4 ASSET VALUATION

4.1 Introduction

In its draft *Regulatory Principles* of May 1999, the Commission notes that the value of fixed assets is fundamental to the calculation of the allowance for both the return on capital and the return of capital in the building block approach. Asset valuation, therefore, accounts for a significant proportion of a TNSP's regulated revenue.

This chapter presents the following information regarding asset valuation:

- an outline of the regulatory arrangements for the valuation of Transend's assets
- a summary of the valuation ascribed to Transend's asset base as at 30 June 2001 and updated or 'rolled-forward' to 1 January 2004.

4.2 Regulatory arrangements for valuing Transend's assets

The calculation of Transend's revenue requirements in the forthcoming regulatory period requires an assessment of the value of the assets employed in the regulated business. Transend's assets can be divided into two categories:

- assets employed at the commencement of the regulatory period, 1 January 2004
- assets employed during the regulatory period, from 1 January 2004 to 30 June 2009.

The first category of assets is sometimes referred to as 'sunk assets' because it reflects investments already undertaken. This chapter is principally concerned with the valuation of these assets.

Once this valuation is determined, the value of assets employed during the regulatory period largely depends on the company's capital expenditure program. Transend's capital expenditure program is described in Chapter 6 of this submission, while Transend's total revenue requirement is presented in Chapter 10.

For initial price reviews conducted under the National Electricity Code (NEC), an upper limit or cap is placed on the valuation of sunk assets. For the purposes of this revenue determination[1], the NEC requires that the value of Transend's assets is determined by the Tasmanian State Treasurer[2], provided that this valuation does not exceed the assets' deprival value.[3] The Commission has the right to verify independently the value determined by the Tasmanian State Treasurer ('the Minister').

The Commission has recently[4] provided the following guidance in relation to its role in verifying the asset valuation provided by a jurisdiction such as Tasmania:

> The Commission's discretion in this regard is constrained by the code. The principal limitations set out in the code are:
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> - where a judgment was made by the jurisdiction in establishing the regulatory asset base (RAB), and where that judgment is still applicable, the Commission cannot substitute its own judgment for that which was made by the jurisdiction

[1] *For a discussion of the regulatory arrangements applying in this review see Chapter 2 of this submission.*

[2] *National Electricity Code, Clause 6.2.3(d)(4)(iii) as amended by the Tasmanian derogations, November 2001.*

[3] *The NEC defines deprival value as, 'a value ascribed to assets which is the lower of economic value or optimised depreciated replacement value.' For a further explanation of these concepts, see the ACCC's draft* Statement of Regulatory Principles, *May 1999, pp. 39-42.*

[4] *ACCC,* South Australian Transmission Network Revenue Cap: Draft Decision*, 11 September 2002, p. 33.*

- the value provided to the Commission must not exceed the deprival value of those assets, where deprival value is generally defined as being the lesser of an asset's optimised depreciated replacement cost (ODRC) or economic cost.

In the light of these regulatory arrangements, Sinclair Knight Merz (SKM) was appointed to undertake an optimised deprival valuation (ODV) of Transend's assets. The Minister subsequently established a valuation of Transend's assets as at 30 June 2001, after a further independent review by Meritec Pty Ltd.

These valuations, together with Transend's asset valuation at the start of the regulatory period, are described in Section 4.3.

4.3 Valuation of Transend's assets as at 1 January 2004

As indicated in section 4.2, there are three steps to determining Transend's asset value at the commencement of the regulatory period:

- Appointment of SKM to undertake an independent asset valuation as at 30 June 2001 in accordance with the deprival valuation concepts
- The Minister's independent review of SKM's valuation followed by the Minister's determination of Transend's asset valuation as at 30 June 2001
- Updating or 'rolling-forward' the Minister's asset valuation to include capital additions, disposals and depreciation from 30 June 2001 to 1 January 2004.

Each element of this valuation process is briefly discussed in turn.

4.3.1 SKM's independent asset valuation as at 30 June 2001

SKM's valuation approach is consistent with the New South Wales Treasury document *Policy Guidelines for Valuation of Network Assets of Electricity Network Businesses* first issued in December 1995. That document has become the de facto standard for the valuation of electricity distribution and transmission network assets in Australia.

There are four key elements of the valuation process as outlined in the NSW policy guidelines:

1. Defining and recognising assets.
2. Assessing the gross replacement cost of the assets, based on the cost of modern equivalent assets.
3. Asset optimisation — adjusting the gross replacement cost of the network assets to reflect any over-design, over-capacity or redundant assets.
4. Determining the optimised depreciated replacement cost of the asset, based on an assigned asset life.

Table 4.1 summarises SKM's asset valuation as at 30 June 2001.

Table 4.1: SKM's asset valuation as at 30 June 2001 (in nominal $m)

	Replacement cost	Optimised replacement cost	Depreciated optimised replacement cost
Substations	538.0	537.6	270.3
Transmission lines and cables	554.4	529.9	278.8
Other assets	23.7	23.7	14.1
Total	**1,116.9**	**1,091.2**	**563.2**

4.3.2 Minister's determination of Transend's asset valuation as at 30 June 2001

The Minister appointed Meritec Pty Ltd (Meritec) to review SKM's valuation, and to advise the Minister on the determination of an appropriate asset valuation for Transend for revenue-setting purposes.

After Meritec's review, the Minister determined that Transend's regulated asset base should be valued at $521.6m as at 30 June 2001.

The breakdown of this valuation is detailed in Table 4.2.

Table 4.2: Minister's determination of Transend's asset valuation as at 30 June 2001 (in nominal $m)

	Depreciated optimised replacement cost
Substations	250.9
Transmission lines and cables	256.6
Other Assets	14.1
Total	**521.6**

The principal areas of difference between the Minister's valuation and that proposed by SKM are in calculating and applying *brownfield factors*, and in valuing acquisition costs of transmission line routes.

Brownfield factors reflect the actual costs of incrementally adding to an existing transmission system. The Minister concluded that, given the requirements of the deprival valuation method and the lack of Commission precedent on this matter, it was not appropriate to apply such factors under the present valuation arrangements.

However, the Minister also noted that if present arrangements for the use of a *brownfield factor* changed, he could not see any reason to exclude such a factor from Transend's asset base.

The valuation of easement compensation, and the acquisition costs for transmission line routes, raises a number of complex conceptual issues that have been the subject of considerable debate. The Minister's approach to the valuation of these assets is consistent with recent Commission revenue determinations on this issue.

Transend firmly believes that the Minister's valuation does not exceed the assets' deprival value, and therefore the Minister's valuation should apply in this revenue determination.

4.3.3 Minister's asset valuation rolled-forward to 1 January 2004

Transend's forthcoming regulatory period is to commence on 1 January 2004. Therefore, the Minister's valuation needs to be 'rolled-forward' to include capital additions and economic depreciation from 30 June 2001 to 1 January 2004.

Table 4.3 shows Transend's assessment of its asset valuation as at 1 January 2004.

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

	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)
Closing asset base	**542.2**	**581.7**	**603.8**

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

4.4 Summary

A detailed and rigorous approach has been adopted to ensure that the Minister's determination of Transend's asset valuation does not exceed deprival value, and therefore satisfies the regulatory requirements for this revenue determination. The Minister's asset valuation for regulated assets in service as at 30 June 2001 is $521.6m. Transend has assessed the rolled-forward valuation as $603.8m as at 1 January 2004.

The Commission is asked to note that Transend has some residual concerns regarding the process for determining future asset values. In Transend's view, it is essential that future asset valuations should properly recognise the full costs of prudently incurred investment. These issues are not central to this revenue determination, but are legitimate concerns for the forthcoming regulatory period. The issues are discussed in Appendix 3.