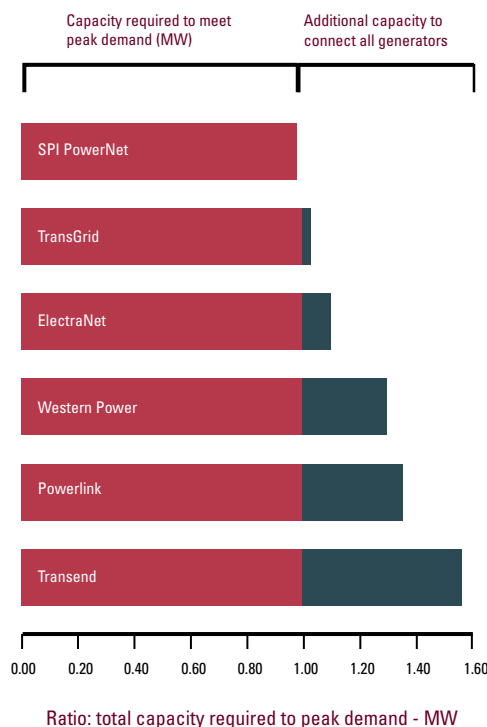
Hydro generation accounts for around 90% of generating capacity in Tasmania and, depending on the availability of water, up to 99% of energy supplied. The dominance of hydro-generation creates a set of operating conditions for Transend that differ significantly from transmission networks with thermal based generation. Factors that have a substantial influence on the configuration of Transend's network are:

- the wide geographic dispersion of generation (which reflects the location of suitable water catchment sites)
- the relatively small generator size (reflecting water storage size and inflow)
- relatively low generator load factors (driven by inflow variability)
- seasonality of generator operation (reflecting seasonal variations in inflows across different regions).

In Tasmania, the combined result of these factors is a large number of relatively small generators in dispersed locations, remote from load centres. Figure 1.3 illustrates the impact of these business conditions on the required size (and therefore cost) of Transend's network, compared to other transmission businesses in Australia.

**Figure 1.3: Transmission capacity required to meet peak demand**

(Figure reproduced from Chapter 1)



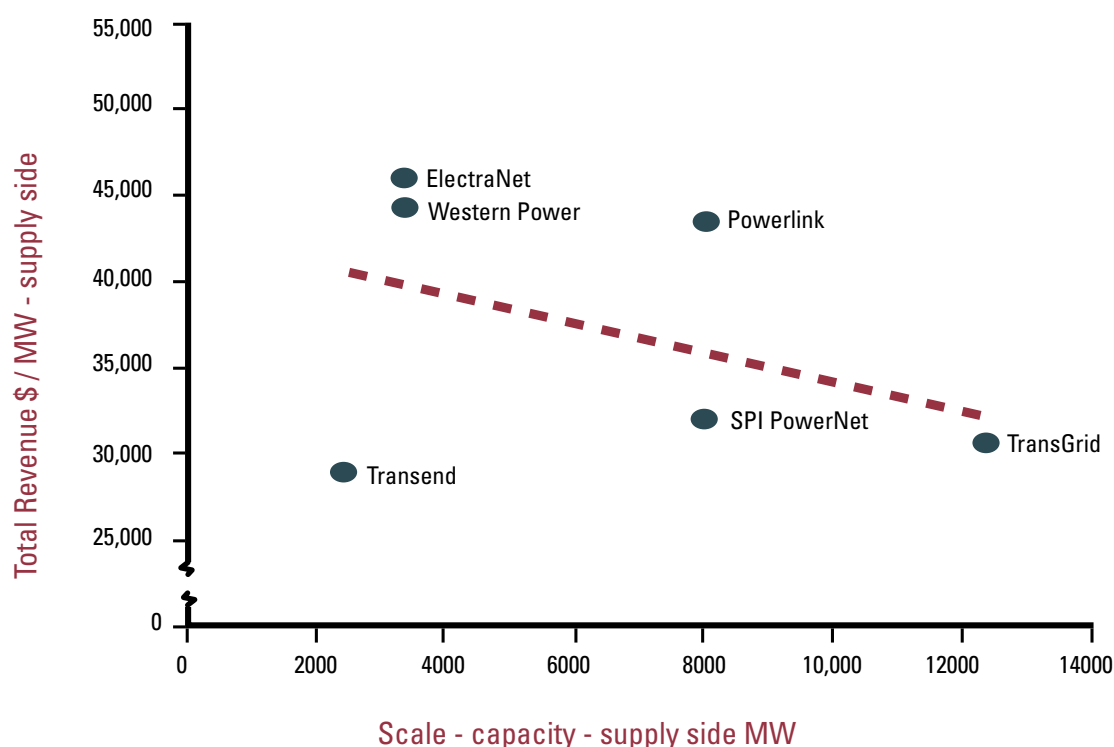
Source: Benchmark Economics

Transend's unique operating characteristics make comparing its costs with those of other transmission businesses problematic. For instance, it has been standard practice in analysing transmission costs to consider only the requirements of peak demand rather than generation capacity. In comparing thermal-based systems with one another, this approach is reasonably sound. However, it will bias results against hydro-based systems, which require much more generation capacity for a given level of peak demand.

Transend commissioned Benchmark Economics to undertake a detailed review of Transend's cost and service performance. Benchmark Economics found that in comparing transmission businesses it is crucial to take account of the business conditions in which they operate. In particular, transmission networks exhibit economies of scale — meaning that the size of the company will affect its average cost. Figure 1.5 illustrates this point.

**Figure 1.5: Measuring cost performance — accounting for economies of scale**

(Figure reproduced from Chapter 1)



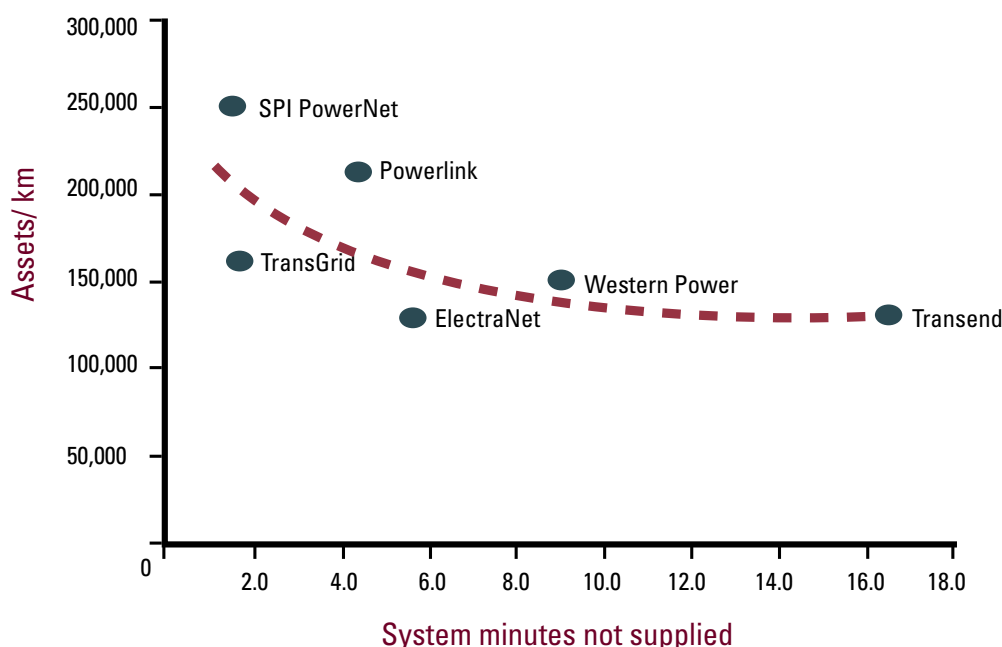
Source: Benchmark Economics

In Figure 1.5, the downward sloping 'dotted' line indicates the relationship between costs and size. As expected, companies with larger supply side capacity, such as TransGrid, exhibit lower costs as measured on a \$/supply capacity basis. However, Transend is substantially below the dotted line — indicating that its costs are well below those that might be expected of a company of its size.

When economies of scale and network business conditions are properly considered, Transend's cost performance appears to be exemplary compared to other Australian transmission businesses. However, the company's service performance is less satisfactory. In particular, Figure 1.7 shows Transend's service performance, measured in terms of 'system minutes not supplied', as being worse than other Australian transmission businesses. The implication of this finding is that Transend's very low cost structure has been achieved only at the expense of service levels.

**Figure I.7: Measuring service performance**

(Figure reproduced from Chapter 1)



Source: Benchmark Economics Note: As reliability can vary substantially between years, the 'System minutes not supplied' figure is a five-year average for 1997-2001.

Benchmark Economics' conclusions regarding Transend's cost and service performance are consistent with analysis conducted prior to the restructuring of the Tasmanian electricity supply industry in 1998. In particular, the comparatively poor condition of the transmission network was raised in the Tasmanian Parliament<sup>1</sup>:

The generation and power generation unit is in pretty good shape and will assume a quantity of debt which will allow it to operate functionally and service the people of Tasmania well and be a viable, robust business opportunity. The recommendation from the consultants, First Boston, is that the transmission, because it needs a considerable amount of money spent on it to bring it to a stage of comparability [sic] to be a robust separate entity in the commercial market providing a level of service and a certainty of service and a security of service to the people of Tasmania, will need to have more money invested in it in the future ...

Transend has responded positively to the challenge of upgrading its network. In each year since 1998, Transend has completed major capital projects and undertaken management initiatives to improve the security and reliability of the network. Major capital projects have been subject to competitive tender to ensure that efficiencies are achieved.

Despite Transend's substantial capital expenditure since 1998, significant challenges remain. Overall, Transend's analysis indicates that service levels and costs will need to rise in future periods.

<sup>1</sup> House of Assembly, Hansard, Wednesday 22 April 1998 – Part 2, p. 87

### Future developments

It is possible that the future challenges facing the company will be significantly different to those it has experienced to date.

Transend has identified three major developments that will significantly affect the transmission network in Tasmania. In other words, they are a step change from the previous requirements placed on the transmission system. These developments are:

- Basslink
- reticulation of natural gas
- growth in wind generation.

Tasmania's entry to the national electricity market (NEM) is conditional on the Basslink project. Tasmania is expected to join the NEM in May 2005, six months before Basslink's expected completion. The impact of these developments is reflected in Transend's expenditure plans for the forthcoming regulatory period.

The impact of wind generation on the transmission system is difficult to estimate, given the uncertainty surrounding the likely capacity of wind generation during this forthcoming regulatory period. However, the technical characteristics of wind generation, and its tendency to be remote from load centres, raise particular challenges for the transmission system. It is important that the transmission system is planned to meet the requirements that wind generation projects place on it.

### Efficiency

The Commission's regulatory framework is designed to reward companies for improving efficiency. A number of transmission businesses have provided examples of their actual costs being lower than forecast. In these cases, the companies have been rewarded with an efficiency bonus.

Transend is in a different position because it has been required to undertake more tasks than originally envisaged. These new tasks are principally connected with:

- the management of regulatory issues
- growth in connection enquiries and new connections
- Tasmania's entry to the NEM.

Transend believes that undertaking additional tasks for the same cost constitutes improved efficiency. On this basis, Transend proposes that it should receive an efficiency bonus. To calculate the bonus, Transend has assessed the efficiency gain as being the increased costs of Transend's Tasmanian Wholesale Electricity Market (TWEM) project, which is managing the company's preparation for NEM entry.

Transend has identified the TWEM costs as averaging approximately \$0.5m a year over the current regulatory period. The proposed efficiency bonus 'glide paths' this gain over the forthcoming regulatory period, as summarised in Table 3.2. The glide path allows the full efficiency gain in the first year, reducing by 20% in each subsequent year.

**Table 3.2: Transend's proposed glide-path for efficiency gains (in 2002-03 \$m)**

(Figure reproduced from Chapter 3)

	2004-05	2005-06	2006-07	2007-08	2008-09
Efficiency bonus	0.5	0.4	0.3	0.2	0.1

### Asset valuation

In the Commission's regulatory framework, asset valuation is a significant determinant of a transmission business's regulated revenue. In accordance with the regulatory arrangements that apply to Transend, Sinclair Knight Merz (SKM) was appointed to undertake an optimised deprival valuation (ODV) of Transend's assets. The Tasmanian State Treasurer independently reviewed this valuation before determining that Transend's asset valuation as at 30 June 2001 was \$521.6m.

Transend's forthcoming regulatory period starts on 1 January 2004. Therefore, the Minister's valuation needs to be 'rolled-forward' to adjust for capital additions and economic depreciation from 30 June 2001 to 1 January 2004. This is shown in Table 4.3.

**Table 4.3: Regulated asset valuation as at 1 January 2004 (in nominal \$m)**

(Figure reproduced from Chapter 4)

	Period		
	2001-02	2002-03	Jul to Dec 2003
Asset base	(12 months)	(12 months)	(6 months)
Opening asset base	521.6	542.2	581.7
Capital expenditure roll-in	34.0	54.7	32.0
Economic depreciation	(13.4)	(15.2)	(9.9)
<b>Closing asset base</b>	<b>542.2</b>	<b>581.7</b>	<b>603.8</b>

It should be noted that the asset valuation has been rolled forward in a manner consistent with the remaining lives in the asset revaluation.

### Service standards

The Commission has developed a framework for providing transmission businesses with stronger incentives to improve service performance. Transend has developed a performance incentive scheme that is consistent with the Commission's framework. The terms of the proposed incentive scheme will encourage Transend to improve its service performance by introducing a system of penalties and bonuses based on performance.

The service performance measures are based on plant availability and supply availability. The choice of measures reflects the type of performance that customers value most highly. Transend has adopted a system of penalties and bonuses that is challenging. In all cases, penalty payments will be paid by Transend if the company's performance does not compare well with the recent past. The incentive scheme will pay bonuses to Transend only if service performance is significantly better than its average past performance.

An important element of the Commission's performance incentive framework is that around 1% of each transmission business's revenue should be placed at risk. Transend notes that this level of risk exposure is material for transmission businesses, which have traditionally been regarded as low risk and low return. A 1% change in revenue would affect profitability by around 10%. Given the high sensitivity of company profit to changes in revenue, Transend considers that its proposed framework will provide effective incentives for improving performance.

### Capital expenditure plans

In establishing its forecasts of future capital expenditure requirements, Transend distinguishes between three types of capital expenditure:

- **Development Capital Expenditure**

This capital expenditure is associated with augmentation of the existing network to meet security criteria, load growth, new customer connection requirements, and new generation and Code compliance requirements.

- **Renewal Capital Expenditure**

This capital expenditure involves the replacement, enhancement and refurbishment of existing transmission assets.

- **Non-network Capital Expenditure**

This capital expenditure relates to non-network assets, such as information technology systems that are required to support the transmission business.

In general terms, Transend's approach to forecasting capital expenditure involves six steps:

1. Fulfil the requirements of the Tasmanian Electricity Code (TEC) and National Electricity Code (NEC).
2. Identify the relevant drivers for each category of capital expenditure.
3. Develop forecasts of capital expenditure requirements on the basis of a detailed assessment of the relevant drivers over the regulatory period.
4. Critically examine the expenditure plans to test their robustness, including, where necessary, the use of independent consultants to review the plans.
5. Ensure, as far as possible, that an efficient balance between maintenance and capital expenditure is attained.
6. Review all capital expenditure and maintenance plans to maximise synergies and efficiencies between them.

### Development capital expenditure

Transend proposes an innovative approach to regulating development capital expenditure. The approach identifies two streams of development capital expenditure projects:

- *Fixed projects* - those projects that are generally driven by load growth or system security requirements. Transend's analysis suggests that these projects are very likely to proceed in the forthcoming regulatory period.
- *Variable projects* - those projects that typically depend on specific customer-driven developments proceeding, such as new generation proposals. Transend's analysis shows that these projects will proceed only if particular growth scenarios eventuate and/or proponents complete identified projects within present timeframes. The probabilities of these variable projects proceeding vary from 10% to 80% in analysis.

The list of variable projects in this submission is not exhaustive. After initial analysis Transend received more enquiries about, and applications for, generation and customer connections. Such projects would also be treated as variable projects for regulatory purposes.

Under Transend's proposal, Transend will take the risk that the total cost of fixed projects exceeds the forecast amount. Conversely, for variable projects Transend will charge the actual cost to customers.

This approach seeks to allocate risk fairly between Transend and its customers, taking into account the relatively high level of uncertainty in future network development. Ultimately, the proposed arrangements will provide Transend with appropriate incentives for efficiency, leading to a better outcome for customers.

Transend's identified fixed projects have been categorised as:

- Southern augmentation
- NEM entry projects
- other fixed development projects.

The Southern augmentation project is a significant component of development capital expenditure in the forthcoming regulatory period. This project will augment the transmission system in the southern part of the state to provide a 220 kV line from Liapootah to Lindisfarne.

The project was submitted to the Reliability Network Planning Panel (RNPP) in December 2002 and endorsed by the RNPP at its meeting on 30 January 2003. The chief objective of the project is to increase the security of supply to Hobart and southern Tasmania.

#### **Renewal capital expenditure**

The key drivers for renewal expenditure in the forthcoming revenue period are:

- compliance
- asset condition
- addressing asset design deficiencies.

Renewal capital expenditure is categorised as either 'refurbishment' or 'replacement or enhancement'.

Transend's forecast of capital expenditure for asset renewal reflects the company's assessment of a prudent investment program. There are many items targeted for renewal and most of the work programs are under way.

#### **Non-network capital expenditure**

In addition to network capital expenditure, Transend incurs non-network capital expenditure, which is essential to support the operation of the business. Transend has identified a number of information technology and communication system requirements associated with NEM entry and the transfer of the system controller function to NEMMCO. These projects have been factored into Transend's expenditure plans.

Transend's total capital expenditure forecasts are summarised in Table 6.12 below.



**Table 6.12: Transend's forecasts of capital expenditure by category  
January 2004 to 2008-09 (in 2002-03 \$m)**

(Figure reproduced from Chapter 6)

	Jan to Jun 2004	2004-05	2005-06	2006-07	2007-08	2008-09	Total
Development expenditure on fixed projects	2.8	43.2	14.3	48.3	0.6	0.0	109.2
Refurbishment expenditure	7.4	6.8	8.7	8.1	4.9	2.1	38.1
Replacement and enhancement expenditure	9.5	23.0	29.9	30.5	32.0	31.8	156.8
Non-network expenditure	7.0	6.9	5.5	1.5	2.3	3.5	26.7
<b>Total Fixed roll-in to asset base<sup>1</sup></b>	<b>26.8</b>	<b>80.0</b>	<b>58.4</b>	<b>88.4</b>	<b>39.8</b>	<b>37.5</b>	<b>330.8</b>
Total Variable	To be determined on annual basis <sup>2</sup>						

<sup>1</sup> The roll-in figure includes total expenditure on assets commissioned during the forthcoming regulatory period. Some expenditure will be incurred before the regulatory period starts. All capital roll-in for network expenditure includes interest during construction (IDC), calculated in accordance with the Commission's recent regulatory decisions. IDC is not included for non-network expenditure.

Table additions are not exact, due to rounding.

<sup>2</sup> Variable capital adjustment will be determined in accordance with formula in Appendix 1.

### Operating and maintenance (O&M) expenditure plans

Transend's approach to forecasting O&M expenditure is based on a detailed analysis of the key cost drivers for each of the three core business functions — Connections & Development Group, Network Group and Transmission Operations Group. In turn, these core functions establish the resource requirements for the business support and corporate functions.

This forecasting approach provides a robust 'bottom-up' assessment of future costs, rather than relying on cost performance in the recent past as a forecasting tool. Importantly, Transend's forecasting approach is an opportunity to examine the challenges facing the business in the forthcoming regulatory period, which include:

- preparing the company for NEM Entry
- effective participation in the NEM environment
- meeting future demand for Transend's services, including new connection enquiries from customers
- aligning asset management techniques with industry best practice
- delivering improvements in service performance
- ensuring O&M and capital expenditure are combined to minimise total life-cycle costs
- improving efficiency where possible.

Of these challenges, NEM entry is a crucial change to Transend's operating environment. From Transend's perspective, it will necessitate three types of changes to the company's operations:

- new systems to interface with NEMMCO
- new regulatory issues and responsibilities
- a more onerous cost structure.

Each of these issues adversely affects Transend's costs in the forthcoming regulatory period. Of the three changes, however, the impact on Transend's cost structure is perhaps the most fundamental. Transend's cost structure will increase because:

- the transfer of the System Controller function to NEMMCO will require the functions of the local system operator to be transferred to Transend in its role as transmission network service provider (TNSP).
- in future all overhead costs will be allocated entirely to Transend's TNSP function, with its new local system operator capacity.

In addition to these high-level impacts on Transend's business, NEM entry will bring more work to Transend's core functions. These additional demands have been factored into Transend's O&M expenditure forecasts.

In the forthcoming regulatory period, increases in O&M expenditure are also required for asset management. Transend has developed a robust 'function by function' and 'asset by asset' works plan; expenditure plans have been staged so that the required works can be achieved in the most efficient manner.

Requirements for NEM entry and asset management account for most of Transend's forecast O&M expenditure increase.

Transend's O&M expenditure forecasts are summarised in Table 7.9.

**Table 7.9: Transend's forecast of total O&M expenditure  
January 2004 to 2008-09 (in 2002-03 \$m)**

(Figure reproduced from Chapter 7)

	Jan to Jun 2004	2004-05	2005-06	2006-07	2007-08	2008-09
Connections & Development	1.9	4.1	4.5	3.6	3.6	3.6
Network	9.6	19.6	19.7	19.9	19.7	20.0
Transmission Operations	1.6	2.7	4.6	4.3	4.3	4.3
Corporate	2.7	4.7	6.3	6.7	6.9	6.6
<b>Sub Total</b>	<b>15.7</b>	<b>31.0</b>	<b>35.0</b>	<b>34.5</b>	<b>34.4</b>	<b>34.6</b>
Dismantling	--	1.9	1.0	1.9	--	--
Equity raising	0.3	0.6	0.6	0.6	0.6	0.6
<b>Total<sup>1</sup></b>	<b>16.0</b>	<b>33.4</b>	<b>36.5</b>	<b>36.9</b>	<b>35.0</b>	<b>35.2</b>
Grid Support	To be determined on annual basis <sup>2</sup>					

<sup>1</sup> Additions are not exact, due to rounding.

<sup>2</sup> Grid Support adjustment determined in accordance with formula in Appendix 1.

## Depreciation

The Commission's approach for determining Transend's regulated revenue includes an allowance for depreciation. In this regulatory framework, depreciation recognises the capital investment in an asset and the need to recoup that investment during the life of the asset. The depreciation allowance therefore provides the return of capital invested in the regulated business.

The Commission's draft *Regulatory Principles* suggests that the standard straight-line accounting approach to depreciation may not be the most appropriate approach for regulatory purposes. In the Commission's view, the principal difficulty with the straight-line approach is that it may produce prices or 'price shocks' that are inconsistent with competitive market outcomes. The Commission therefore proposes 'competition depreciation'.<sup>2</sup>

Transend accepts as sound the principles that underpin the concept of competition depreciation. However, it is noted that competition depreciation has not yet been applied in any Commission determination on electricity transmission revenue. For the purposes of this submission, therefore, Transend has adopted straight-line depreciation.

An adjustment to straight-line depreciation is required for revenue-setting purposes to account for the effect of inflation on the asset base. This inflation-adjusted straight-line depreciation is referred to as 'economic depreciation'.

Transend has also identified some assets that might be subject to stranding over the forthcoming regulatory period. Transend expects that if any of these assets become stranded during the forthcoming regulatory period, the Commission would provide for an additional depreciation allowance (adjusted to preserve its present value) in the regulatory period starting 1 July 2009. The effect of this additional depreciation allowance would be to recover the cost of the stranded asset.

## Weighted average cost of capital

The weighted average cost of capital (WACC) is an important determinant of Transend's revenue requirement. A company's WACC is calculated as follows:

$$WACC = R_e \frac{E}{V} + R_d \frac{D}{V}$$

where  $R_e$  and  $R_d$  are the costs of equity and debt respectively, and  $E/V$  and  $D/V$  are the shares of equity and debt in the financing structure of the company.

The estimate is a 'vanilla' cost of capital because it is the weighted average of the post-tax nominal return on equity and the pre-tax nominal return on debt. In other words, it excludes from the WACC calculation all tax-related matters. The 'weighting' typically adopted by the Commission is a benchmark gearing level of 60% debt to total capital.

The WACC for TNSPs is estimated according to the capital asset pricing model (CAPM). According to CAPM, the cost of equity  $R_e$  is calculated as follows:

$$R_e = R_f + \beta_e (R_m - R_f)$$

where  $R_e$  is the required return on equity;  $\beta_e$  is the equity beta;  $R_f$  is the risk free rate; and  $(R_m - R_f)$  is the return over the risk free rate that investors require to invest in a well-diversified portfolio of equities (i.e. it is the 'market risk premium').

<sup>2</sup> ACCC, draft Statement of Regulatory Principles, May 1999, p. 28

Transend commissioned Network Economics Consulting Group (NECG) to prepare a report on the weighted average cost of capital that should be applied in the Commission's determination of the company's regulated transmission revenue. NECG concluded that Transend's post-tax nominal WACC is 8.80%. Transend has adopted this figure in its revenue calculations.

### Revenue requirements

Transend's revenue requirements are calculated from a series of 'building blocks', summarised in Table 10.1.

**Table 10.1 – Summary of the building block components**

(Figure reproduced from Chapter 10)

Revenue component	Brief description	Chapter containing analysis
Operating and maintenance (O&M) expenditure	The annual operating expenditure for the transmission business, and the costs of maintaining the assets used in the delivery of transmission services.	7
Return of capital (economic depreciation)	The annual depreciation charge on the assets used in the delivery of transmission services.	8
Return on capital	The product of the required rate of return (the weighted average cost of capital: WACC) and the value of Transend's assets used in the delivery of transmission services.	4, 6, 8, 9
Efficiency bonus and 2003 revenue shortfall	The calculation of Transend's efficiency in carrying out tasks for NEM entry. The tasks were not contemplated in Transend's existing revenue control. An amount for the under-recovery of revenue from 2003 is also included (discussed below).	3, 10
Tax allowance	The Commission's post-tax approach provides an additional allowance for tax in the company's cashflows rather than through the WACC.	9

Table 10.2 shows Transend's forecast for each building block component, together with the total revenue requirements in 2002-03 dollars for each year of the forthcoming regulatory period.

Transend's current determination was initially expected to end on 31 December 2002. In extending the revenue control for 12 months, the jurisdiction determined that Transend's total revenue should be maintained in real terms.

A crucial assumption in setting Transend's revenue for 2003 was that the effects of net capital additions and depreciation in 2003 would exactly offset one another.<sup>3</sup> In its issues paper, OTTER indicated that adjustments to revenue would be appropriate if this assumption proved to be incorrect.

Transend has now had further opportunity to estimate the financial impact of the difference between capital additions and depreciation. Calculations show that OTTER's allowance for 2003 understated Transend's total revenue entitlements by \$2.44m.

Transend's proposed revenue in 2003-04 has been increased to account for this shortfall (shown in Table 10.2, under 'Jan to Jun 2004' in the efficiency bonus row).

<sup>3</sup> OTTER, *Extension of Controls for Electricity Pricing to 31 December 2003, October 2002*, p. 5.

**Table 10.2: Annual revenue requirement from January 2004 to 2008-09 (in 2002-03 \$m)**

(Figure reproduced from Chapter 10)

Revenue component	Jan to Jun 2004	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenditure	16.0	33.4	36.5	36.9	35.0	35.2
Return of capital (economic depreciation)	8.0	19.0	21.2	23.1	23.4	24.1
Return on capital	26.0	52.7	57.0	59.1	63.6	63.8
Efficiency bonus and 2003 revenue shortfall	2.4	0.5	0.4	0.3	0.2	0.1
Tax allowance	1.9	3.2	3.6	3.8	4.1	4.2
<b>Total annual revenue requirement<sup>1</sup></b>	<b>54.4</b>	<b>108.9</b>	<b>118.7</b>	<b>123.2</b>	<b>126.3</b>	<b>127.5</b>

<sup>1</sup> A post-tax nominal framework has been used to model the revenue components. These have been converted to 2002-03 real dollars using a CPI deflator.

Transend's base revenue claim presented in Table 10.2 shows that a substantial revenue increase is required over the regulatory period. The required increase in revenue can be expressed in five components, as shown in Table 10.5.

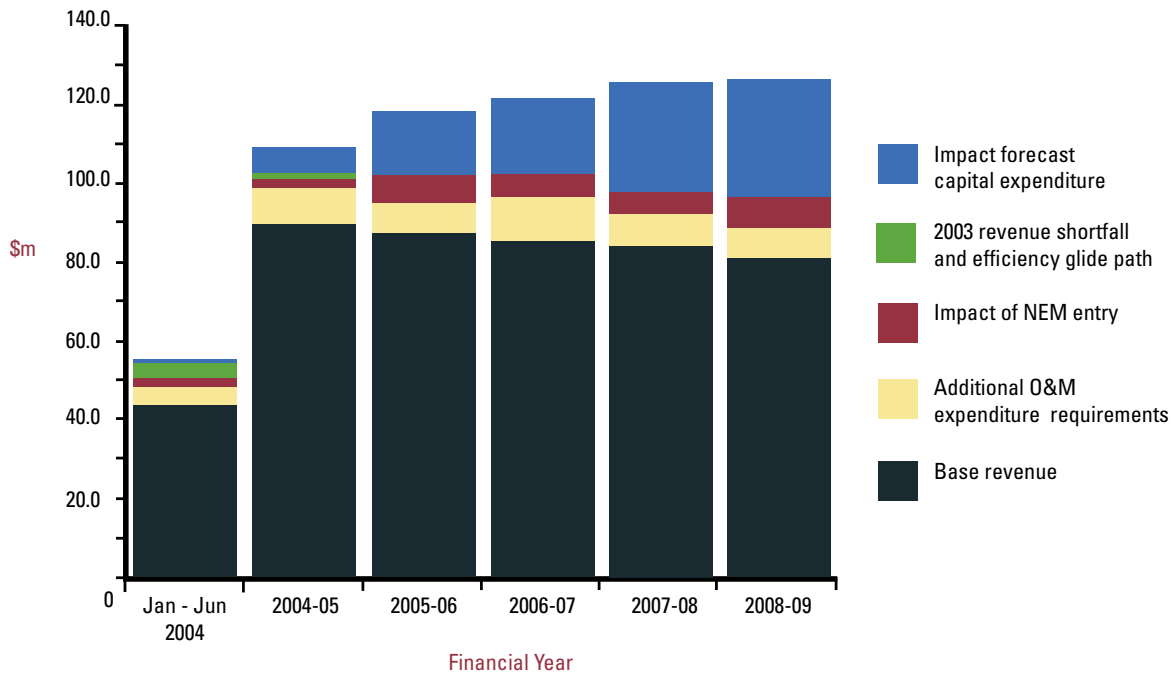
**Table 10.5: Required increase in revenue — the five components**

(Figure reproduced from Chapter 10)

Component	Explanation of component
1. Base revenue	This represents Transend's base revenue requirement, which is based on (a) the valuation of its assets at the start of the forthcoming regulatory period, and (b) its budgeted O&M expenditure for 2002-03. This base revenue requirement exceeds the allowance provided by OTTER in 2003-04, which adopted a lower asset value and under-estimated O&M expenditure.
2. Additional O&M expenditure requirements	This category shows the increased O&M expenditure that arises from Transend's expenditure plans, described in Chapter 7. A principal component of this cost is the additional work to be undertaken by the Network Group to maintain and improve services for customers.
3. Impact of NEM entry	This category isolates the additional costs associated with NEM entry. NEM entry will bring substantial changes to Transend, as explained in Chapters 1, 6 and 7.
4. 2003 revenue shortfall and efficiency glide-path	As noted earlier, Transend's allowed revenue in 2003 did not properly take account of the company's capital expenditure. This component therefore recognises this shortfall in revenue. In addition, it also provides a separate efficiency bonus or 'glide path', in accordance with information presented in Chapter 3.
5. Impact of forecast capital expenditure	This category isolates the impact of Transend's capital expenditure plans on its revenue requirements. Chapter 6 contains detailed justification of Transend's capital expenditure plans.

**Figure 10.1 Breakdown of Transend's revenue requirements from January 2004 to 2008-09 (in 2002-03 \$m)**

(Figure reproduced from Chapter 10)



The principal findings from Figure 10.1:

- The base revenue is the dominant element in each year, comprising more than 80% of Transend's required revenue in 2004-05.
- Transend's capital expenditure program is the main driver for revenue increases beyond 2005-06. This is 24% of Transend's total revenue requirement in 2008-09.
- The impact of the new O&M expenditure requirements necessitates an increase in Transend's revenue requirement in 2004-05. In subsequent years, the extent of the required increase diminishes.
- NEM entry costs peak in 2005-06. It is expected that these costs will also reduce over the remaining years of the regulatory period.

As noted earlier, the cost of providing transmission services is inextricably linked to the quality of the service. In earlier years, Transend's cost base has been substantially lower than that of its peers in Australia, with the result that service performance has fallen short of expectations.

In 1998, the State Government recognised that transmission needed 'a considerable amount of money spent on it' to provide the quality of service required by the people of Tasmania.<sup>4</sup> The detailed analysis in this submission shows that this conclusion equally applies today.

The forthcoming regulatory period brings new challenges that reflect a significant change from the past. The program of work outlined in this submission will meet the challenges that lie ahead. By doing so, it will bring substantial benefits to Transend's customers, to the national electricity market and to Tasmania as a whole.

<sup>4</sup> House of Assembly, Hansard, Wednesday 22 April 1998 - Part 2, p. 87.