PRICEWATERHOUSECOOPERS

PricewaterhouseCoopers
188 Quay Street
Private Bag 92162
Auckland, New Zealand
DX CP24073
www.pwc.com/nz
Telephone +64 9 355 8000
Facsimile +64 9 355 8001
Direct Phone +64 9 355 8573
Direct Fax +64 9 355 8024

Mr Lee Bettles
General Manager
Scanpower Limited
PO Box 157
Dannevirke
NEW ZEALAND

1 December 2004

Dear Lee,

ODV Valuation of Scanpower Limited at 31 March 2004

Introduction

As requested, PricewaterhouseCoopers has reviewed the Optimised Deprival Value ("ODV") of Scanpower Limited's ("Scanpower") Electricity Lines Business ("ELB") system fixed assets as at 31 March 2004, prepared by Scanpower.

We confirm that the ODV valuation has been calculated in accordance with the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses ("the Handbook"). The Handbook was issued by the Commerce Commission on 30 August 2004.

Part 4 of the Commerce Act (Electricity Information Disclosure) Requirements ("the Requirements") requires that:

- ELBs publicly disclose various financial performance measures;
- these financial performance measures be based on the ODV of the ELB's system fixed assets; and
- the ODV be calculated in accordance with the Handbook.

We stress that the valuation derived using the ODV methodology in the Handbook is intended for regulatory purposes and may not necessarily represent the fair market value of the ELB.

Mr Lee Bettles
1 December 2004

In reviewing the ODV valuation we have relied on advice from Eddie Graham, Consulting Engineer. In particular, Eddie Graham has reviewed the replacement costs, asset lives and optimisation of the system fixed assets.

Valuation Methodology

The ODV of an asset is the minimum of the Optimised Depreciated Replacement Cost ("ODRC") and Economic Value ("EV"). The ODRC is a measure of the cost of replicating the network in the most efficient way possible, from an engineering perspective, given its service capability and the age of the existing assets. The EV is the earnings based value of the network, and is obtained by calculating the Net Present Value ("NPV") of the future cash flows of the least cost equivalent service not using system fixed assets. EV is used to value uneconomic parts of the network, which are not able to fully recover their costs (including their cost of capital), with assets valued at ODRC. This equates to the value of the assets if they were (hypothetically) replaced today, with their modern equivalent assets, and any excess or uneconomic assets removed.

The key steps in the application of the ODV approach to valuing the system fixed assets of an ELB are summarised below in simple terms:

- prepare a valuation asset register;
- determine Modern Equivalent Asset ("MEA") replacement costs of each asset to determine the Replacement Cost ("RC");
- optimise the asset base to determine the Optimised Replacement Cost ("ORC");
- depreciate the RC to determine the Depreciated Replacement Cost ("DRC");
- depreciate the ORC to determine the ODRC;
- apply the EV test; and
- determine the ODV being the minimum of ODRC or EV for each segment of the system.

Optimised Depreciated Replacement Cost

Scanpower produced an ODRC asset register of the system fixed assets as at 31 March 2004. This information formed the basis of the valuation. For the purposes of this asset valuation, the components of Scanpower's electricity system were separated into a number of distinct asset categories (as specified in Table A.1 of the Handbook). A summarised version of this register is included as Table 1 overleaf. Appendix A includes

Mr Lee Bettles
1 December 2004

an asset register for each category of asset replacement costs and lives used. More detailed information concerning asset categories is contained in the valuation report prepared by Scanpower.

The total RC of the system fixed assets of Scanpower is $40,581,674. After charging depreciation of $21,024,593 to reflect the age of the assets, a DRC of $19,557,081 has been derived, and finally, following a review of system optimisation by Eddie Graham, an ODRC of $19,540,725 has been determined.

Table 1: Summary ODRC asset register for Scanpower as at 31 March 2004

EQUIPMENT	Unit	Total Units	Std Life years	RC $	ORC $	DRC $	ODRC $
Distribution							
11kV Lines - concrete	km	356	60	**9,382,240**	**9,382,240**	**6,784,044**	**6,784,044**
11kV Lines - wooden	km	387	45	**10,263,770**	**10,263,770**	**4,219,179**	**4,219,179**
11kV Cables - xlpe	km	1	45	**117,450**	**117,450**	**52,290**	**52,290**
11kV Cables - pilc	km	2	70	**139,320**	**139,320**	**49,968**	**49,968**
Disconnectors, Load Break Switches, Dropout Fuses	No.	1,393	35	**3,551,500**	**3,551,500**	**931,500**	**931,500**
Sectionalisers, Reclosers, Circuit Breakers, Ring Main Units, Switches	No.	23	40	**611,000**	**611,000**	**430,625**	**430,625**
Voltage Regulators	No.	2	55	**120,000**	**120,000**	**91,636**	**91,636**
Distribution Transformers Normal Life	No.	1,284	45	**7,571,900**	**7,571,900**	**2,701,387**	**2,701,387**
Distribution Substations Normal Life	No.	1,284	45	**1,574,000**	**1,574,000**	**547,156**	**547,156**
LV Lines - concrete	km	3	60	**66,530**	**66,530**	**38,951**	**38,951**
LV Lines - wooden	km	69	45	**1,463,955**	**1,463,955**	**668,474**	**668,474**
LV Cables - xlpe	km	43	45	**2,766,306**	**2,766,306**	**1,901,260**	**1,901,260**
Customer Service Connections							
LV Overhead	No.	3,491	45	**503,200**	**503,200**	**48,531**	**48,531**
LV Underground	No.	3,308	45	**987,200**	**987,200**	**655,062**	**655,062**
Other System Fixed Assets							
SCADA and Communications (Central Facilities)	Lot		15	**53,535**	**53,535**	**39,259**	**39,259**
Miscellaneous & Non Standard Assets	Lot		-	**928,868**	**928,868**	**162,602**	**162,602**
Strategic spares	Lot		-	**480,900**	**300,700**	**235,158**	**218,802**
Totals				**40,581,674**	**40,401,474**	**19,557,081**	**19,540,725**

Note: Tables may not add due to rounding

Mr Lee Bettles
1 December 2004

Review of the ODRC

PricewaterhouseCoopers has not, in the course of this assignment, conducted anything in the nature of an audit of the information provided. Accordingly, we do not express an opinion as to the reliability, accuracy or completeness of the information upon which this valuation is based.

No reconciliation has been undertaken between the valuation database and Scanpower's historical accounting fixed asset records. The responsibility for the completeness and accuracy of the data lies with Scanpower. We have reviewed the valuation methodology and performed sample checks on the ODRC asset register as described below.

Scanpower assembled an ODRC register of their ELB system fixed assets as at 31 March 2004. Our check as to the completeness and accuracy of the ODRC asset register focused on the detailed registers that underlie the summarised ODRC asset register. Representative portions of the data records were checked on a sample basis. Testing primarily focused on asset categories of a material nature although samples were tested from all asset categories. In addition, reasonableness tests were performed on asset groups to ensure the completeness and accuracy of the summary schedules.

Testing was directed to examining the flow of information into the summary asset register. The steps undertaken were:

- the process for populating the asset register was checked for quality assurance;
- source data was selected at random and the items were traced into the asset register;
- items were selected from asset groups within the asset register and traced to source data such as drawings and supplier documentation; and
- reasonableness tests were performed on asset groups to ensure the completeness and accuracy of the summary spreadsheet schedules.

Representative portions of the asset database were checked on a sample basis as follows:

- site visits were made to a sample of physical assets which were traced to the asset database;

- source data was selected at random and the items were traced into the asset register;
- items were selected from asset groups within the asset register and traced to source data such as drawings and supplier documentation; and
- reasonableness tests were performed on asset groups to ensure the completeness and accuracy of the summary schedules.

Economic Value

The ODV of an asset is the lesser of its ODRC and EV. The EV of an asset is lower than the ODRC where it is possible to provide the same service, at lower cost to users of the network, by an alternative means. System fixed assets are valued at their EV when it is possible to supply users by alternative means at a lower cost than the existing network.

The strict application of the above approach would require EV testing for each part of the system. This would be time consuming and impractical in many instances. The Handbook states in paragraph 2.59 however, that a comprehensive EV test need only be applied if it is considered that the write-down in asset value as a result of the EV analysis on all potentially uneconomic assets would be greater than 1% of the ODRC of all system fixed assets. In accordance with clause 2.59 of the Handbook, the EV analysis undertaken for the 2001 ODV of Scanpower has been considered as a guide to determine whether a comprehensive EV test is required.

In 2001, all of the feeders and 7 spurs were selected for EV testing using the segmentation criteria prescribed in paragraph 3.70 of the Ministry of Economic Development's ODV Handbook (4th edition). The EV testing applied to these segments in 2001 resulted in no EV write-down.

Since 2001, there have been no significant changes to the configurations or supply requirements of these spurs and feeders. Increases in the replacement cost of the assets due to revised Handbook values have been offset by additional depreciation on the assets since 2001. As a result, there is no reason to consider that the results of the EV testing undertaken in 2001 would be materially different in 2004. In addition, there are no other segments of the network which are believed to be less economic than the feeders and spurs noted above. Therefore, as the EV write-down in 2001 was considerably less than 1% of the ODRC, it is not necessary to undertake a comprehensive EV analysis for the purposes of the 2004 ODV valuation.

Mr Lee Bettles
1 December 2004

Further support for this conclusion is provided by the cost of the alternative supply options for the relevant feeders and spurs. In 2001, the ODV Handbook prescribed that EV tests must be undertaken using a cost for the alternative supply option (excluding energy, but including transmission) of no more than 30 cents per kWh (or 35 - 40c/kWh including energy). Based on our analysis undertaken in 2001 and again in 2004, for those customers connected to the least economic segments, the least cost alternative use able to provide the same service, is local diesel generation. In 2001, we assessed the total costs of supply for remote segments as being greater than the maximum alternative cost allowed in the 2001 Handbook. In 2001 however, in accordance with the Handbook, the EV tests were calculated using the maximum allowable tariff of 30 c/kWh. The EV write-downs calculated in 2001 were therefore potentially overstated due to the Handbook's requirement to use 30 c/kWh as the cost of the alternative.

The 2004 Handbook does not prescribe a maximum value to be used for alternative supply options. The current cost of the fuel itself is in excess of 30c/kWh (for remote locations) and forecasts of diesel prices are not expected to result in prices any lower than 2001 prices. In addition, we have no evidence that the capital costs for diesel generation are lower in 2004 than in 2001, or will become less than 2001 costs in the medium term. These factors support our conclusion that the EV analysis undertaken in 2001 was potentially overstated. Therefore for the purposes of this valuation, and given the 2001 EV results, we conclude that the potential EV write-down in 2004, if any, will be less than 1% of ODRC.

In addition, the potential for by-pass of existing customers by alternative suppliers was considered in order to determine if additional EV analysis was required. Following discussions with Scanpower staff, it was concluded that no additional analysis was required as there are no instances where large customers (that is those who are likely to be of most interest to alternative suppliers), could be supplied by another network or the transmission system with costs of supply less than existing costs of supply. Thus the EV of these assets will be greater than their ODRC, based on the higher alternative costs, and the ODV equals the ODRC.

For the reasons outlined above therefore, and in accordance with Clause 2.59 of the Handbook, we have reviewed the system fixed asset base of the Scanpower network and have identified assets that are potentially uneconomic. As a result, and based on analysis previously undertaken, with consideration of changes in circumstances relevant to these

assets, we conclude that an EV of these assets will not result in a material (or > 1%) reduction in the ODV of the total system fixed assets.

Optimised Deprival Value

In summary, PricewaterhouseCoopers has reviewed the ODV of Scanpower's ELB system fixed assets of $19,540,725, as at 31 March 2004, prepared by Scanpower. The ODV is represented by:

	Value as at 31 March 2004 ($)
ODRC of system fixed assets	19,540,725
Less ODRC of uneconomic segments	(-)
Plus EV of uneconomic segments	-
ODV of system fixed assets	19,540,725

Assets have been valued using the standard replacement costs included in the Handbook, and depreciated against the standard asset lives also incorporated in the Handbook. Assets for which the Handbook does not include standard replacement costs, have been valued by Scanpower's engineers on a modern equivalent replacement cost basis and reviewed by Eddie Graham. System optimisation has been undertaken by Scanpower and reviewed by Eddie Graham. Appendix B includes Eddie Graham's written confirmation on these matters.

We have also considered whether a comprehensive EV test is required, as envisaged in paragraph 2.59 of the Handbook. We have concluded that a comprehensive EV test is not required as the value of potentially uneconomic assets is less than 1% of the ODRC of all system fixed assets. We have formed this conclusion on the basis of the EV segmentation and EV testing undertaken in 2001, together with a consideration of the likely costs of the relevant least cost alternatives and an assessment of changes to the network since 2001. All segments of the distribution system are therefore valued at their ODRC value.

General

In accordance with our normal practice, PricewaterhouseCoopers specifically disclaim any responsibility to any party for any loss or damage whatsoever suffered as a result of

Mr Lee Bettles
1 December 2004

acting in accordance with any information contained within this report. This report has been specifically prepared for the purpose set out above.

Neither the whole nor any part of this report nor any reference thereto may be included with or attached to any document, circular, resolution, letter or statement without the prior written consent of PricewaterhouseCoopers as to the form and context in which it may appear. We retain the right to review our opinion in light of information that now exists but becomes known to us after the date of this report.

This report has been prepared for the directors of Scanpower solely to provide an opinion on the ODV value of the ELB system fixed assets as at 31 March 2004, for regulatory purposes. This report has not been prepared for any other purpose and we expressly disclaim any liability to any other party who may rely on this report for any other purpose.

Please do not hesitate to contact the undersigned if you have any queries about this report.

Yours sincerely

Craig Rice
Partner
Corporate Finance

Lynne Taylor
Director
Corporate Finance

PRICEWATERHOUSECOOPERS

APPENDIX A

Detailed Asset Register

EQUIPMENT	Unit	Total Units	Std Life years	RC $	ORC $	DRC $	ODRC $
Distribution Lines & Cables							
11kV Lines - Medium - Concrete	km	64	60	1,961,640	1,961,640	1,268,818	1,268,818
11kV Lines - Medium - Wooden	km	72	45	2,094,220	2,094,220	417,468	417,468
11kV Lines - Light - Concrete	km	293	60	7,420,600	7,420,600	5,515,226	5,515,226
11kV Lines - Light - Wooden	km	300	45	7,606,750	7,606,750	3,653,311	3,653,311
11 kV Lines - Single Phase or SWER Lines - Wooden	km	3	45	58,800	58,800	32,667	32,667
11kV Lines - Double Circuit - Medium - Wooden	km	12	45	504,000	504,000	115,733	115,733
11kV Cables - Light - xlpe	km	1	45	117,450	117,450	52,290	52,290
11kV Cables - Light - pilc	km	2	70	139,320	139,320	49,968	49,968
Distribution Disconnector 3 ph	No.	109	35	381,500	381,500	131,100	131,100
Distribution Dropout Fuse 3 ph	No.	1,204	35	3,010,000	3,010,000	767,429	767,429
Distribution Dropout Fuse 2ph	No.	80	35	160,000	160,000	32,971	32,971
Distribution Oil Sw/Sectionaliser	No.	1	40	18,000	18,000	17,550	17,550
Distribution Recloser	No.	20	40	561,000	561,000	391,875	391,875
Distribution Voltage Regulator	No.	2	55	120,000	120,000	91,636	91,636
Distribution Ring Main Unit - 3 way	No.	2	40	32,000	32,000	21,200	21,200
Distribution Transformers Normal 45 year Total Life							
Distribution Transformer - Single/Two Phase Unit - up to 15 kVA	No.	63	45	163,800	163,800	41,947	41,947
Distribution Transformer - Single/Two Phase Unit - 30 kVA	No.	17	45	56,100	56,100	15,840	15,840
Distribution Transformer - Pole Mounted - Three Phase Unit - 11kV - Up to and including 30 kVA	No.	1,016	45	5,080,000	5,080,000	1,702,667	1,702,667
Distribution Transformer - Pole Mounted - Three Phase Unit - 11kV - 50 kVA	No.	62	45	434,000	434,000	205,333	205,333
Distribution Transformer - Pole Mounted - Three Phase Unit - 11kV - 100 kVA	No.	28	45	252,000	252,000	90,200	90,200
Distribution Transformer - Pole Mounted - Three Phase Unit -11kV - 200 kVA	No.	4	45	52,000	52,000	18,489	18,489
Distribution Transformer - Pole Mounted - Three Phase Unit - 11kV - 300 kVA	No.	6	45	96,000	96,000	21,333	21,333
Distribution Transformer - Ground Mounted - Three Phase Unit - 11kV - 200 kVA	No.	56	45	784,000	784,000	300,533	300,533
Distribution Transformer - Ground Mounted - Three Phase Unit - 11kV - 300 kVA	No.	18	45	288,000	288,000	78,933	78,933
Distribution Transformer - Ground Mounted - Three Phase Unit - 11kV - 500 kVA	No.	4	45	88,000	88,000	26,889	26,889
Distribution Transformer - Ground Mounted - Three Phase Unit - 11kV - 750 kVA	No.	4	45	104,000	104,000	77,422	77,422
Distribution Transformer - Ground Mounted - Three Phase Unit - 11kV - 1000 kVA	No.	6	45	174,000	174,000	121,800	121,800
Distribution Substations Normal 45 year Total Life							
Distribution Substation - Pole Mounted - Up to 50 kVA	No.	1,158	45	1,158,000	1,158,000	390,800	390,800
Distribution Substation - Pole Mounted - Over 50 kVA	No.	38	45	76,000	76,000	25,556	25,556
Distribution Substation - Ground Mounted (Covered)	No.	82	45	328,000	328,000	122,400	122,400
Distribution Substation - On Customer Premises	No.	6	45	12,000	12,000	8,400	8,400
L.V Lines							
LV Lines - Medium - 4 wire - LV Only - Concrete	km	0	60	14,700	14,700	8,575	8,575
LV Lines - Medium - 4 wire - LV Only - Wooden	km	5	45	216,720	216,720	34,328	34,328
LV Lines Light - 4 wire - LV Only - Concrete	km	0	60	13,300	13,300	8,202	8,202
LV Lines Light - 4 wire - LV Only - Wood	km	2	45	67,260	67,260	4,484	4,484
LV Lines - Medium - Underbuilt - 4 wire - Concrete	km	1	60	11,550	11,550	5,737	5,737
LV Lines - Medium - Underbuilt - 4 wire - Wooden	km	3	45	56,070	56,070	8,661	8,661
LV Lines - Light - Underbuilt - 4 wire - Concrete	km	1	60	26,980	26,980	16,438	16,438
LV Lines - Light - Underbuilt - 4 wire - Wooden	km	53	45	1,015,257	1,015,257	559,467	559,467
LV Lines - Light - Underbuilt - 2 wire - Wooden	km	6	45	108,647	108,647	61,534	61,534
LV Cables - Medium -LV Only - xlpe/pvc	km	43	45	2,766,306	2,766,306	1,901,260	1,901,260
Customer Service Connections							
LV Overhead - 1ph	No.	1,138	45	79,660	79,660	7,683	7,683
LV Overhead - 3ph	No.	2,353	45	423,540	423,540	40,848	40,848
LV Underground - 1ph - shared fuse pillar	No.	2,240	45	560,000	560,000	371,591	371,591
LV Underground - 3ph - shared fuse pillar	No.	1,068	45	427,200	427,200	283,471	283,471
LV Underground - 3ph - own fuse pillar	No.		45				
Other System Fixed Assets							
SCADA and Communications (Central Facilities)	Lot		15	53,535	53,535	39,259	39,259
Miscellaneous & Non Standard Assets	Lot		15	928,868	928,868	162,602	162,602
Strategic Spares	Lot		15	480,900	300,700	235,158	218,802
Totals				**40,581,674**	**40,401,474**	**19,557,081**	**19,540,725**

EDDIE W GRAHAM

Electrical Engineer
B.E. (Elect), F.I.P.E.N.Z.
Consultant

18 Seaway Terrace
Tauranga, New Zealand
Ph 07-576 9070
Fax 07-576 9070
Mobile 021 1810935
e-mail eddie@enternet.co.nz

11 November 2004

Lynne Taylor
Director
Financial Advisory Services
PricewaterhouseCoopers
Private Bag 92162
AUCKLAND

Dear Lynne

Scanpower Limited ODV Valuation

I have carried out an Engineering review and audit of the Scanpower Limited Optimised Deprival Valuation of System Fixed Assets as at 31 March 2004.

This audit has been based upon compliance with the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses dated 30 August 2004 issued by the Commerce Commission, (The Handbook).

In particular the following matters have been considered in detail.

Asset Categorisation

The electricity distribution system of Scanpower as recorded in their asset register has been reviewed to ensure that the assets listed in the register are consistent with and correctly categorised with the assets used on the system.

Ground surveillance and spot checks were undertaken as well as inspection of new work carried out since the last valuation such as the 0.933 km overhead rebuild of the Weber Feeder and the 1.44 km underground in Ross Street Woodville. The feeders starting from the Point of Supply from Transpower at Dannevirke and Woodville were inspected as was all the ripple control equipment.

In all cases I found the assets are correctly categorised and consistent with the items used. Where minor discrepancies were noted these were corrected and incorporated into specific asset data and the final total.

Field Audits of a sample of assets

A number of field audits were carried out representing a good sample of the assets. These were of sections of overhead lines, line switches, substations, ripple injection plant, control room, emergency stores and verification of underground cable termination's as recorded on system diagrams.

Review of replacement costs, including multipliers

Replacement costs used are those taken from the Handbook where provided. These were compared with my recent experience and records of similar Modern Equivalent Assets erected under competitive tender conditions and are considered appropriate for the Scanpower assets.

The only non standard costs (ie not provided in the Handbook) are for the Ripple Plants, SCADA, radios and communication equipment and the chevron structure at Ruaroa Road. These replacement costs have been based upon recent quotes from suppliers of the equipment and verified from experience.

The use of all multipliers was considered and their appropriate use in accordance with the Handbook rules examined. These were as follows:

- The overhead line urban multiplier applied was 1.5 which is the lowest provided in the Handbook and correctly reflects the construction costs for the urban areas reticulated by Scanpower.

- The multiplier applied to cables laid in business districts has been restricted to those business districts in Dannevirke and Woodville located on State Highway 2. The lowest handbook figure of 1.15 has been applied, which has been added to the urban multiplier above as required by the Handbook.

- The Traffic Management Allowance for Level 1 of $800 per km has been applied to those overhead lines along State Highway 2 and an allowance of $6,000 per km applied to underground cable trench. These are in accordance with The Handbook.

Review of asset lives and life extensions

The asset lives used were examined in all cases and found to be those provided in the Handbook. No life extensions were claimed.

Review of optimisation

The Scanpower Lines Business supplies a typical rural area and the towns of Dannevirke and Woodville. There are no "Heavy" overhead lines, 19.7% of "Medium" overhead lines and the rest "Light" as defined by the Handbook. In accordance with the Handbook all overhead lines and cables have been optimised to the Modern Equivalent Asset (MEA) of Aluminium wire and plastic cables.

The Asset Management Plan for Scanpower generally provides for a "n" standard of supply with 11kV interconnections between feeders where the geography allows them to meet. These interconnections reduce the time and area of any outage by allowing a reduction of the length of line out of service. This design has been tested and confirmed by a customer survey. The network design is based upon the "Guidelines for Security of Supply in New Zealand" published by the Electricity Engineers' Association of NZ. This means that there is no provision for optimisation of the network.

The Scanpower 2001 ODV identified the only area for optimisation was the 30 kVA 3 phase transformers. Scanpower has standardised on 30 kVA for the smallest size of 3 phase transformer as the smallest practicable 3 phase size and this has now been recognised in the

new Draft Handbook. Hence the optimisation of the 30 kVA transformers is no longer appropriate and has not been applied to this valuation.

As at 31 March 2004 there have been no fundamental changes to the Scanpower network there are no other optimisation opportunities.

The five stages of optimisation were completed as follows:

(i) Excluding stranded assets.
None were found.

(ii) Optimising configuration of the network.
Scanpower is supplied from Transpower points of supply at Dannevirks and at Woodville. The two points of supply are not connected within the Scanpower network. There is no sub transmission and all 11kV lines were found to be required to supply existing customers. The network configuration was as a result not able to be optimised.

(iii) Optimising the capacity of Elements in the network.
Scanpower supplies a rural area and the extensive light reticulation required to supply its existing load leaves little to optimise. Transformer utilisation was found to be greater than The Handbook prescribed minimum of 30% when calculated in feeder segments, therefore no optimisation was applied. LV assets were estimated in the absence of actual data, it is not possible to optimise these assets. However, the assumptions used in estimating LV lengths reflect an optimised approach.

(iv) Optimising network engineering
The Scanpower Network was examined to confirm that the optimised asset base is not over-engineered for the quality of supply criteria. This was judged against the Scanpower design and construction standards applied to its most recent projects and checked against their Asset Management Plan for the period April 2004 to March 2014. The network was also tested against the criteria set out in The Handbook, Appendix B. The optimised asset base was found to be fully consistent with these criteria and no over-engineering found.

(v) Optimising stores and spares
The stores and spares were examined to ensure that they were suitable replacements for the assets installed on the network and that the quantities were reasonable to meet the disclosed quality of supply criteria. The optimised stores and spares assets were found to comply with these requirements. As there are no stranded assets their inclusion in the stores and spares is not relevant.

The following tests listed in The Handbook Appendix B were applied:

B1 Optimisation in accordance with clauses 2.18-2.47 was carried out.

B2 The two Connection/Supply Points are owned by Transpower.

B3 Transmission/Subtransmission/Primary Distribution Circuits. Scanpower does not have any.

B4 Transmission Substations/Zone Substation/Primary Distribution Substations.
Scanpower does not have any.

B5 High Voltage Distribution Network

(a) Use of very low capacity or less than three phase distribution lines
Scanpower uses two wire single-phase 11kV lines in rural areas where consumers have not required a three phase supply. The length and capacity of such lines has been recorded in the ODV.

(b) Valuation of single wire earth return circuits (SWER) circuits.
These are not used by Scanpower.

B6 Security Guidelines for Transmission Planning. Transpower only.

B7 Transmission/Substation/Primary Distribution Lines and Cables
Scanpower does not own these.

B8 Substations/zone/primary distribution substations.
Scanpower does not own any substations.

B9 High Voltage Distribution

(a) Conductor and cable size
Conductor and cable sizes were found to be the most cost efficient size for thermal ratings, fault and current levels for the quality of supply criteria disclosed.

(b) Whether underground cables are justified
Only a small amount is underground and these are a requirement of the Tararua District Council.

(c) Underground cable trenching
Cables on the same side of the street have been optimised to a common trench

B10 Voltage Control Devices
There are two and both were found to have clear justification.

B11 Distribution Transformers (pole, kiosk, ground types)
Capacity utilisation factor was analysed resulting in no optimisation being required.

B12 Low Voltage Distribution

(a) Whether underground cables are justified
All are a requirement of the District Council.

(b) Underground distribution trenching
Cables on the same side of the street have been optimised to a common trench.

(c) Whether the configuration and engineering of the low voltage distribution network exceeds the standard required to meet the ELB's quality of supply criteria
No 400V reticulation exceeds these targets.

B13 System Control

(a) Degree of sophistication of SCADA equipment

Scanpower SCADA System is appropriate.

(b) Need for load control system and degree of sophistication
Scanpower depends on its Load Management system to meet its quality of supply criteria. It is appropriate for this function.

Existing Loads and Growth Forecast

Scanpower's base load is relatively static with an annual growth of about 200 kVA per annum.

Over the past ten years there have been only minor fluctuations in the total number of customer connections.

The network is sensitive to step changes in load, such as the addition of new industrial load. The new freezing works caused such a "step change" in the 2004 year.

I have obtained all the information and explanations sought for an understanding of the methodology used and the calculations made. The calculations and data acquisition has been competently and systematically carried out. In my opinion the ODV valuation meets the requirements of the 30 August 2004 Handbook and represents Fair Value in accordance with the Financial Reporting Standard 3 (FRS3).

Yours sincerely

E W GRAHAM