



Australian Competition and Consumer Commission

ElectraNet SA Asset Base Review

July 2002

ideas
change
everything



ElectraNet SA Asset Base Review

Prepared for
Australian Competition and Consumer Commission

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Description of Review for ACCC of the Asset Base submitted by ElectraNet SA for regulatory reset in 2002

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Summary of Findings

Introduction

The Australian Competition and Consumer Commission (ACCC) is conducting an inquiry to determine an appropriate revenue cap to be applied to the non-contestable elements of the transmission services provided by ElectraNet SA (ElectraNet) in South Australia.

The National Electricity Code (Code) requires the submission of a proposal by the network business, a review by ACCC, a draft determination by ACCC open to public submission and a final determination by the ACCC to establish a revenue cap for the period 1st January 2003 to 30th June 2008.

Part of the review process requires ACCC to assess the appropriate asset base to form a view on a reasonable risk-adjusted cash flow rate of return on the asset investment and ensure any assigned value does not exceed the deprival value of the assets.

Meritec Pty Limited (Meritec) with the support of urbis Property Consultants (urbis) has completed a review of the asset base in line with the requirements of the ACCC brief and a summary of the findings of the review follow.

Summary of Findings

The Submission

- The valuation used by ElectraNet as the basis of its submission to ACCC was that developed as a high level review by Sinclair Knight Merz (SKM) for the South Australian Government in 1998 of a valuation by Hill Michael and Associates (HMA) in 1995 for ETSA Corporation. The valuation review outcome was subsequently rolled forward to 30 June 1999 by the South Australian Government for the purposes of establishing the Electricity Pricing Order that currently operates. This is called the Jurisdictional Valuation.
- SKM reviewed and generally accepted with minor alterations for time the valuation carried out in 1995 by HMA. This was a more detailed valuation.
- ElectraNet has provided additional information in support of adjustments to those valuations to establish a current asset base for the revenue cap submission and has rolled the SKM valuation forward to December 2002.
- The Jurisdictional ODRC Valuation at 1 July 1999 was \$685.0 million.
- The SKM ODRC valuation at 1 July 1998 was \$678.9 million and is reconciled with the Jurisdictional valuation. This was rolled forward by ElectraNet to \$1,101,667 million at December 2002 with their adjustments.
- The major adjustments to valuations sought by ElectraNet in their submission are allowances for the treatment of easements, revised optimisation leading to

readmitted assets and the application of finance costs to replacement cost models. These have all been addressed in this review and Meritec and urbis have formed an opinion on the appropriateness of these adjustments.

- The asset valuations used to obtain the Jurisdictional valuation have not been examined in detail during this submission review. ACCC is constrained by the Code to the valuations as those applicable to the asset base at 1 July 1999.
- The issues of additions, accelerated depreciation, etc for the roll forward to 1 January 2003 are the focus of this review.

Easements

- Easements have been treated in two parts: (i) The cost of compensation applicable to the recognition of the easement on title and (ii) the cost of acquisition of the easement by ElectraNet associated with the effort to gain the easement.
- The original easement network value attributed to ElectraNet SA subsequent to disaggregation and used for the Jurisdictional valuation was not based on any factual valuation.
- Maloney Field Services (MFS) provided deprival valuations of the network at 1997 and 2000 on a "degree of difficulty" basis, in which costs of compensation and procurement/administration were separately identified. MFS isolated costs reflective of land transactions only, exclusive of transmission and network costs. We agree with their methodology and its execution.
- For regulatory purposes, the ACCC in their "Draft Statement of Principles for the Regulation of Transmission Revenues" favours adoption of the most appropriate available valuation and indexation of the values and applicable costs rolled forward to the jurisdictional valuation date (January 2003) by means of a CPI based index. In our opinion that is not consistent with deprival value concepts for easement compensation values.
- It has generally been accepted that adoption of deprival value methodology based upon current market information is the most appropriate method to establish the network easement/land values. ACCC is however constrained from adopting this method at the present time by potential negative depreciation issues and "price shock" concerns.
- Within the scope of this Brief, a compromise based upon adoption of the latest valuation available, indexed by a property-specific increment over the shortest timeframe possible appears to be a preferred method to estimate compensation value as at January 2003.
- The review has established a value of \$137million at December 2002 for the compensation component based on the MFS 2000 valuation and indexed for market adjustments to December 2002. It has been rolled into the asset base at December 2002.

- The separate cost of acquisition has been determined to be \$36million at June 2000 based on those costs associated with acquiring an easement and excluding costs already recognised in the asset valuations as related to replacement costing for line assets.
- The acquisition costs have been included at June 2000 and rolled forward undepreciated with the asset base using the indices applied to other assets

Interest During Construction

- Based on advice from ACCC the inclusion of interest during construction as a component of replacement cost models has been disallowed by ACCC due to the SA government decision to accept interest during construction only for projects over \$50million in setting the Jurisdictional valuation.
- Interest during construction has not been added to the asset base but is reflected in the costs rolled in for those assets included since July 1998

Optimisation

- The optimisation applied to the asset base since the original Jurisdictional valuation has been examined and in our opinion the allowance of \$12.9million is appropriate. It has been reintroduced into the asset base as at July 2001.

Roll Forward

- The roll forward of the asset base has been undertaken using the same indexation principles as applied in the recent Powerlink application and determination, except for the treatment of the easement compensation.

Asset Base Value at 1 January 2003

- In our opinion the resulting asset base value at 1 January 2003 is \$997million.

1.0 Background

A revenue cap decision is required for the transmission network services of ElectraNet SA for the period 1 January 2003 to 30 June 2008.

ElectraNet has submitted information in support of an application to allow ACCC to make a decision. This information includes a Depreciated Optimised Replacement Cost asset base valuation at 1 January 2003.

ACCC appointed Meritec with urbis to review the asset base valuation, in particular the reasonableness of proposed inclusions to the base value.

1.1 National Electricity Code Requirements

The National Electricity Code (Section 6.2.3) requires that the assets providing the service at 1 July 1999 be accepted at the value assigned by the jurisdictional regulator if they do not exceed deprival value. Assets added to the base since the jurisdictional ruling are to be added at cost at the time of commissioning to establish an asset base value at 1 January 2003.

The Code does allow ACCC the opportunity to verify the valuation independently and to make adjustments consistent with the jurisdictional valuation, to the asset base where there have been unreasonable omissions in the establishment of the asset base for the jurisdictional valuation.

Deprival value of an asset is the measure of economic loss a network owner would suffer if deprived of the use of that asset. DORC value can be compared to economic value and the lesser of the two is assumed to be the deprival value.

This will be discussed further in this report.

1.2 Statement of Regulatory Principles

The Draft Statement of Regulatory Principles issued by ACCC in May 1999 forms the basis of evaluation of the asset base submitted by ElectraNet. Sections 4 and 5 particularly relate to valuation issues.

The document is a draft. However and it will be valuable to ensure issues raised in this report are addressed either in the final version or in support documents, for example the valuation guidelines applicable to TNSPs.

1.3 Jurisdictional Valuations for ElectraNet

ElectraNet has presented information in support of adopting the Sinclair Knight Merz (SKM) valuation at 1 July 1998 as the base valuation for roll forward to 1 January 2003 to start the regulatory period.

The jurisdictional valuation used for the Electricity Pricing Order (EPO) as of July 1999 was established by rolling forward the SKM valuation from 1 July 1998 to 1 July 1999.

The SKM valuation review of the Hill Michael and Associates 1995 valuation led to an optimised depreciated replacement value of \$678.9million including working capital applicable to the ElectraNet assets at 1 July 1998.

The lack of detail in the jurisdictional valuation does not easily support simple roll forward from July 1999 to January 2003 so ElectraNet has assumed the SKM valuation, reconciled it with the financial asset register at 1 July 1998 and the July 1999 jurisdictional valuation, and then rolled this valuation forward to 1 January 2003.

We will discuss the roll forward process later in this report.

The valuation by SKM was an overview and review of changes since 1995 of the detailed valuation undertaken by Hill Michael and Associates (HMA) in 1995 for the ETSA Corporation. Both these valuations have been undertaken using ODRC valuation principles in accordance with the Draft Statement of Regulatory Principles.

SKM clearly stated in their valuation report that "their report establishes a valuation of ETSA Transmission Infrastructure as at 30 June 1998 based on the Hill Michael and Associates Valuation Report (30 June 1995)".

The valuations covered regulated assets.

SKM referenced the National Grid Management Council guidelines and the 1995 NSW Treasury valuation guidelines for their review of the HMA valuation. These guides assume deprival value principles apply.

No economic value tests were applied to the SKM or HMA valuations. This is, however, consistent with the ACCC approach in the Draft Regulatory Principles Statement.

Without an economic value test it is assumed the deprival value of the network is equal to the ODRC value. ElectraNet has not sought a write down of the value of any parts of

the network and Meritec has not identified any situations where a write down might be applied.

The ACCC is constrained by the Code to the jurisdictional valuation as the starting point for roll forward and assessment of future value of the asset base for this regulatory reset. However, where there was no judgement made the ACCC may examine any arguments and adjustment as proposed by ElectraNet.

It is expected that subsequent revaluations will take full account of deprival valuation principles in establishing a starting value for the next and subsequent regulatory resets.

ElectraNet has argued that substantial adjustment is required to the jurisdictional valuation to account for omissions. These omissions include recognition of easement compensation and acquisition costs, recognition of interest costs during construction and changes in the optimisation levels for certain assets.

Meritec and urbis have examined these adjustments and formed opinions as to their validity and these have been discussed in the relevant sections of this report.

The acceptance of some appropriate adjustment is ultimately for the ACCC to decide as part of its determination.

1.4 The Review Process

ACCC appointed Meritec with urbis in April 2002 to review the asset base submission for the regulatory reset.

On 16 April 2002 ElectraNet SA submitted their proposal to ACCC for the regulatory reset covering 2003 to 2007/08.

Meritec and urbis gathered information associated with the submission and then visited ElectraNet to establish the detail behind the asset base projections.

The review required examination of data and assumptions associated with the jurisdictional valuation, the roll forward process and the adjustments to the asset base proposed by ElectraNet.

As well as the data the processes used to define the adjustments and the roll forward were examined.

In summary the terms of reference for the review were:

- Review with analysis and comment on assumptions, methodology and findings contained in the SKM valuation report and the subsequent roll forward.

- Review the appropriateness of assumptions for the underlying valuation of easements
- Review the impact of modern equivalent asset valuation and advise on methods to address deficiencies
- Review the validity and varsity of claims for inclusion of funds during construction
- Roll forward the jurisdictional asset valuation to 1 January 2003
- Provide advice as necessary for the Commission to make a Code compliant valuation at 1 January 2003.

2.0 Asset Definition and Identification

The jurisdictional valuation adopted at 1 July 1999 as directed by the Code is the basis for a roll forward of the asset base to 1 January 2003 as the starting date for the regulatory reset.

This examination of the asset base and the roll forward process has not focussed in detail on a review of the valuations used to establish the jurisdictional asset base rather the focus has been on the omitted assets or allowances as defined in the ElectraNet submission.

Generally the asset listing is appropriate for valuation purposes and is satisfactorily classified. ElectraNet has identified that it can, for asset management purposes, provide an appropriate hierarchy of assets.

The valuation by HMA was produced at an assets level and aggregated to asset categories for reporting. SKMs review (while considering impacts of unit rates, lives and optimisation at asset level) focussed on asset at a category reporting level.

The quantities of assets have been clearly established for the 1995 valuation and 1998 review and we have not completed any verification process for the asset base, relying on the quantities previously established as given. The quantities of assets have been identified and confirmed a number of times through the leasing process and the regulatory pricing process so Meritec believes the asset base is materially complete in its identification of assets.

Adjustment to the number of assets following the valuations has been based on returns from the financial asset register at ElectraNet and this holds information at a level suitable for the roll forward exercise.

The asset listing used for the asset base has only considered regulated assets and excludes non-regulated assets as required by the Code.

2.1 Validation and Verification

The SKM review provided for sample audits of ElectraNet assets to ensure the validity of the asset listings used by HMA.

They found no inconsistencies.

Meritec believes that all appropriate regulated assets have been included in the HMA and SKM valuations.

However ACCC needs to develop the necessary guidelines to clearly define the regulated assets and the prescribed services.

3.0 Asset Replacement Costs

The replacement costs associated with the asset base used for the jurisdictional valuation and electricity pricing order have not been examined in detail as the ACCC has indicated it is constrained by the Code to the jurisdictional regulatory asset base as the starting point for the roll forward process.

SKM reviewed the HMA values and agreed with them as representative of replacement cost models for the typical assets of a transmission network service provider.

For this review the focus has been on the submission by ElectraNet and the issues relating to omitted asset value. Thus the examination of replacement costs has centred on the elements of costs that may have been excluded previously.

The omissions claimed by ElectraNet relate to interest during construction and its impact, easement compensation and easement acquisition costs. The latter two are discussed in the next section of this report.

3.1 Interest During Construction

Interest during construction is a cost provision in any replacement cost model for DORC valuations. It recognises the cost of capital outlaid over a construction period generally longer than 12 months. Not all assets in a replacement model would require more than 12 months for construction but the general provision for such a cost is shared across all assets by the application of a unit replacement cost inclusive of interest during construction.

Typical assets as provided by ElectraNet generally have construction periods beyond twelve months when planning and design lead times are added to actual construction times.

The HMA and SKM valuations specifically excluded interest during construction as a unit replacement cost component at the request of the ETSA Corporation, except for a single asset that alone cost more than \$50 million. The rationale for its deletion is not available now but it has the impact of reducing the cost of replacement and not reflecting the true cost of such activity or the depreciated value of the assets.

ElectraNet commissioned PricewaterhouseCoopers to determine an appropriate allowance for interest during construction.

The work by PricewaterhouseCoopers is detailed and well presented. It clearly argues for a provision of 7.5% interest during construction rate applicable to the construction of assets in the asset base. An average number has been chosen due to the variability of the true interest rate applied for different projects used as models for the exercise.

In comparison the HMA valuation utilised an interest rate provision of 7.5% for estimating the interest during construction. The resultant impact on the valuation of assets was not recognised in the asset base except for a single asset, the Tails-Seas 275kV double circuit line, that cost more than \$50 million. HMA estimated the total IDC impact to be \$40.9 million undepreciated.

Recent work by Meritec and others to value electricity assets including transmission lines has been on the premise that interest during construction should be included as a legitimate cost incurred in developing an asset and so would also be present as a cost for replacement cost modelling.

Meritec supports the proposition that interest during construction is a legitimate cost associated with replacement or development of assets and should be recognised in the replacement cost valuation of assets.

The method used in the jurisdictional valuation was to exclude interest during construction except for projects over \$50 million (only one asset qualified for this inclusion). The jurisdictional valuation was achieved knowing this element of cost was excluded on such a basis.

Adopting the jurisdictional valuation as the starting point for reporting an asset base at 1 January 2003 means that ACCC is constrained from allowing additional IDC where a judgment was made by the jurisdiction in establishing the regulated asset base. Therefore, no provision for additional IDC can apply to the ElectraNet asset base.

We have excluded interest during construction from the roll forward of the asset base.

Future valuations for the ElectraNet asset base, where a starting asset valuation can be applied, should recognise and include appropriate provision for interest during construction.

3.2 Asset Lives

Asset lives have not been reviewed here as the work done by SKM to review the HMA valuation elements set the basis of the jurisdictional valuation.

The SKM review found that generally the asset lives assigned to assets for valuation purposes were appropriate.

We consider the adopted lives are appropriate.

They are consistent with those applied for other valuations elsewhere in transmission businesses in Australia.

4.0 Optimisation

The basis of the methodology for the optimisation review conducted by SKM¹ for ElectraNet as part of the asset base submission is the NSW Treasury document from 1995 'Policy Guidelines for Valuation of Network Assets of Electricity Network Businesses'. Although primarily developed for the valuation of distribution businesses, the Guideline is considered applicable to transmission systems, and has been used as the basis for all jurisdictional valuations to date.

Although the Guideline is not specific on security/reliability, these are adequately covered in the South Australian Transmission Code. In this regard it is important to note that the SA Code imposes obligations on ElectraNet in addition to those imposed on other TNSPs covered by the National Electricity Code – differentiating ElectraNet from those TNSPs. Similarly the 15 yr planning period discussed in the Guidelines is not considered appropriate, as in our view the results of system studies become meaningless that far ahead. Indeed SKM note from the results of studies at the end of 10 yrs from the start of the regulatory period that convergence was not always possible at forecast loading levels.

The load forecasts used in the submission were largely produced by ETSA Utilities and subsequently published by ESIPC in their Annual Planning Review of July 2001. These forecasts do not extend beyond 10 yrs and our view is that this is an appropriate period for consideration of network optimisation.

The starting point for SKM's optimisation review has been the HMA Valuation Report from 1995, and as updated by SKM as part of the 1998 valuation of the ElectraNet business. The review was of ElectraNet's shared network assets. Connections assets are not considered as part of the scope of such as assignment as they are the subject of direct agreement between ElectraNet and connected parties.

Studies were done 10yrs out from the yr0 base case, starting with the current system model for first year, diversified loads [prepared by ETSA Utilities on connection point basis] were applied, contingency studies conducted on the solved case and results viewed for code violations, optimum solutions (from a planners perspective) were identified, built into the model, and tested.

Load flow analysis was conducted by ElectraNet network planning personnel, following on from the extensive scenario development work conducted by Roam Consulting

¹ 2001 Optimisation Review - Final report. SKM. February 2002

Optimisation studies considered the two VIC-SA interconnectors, Heywood and Murraylink (not yet commissioned), but didn't consider the proposed SNI from NSW. Although the SNI project has been approved by NEMMCO, it is currently held up under appeal. The SNI project is considered to provide roughly an equivalent additional supply capacity into SA as Murraylink although it does provide better security of supply for the Riverland area for the 10 year planning horizon.

Meritec's role has been to review the SKM optimisation for reasonableness. In general there was little in the way of justifications given in the SKM report for the optimisations suggested, apart from broad comments such as 'increased load', or that the South Australian maximum demand has increased from 2132 MW when the HMA report was completed to a projected 4188 MW in 2012/3. Such broad comments could apply to any network element.

Notwithstanding that, we are of the view that the optimisations proposed are reasonable.

4.1 Optimisation of the ElectraNet SA system

Proposed changes to the 1998 optimised network include (as at 30 June 2001):

275 kV double circuit line Davenport – Cultana.

This 275 kV line into the Eyre Peninsula from Davenport is built and strung as a double circuit line. Operationally it is run as a single circuit line with the circuits bonded. Demand projections do not support the need for two 275 kV circuits effectively running in parallel with two 132 kV circuits from Playford/Davenport into Cultana/Whyalla.

Meritec agrees with the optimisation of the bonded circuits to a single circuit, given the projected load flows on this circuit into the Eyre Peninsula.

275 kV single circuit Para – Tailem on double circuit towers.

Actual construction is a single circuit line and a double circuit line with one circuit strung. Previous optimisation studies concluded that the two single circuits could be optimised to a double circuit line. SKM recommends that the two single lines remain, and that the double circuit construction be optimised to a single circuit construction.

We agree with this optimisation.

Para SVC.

These were never optimised in the HMA report, however their inclusion rendered the older synchronous condensers unnecessary, and so the condensers were optimised out.

The condensers have, subsequently, been decommissioned and there seems little doubt that the SVCs are required for reactive support on the network.

Meritec agree that the SVCs should not be optimised out.

In summary, we concur with the conclusions reached on the optimised network

4.2 Re-Admitted Assets

275 kV single circuit lines Davenport to Brinkworth and Davenport to Para.

These circuits were optimised to a double circuit line by HMA in 1995, an optimisation retained by SKM in 1998. However with the proposed Bungama project, the circuits were considered to be necessary as discrete single circuits. The need addressed by the Bungama project is the strengthening of the ageing 132 kV network between Baroota and Ardrossan West on the Yorke Peninsula. Allied with this is the decommissioning of old 132 kV circuits and the associated accelerated depreciation of those assets.

Meritec agrees with the reversal of the previous optimisation of these two single circuit lines.

275 kV Playford switchyards.

The optimisation from HMA was to reduce the transformers in Playford A switchyard, replacing with complex 275 kV primary, auto 132 kV winding and dual 11 kV windings for generators. Apart from the issue of introducing two non-standard transformers, such an optimisation is not now appropriate.

Meritec agree with this review of the optimisation

275 kV lines ex TIPS. Twin conductor to single.

HMA comment in their report that generation proposals at the time these lines were designed were somewhat higher than were current in 1995. Although little factual justification has been shown in SKM's report to back up the comment on 'significant developments in generation connected at TIPS'. Meritec reviewed possible generation on the Le Fevre Peninsula / Torrens Island region², including:

- Australian National Power plans for construction of a further 250-300 MW of generation capacity at Pelican Point,
- ATCO Group in planning approval stage for a gas fired station at Port Adelaide (Osbourne 2) of up to 450 MW installed capacity,

² Annual Planning Review. Electricity Supply Industry Planning Council. June 2001

- Origin Energy announced intentions to construct a 95 MW gas turbine station on Torrens Island, with possible conversion to CCGT of 150 MW capacity

Given these proposals, Meritec agrees with the conclusion that there is no justification for optimisation of these circuits.

275 kV CB and a half installations.

The 1995 optimisation from HMA questioned the requirement for CB + half substation installations on the basis of CB reliability not justifying such expenditure. We agree with SKM that such an optimisation is not appropriate when one considers electricity market requirements.

Meritec agree that no optimisation should take place.

As a consequence we have included these assets in the roll forward of the asset base to January 2003

4.3 Assets with Accelerated Depreciation

ElectraNet has nominated a number of assets as being subject to accelerated depreciation. These are split into four categories; transmission lines, substation equipment, system transformers and connection transformers.

Transmission Lines

Four 132 kV circuits are proposed for write-off, varying between 47 and 50 yrs old. These circuits are associated with substation decommissioning projects (Playford and Northfield 132 kV) and become surplus once the substation works are carried out.

Substation Equipment

132 kV equipment in Northfield (1951 construction), Playford (1952) and the existing Bungama substation (1952), is proposed for write-off in the forthcoming regulatory period. These projects, with their proposed replacements, are required for ElectraNet to continue meeting SA Code reliability obligations for connection points fed from the three substations.

We have examined the listing of assets against projected capital expenditures and planning proposals and determined that the listing is appropriate assuming future works programmes are achieved.

The depreciation schedules proposed by ElectraNet have been retained in the roll forward.

5.0 Non-Infrastructure Assets

5.1 Buildings and Equipment

Buildings and non-infrastructure plant and equipment assets forming part of the overall network property portfolio have been indexed and rolled forward by ElectraNet SA from 1 July 1998 to 31 December 2002.

We have not directly addressed either the particular properties involved or the dollar values applicable to these assets. The ACCC is constrained by the Code to the Jurisdictional asset base as the starting point for any roll forward and our focus with this Brief has been to undertake a desktop review of the easement compensation and procurement costs valuation approach adopted over the transmission network.

Furthermore, the all-up value of the buildings and non-infrastructure plant and equipment assets is minimal in terms of the overall transmission line network. We believe that without the benefit of current and historic property information it is more appropriate at this time to defer detailed investigation of the ElectraNet index methodology of these assets until the first review opportunity arises.

In concert with comments made later in this report regarding easement value and cost indexation, we believe that building assets should be indexed in a manner that is tied to unique property issues and to the wider economic and social pressures within which such an asset class performs.

Non-infrastructure plant and equipment assets are being indexed in a fashion consistent with the other assets of ElectraNet. There may be some opportunity in the future to review the nature of an appropriate index if CPI is not considered adequate.

5.2 Land

Freehold land sites owned by ElectraNet SA are restricted to commercial locations and sub-station sites.

As stated above, the value represented by this asset class is minimal in the overall transmission network value and, given that our main concern and focus in this Brief has been the question of easements, this matter should be fully reviewed at the first opportunity available to the regulator.

Similar issues as apply to easements in terms of roll forward should be reviewed in the future.

5.3 Easements

The matter of adequate recognition of costs and values associated with easements has been raised by ElectraNet in their submission due to its apparent deletion in the HMA and SKM valuations at the request of ETSA Corporation.

Only a notional value of \$3.1million was assigned by the SA government for the Jurisdictional valuation.

Costs associated with easements are incurred by utility businesses such as ElectraNet to ensure security for access for maintenance, sometimes for construction of a transmission line and for continued use of line assets such as transmission lines. An easement gives right of access for construction and operating purposes, warns of an interest in a certain property where the assets exist, warns of the possible development of assets by the business within the prescribed land in the future and ensures continued use of assets by excluding or restricting use of the land by the land owner that might impinge on the continued operation of the assets.

Therefore easements are an integral part of the development of, planning for and protection of transmission line assets.

There are two major elements of cost associated with easements. The cost of acquisition or establishment and the cost of compensation or redress to land owners affected by the need to create an easement. In the ElectraNet submission it is stated that neither of these costs have been appropriately recognised in the jurisdictional valuation.

The submission by ElectraNet sought to recognise the cost of acquisition incurred by the business and its predecessors and to seek consideration of a realistic compensation cost that might have been incurred to obtain any easements. These costs would be adjusted in the roll forward of the asset base.

urbis has considered the issue of compensation and this is discussed in Section 5.3.1.

Meritec has looked at the cost of acquisition and sought to assess a realistic value for costs should they not be recognised in the jurisdictional valuation and considered by ACCC as able to be included. These are discussed in Section 5.3.2.

5.3.1 Easement Compensation

Background

As part of the desktop review of the ElectraNet SA Asset Base Review we have been provided with various background documents relating to the component parts of the easement network valuations.

The figure originally taken up into the regulated asset base for easements (\$3,100,000) was essentially the figure attributed to the ETSA Transmission entity as part of the disaggregation of the ETSA business in early 1999.

It clearly did not represent the deprival value or actual costs of transmission line easements forming part of ElectraNet SA at that time.

All parties acknowledge that the initial asset value was a totally inadequate reflection of the value of such easement assets within the network.

At and around that time, Maloney Field Services (MFS) was undertaking valuations of ElectraNet SA's network to provide market based estimates of worth of these land assets adopting deprival value methodology. MFS had also undertaken deprival basis valuations based upon every location type throughout South Australia to provide overall unit cost rates per kilometre and per square metre for both overhead and underground lines of different types.

MFS Valuation Methodology

MFS provided valuations for ElectraNet as at 28 February 1997 and 30 June 2000 on individual transmission line/system bases to isolate, identify and account for the value of land (easement and freehold network sites) thereon. The assessments relied upon estimation of the number of easements/ownerships per system, and adopted unit rates for procurement costs (acquisition costs) and estimations of likely easement compensation costs payable to affected owners in the network, based on a "degree of difficulty" valuation regime.

MFS determined procurement costs and estimated compensation sums based upon its considerable and expert valuation experience in both rural and urban areas throughout South Australia. Detailed overflights were made of the network assets in the Adelaide and environs area.

For the assessment of compensation MFS adopted differing percentages of freehold value applicable to lands forming part of the transmission network easement lines, to which

additional value factors of injurious affection, disturbance, solatium and out of pocket expenses were added.

In rural areas, MFS used a figure approximating 25% of freehold value, increasing this to 25-30% in semi-rural areas where injurious affection is more noticeable due to the "spread of influence" of the easement that is magnified on or closely by settled sites.

Within the urban areas percentage freehold value varied between 30 and 80% for those same reasons.

We agree that in general terms these percentages are not unreasonable (given our own experience and expert advice canvassed) as are the broad band of land values discussed with MFS applicable to the network lands throughout the State.

MFS data for the 1997 valuation was based on easement/ownership numbers provided from previous ETSA information. MFS estimated the number of easements/ownerships at 2000 based upon an estimate of land use and ownership changes over time on separate systems. The data can be broadly compared to current baseline information provided by ElectraNet.

The average costs on a per easement/ownership basis for the transmission line network (excluding Capital Gains Tax which was an issue in 1997) can be presented as:

| MFS VALUATION DATA WITH ELECTRANET 2002 DATA | | | |
|--|--------------------|--------------------|---------------------------|
| | MFS 1997 VALUATION | MFS 2000 VALUATION | ELECTRANET 2002 DATA |
| <i>Estimated No. of Easements/Ownerships</i> | 3,489 | 3,798 | 5199 |
| <i>Average Procurement Costs/Ownership</i> | \$6,488 | \$9,839 | \$7188 (at MFS 2000) |
| <i>Average Compensation Costs/Ownership</i> | \$31,269 | \$30,542 | \$22,312 (at MFS 2000) |

MFS adopted a definition of deprival value that we believe is acceptable for valuation purposes, stating it to be:

"The entire loss, both direct and indirect, that might be expected to be incurred by an entity if that entity were deprived of the asset at reporting date (or the amount that

would have represented sufficient compensation to restore it to the position it formerly occupied if for some reason it was deprived of the said asset”.

In summary, the MFS valuation models represented and valued the total number of easements/ownerships on a transmission line system on a “degree of difficulty” basis (in terms of bundling the various and uncertain issues that could be involved, including potential negotiation effort, public awareness/antipathy/acceptance, and their resultant impact on fixed costs and monetary compensation issues), adjudged the dollar value of compensation payable for each class of easement/ownership and the dollar value of procurement costs, and hence the total deprival value dollar figures involved as at 1997 and 2000.

ElectraNets Easements

ElectraNet SA’s network is self-classified into three categories of property type:

- Case A: Pure rural (adopting 50% private land, 50% Crown land)
- Case B: Rural/Regional mix (adopting 75% private land, 25% Crown land)
- Case C: Fringe urban (adopting 100% private land)

MFS undertook very detailed investigation of the Case C lands in and around Adelaide and the Adelaide Hills to positively identify and generally “prove up” its valuation techniques and methods prior to valuing the remainder of the overall ElectraNet network.

Our discussions with MFS on this matter allows us to feel generally satisfied that the methodology employed, given their expert understanding of the areas involved, is reasonable based upon established valuation principles and practise.

Currently, ElectraNet SA suggests that approximately 3.8% of its network easement length exists within Fringe Urban, approximately 8% within Rural/Regional, and the remaining 88.2% in the Pure Rural areas:

| CASE | EASEMENT LENGTH (KM) | EASEMENT LENGTH (%) |
|------|----------------------|---------------------|
| A | 3990.5 | 88.2% |
| B | 363.2 | 8.0% |
| C | 172.9 | 3.8% |
| | 4526.6 | 100% |

In adopting its 'degree of difficulty' notional acquisition process, the MFS deliberations approximated the SKM approach used in its Easement Acquisition Assessment, where SKM stated that:

- 95% of easements will be settled through negotiation with the property owner,
- 4% of easements will be resumed, and
- 1% will be acquired through legal action.

These percentages are based on SKM's field experience and are stated to be borne out by experience with ElectraNet in South Australia, QNI in Queensland/NSW, and BassLink in Victoria.

(ElectraNet commissioned SKM to provide advice on easement acquisition and has prepared a document "Regulated Costs of Easement Acquisition" in support of their asset base submission. We will discuss these documents in Section 5.3.2.)

Given the constraints of our desktop valuation review it has not been possible to separate out any further degree of detail on the MFS valuation report without completing detailed reviews and analyses of background data, detailed historic and current values, and the undertaking of a compensation/acquisition process for at least (representative) portions of overall Case A, B and C systems.

MFS undertook its valuation exercise on a per easement/ownership basis. Information provided suggests the following estimate numbers apply to the Cases nominated:

| Case | Ownership Numbers | Average Compensation Payable | Total |
|------|-------------------|------------------------------|---------------|
| A | 1119 | \$12,931 | \$14,469,247 |
| B | 1617 | \$26,890 | \$43,480,431 |
| C | 1062 | \$54,661 | \$58,049,477 |
| | | Total | \$115,999,155 |

Issues Relating to Compensation Roll Forward

We note the jurisdictional valuation date is July 1999. The rolled forward valuation date is to be January 2003.

From a valuation perspective, there are flaws in any proposal to adopt outdated or the "oldest" valuation available (ie the MFS 1997 document) for roll forward to reflect values as at January 2003 adopting a CPI based index regime, as the hybrid method is:

- based over a longer (and therefore more uncertain) period of time, and

- uses a non-property based index that is unrepresentative of potential movements in real estate values over time.

We do not believe that adopting a simple CPI index accurately reflects the value increase in land for roll forward purposes since 1997. This is because there is a mix of land uses within the network, the underlying land values within those areas change, land use patterns change as do amenity values reflected in ongoing development. The difficulty therefore is deciding upon a reasonable roll forward index cognisant of the different property types and uses affected by the easement network.

Easement Valuation Issues

In a valuation scenario, these roll forward matters create two questions to be reviewed namely:

1. The appropriateness of the MFS valuations and methodology as at 1997 and 2000, and
2. The accuracy and fairness of adopting a rolled forward valuation as at January 2003, and the index to be used.

Under deprival value methodology, the easement network valuation as at January 2003 needs to be established and be based upon a market based value.

The ACCC however prefers adopting a historic cost valuation figure for the compensable items, which are then rolled forward to the appropriate date, plus the addition of estimated/indexed current acquisition costs, to provide base line figures for its revenue cap determinations.

In our view, the most appropriate valuation method to achieve the ACCC's stated concept is to use the 30 June 2000 MFS valuation as a base document, and then index the values forward using:

- Easement/Ownership compensation - on the basis of market movements in underlying land values, and
- Procurement costs – by a CPI based index that would be representative of the increase in costs of this nature.

In deprival value methodology the question of the network current replacement costs must be considered in the context of a hypothetical situation where all of the easement rights are assumed not to exist, but that the property status and conditions along the network are as they exist today. The easement network was acquired over a long period of time, however the cost assessment is to be based on the assumption that the entire

network of easements would be acquired in bulk at the jurisdictional date ie January 2003.

As noted above, we do not believe the indexation of historic compensation costs using some form of general commodity-based index is the most appropriate way to represent the deprival value of an easement network. Simply put current market value is best determined using current market data.

However, if a pure market approach is not acceptable, we believe the next most accurate method is to use index methodology which is attuned to the particular data being adjusted e.g. a cost index for cost and a property based index for property.

Easement Compensation Summary

ACCC has stated that there are sound regulatory reasons for adopting its preferred method, including:

- the need to avoid a potential negative depreciation charge that may be required to account for any land/easement value growth, and
- the need to avoid potentially huge "price shocks" that may come from the adoption of updated land/easement valuations at the beginning of every regulatory period.

Notwithstanding these comments, as valuers we believe the deprival value methodology based on current market conditions is the best approach.

This creates a conflict of objectives.

On the one hand, the deprival value concept is espoused as the preferred method and acknowledged for its central objectivity by all parties, but on the other hand a true application of the principles yields an unacceptable valuation outcome at this time.

Discussions with MFS suggest that since 1997, land values in the ElectraNet SA area increased far beyond a normal CPI or related index in the following approximate manner:

Case A: In concert with the rest of rural Australia, land values in the country have increased over time given the improving international economic outlook and the better than average prices received for Australian produce on the world market. Land values have risen in the vast majority of the broadacre grazing land over which ElectraNet SA's network runs in the period 1997-2002 by some 20%. 10% or more of which has occurred since 2000. Values are however less volatile

in rural areas, and consensus is that this increment may not be sustained into the future.

Case B: The increase in subdivision and demand for outer urban/inner rural land contributed to substantial value increase from 1997 in the order of 20-25% especially apparent in the Adelaide Hills area. The majority of this has occurred since 2000.

Case C: Fringe Urban. Adelaide has experienced a boom in real estate values driven by continued subdivision of fringe grazing lands into residential estates, and also the increase in broadacre and industrial land values located to the north of the City area itself. Between 1997 and 2000 land values have increased by 20-25%, but between 1997 and 2002 values across the board may have jumped as high as 80% in capital value, depending entirely of course upon subdivision potential, land use, rezoning etc.

Such value increments make the adoption of any index (except specific property indices) difficult. Land must be recognised as an asset whose value will generally increase over time (although this is not always the case) in a manner tied to unique property issues and to wider economic and social pressures. Hence unlike most forms of physical assets, property network assets contain both depreciating components (plant, buildings and fixtures) and an appreciating component (land).

The items to be assessed in a deprival valuation process of ElectraNet SA's easement network include in broad terms,

- The market value of the land
- Injurious affection
- Loss attributable to disturbance
- Loss attributable to severance
- Special value
- Solatium
- Fees/Fixed Costs

ElectraNet SA's easements accommodate its transmission line network and have been acquired over a long period of time. Easements of this type are rarely if ever sold or traded. The question of value of real property interests that are not traded on the open market is rarely a straightforward question, because the concept of market value becomes purely hypothetical rather than actual. This is the case for the subject network easements.

We believe the costs discussed with MFS refer specifically to land and easement cost items.

We have split the 2000 MFS valuation and dealt with the compensation sum of \$115,999,210 as follows. (Procurement costs are covered in Section 5.3.2)

We have estimated average land value increments relevant to each Case based on our experience in similar situations, and with reference to advice received from property professionals and South Australian government data. The adjudged increments are 10%, 20% and 30% for Cases A, B and C.

We have adopted the latest Mapinfo data provided by ElectraNet regarding the numbers of easement/ownerships existing in the network.

These estimates can be represented as follows:

| | CASE A | CASE B | CASE C |
|---|--------------|--------------|---------------|
| <i>Ownerships reported by ElectraNet (2002)</i> | 3298 | 966 | 935 |
| <i>Revised Ownership Numbers (2000)</i> | 3133 | 918 | 888 |
| <i>MFS Average Compensation (2000)</i> | \$12,931 | \$26,890 | \$54,661 |
| <i>MFS Total Compensation</i> | \$40,514,116 | \$24,676,953 | \$48,552,633 |
| <i>Indices for Compensation at 2002</i> | 1.10 | 1.20 | 1.30 |
| <i>Total Compensation 2002 Value</i> | \$44,565,528 | \$29,612,344 | \$63,118,423 |
| <i>TOTAL:</i> | | | \$137,296,295 |
| <i>ADOPT:</i> | | | \$137,000,000 |

In our view the estimated all-up base line jurisdictional valuation for easement compensation rolled forward to 1 January 2003 approximates \$137,000,000.

Note: The ACCC uses a different methodology for compensation determination in its DSRP

5.3.2 Easement Acquisition

Inclusion of Acquisition Costs

The replacement cost valuation approach associated with deprival valuations requires the establishment of the true cost of asset replacement. This should incorporate all costs to provide a new asset if deprived of the current asset.

These costs therefore should reflect the optimal method to establish/replace an asset.

Within the method are the activities that alone or in combination contribute to development of the asset. Costs should be captured at a level that allows these activities to be individually recognised and confirmed as part of the process.

The listed activities associated with replacement of assets include preliminary and supplementary activities that ensure an asset such as a transmission line can be built and can be protected legally once it is operational. Easement acquisition fits into this category as a number of actions to demonstrate on land titles the interest of the transmission line owner in part of the land.

We have developed discussion of acquisition costs separately from compensation costs (Refer Section 5.3.1)

Only if the transmission line business were to put a line in place or seek to put a line in place would there be a need to establish easements. Therefore costs of acquisition are associated with the development of an asset. However these costs are undepreciable ie are not affected by the age or condition of the asset affected, and should therefore be recognised independently of the normal replacement cost elements.

Easement compensation costs are specific to individual land parcels.

The jurisdictional valuation made some provision for easement compensation costs but did not mention easement acquisition costs so there is no clear appreciation of whether this was realised if it was not fully allowed in the replacement costs.

It is strongly advocated that acquisition costs be included as recognised costs in replacement cost or easement cost models for transmission line assets.

Valuation guidelines to be developed by ACCC should take account of this for future valuations.

Initial Rates for Replacement of Assets in the Jurisdictional Valuation

SKM has advised ElectraNet that their review of the HMA 1995 valuation did not include any allowance for route selection or easement acquisition costs. Their comparison of SKM 1998 unit rates and HMA 1995 unit rates also led SKM to believe that there was no significant provision for route selection or easement acquisition in the HMA 1995 unit rates, but it was not possible to be definitive about that.

Replacement unit rates or costs are intended to reflect the true cost of replacement and usually include planning, design, construction, commissioning and corporate overheads.

Examination of the HMA valuation report suggests in our opinion that an allowance was made in the replacement cost modelling process for the easement acquisition cost and route selection costs. The route selection costs mentioned by HMA incorporate elements of easement acquisition as nominated by SKM in their recent report to ElectraNet (see below).

Advice in the HMA valuation is that easement acquisition costs were excluded from the valuation outcomes at the request of ETSA. Testing of the database (now only available in hardcopy at summary levels) suggests that only easement acquisition costs as defined by HMA ie easement survey, acquisition, registration and compensation were excluded but route selection costs incorporating environmental impact assessment and approvals were retained.

SKM stated in their Valuation Review for ETSA in 1998 that they agreed with the gross line replacement rates used by HMA and saw no reason to adjust them for the valuation review. Some SKM transmission line replacement rates were actually lower than those used by HMA in 1995. This was explained at the time in terms of efficiency and productivity improvements. However it may have been that the rates were different because the SKM rates excluded route selection and the HMA rates included it.

SKM made no adjustment to the rates and only allowed for additional line assets in setting the asset base value.

In our opinion an allowance for the route selection, environmental impact assessment and approvals was incorporated in the HMA 1995 valuations and retained through the SKM 1998 review.

If there is to be consideration of a provision for easement acquisition costs in the asset base then it is necessary to define the value of such an allowance.

Several models are available for consideration of easement acquisition costs.

SKM and HMA Acquisition Costs Models

ElectraNet through SKM has developed a model to identify and quantify costs associated with easements acquisition. SKM has submitted a report to ElectraNet dated April 2002 titled Easement Acquisition Assessment. This report contains a methodology for estimating the cost of acquisition of easements and the outcomes of the application of the methodology to all line assets in the asset base at the time of the jurisdictional valuation.

ElectraNet has developed a report titled "Regulated Costs of Easement Acquisition, 9 May 2002" and submitted this to ACCC. This contains the outcomes of the SKM work.

Advice from SKM is that the costs identified in the methodology are specific to easement acquisition and are only incurred to identify and secure an easement. Total cost sought to be recognised is \$104.3million prior to 1 July 1999. Note this excludes cultural and heritage negotiation costs that have only recently become a significant asset establishment issue. At 1 July 1999 the existing assets had not been exposed to costs associated with native title, heritage and cultural issues for the purpose of easement establishment.

This cost is approximately \$21,000 per kilometre of easement excluding cultural and heritage assessment costs.

Unfortunately some of the types of activities associated with easement acquisition in the ElectraNet report are also typically incurred in engineering assessment of transmission line development and there is often difficulty separating line development and easement acquisition costs. Many utility businesses involved in easement establishment to protect their asset investment include these costs within the project cost but cannot separate out the expenditure category or easily identify the amount spent on acquisition. This is a grey area. ElectraNet cannot separately identify costs between line development and easement acquisition.

It is recommended that ACCC address this issue in the valuation guidelines it is proposing to prepare for the industry later this year. In addition ElectraNet should begin immediately to capture such costs separately for the purposes of supporting future asset valuation submissions. They should clearly be separated from replacement cost components.

The argument put forward by ElectraNet for inclusion of the costs in the asset base are that they were not provided for in the previous valuations.

HMA were asked in their valuation to remove easement acquisition costs and indicated they followed this request. However they appear to have continued to include such activities as route selection, EIS development and public consultation in the valuation rates as they are identified separately in their report. The computation of easement acquisition costs was separately identified by HMA and does not appear to include route selection costs.

HMA defined easement acquisition as easement survey, acquisition, registration and compensation.

Route selection costs have been established as being worth \$15.6million in 1995 at the rates nominated by HMA out of the total value of line assets of \$703.8million (excluding easements and IDC). Easement acquisition was costed at \$23.7million in 1995 based on an average rate of \$4700/km.

In our opinion the route selection costs are already included in the HMA valuation and SKM agreed with those valuation amounts generally. Therefore there should be no additions for route selection, EIS and public consultation, activities defined in the SKM Easement Acquisition Assessment report to ElectraNet and the ElectraNet submission to ACCC titled "Regulated Costs of Easement Acquisition".

If there is acceptance of acquisition costs as a relevant asset related cost and the claim that such costs have not been recognised in the jurisdictional asset base then there needs to be a modification of the ElectraNet requested provision. This should take account of the costs already recognised in the HMA valuations and carried through in the SKM valuation result.

Culture and heritage assessment costs were not considered in the HMA valuation or in SKM unit rates compared with the HMA rates as their impact at the time of the valuations was not seen as significant. Only recently have such costs been recognised as significant for land based projects and will need to be accommodated in future valuations. Their consequences will be critical to projects in the future.

SKM modelling suggests the costs for acquisition not related to route selection, environmental impact study, cultural and heritage assessment and public consultation are of the order of \$13,100 per km of lines taking account of all the types of land impacted by easements in SA. If this is applied to the approximate 4500km of easements existing at the time of the jurisdictional valuation the resulting amount is \$59million.

ElectraNet has applied this model to deal with acquisition costs on an ownership basis and this adjusts the amount to \$54million. If the route selection, environmental impact studies and public consultation costs are added to this the value comes to \$87million.

Maloney Field Services Estimate of Procurement Costs

In their 1997 and 2000 easement assessments MFS separately identified and modelled easement acquisition costs as procurement costs.

Fixed/Procurement costs on a per ownership basis were nominated to include:

- Drafting costs in preparing site plans or easement plans.
- Valuation fees incurred in assessing the compensation payable for the required easements.
- Personnel costs in undertaking negotiations with land owners to obtain the necessary easements.
- Conveyancing costs in preparing and processing easement documents through to registration.
- Land Titles Office fees and charges including registration charges for Notices of Intention to Acquire, fees to subsequently withdraw the Registrar General's caveats, plan lodgement fees and/or grant of easement lodgement and registration fees etc.
- Mortgagee production fees arising from the necessity to obtain consents to have the easements registered.

These costs were applied to the actual number of ownerships along an easement line. Variable Costs having a direct relationship to the actual kilometre length of easement required for a particular project were nominated to include:

- Survey Costs in defining an easement and incorporating the collecting and recording of cadastral data, and
- Monetary compensation payable directly to property owners for the required easements assessed in compliance with the relevant provisions of the SA Land Acquisition Act and established court precedent.

The Procurement Costs established for urban and rural processes and adopted by MFS in its valuation model suggested a 1997 unit rate of some \$4,500 per easement/ownership for rural areas (\$9,100 in 2000 due to a series of factors affecting the 'degree of difficulty' increase over time), and \$12,000 for Fringe Urban assessments.

The fixed procurement costs included:

For suburban areas

| | |
|---|---------|
| - fees to negotiate easements | \$2,500 |
| - fees to value easements for ElectraNet SA | \$2,000 |
| - In-house easement survey plans plus all documentation | |

| | |
|--|---------------|
| including discharge of mortgages etc | \$2,500 |
| - representation of owner by solicitors | \$2,000 |
| - representation of owner by valuer | \$2,000 |
| - land survey and other archaeological and environmental studies | \$1,000 |
| | Adopt \$12000 |

For the farming and rural areas of South Australia the list included:

| | |
|--|--------------|
| - negotiations to obtain easements | \$1,500 |
| - valuation of easements for ElectraNet SA | \$1,000 |
| - easement survey plans and all easement documentation | \$1,000 |
| - representation of owners by solicitor and/or valuer | \$1,000 |
| | Adopt \$4500 |

For the farming and rural areas of South Australia the list was amended in 2000 as follows:

| | |
|---|--------------|
| - proportion of initial route evaluation | \$1,000 |
| - proportion of environmental and archaeological survey process | \$1,500 |
| - proportion of power line licence application | \$200 |
| - ownership search and preliminary easement plan | \$200 |
| - initial contact and preliminary negotiations | \$600 |
| - assessment of easement compensation | \$800 |
| - final cadastral survey for easement registration purposes | \$1,000 |
| - final negotiations leading to agreement and/or compulsory process | \$1,800 |
| - Average payments made to solicitors/valuers representing private ownerships | \$1,200 |
| - preparation of easement documents, lodgement and registration in Land Titles office | \$800 |
| | Adopt \$9000 |

MFS attempted to isolate the unique easement and land value issues only and not the transmission network costs. This is important to avoid any "double counting". We note that MFS relates these proportions to: (a) the initial route evaluation, (b) environmental and archaeological survey process and (c) to the power line licence application.

We believe that in general terms the above procurement costs appear reasonable given our experience in similar situations within Victoria and with reference to MFS and other expert South Australian source information.

On the same basis that we believe the SKM easement acquisition cost is overstated by cost elements already included in the asset base value at July 1998, the MFS acquisition cost per easement for farming and rural areas should be reduced from \$9000 to \$6500 and the fringe urban model reduced from \$12000 to \$11000. This allows for route evaluation, environmental and archaeological costs already built in to the HMA values in 1995 and brought forward through the SKM valuation in 1998.

Thus the MFS procurement model suggests costs in 2000 as follows for each easement establishment:

- Farming/rural \$6500
- Fringe/urban \$11000

MFS estimated the number of ownerships requiring negotiation of easements of each type at the time but advice from ElectraNet suggests these numbers were low as ElectraNet now has access to a reliable GIS (Mapinfo) that identifies properties and ownership traversed by ElectraNet assets.

Thus the model values for easement acquisition costs is as follows:

| Easement Types | MFS Estimate 2000 | Acquisition Cost (\$000) | ElectraNet Estimate 2000 | Acquisition Cost (\$000) |
|----------------|-------------------|--------------------------|--------------------------|--------------------------|
| Farming/rural | 2736 | 17,784 | 4051 | 26,332 |
| Fringe urban | 1062 | 11,682 | 888 | 9,768 |
| Total | 3798 | 29,466 | 4939 | 36,100 |

The ElectraNet numbers are an estimate adjusted from the 2002 figures provided by ElectraNet (17th June 2002)

The model therefore suggests a figure of \$36million for easement acquisition costs based on estimated easement ownership numbers in 2000 and not previously allowed in the asset base.

Treatment of Easement Costs in the SPI Powernet Regulatory Reset Submission

Concurrent with the ElectraNet submission SPI Powernet has also made a submission to ACCC for a regulatory reset.

Their submission has sought to account for omitted assets in the asset base rolled forward in a similar fashion as ElectraNet.

Among the omitted assets is a provision for easements. This is made up of solatium (compensation by law for compulsory acquisition), owner's costs recoverable against SPI Powernet and SPI Powernet costs.

The Powernet costs are referred to as acquisition costs and cover valuation fees, easements surveys, legal and conveyancing costs, and compulsory acquisition management. They do not cover costs associated with the establishment of the line assets in the field ie route selection, environmental impact assessment and public consultation.

A.T. Cocks {now urbis} estimated the costs associated with easement acquisition for SPI Powernet in 1997 as \$10900 per property easement/ownership. These costs included legal and valuation fees, surveying of easements and administration of the process. All other easement related costs were recognised as compensatory costs

These costs are reasonably consistent with those proposed by MFS for easement procurement on an ownership basis.

SKM, working for SPI Powernet, has rolled the claimed acquisition costs into the asset base as indicated. However there is no mention of other costs associated with easement acquisition as defined in the recent SKM report to ElectraNet and the basis of ElectraNets' claim for costs not covered in the asset base established for the initial regulatory set.

SKM reviewed their own 1994 valuation of the Powernet asset base for omissions as part of the SPI Powernet submission and recommended the inclusion of the above nominated omitted costs.

Conclusions on Easement Acquisition

In our opinion it is difficult to accept that the ElectraNet valuations are deficient in recognition of all easement acquisition costs. HMA appears to have made an allowance in their replacement cost model for some costs that ElectraNet are suggesting refer to easement acquisition and appear to have included these costs in the asset valuation reviewed and accepted with SKM adjustment as the asset base for jurisdictional purposes.

We recommend altering the asset base to account for some easement acquisition costs but not all the categories identified by SKM or Maloney Field Services as a provision has already been made for the costs that are more in line with asset establishment than easement acquisition.

If we compare easement acquisition costs for the various models, excluding costs already included in the asset base, we get:

| Model | Date | Total Value | Rate | Comments |
|---------|------|---------------|-----------------|--|
| HMA | 1995 | \$23.7million | \$4700/km | Based on length of line |
| SKM | 2002 | \$59million | \$13100/km | Based on length of lines in 1999 |
| SKM | 2002 | \$78million | | Based on easement numbers from ElectraNet |
| SKM (2) | 2002 | \$54million | \$10,400/o'ship | Revised SKM model using number of ownerships (5199) |
| MFS (1) | 2000 | \$36million | \$7288/o'ship | Based on estimated easement ownerships in 2000 (4939) |
| ATCocks | 1997 | | \$10900/o'ship | Victorian model based on number of easement ownerships |

(1) Based on easement ownerships from ElectraNet in 2002

(2) ElectraNet advice dated 17 and 18 June 2002

The SKM model and the ElectraNet adjustment give higher values and are based on recent work done in Victoria, SA, NSW and Queensland to establish easements for specific projects. This may lead to inconsistencies in the cost components and their ranges. The comparative costings would be project based and not reflective of a regular business process of easement acquisition.

The HMA costs are comparable to the MFS costs given that they are earlier and based on lengths of line with no indicative regard for value of land.

The MFS modelling of easement acquisition costs is based on many years experience with both the valuation of easements in SA and the costs of procuring easements for a number of government departments in SA including ETSA. They undertook a detailed study of procurement costing in 2000.

We believe the MFS costs are realistic estimates of acquisition cost in 2000.

We recommend an allowance of \$36million be introduced to the asset base before July 2000 to recognise easement acquisition costs.

Easement acquisition costs are related to real property survey, registration of easements, legals and acquisition negotiation. They should be treated as associated with the easement compensation values and be roll forward with indexation and retained undepreciated.

The roll forward of the asset base is on this basis.

6.0 Roll Forward of the Asset Base

6.1 The Process

ElectraNet has adopted a process of annual indexing of the asset base value with adjustment for inclusions and deletions requested under the regulatory submission to ACCC.

The process uses the CPI weighted average eight capital cities index to make half yearly adjustment of the asset base value and its additions. This is modified by depreciation applicable to each asset category.

The index has been modified downwards in the June 2000 to December 2000 period by 2.5% to discount the effect of GST introduction

This is a consistent process applied for other roll forwards and accepted in the recent Powerlink determination. It demonstrates a reasonable adjustment of the asset base as a starting point for revenue cap determination.

Indices are available for the period July 1997 to July 2001. The period July 2001 to July 2002 has been estimated on the trend for the reported periods July 2001 to March 2002 and appears to be reasonable. The period July 2002 to December 2002 is speculative but ElectraNet has referenced historical trends to achieve a conservative outcome.

Meritec has adjusted the roll forward of the asset base with the following factors:

- Assumed starting base is as per the ElectraNet submission i.e. opening asset base value at July 1998 is \$675,848,000. This excludes interest during construction and easement compensation.
- Capital expenditure as per the ElectraNet submission has been added annually
- Depreciation and indexation has been applied as per the ElectraNet submission
- Omitted assets relating to reoptimisation have been included at appropriate times
- Alteration to the asset base value has been made with reference to easement acquisition indexed from 2000 and easement compensation introduced at December 2002

The opening asset value is the roll back from 1 July 1999 of the jurisdictional valuation. We have examined the roll back process and are satisfied the opening asset value is appropriately determined.

Meritec has examined the material from ElectraNet regarding capital additions for each period. From July 1998 to July 2000 these are actual additions, according to ElectraNet, capitalised by the business so are added at cost from audited financial records. For the period July 2001 to July 2002 the capitalised value is estimated from financial records and works in progress. We are satisfied this is reasonable. The additions for the period July 2002 to December 2002 have been estimated based on expected work and we consider this to be reasonable.

ElectraNet expects to have to adjust the capital expenditure for the period 1 July 2001 to 1 July 2002 to take account of actual expenditure before the determination is finalised.

Depreciation is on a straight-line basis using the useful lives defined in material provided by ElectraNet.

The indexation of the asset base in the roll forward through to January 2003 uses the Australian Bureau of Statistics weighted average CPI index for all capital cities. This index has proven to be a reasonable indicator of changes in cost of a number of the factors that influence the replacement cost of assets and hence the asset base in ElectraNet's case. It is regularly used for valuation adjustments.

Alternatives such as building cost indices might also be used but consideration of these compared with CPI for other utility valuations has shown close correlation and not led to wide variance. Their acceptance is less wide spread.

Some elements of the replacement cost models for transmission assets are currently out of alignment with the CPI, e.g. materials costs, while some are heavily aligned, e.g. labour costs. This has some cyclic aspects to it and may with time lead to realignment.

ACCC will need to look at the long-term options for indexing forward where the CPI does not adequately cover the expected and observed changes in costs.

As discussed in Section 5 of this report the asset base should be adjusted to account for easement acquisition costs incurred in securing an easement and easement compensation costs both of which have been inadequately recognised in previous valuations.

To determine a roll forward value at 1 January 2003 Meritec has used the roll forward model prepared by ElectraNet. ElectraNet provided a simplified version of their model that allowed Meritec to add the easement acquisition and compensation values to the initial asset base values and depreciation and indexation values provided in the ElectraNet submission. The operation of the roll forward model is not guaranteed by Meritec and it has not been possible to determine if depreciation provisions are correct

given that this information is held in supporting spreadsheets at ElectraNet. The fact that we have been advised by ElectraNet that these numbers are accurate and accord with accounting reporting has been accepted by Meritec.

6.2 Asset Base at 1 January 2003

Based on these provisions the Roll Forward is now assessed as:

Table 6.1 Roll Forward July 1998 to December 2002

| Asset Category | 1998/99 (\$'000) | 1999/00 (\$'000) | 2000/01 (\$'000) | 2001/02 (\$'000) | July to Dec. 02 (\$'000) |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|--------------------------------|
| Opening Asset Value | 675,848 | 684,890 | 784,051 | 805,467 | 838,417 |
| Capital Expenditure ¹ | 24,016 | 64,920 | 7,796 | 41,168 | 26,373 |
| Economic Depreciation ² | (14,974) | (1,759) | 666 | (8218) | (4990) |
| Omitted Assets ³ | | | 12,953 | | |
| Financing Costs ⁴ | NA | | | | |
| Easement Acquisition ⁵ | | 36,000 | | | |
| Easement Compensation ⁶ | | | | | 137,000 |
| Closing Asset Value | 684,890 | 784,051 | 805,467 | 838,417 | 996,800 |

1 – Net of disposals and agreeing with CAPEX review findings

2 – Straight-line depreciation less inflation

3 – Based on optimisation review

4 - Financing costs disallowed by ACCC

5 – Allowance for easement acquisition costs not represented in replacement costing of the initial asset base

6 – Estimated cost of compensation at December 2002 based on Deprival valuation. Note ACCC uses a different methodology in its Draft Statement of Regulatory Principles

In our opinion the opening asset base proposed for the regulatory reset at 1 January 2003 is \$996,800,000.

The detailed spreadsheets covering these adjustments are contained in Appendix 1. The model is based on that used by ElectraNet in its submission.

7.0 References

| | |
|---------------------------|--|
| ElectraNet SA | Transmission Network Revenue Cap Application 2003-2207/08 16 April 2002 |
| ElectraNet SA | Asset Base Roll Forward 1 July 1998 to 31 December 2002 24 May 2002 |
| ElectraNet SA | Regulated Costs of Easement Acquisition 9 May 2002 |
| ElectraNet SA | Clarification of Transmission Line and Easement Costs 9 May 2002 |
| ElectraNet SA | Summary of Assets for Accelerated Depreciation 9 May 2002 |
| ElectraNet SA | Comments on Meritec Draft Asset Base Report 12 June 2002 |
| Hill Michael & Associates | Valuation of ETSA Transmission Assets 15 August 1995 |
| Sinclair Knight Merz | ETSA Transmission Asset Valuation September 1999 |
| Sinclair Knight Merz | Easement Acquisition Assessment April 2002 |
| Sinclair Knight Merz | Optimisation Review Final Report February 2002 |
| ESIPC | Annual Review Electricity Supply Industry Planning Council June 2001 |
| ACCC | Letters between ACCC, South Australian Department of Treasury and Finance and ElectraNet August 2001 to March 2002 |
| ACCC | Draft Statement of Regulatory Principles May 1999 |
| ACCC | Queensland Transmission Network Revenue Cap Decision 2002- 2006/07 1 November 2001 |
| PricewaterhouseCoopers | Interest During Construction. Estimate for ElectraNet 2003 Reset April 2002 |
| Maloney Field Services | Assessment of Deprival Value: Easement Assets of ETSA Corporation 30 June 1995 and 30 June 1996 |
| Maloney Field Services | Assessment of Deprival Value: Land and Easement Assets of ETSA Transmission 28 February 1997 |

| | |
|------------------------|--|
| Maloney Field Services | Valuation of Easements Held by ETSA Transmission on 275KV and 132KV Systems: Assessment of Deprival Value 28 February 1997 |
| Maloney Field Services | Valuation of Easements Held by ElectraNet SA on 275KV and 132KV Systems: Assessment of Deprival Value 30 June 2000 |
| Maloney Field Services | Valuation of Easements Held by ETSA Transmission on 275KV and 132KV Systems: Comparisons of Values Assessed as at 28 February 1997 and 30 June 2000 – Abridged Summary |

Appendix 1

Summary Roll Forward Spreadsheets

ElectraNet SA Asset Base Roll Forward - 1 July 1998 to 31 December 2002
Stand-alone Summary Model

Opening 1 July 1998 ODRC

| Asset Category | Financial Systems (1) | | Working Capital (\$'000) | Opening incl. WC (\$'000) | Opening Reagg. (2) (\$'000) | Adjustment for IDC (3) (\$'000) | Opening ODRC (\$'000) |
|----------------------------------|-----------------------|--------------------|--------------------------|---------------------------|-----------------------------|---------------------------------|-----------------------|
| | (\$'000) | Subtotals (\$'000) | | | | | |
| Transmission Lines Overhead | 362,925 | | | 362,925 | 360,484 | - | 360,484 |
| Underground Cables | 15,075 | 378,000 | | 15,075 | 15,075 | - | 15,075 |
| Substation Civil & Establishment | 108,518 | | | 108,518 | 101,815 | - | 101,815 |
| Substation Primary Plant | 109,148 | | | 109,148 | 103,812 | - | 103,812 |
| Substation Secondary Plant | 31,590 | | | 31,590 | 31,050 | - | 31,050 |
| Substation Protection A | 5,568 | | | 5,568 | 5,323 | - | 5,323 |
| Substation Protection B | - | | | - | - | - | - |
| Substation Comms & Metering | 6,176 | 261,000 | | 6,176 | 5,806 | - | 5,806 |
| Operating Systems | 7,000 | 7,000 | | 7,000 | 6,991 | - | 6,991 |
| Communications Civil Assets | 1,892 | | | 1,892 | 1,892 | - | 1,892 |
| Communications Ancillary Assets | 3,626 | | | 3,626 | 3,626 | - | 3,626 |
| Communications Other Assets | 482 | 6,000 | | 482 | 482 | - | 482 |
| Computers and Office Equipment | 1,667 | 1,667 | | 1,667 | 1,676 | - | 1,676 |
| Plant and Tools | 422 | 422 | | 422 | 423 | - | 423 |
| Furniture & Fittings | 77 | 77 | | 77 | 77 | - | 77 |
| Commercial Buildings | 1,814 | 1,814 | | 1,814 | 1,848 | - | 1,848 |
| Assets for Accel Depn. | - | - | | - | 15,846 | - | 15,846 |
| Working Capital | - | - | 10,883 | 10,883 | 10,883 | - | 10,883 |
| Land | 8,739 | 8,739 | | 8,739 | 8,739 | - | 8,739 |
| Easements (Compensation) | - | - | | - | - | - | - |
| Easements (Establishment) | - | - | | - | - | - | - |
| Total | 664,719 | 664,719 | 10,883 | 675,602 | 675,848 | 0 | 675,848 |

Notes:

- (1) Financial systems subtotals for transmission lines, substations, operating systems and communications assets are identical to the SKM 1998 Valuation.
- (2) Reaggregated opening balance with assets identified for accelerated depreciation during the regulatory period placed in separate asset class for this purpose.
- (3) No adjustment to the jurisdictional asset valuation for missing IDC on system assets (approx. \$45 million at 7.5% on ODRC). The only asset to which IDC was applied in the jurisdictional asset valuation was the Tailern Bend to South East 275 kV double circuit transmission line (\$57.4 million ODRC).

ODRC Rolled Forward from 1 July 1998 to 31 December 1998

| Asset Category | 1 July 98 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 31 Dec 98 (\$'000) |
|----------------------------------|-------------------------------|--------------------------------|---------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|
| Transmission Lines Overhead | 360,484 | - | 355 | - | (5,003) | 2,681 | 358,518 |
| Underground Cables | 15,075 | - | - | - | (282) | 112 | 14,905 |
| Substation Civil & Establishment | 101,815 | - | 1,888 | - | (1,468) | 757 | 102,993 |
| Substation Primary Plant | 103,812 | - | 1,648 | (2) | (1,967) | 772 | 104,262 |
| Substation Secondary Plant | 31,050 | - | 3,978 | (7) | (547) | 231 | 34,705 |
| Substation Protection A | 5,323 | - | 2,094 | - | (171) | 40 | 7,285 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 5,806 | - | 731 | - | (313) | 43 | 6,268 |
| Operating Systems | 6,991 | - | 154 | - | (401) | 52 | 6,795 |
| Communications Civil Assets | 1,892 | - | - | - | (24) | 14 | 1,882 |
| Communications Ancillary Assets | 3,626 | - | - | - | (61) | 27 | 3,592 |
| Communications Other Assets | 482 | - | 960 | - | (16) | 4 | 1,430 |
| Computers and Office Equipment | 1,676 | - | 126 | - | (221) | 12 | 1,594 |
| Plant and Tools | 423 | - | 54 | - | (30) | 3 | 450 |
| Furniture & Fittings | 77 | - | 15 | - | (6) | 1 | 87 |
| Commercial Buildings | 1,848 | - | 13 | - | (34) | 14 | 1,840 |
| Assets for Accel Deprn. | 15,846 | - | - | - | (453) | 118 | 15,511 |
| Working Capital | 10,883 | - | - | - | - | 81 | 10,964 |
| Land | 8,739 | - | - | - | - | 65 | 8,804 |
| Easements (Compensation) | - | - | - | - | - | - | - |
| Easements (Establishment) | - | - | - | - | - | - | - |
| Total | 675,848 | - | 12,017 | (9) | (10,997) | 5,027 | 681,886 |

ODRC Rolled Forward from 1 January 1999 to 30 June 1999

| Asset Category | 1 Jan 99 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 30 June 99 (\$'000) |
|----------------------------------|----------------------|------------------------|-------------------|-----------------------|----------------------|---------------------|------------------------|
| Transmission Lines Overhead | 358,518 | - | 355 | - | (5,022) | 1,176 | 355,028 |
| Underground Cables | 14,905 | - | - | - | (283) | 49 | 14,671 |
| Substation Civil & Establishment | 102,993 | - | 1,888 | - | (1,490) | 338 | 103,729 |
| Substation Primary Plant | 104,262 | - | 1,648 | (2) | (1,992) | 342 | 104,258 |
| Substation Secondary Plant | 34,705 | - | 3,978 | (7) | (598) | 114 | 38,192 |
| Substation Protection A | 7,285 | - | 2,094 | - | (207) | 24 | 9,196 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 6,268 | - | 731 | - | (343) | 21 | 6,677 |
| Operating Systems | 6,795 | - | 154 | - | (410) | 22 | 6,561 |
| Communications Civil Assets | 1,882 | - | - | - | (24) | 6 | 1,865 |
| Communications Ancillary Assets | 3,592 | - | - | - | (61) | 12 | 3,542 |
| Communications Other Assets | 1,430 | - | 960 | - | (48) | 5 | 2,347 |
| Computers and Office Equipment | 1,594 | - | 126 | - | (234) | 5 | 1,491 |
| Plant and Tools | 450 | - | 54 | - | (33) | 1 | 473 |
| Furniture & Fittings | 87 | - | 15 | - | (7) | 0 | 96 |
| Commercial Buildings | 1,840 | - | 13 | - | (35) | 6 | 1,824 |
| Assets for Accel Deprn. | 15,511 | - | - | - | (454) | 51 | 15,107 |
| Working Capital | 10,964 | - | - | - | - | 36 | 11,000 |
| Land | 8,804 | - | - | - | - | 29 | 8,833 |
| Easements (Compensation) | - | - | - | - | - | - | - |
| Easements (Establishment) | - | - | - | - | - | - | - |
| Total | 681,886 | - | 12,017 | (9) | (11,242) | 2,238 | 684,890 |

ODRC Rolled Forward from 1 July 1999 to 31 December 1999

| Asset Category | 1 July 99 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 31 Dec 99 (\$'000) |
|----------------------------------|-------------------------------|--------------------------------|---------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|
| Transmission Lines Overhead | 355,028 | - | 4,214 | (348) | (5,100) | 5,225 | 359,019 |
| Underground Cables | 14,671 | - | - | - | (287) | 216 | 14,599 |
| Substation Civil & Establishment | 103,729 | - | 5,133 | - | (1,529) | 1,527 | 108,860 |
| Substation Primary Plant | 104,258 | - | 8,331 | - | (2,040) | 1,534 | 112,084 |
| Substation Secondary Plant | 38,192 | - | 5,307 | - | (658) | 562 | 43,403 |
| Substation Protection A | 9,196 | - | 2,349 | - | (245) | 135 | 11,435 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 6,677 | - | 946 | - | (377) | 98 | 7,345 |
| Operating Systems | 6,561 | - | 146 | - | (424) | 97 | 6,380 |
| Communications Civil Assets | 1,865 | - | 2 | - | (24) | 27 | 1,870 |
| Communications Ancillary Assets | 3,542 | - | 16 | - | (62) | 52 | 3,548 |
| Communications Other Assets | 2,347 | - | 271 | - | (82) | 35 | 2,571 |
| Computers and Office Equipment | 1,491 | - | 1,194 | (46) | (250) | 22 | 2,411 |
| Plant and Tools | 473 | - | 313 | - | (36) | 7 | 756 |
| Furniture & Fittings | 96 | - | 178 | - | (7) | 1 | 268 |
| Commercial Buildings | 1,824 | - | - | - | (35) | 27 | 1,816 |
| Assets for Accel Deprn. | 15,107 | - | 4,454 | - | (461) | 222 | 19,322 |
| Working Capital | 11,000 | - | - | - | - | 162 | 11,162 |
| Land | 8,833 | - | 2 | - | - | 130 | 8,965 |
| Easements (Compensation) | - | - | - | - | - | - | - |
| Easements (Establishment) | - | - | - | - | - | - | - |
| Total | 684,890 | - | 32,855 | (395) | (11,618) | 10,080 | 715,812 |

ODRC Rolled Forward from 1 January 2000 to 30 June 2000

| Asset Category | 1 Jan 00 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 30 Jun 00 (\$'000) |
|----------------------------------|----------------------|------------------------|-------------------|-----------------------|----------------------|---------------------|-----------------------|
| Transmission Lines Overhead | 359,019 | - | 4,214 | (348) | (5,220) | 6,075 | 363,739 |
| Underground Cables | 14,599 | - | - | - | (292) | 247 | 14,554 |
| Substation Civil & Establishment | 108,860 | - | 5,133 | - | (1,602) | 1,842 | 114,232 |
| Substation Primary Plant | 112,084 | - | 8,331 | - | (2,169) | 1,897 | 120,143 |
| Substation Secondary Plant | 43,403 | - | 5,307 | - | (736) | 734 | 48,708 |
| Substation Protection A | 11,435 | - | 2,349 | - | (289) | 193 | 13,687 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 7,345 | - | 946 | - | (421) | 124 | 7,994 |
| Operating Systems | 6,380 | - | 146 | - | (439) | 108 | 6,195 |
| Communications Civil Assets | 1,870 | - | 2 | - | (25) | 32 | 1,879 |
| Communications Ancillary Assets | 3,548 | - | 16 | - | (63) | 60 | 3,560 |
| Communications Other Assets | 2,571 | - | 271 | - | (92) | 43 | 2,793 |
| Computers and Office Equipment | 2,411 | - | 1,194 | (46) | (366) | 41 | 3,234 |
| Plant and Tools | 756 | - | 313 | - | (53) | 13 | 1,029 |
| Furniture & Fittings | 268 | - | 178 | - | (17) | 5 | 435 |
| Commercial Buildings | 1,816 | - | - | - | (36) | 31 | 1,810 |
| Assets for Accel Depn. | 19,322 | - | 4,454 | - | (515) | 327 | 23,589 |
| Working Capital | 11,162 | - | - | - | - | 189 | 11,351 |
| Land | 8,965 | - | 2 | - | - | 152 | 9,119 |
| Easements (Compensation) | - | - | - | - | - | - | - |
| Easements (Establishment) | - | 36,000 | - | - | - | - | 36,000 |
| Total | 715,812 | 36,000 | 32,855 | (395) | (12,334) | 12,113 | 784,051 |

\$30million for easement acquisition included at 30 June 2000 based on Maloney Field Services estimates less costs already included in asset base

ODRC Rolled Forward from 1 July 2000 to 31 December 2000

| Asset Category | 1 July 00 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 31 Dec 00 (\$'000) |
|----------------------------------|-------------------------------|--------------------------------|---------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|
| Transmission Lines Overhead | 363,739 | - | 907 | (134) | (5,334) | 5,606 | 364,784 |
| Underground Cables | 14,554 | - | - | - | (297) | 224 | 14,482 |
| Substation Civil & Establishment | 114,232 | - | 1,138 | (416) | (1,674) | 1,761 | 115,041 |
| Substation Primary Plant | 120,143 | - | 697 | (139) | (2,296) | 1,852 | 120,257 |
| Substation Secondary Plant | 48,708 | - | 858 | (195) | (815) | 751 | 49,306 |
| Substation Protection A | 13,687 | - | 368 | (31) | (334) | 211 | 13,901 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 7,994 | - | 139 | 0 | (465) | 123 | 7,790 |
| Operating Systems | 6,195 | - | 0 | 0 | (453) | 95 | 5,838 |
| Communications Civil Assets | 1,879 | - | 105 | 0 | (25) | 29 | 1,988 |
| Communications Ancillary Assets | 3,560 | - | 22 | 0 | (65) | 55 | 3,573 |
| Communications Other Assets | 2,793 | - | 217 | 0 | (103) | 43 | 2,950 |
| Computers and Office Equipment | 3,234 | - | 280 | (22) | (480) | 50 | 3,062 |
| Plant and Tools | 1,029 | - | 90 | (2) | (69) | 16 | 1,063 |
| Furniture & Fittings | 435 | - | 163 | 0 | (26) | 7 | 578 |
| Commercial Buildings | 1,810 | - | - | (27) | (37) | 28 | 1,775 |
| Assets for Accel Deprn. | 23,589 | - | - | 0 | (568) | 364 | 23,384 |
| Working Capital | 11,351 | - | - | 0 | - | 175 | 11,526 |
| Land | 9,119 | - | - | (118) | - | 141 | 9,142 |
| Easements (Compensation) | - | - | - | 0 | - | - | - |
| Easements (Establishment) | 36,000 | - | - | 0 | - | 555 | 36,555 |
| Total | 784,051 | - | 4,982 | (1,084) | (13,040) | 12,084 | 786,993 |

ODRC Rolled Forward from 1 January 2001 to 30 June 2001

| Asset Category | 1 Jan 01 (\$'000) | Adjustment (\$'000) (1) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 30 Jun 01 (\$'000) |
|----------------------------------|----------------------|----------------------------|-------------------|-----------------------|----------------------|---------------------|-----------------------|
| Transmission Lines Overhead | 364,784 | 9,792 | 907 | (134) | (5,442) | 6,946 | 376,852 |
| Underground Cables | 14,482 | 464 | - | - | (302) | 276 | 14,919 |
| Substation Civil & Establishment | 115,041 | - | 1,138 | (416) | (1,710) | 2,190 | 116,243 |
| Substation Primary Plant | 120,257 | - | 697 | (139) | (2,345) | 2,290 | 120,760 |
| Substation Secondary Plant | 49,306 | 2,697 | 858 | (195) | (838) | 939 | 52,767 |
| Substation Protection A | 13,901 | - | 368 | (31) | (345) | 265 | 14,158 |
| Substation Protection B | - | - | - | - | - | - | - |
| Substation Comms & Metering | 7,790 | - | 139 | 0 | (480) | 148 | 7,598 |
| Operating Systems | 5,838 | - | 0 | 0 | (462) | 111 | 5,488 |
| Communications Civil Assets | 1,988 | - | 105 | 0 | (26) | 38 | 2,104 |
| Communications Ancillary Assets | 3,573 | - | 22 | 0 | (66) | 68 | 3,597 |
| Communications Other Assets | 2,950 | - | 217 | 0 | (112) | 56 | 3,111 |
| Computers and Office Equipment | 3,062 | - | 280 | (22) | (509) | 58 | 2,869 |
| Plant and Tools | 1,063 | - | 90 | (2) | (75) | 20 | 1,096 |
| Furniture & Fittings | 578 | - | 163 | 0 | (35) | 11 | 717 |
| Commercial Buildings | 1,775 | - | - | (27) | (37) | 34 | 1,745 |
| Assets for Accel Deprn. | 23,384 | - | - | 0 | (579) | 445 | 23,250 |
| Working Capital | 11,526 | - | - | 0 | - | 219 | 11,745 |
| Land | 9,142 | - | - | (118) | - | 174 | 9,198 |
| Easements (Compensation) | - | - | - | - | - | - | - |
| Easements (Establishment) | 36,555 | - | - | - | - | 696 | 37,251 |
| Total | 786,993 | 12,953 | 4,982 | (1,084) | (13,363) | 14,985 | 805,467 |

Notes:

(1) Previously optimised assets readmitted to the asset base at 30 June 2001 in accordance with Sinclair Knight Merz Optimisation Review Report, dated February 2002.

ODRC Rolled Forward from 1 July 2001 to 30 June 2002

| Asset Category | 1 July 01 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 30 Jun 02 (\$'000) |
|----------------------------------|-------------------------------|--------------------------------|---------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|
| Transmission Lines Overhead | 376,852 | - | 2,423 | - | (11,535) | 8,817 | 376,557 |
| Underground Cables | 14,919 | - | - | - | (652) | 349 | 14,616 |
| Substation Civil & Establishment | 116,243 | - | 3,413 | - | (3,436) | 2,720 | 118,940 |
| Substation Primary Plant | 120,760 | - | 12,035 | - | (4,617) | 2,825 | 131,004 |
| Substation Secondary Plant | 52,767 | - | 7,599 | - | (1,768) | 1,235 | 59,834 |
| Substation Protection A | 14,158 | - | 2,303 | - | (626) | 331 | 16,165 |
| Substation Protection B | - | - | - | - | 0 | - | - |
| Substation Comms & Metering | 7,598 | - | 921 | - | (951) | 178 | 7,745 |
| Operating Systems | 5,488 | - | 1,030 | - | (1,012) | 128 | 5,634 |
| Communications Civil Assets | 2,104 | - | 383 | - | (56) | 49 | 2,480 |
| Communications Ancillary Assets | 3,597 | - | 383 | - | (138) | 84 | 3,926 |
| Communications Other Assets | 3,111 | - | 3,420 | - | (245) | 73 | 6,358 |
| Computers and Office Equipment | 2,869 | - | 1,910 | - | (851) | 67 | 3,995 |
| Plant and Tools | 1,096 | - | 170 | - | (148) | 26 | 1,144 |
| Furniture & Fittings | 717 | - | 1,703 | - | (84) | 17 | 2,353 |
| Commercial Buildings | 1,745 | - | 3,208 | - | (75) | 41 | 4,919 |
| Assets for Accel Deprn. | 23,250 | - | - | - | (869) | 544 | 22,925 |
| Working Capital | 11,745 | - | - | - | (0) | 275 | 12,020 |
| Land | 9,198 | - | 123 | - | 0 | 215 | 9,536 |
| Easements (Compensation) | - | - | 145 | - | 0 | - | 145 |
| Easements (Establishment) | 37,251 | - | - | - | (0) | 872 | 38,122 |
| Total | 805,467 | - | 41,168 | - | (27,063) | 18,845 | 838,417 |

ODRC Rolled Forward from 1 July 2002 to 31 December 2002

| Asset Category | 1 July 02 (\$'000) | Adjustment (\$'000) | Capex (\$'000) | Disposals (\$'000) | Deprec'n (\$'000) | Index'n (\$'000) | 31 Dec 02 (\$'000) |
|----------------------------------|-----------------------|------------------------|-------------------|-----------------------|----------------------|---------------------|-----------------------|
| Transmission Lines Overhead | 376,557 | - | 231 | - | (5,974) | 4,441 | 375,255 |
| Underground Cables | 14,616 | - | - | - | (337) | 172 | 14,451 |
| Substation Civil & Establishment | 118,940 | - | 2,963 | - | (1,805) | 1,403 | 121,500 |
| Substation Primary Plant | 131,004 | - | 7,589 | - | (2,523) | 1,545 | 137,615 |
| Substation Secondary Plant | 59,834 | - | 7,589 | - | (1,012) | 706 | 67,116 |
| Substation Protection A | 16,165 | - | 2,119 | - | (364) | 191 | 18,111 |
| Substation Protection B | - | - | - | - | 0 | - | - |
| Substation Comms & Metering | 7,745 | - | - | - | (529) | 91 | 7,307 |
| Operating Systems | 5,634 | - | 1,076 | - | (577) | 66 | 6,200 |
| Communications Civil Assets | 2,480 | - | 272 | - | (33) | 29 | 2,749 |
| Communications Ancillary Assets | 3,926 | - | 272 | - | (76) | 46 | 4,168 |
| Communications Other Assets | 6,358 | - | 2,822 | - | (247) | 75 | 9,008 |
| Computers and Office Equipment | 3,995 | - | 790 | - | (641) | 47 | 4,192 |
| Plant and Tools | 1,144 | - | 78 | - | (85) | 13 | 1,150 |
| Furniture & Fittings | 2,353 | - | 254 | - | (133) | 28 | 2,502 |
| Commercial Buildings | 4,919 | - | 317 | - | (95) | 58 | 5,198 |
| Assets for Accel Depn. | 22,925 | - | - | - | (448) | 270 | 22,747 |
| Working Capital | 12,020 | - | - | - - | 0 | 142 | 12,162 |
| Land | 9,536 | - | - | - | - | 112 | 9,649 |
| Easements (Compensation) | 145 | 137,000 | - | - | - | 2 | 137,146 |
| Easements (Establishment) | 38,122 | - | - | - - | 0 | 450 | 38,572 |
| Total | 838,417 | 137,000 | 26,373 | - | (14,879) | 9,889 | 996,800 |

Index Data

| Source | 30-Jun-98 | 31-Dec-98 | 30-Jun-99 | 31-Dec-99 | 30-Jun-00 | 31-Dec-00 (1) | 30-Jun-01 | 30-Jun-02 30-Jun-03 |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|------------------|-----------|------------------------|
| ABS Index (eight capital cities) | 121.0 | 121.9 | 122.3 | 124.1 | 126.2 | 131.3 | 133.8 | |
| ABS Inflation Rate (CPI) | | 0.744% | 0.328% | 1.472% | 1.692% | 1.541% | 1.904% | |
| Forecast Inflation Rate (CPI) | | | | | | | | 2.340% |

Notes:

(1) GST effect of 2.5% has been removed from the CPI.