PRICEWATERHOUSECOOPERS

Submission to Commerce Commission

Asset Valuation Methodologies for Electricity Line Businesses' System Fixed Assets

11 November 2002

PRICEWATERHOUSECOOPERS

SUBMISSION TO COMMERCE COMMISSION

Asset Valuation Methodologies for Electricity Line Businesses' System Fixed Assets

This submission has been prepared by PricewaterhouseCoopers on behalf of the following 18 large Electricity Line Businesses:

- Alpine Energy Limited
- Buller Electricity Limited
- Counties Power Limited
- Eastland Network Limited
- Electra Limited
- Electricity Ashburton Limited
- Electricity Invercargill Limited
- Horizon Energy Distribution Limited
- MainPower New Zealand Limited
- Marlborough Lines Limited
- Nelson Electricity Limited
- Network Waitaki Limited
- OtagoNet Joint Venture
- The Lines Company Limited
- The Power Company Limited
- Top Energy Limited
- Waipa Networks Limited
- WEL Networks Limited

The first section of this document contains covering letters from each member of the submission group. The submission itself is contained in Section two.

PRICEWATERHOUSECOOPERS

Any correspondence regarding the submission should be addressed in the first instance to:

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11 November 2002

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November 11 2002

PETER ALSOP
Submissions on the Review of Asset Valuation Methodologies
COMMERCE COMMISSION
P O Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Buller Electricity Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours faithfully

M J McSHERRY
Chief Executive

Enc

COUNTIESPOWER

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

November 2002

Dear Mr Alsop

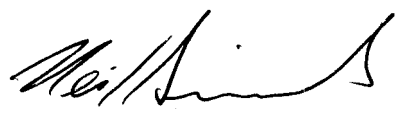
Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Counties Power Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely



Neil Simmonds
Chief Executive Officer

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WEBSITE www.countiespower.com

11 November 2002

EASTLAND NETWORK LTD

Mr Peter Alsop
Submissions on the Review
of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr. Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Eastland Network Ltd. In addition Eastland Network Ltd has submitted a supplementary submission emphasising specific points and experience relevant to the submission.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours faithfully,

Ken Mitchell
Chief Executive

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Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

11 November 2002

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of a joint submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Electra.

We look forward to the opportunity to discuss the submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

John Yeoman
General Manager

Electricity Ashburton
YOUR POWER PARTNER

8 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Electricity Ashburton Ltd.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

G R Guthrie
GENERAL MANAGER

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11 November 2002

Mr Peter Alsop
Submissions on the Review
of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
WELLINGTON

Dear Mr Alsop

SUBMISSION ON ASSET VALUATION METHODOLOGIES DISCUSSION PAPER

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Electricity Invercargill Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Martin Walton
Chief Executive

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HORIZON
ENERGY DISTRIBUTION LIMITED

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File Ref
Our Ref JEB/Car

11 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Horizon Energy Distribution Ltd.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Johan Bankers
CHIEF EXECUTIVE

MainPower
New Zealand Limited

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

11 November 2002

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including MainPower New Zealand Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

A Berge
Managing Director

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11 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Marlborough Lines Ltd.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Ken Forrest
for Marlborough Lines

NELSON ELECTRICITY LTD

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

11 November 2002

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Nelson Electricity Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Phil Goodall
Commercial Manager
Nelson Electricity Limited

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Networks South Limited
Managing the networks of Alpine Energy and Network Waitaki

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14/11

5 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to be part of this submission, which has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses. Networks South Ltd is the Asset Management Company for Network Waitaki Ltd and Alpine Energy Ltd.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Jim Pearce

Jim Pearce
Chief Executive Officer

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11 November 2002

Mr Peter Alsop
Submissions on the Review
of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
WELLINGTON

Dear Mr Alsop

SUBMISSION ON ASSET VALUATION METHODOLOGIES DISCUSSION PAPER

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including OtagoNet Joint Venture.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Martin Walton
Chief Executive
PowerNet Limited

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JBA:ICS 8/8

6th November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including The Lines Company.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

John Anderson
CHIEF EXECUTIVE

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THE POWER COMPANY LTD

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11 November 2002

Mr Peter Alsop
Submissions on the Review
of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
WELLINGTON

Dear Mr Alsop

SUBMISSION ON ASSET VALUATION METHODOLOGIES DISCUSSION PAPER

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including The Power Company Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Martin Walton
Chief Executive

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11 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Top Energy Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Roger de Bray
Chief Executive

11 November 2002

Waipa Networks

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

Submission on Asset Valuation Methodologies Discussion Paper

We are pleased to enclose 20 copies of our submission on the Discussion Paper on Asset Valuation Methodologies for Electricity Line Business Fixed Assets. An electronic version has also been emailed to you today.

This submission has been prepared by PricewaterhouseCoopers on behalf of a group of large Electricity Line Businesses including Waipa Networks Limited.

We look forward to the opportunity to discuss our submission with you at the Commerce Commission's conference at the end of the month.

Yours sincerely

Ray Milner
GENERAL MANAGER

Wpnov02\com com rm

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8 November 2002

Mr Peter Alsop
Submissions on the Review of Asset Valuation Methodologies
Commerce Commission
PO Box 2351
Level 10, 44-52 The Terrace
WELLINGTON

Dear Mr Alsop

RE: SUBMISSION ON ASSET VALUATION METHODOLOGIES DISCUSSION PAPER

We have joined with 13 other lines companies in funding PricewaterhouseCoopers to carry out investigations and prepare a submission on Asset Valuation Methodologies Discussion Paper.

We generally support the evaluation and conclusions in this report but note that we are preparing our own submission which will draw on the PricewaterhouseCoopers work, the UMS group and other work we have carried out.

Yours sincerely

M.C Underhill

Mike Underhill
CHIEF EXECUTIVE

PRICEWATERHOUSECOOPERS

SUBMISSION TO COMMERCE COMMISSION

Asset Valuation Methodologies for Electricity Line Businesses' System Fixed Assets

I. INTRODUCTION

1. The Commerce Commission ("the Commission") issued the Discussion Paper, "Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets" ("the Paper") on 1 October 2002. The Commission is required to undertake a review of asset valuation methodologies, under Part 4A of the Commerce Act 1986 ("the Act"). The Commission is also required under Part 4A to set thresholds for the declaration of control in respect of electricity distribution and transmission services supplied by large Electricity Line Businesses ("ELBs"), and the Paper discusses the links between the regulatory regime required under Part 4A and possible valuation methodologies for system fixed assets.

2. The Commission has sought submissions on the Paper from interested parties. This submission has been prepared by PricewaterhouseCoopers on behalf of the following 18 large ELBs:

- Alpine Energy Limited
- Buller Electricity Limited
- Counties Power Limited
- Eastland Network Limited
- Electra Limited
- Electricity Ashburton Limited
- Electricity Invercargill Limited
- Horizon Energy Distribution Limited
- MainPower New Zealand Limited
- Marlborough Lines Limited

- Nelson Electricity Limited
- Network Waitaki Limited
- OtagoNet Joint Venture
- The Lines Company Limited
- The Power Company Limited
- Top Energy Limited
- Waipa Networks Limited
- WEL Networks Limited

3. The following map highlights the supply areas represented by the group.

4. This group of ELBs together comprises 440,000 connections, 25% of the total industry and 56,000 system kilometres, 39% of the total industry. The ownership structures represented include consumer and community trusts, a listed company, local body and co-operative ownership, as well as those

managed by management companies. Group members include networks with predominantly urban systems, others that are sparsely populated and a number with significant urban areas combined with rural and remote rural characteristics.

5. The following table summarises the key characteristics of the group.

	System Assets at ODV ($000)	System Length (km)	ICPs	Network Supply Area (km^2)	Density ICPs/(km)
Alpine Energy	65,996	3,687	28,376	10,596	7.7
Buller Electricity	13,182	595	4,108	4,654	6.9
Counties Power	89,721	3,385	30,817	2,220	9.1
Eastland Network	66,049	3,679	25,552	11,858	6.9
Electra	73,515	2,127	38,292	1,628	18.0
Electricity Ashburton	81,842	2,579	14,558	6,664	5.6
Electricity Invercargill	37,750	688	16,847	33	24.5
Horizon Energy Distribution	63,994	2,384	23,092	8,388	9.7
MainPower	91,038	4,327	25,047	12,000	5.8
Marlborough Lines	70,828	3,050	21,038	11,272	6.9
Nelson Electricity	13,837	241	8,575	24	35.6
Network Waitaki	38,367	1,911	11,341	7,741	5.9
OtagoNet	53,440	4,191	14,434	12,349	3.4
The Lines Company	65,456	4,602	25,712	13,623	5.6
The Power Company	152,422	7,540	31,800	28,740	4.2
Top Energy	73,705	4,834	27,044	6,830	5.6
Waipa Networks	45,472	1,764	20,293	1,864	11.5
WEL Networks	158,103	4,692	72,942	3,082	15.5
Group Average	**69,707**	**3,126**	**24,437**	**7,976**	**10.5**
Group Total	**1,254,718**	**56,276**	**439,868**	**143,566**	
Industry Total	**4,536,655**	**143,907**	**1,779,433**	**266,094**	
Group as a % of Industry	**27.7%**	**39.1%**	**24.7%**	**54.0%**	

Source: New Zealand Gazette, Information Disclosure, 2002[1]

Structure of the Submission

6. This submission is structured in 4 sections, (in addition to the Introduction):

- II. Executive Summary – we summarise the key points of the Submission.

[1] For Dunedin Electricity, 2001 Gazette data has been used

- III. Regulation of Electricity Line Businesses – this section presents our views on the inter-relationships between the proposed regulatory regime, information disclosure and asset valuation.

- IV. Evaluation Criteria – this section presents our views on the alternative valuation options assessed against the three key evaluation criteria: efficiency, cost effectiveness and excessive profits.

- V. Relative Merits of Options – the final section collates the Submission into an overview of the relative merits of the alternative valuation methods proposed.

II. EXECUTIVE SUMMARY

7. We appreciate the opportunity to comment on the asset valuation issues prior to the final declaration of the threshold and control regime. Once again we stress that the Commission must focus its regulatory regime on outputs, those factors such as price and quality that are of direct relevance to consumers. We also submit it is imperative that the Commission enables the industry to review and comment on the integrated regulatory package once the Commission's deliberations on each aspect of their review become known.

8. Our submission reflects common views of 18 ELBs, which, given the diverse nature of the submission group, demonstrates the strength of commitment to the views expressed in this submission.

9. In summary, our submission supports the continued use of ODV for both opening and ongoing asset values and rejects any move towards Historical Cost. We submit that both sets of values require a revised set of ODV rules and that these rules require updating on a regular and ongoing basis .

10. Neither the Commission nor any other commentator has demonstrated the need to move away from ODV, or any reason to adopt an alternative valuation methodology including Historical Cost. ODV provides a consistent methodology with the least regulatory risk and lowest compliance costs.

11. In particular we submit that:

    a) In the context of evaluating valuation methodologies we do not consider that allocative or productive efficiency are as important criteria as dynamic efficiency.

    b) The owner of a line business is exposed to significant investment risks. In particular, the risk of economic stranding arising through movements in

demand or technological obsolescence is likely to become a more significant risk in the near future.

c) DHC or DIHC is not an appropriate basis for the opening value of system fixed assets because it does not exist, cannot be recreated and originally was unreliable and understated.

d) ODV is an appropriate basis for opening values because it already exists, is consistent and robust. However, updated valuations are required in order to address the current shortcomings in the ODV Handbook.

e) Historical cost values should not be used for ongoing regulatory values because they do not ensure consistency or efficient investment and will require costly new and duplicate systems and processes.

f) ODV should be used for ongoing values, because ODV ensures efficient investments are included in the asset base, at least cost, and values will be consistent across the industry.

g) Claims of excessive profits are unsubstantiated and rejected. Prices have decreased in real terms since vesting and quality has significantly improved. As a result the consumer is demonstrably better off. ELBs are more efficient and have managed to become more profitable – incentivised by the ability to retain some of these gains over time.

III. REGULATION OF ELECTRICITY LINE BUSINESSES

Current Processes

12. Under section 57ZD of subpart 4 of Part 4A of the Commerce Act 1986 the Commission must carry out a review of the valuation methodologies for line business system fixed assets along with other functions required under Part 4A in respect of electricity line business regulation.

13. The Commission has duly released the discussion paper "Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets", dated 1 October 2002 and has called for written submissions. Following receipt of the submissions, and oral presentations of these at a conference to be held at the end of November, the Commission intends to release the results of the asset valuation review at the end of the year alongside its high level findings on the form of the thresholds under the thresholds and control regime.

14. On behalf of our original group of 14 ELBs, PricewaterhouseCoopers prepared a submission on the proposed regulation of electricity line businesses and, in particular, suggested that the work-streams on valuation and the threshold and control regimes needed to be aligned. In this context and where relevant we have referred to our earlier submission throughout the remainder of this document.

The Purpose Statement and the Threshold and Control Regime

15. The Purpose Statement, as set out in Part 4A sets out the overall objective of the proposed regulatory regime.

> *The purpose of this subpart is to promote efficient operation of markets directly related to electricity distribution and transmission services through targeted control for the long-term benefit of consumers by ensuring that suppliers-*
>
> *(a) are limited in their ability to extract excessive profits; and*
> *(b) face strong incentives to improve efficiency and provide services at a quality that reflects consumer demands; and*
> *(c) share the benefits of efficiency gains with consumers, including through lower prices.*

16. Along with the threshold and control regime, the overriding objective of the asset valuation methodology review is to ensure that the regulatory mechanism achieves the intent of the purpose statement. This implies that the effectiveness of the threshold and control regime depends on valuations of ELBs as indicated in the Commission's regulatory discussion paper which stated that "asset values (and how they are determined) are important determinants of the performance of businesses." (page 13).

17. Precisely how asset values are to be used in the threshold and control regime is not yet known, and therefore assessing the relative merits of the valuation options presented by the Commission is difficult. The Commission is required to develop a targeted regime. How this objective is to be met is unclear in particular in the context of evaluating valuation methodologies commonly used in universal regimes. The Paper proposes the following possible uses for asset values under the thresholds regime:

- a profit threshold – to measure whether excess profits are being made;
- an efficiency threshold – influencing capital efficiency through the development and maintenance of optimal network assets; and

- a sharing threshold – influencing how profits and investment risks are shared between investors and consumers.

18. In addition, under the proposed control regime, asset values will influence revenue requirements, such as the starting price (Po) and X under a price cap approach, specifically:

- return of capital (depreciation); and

- return on capital.

Without further information about how the proposed price control process will be implemented and decisions on the other factors important to this process, it is not possible to comment on the suitability of asset valuation methodologies for this aspect of the regime.

19. Our earlier regulatory submission supported a combined price path efficiency threshold and quality threshold regime, focusing on the outputs of direct relevance to consumers; price and quality. It did not support a threshold regime encompassing a profit threshold on the basis that the objectives of the purpose statement are best met by a thresholds regime which focuses on consumers, and consumers are most interested in the prices they pay and the quality of the services they purchase.

20. The relative level of profit earned by ELBs, which are providing similar quality at similar prices to customers with like characteristics, is irrelevant. Profits which reflect relative efficiencies, should not be deemed excessive, particularly if these are shared over time with consumers. Thus the profit threshold option is not supported by the submission group. In addition, the sharing threshold option is not supported by the submission group, as it is superfluous once a price efficiency threshold is in place.

21. The group recognises however, that the asset valuation methodology is of primary importance to both the efficiency threshold, in determining capital efficiency, and the price control regime itself, in determining returns of capital and returns on capital. Our submission therefore focuses on these three purposes for asset values, that is:

- capital efficiency;
- return of capital; and
- return on capital.

22. Once again we submit it is imperative that the Commission enables the industry to review and comment on the integrated regulatory package once the Commission's deliberations on each aspect of their review become known.

Information Disclosure

23. Under subpart 3 of Part 4A, the Commission must set information disclosure requirements. Currently ELBs make comprehensive disclosures under the Electricity (Information Disclosure) Regulations 1999 and in particular in respect of asset valuations must:

- Make valuation reports publicly available which must include detailed information including asset quantities, replacement costs, asset lives, depreciation, optimisations, economic values, load forecasts, quality of supply criteria, stranded assets and methodologies and assumptions applied in the valuation.
- Publish details of recent valuations on the internet including the date of the valuation report and the value.

- Annually Gazette an ODV reconciliation report showing opening ODV, additions, disposals, depreciation and revaluations occurring throughout the year, and closing ODV.

- Gazette a valuation audit certificate prepared by an independent auditor confirming that the valuation has been prepared in accordance with the ODV Handbook.

- Make asset management plans publicly available including details of the assets covered, proposed levels of service, demand forecasts, policies on non-asset solutions, maintenance policies and network development programmes including expenditure projections. These assumptions must be the same as those applied in the ODV valuation.

24. These detailed disclosure requirements, coupled with the prescriptive nature of the ODV Handbook used to derive the valuations, provide significant transparency to the asset valuations used for regulatory purposes. It is difficult to see that any further information is required other than that already published. This is reinforced by the findings of the Commission's recent audit and recalibration of the ODV valuations of the ELBs where the recalibration resulted in a reduction of just 0.37% in value across the industry, suggesting that the required level of disclosure has assisted in ensuring compliance with the disclosure regulations.

25. There is no reason why asset valuation information disclosed for disclosure purposes should differ to asset information used for threshold and control purposes. The transparency achieved by using the same asset information throughout the regulatory regime can only assist in meeting regulatory objectives, minimising compliance costs and providing certainty to investors and consumers.

Opening and Ongoing Asset Values

26. The Paper provides the asset valuation options to be used in the threshold and control regime, and distinguishes between opening values (to be used at the start of the threshold and control regime) and ongoing values (to be used to value assets in the future under the proposed regime). The following options are proposed:

Opening Value
Book Value at vesting date (rolled forward)
Most recent audited Book Value (rolled forward)
Audited Optimised Deprival Value at 31/3/01 (rolled forward if necessary)
Optimised Deprival Value or Optimised Depreciated Replacement Cost (or other) based on new rules

Ongoing Value
Depreciated Historical Cost (with or without a "used and useful" test)
Indexed Depreciated Historical Cost (with or without a "used and useful" test)
Depreciated Replacement Cost (with or without "Optimisation")
Optimised Deprival Value

27. Where possible in our submission we have distinguished between the relative merits of the opening and ongoing values for clarity, although some of our points are relevant to both.

Summary - Regulation

- The proposed threshold regime must focus on outputs of direct relevance to consumers, being price and quality, not profit.
- The Commission must allow the industry to comment on the integrated regulatory package once it is brought together, not simply its component parts.
- Existing disclosure requirements for asset valuations are comprehensive and are able to meet the requirements of both the threshold and control regimes.

IV. EVALUATION CRITERIA

28. The Paper lists the potential evaluation criteria for assessing alternative valuation methodologies and collates these into three major criteria: efficiency; cost effectiveness; and identification of excessive profits. We discuss each of these criteria in turn in this section of our submission.

Efficiency Criteria

29. The Commission proposes that dynamic efficiency is more important in the context of the Paper than allocative or productive efficiency. Accordingly and in agreement we have focused most of our review on this aspect of efficiency.

Allocative Efficiency

30. Allocative efficiency is concerned with achieving maximum benefit from the use of scarce resources, most readily achieved by pricing on the basis of marginal costs. However, marginal costs may not always allow an investor to recover total costs, particularly as in this instance, significant components of cost are sunk.

31. In evaluating whether or not additional investment will be made in a network, an ELB typically undertakes Net Present Value ("NPV") analysis to underpin the investment decision. The NPV rule requires that the NPV of the expected cash flows from the investment equals the original cost of the investment. An investor, theoretically, should be indifferent as to when, over the life of the assets, the expected revenues arise, so long as the resulting NPV equals the investment cost when an appropriate risk adjusted discount rate (i.e. required rate of return) is used.

32. The adoption of alternative valuation methods can influence revenue (and price) profiles over time. As demonstrated above, this is not of primary importance for allocative efficiency. What is more important is that dynamic efficiency is achieved in the context of asset valuations by ensuring appropriate incentives to innovate and invest.

Productive Efficiency

33. Productive efficiency is concerned with ensuring that demand is met at the lowest cost. Most line business demand is met through existing assets reflecting past investment decisions. It is only additional or new demand which is subject to productive efficiency criteria in the context of this review.

34. Asset values that are set at unrealistically low levels will discourage future investment which may affect productive efficiency by incentivising short term (operating cost) expenditure at the expense of long term (capital) investment. Thus asset valuation methods must ensure the incentives to invest and innovate are not stifled to the detriment of productive efficiency.

Dynamic Efficiency

35. Dynamic efficiency is concerned with ensuring that investment decisions and innovation allow allocative and productive efficiency to be maintained over time, reflected in least cost solutions, matched in the long term by minimising prices.

36. For businesses with large, long term asset bases, dynamic efficiency is concerned with making the right investment decisions at the right time, subject to opportunities for innovation resulting from new processes, products or technology.

37. From a valuation perspective, the achievement of dynamic efficiency can be hindered if investment decisions are influenced by the valuation methodology adopted. An example of this is perceived regulatory risk. If investors perceive there is a risk the regulatory regime may change over time, incentives for investment may be altered. Since regulation of ELBs was first introduced under the light handed disclosure regime, assets have been valued using the ODV methodology, and investment decisions based on an understanding of the opportunity for recovery of cost under the ODV assumptions.

38. A change from using the ODV methodology would raise concerns about the stability of any new regime, including an increased perception that a new regime might itself be subsequently revised. Perceived risk would be heightened by any change to the basis of valuing opening assets that resulted in those opening values being materially less than current ODV values.

Investment Risks

39. In general terms, the owner of a line business is in the best position to manage investment risks, given the owner's ability to make decisions on such issues as the timing, quantum and location of investments.

40. Investment risks are generally most properly addressed through a combination of the rate of return allowed on the asset base, and the depreciation and revaluation regimes. Generally a business' Weighted Average Cost of Capital ("WACC") only measures those risks that it is designed to capture. The required rate of return for a regulated ELB may need to be set at a higher level since there are significant downside risks for ELBs arising from obsolescence issues which are asymmetric (i.e. have downside risk which is not offset by the potential for upside) and which are not addressed by a conventional WACC estimate. However, where possible it is preferable that these risks be compensated through the use of accelerated depreciation rates, and revaluation losses or gains being accounted for through income.

41. The key investment risks identified by the Commission in the Paper are:

- inflation;
- risk of assets requiring premature replacement;
- risk of economic stranding due to unanticipated shifts in demand levels or patterns; and
- risk of economic stranding due to technological obsolescence (where the comparable service can be provided by cheaper alternative technologies).

42. We consider each of these investment risks below.

Inflation

43. Inflation has the potential to erode the profits of line businesses over time, particularly given the long term nature of the underlying asset base. In keeping with competitive markets, we are of the view that it is more appropriate that consumers bear the cost of expected inflation, as part of the nominal rate of return required by investors.

44. The year-by-year effects of inflation should be dealt with through the valuation methodology, via asset revaluation, and not through indexation. Indexation, while seeking to preserve the purchasing power of investors' capital is unlikely to be able to replicate specific price movements of different asset classes. This contrasts with asset revaluations which implicitly encompass price inflation in the determination of asset values within different classes of current assets. While both approaches can satisfy the NPV rule, only the use of asset revaluations is consistent with asset carrying values and hence a pricing base that might be expected in contestable markets.

45. As asset inflation is recognised in both the ODV valuation methodology and through the use of a nominal WACC, it is appropriate when assessing returns that asset revaluations are treated as income. Asset revaluations represent a capital gain to shareholders and therefore should be recognised as a component of current period economic income. The revaluation increment effectively represents an increase in the NPV of expected future revenues from the asset and therefore this amount does not need to be recovered from consumers in the current period. There are timing issues however associated with reflecting revaluation gains as income, and these are considered in paragraph 49 below.

46. The revaluation increment can be treated as income in two ways:

a) Recognition of revaluation gains (or losses) within the Statement of Financial Performance, or;

b) As an adjustment to the EBIT calculation used for determining Return on Investment ("ROI") for the purposes of Information Disclosure.

47. Option a) would potentially make the financial result more transparent as the revaluation amount is explicitly disclosed as income within the Statement of Financial Performance. However, this treatment would be inconsistent with the requirements of FRS-3 Accounting for Property, Plant and Equipment, which requires

"… when an item of property, plant and equipment is revalued, the resultant revaluation increment or decrement must be recognised in the statement of movements in equity."

48. As consistency of regulatory accounting with financial reporting is desirable, our preferred approach is therefore to adjust the EBIT value used for

determining the ROI calculation, consistent with the current requirements under the Information Disclosure regime (or (b) above).

49. Revaluations have the potential to be 'lumpy' in nature, depending upon their frequency and the significance of movements in the underlying replacement costs of the assets due to such factors as inflation, or component prices. This may lead to significant movements in income and profitability in any given year although regular replacement cost reviews would mitigate this. Depending on the regularity with which revaluations are undertaken, we would recommend that a methodology be put in place for spreading revaluation movements over a number of years thereby smoothing the impact of periodic revaluations for dealing with inflation. This could be achieved through some form of rolling balance, in which case, interest would need to be charged on any under or over collection from customers, to maintain NPV neutrality.

50. In addition, Paragraph 101 considers specific issues in relation to the revaluations that have occurred to date, and in particular what has been captured by these revaluations.

51. We are, therefore, of the view that of the four options proposed by the Commission for dealing with inflation, Option 3, replacement cost and nominal WACC with revaluation gains treated as part of income for calculating regulatory returns, is the best alternative.

Asset Failure

52. Generally the risk of asset failure is most appropriately borne by the line business, subject to adequate compensation through the rate of return and depreciation and revaluation rules. This incentivises investors to mitigate the potential for failure. However, investors should not necessarily bear the risk if there is little control over the risk and the risk could be extreme, in which case some sharing with customers may be appropriate.

Demand Risk

53. Demand risk arises from the possibility that significant movements in demand could result in excess capacity or stranded assets for which full investment cost can not be recovered. In most instances the line business is best placed to manage this risk. Demand risk incentivises line businesses to manage their capital investments, and line businesses are in a better position to evaluate demand risk across a network as a whole, than consumers, with the possible exception of very large customers with dedicated assets.

54. Demand is predictable within a range, however large customer demand is subject to volatility resulting from closure, or downsizing. If stranding of assets is identifiable in the short to medium term, then the investment risk is best addressed through accelerated depreciation.

55. However, it needs to be noted that in many circumstances assets likely to be stranded by the loss of a single customer may be subject to individual line services contracts with that customer. These contracts should be excluded from the asset valuation and thresholds regime. This point is discussed in paragraph 112. For example, an Otago gold mine has a limited life and the line in the vicinity of the mine has to be removed to allow the site to be restored to its former status once the mine has closed. Special arrangements are needed to manage this risk by the line company, effectively allowing the line company to recover its investment over the economic life of the asset. In addition, other lines are built with excess capacity at the customer's request with allowance for full investment recovery through individual contracts.

Technological Obsolescence

56. Technological risk arises from developments in technology that either reduce the replacement cost of a network, or make substitutes more economic.

57. The pace of technological change is accelerating, and is likely to have significant direct and indirect affects on ELBs, through distributed generation. In addition to stranding assets, distributed generation has the ability to undermine network viability and increase network costs for such things as protection, back-up, reverse power flows and increased capacity.

58. As is the case for demand risk, the network owner is generally more able to predict changes in technology that are likely to affect their business. Furthermore, they will be incentivised to manage this risk as much as possible.

59. ODV optimisation is advantageous from an efficiency perspective, if the risk of inefficient investment is high, and potential for technological change high also.

Economic Depreciation

60. Economic depreciation and accounting depreciation should not diverge, as the lives of asset are reviewed regularly for service potential, in which case accounting depreciation will replicate economic depreciation.

61. An issue does arise however, when in a given year a significant adjustment is required to accounting depreciation, for example to write off a significant asset that has become obsolete. If this was to occur without any warning, then it may not be possible for a line business to adjust its tariffs to recoup the cost of stranding, and the line business would effectively have a higher depreciation cost for that year. However, if it is evident that stranding may occur in the

medium term, say within 3 – 5 years, then the ELB should seek to recover the higher depreciation charge through the tariff mechanism in that period. This would provide the ELB with a greater prospect of getting a return on and return of its capital, although not necessarily a full return.

62. Accelerated depreciation could potentially give rise to intertemporal inequity for consumers, but over a large pool of assets of mixed age this may not be a material issue.

Innovation

63. The regulatory framework for ELBs needs to incorporate appropriate incentives to encourage innovation and efficient and timely investment. The valuation methodology and wider regulatory framework must ensure there are appropriate incentives to invest while recognising that inefficient investments should not be fully rewarded. However, ELBs should not be restrained from innovating by the prospect of unacceptable levels of uncertainty. The benefits of innovation can be expected in the following areas:

- reduction of the long term cost base of the ELB; and
- improvements in the quality of supply,

both bringing benefits to the consumer.

Summary – Efficiency

- Dynamic efficiency is a more important criterion than allocative or productive efficiency in the context of asset valuation methodologies.

- Asset valuation methodologies must ensure the incentives to invest and innovate are not stifled to the detriment of productive efficiency.

- If the valuation methodology results in sub-optimal investment decisions, then the achievement of dynamic efficiency is hindered. Investment decisions since regulation has been introduced have been made on the basis of the ODV methodology.

- Consumers should bear investment risks associated with inflation as part of the nominal rate of return required by investors. The year by year effects of inflation should be dealt with through revaluations, with valuations at replacement cost, returns based on a nominal WACC and revaluation gains treated as part of income for the purposes of assessing regulatory returns.

- The risk of asset failure is most appropriately borne by the investor, subject to adequate compensation through the rate of return, depreciation and revaluation rules.

- Line businesses should be incentivised to manage demand risk through prudent capital investments. Accelerated depreciation provides the ability to recover the cost of the investment if stranded assets are identified in the short to medium term.

- Large customer supplies however, are unique and should be excluded from the regime as individual contracts are the best mechanism for dealing with demand risk for these customers.

- The risk of stranding due to technological obsolescence is increasing and the network owner is best placed to manage this.

Cost Effectiveness Criteria

64. In describing the cost effectiveness criteria in the Paper, the Commission notes that this can be achieved by meeting regulatory objectives at least cost. We believe that this requires asset valuation methodologies to generate asset values which are:

- robust;
- transparent;
- consistent;
- reliable;
- achievable; and
- avoid duplication of effort.

65. In the following paragraphs we consider the relative merits of the alternatives proposed by the Commission against these criteria.

Opening Value – Historical Cost

66. Depreciated Historical Cost ("DHC") or Depreciated Indexed Historical Cost ("DIHC") is not an appropriate basis for the opening value of system fixed assets because it does not exist, cannot be recreated and originally was unreliable and understated. In the following paragraphs we discuss the major factors supporting this conclusion.

67. Original historical cost values are no longer used in the electricity lines sector for financial reporting[2], regulatory or other purposes, such as rating. This reflects unreliable original values and continuous changes in accounting standards, asset records, industry structure, ownership and regulation resulting in historical cost values being superseded by alternatives, principally depreciated replacement cost or acquisition values[3]. The following table provides a chronology of the major events impacting on the valuations of ELB system fixed assets.

Date	Event	Impact on Asset Values
1977	Electric Power Boards Accounting Regulations	Distribution assets recorded at cost and depreciated over a useful life of 25 years (4% per annum), although a different useful life could be used provided it was disclosed. System maintenance was expensed. No guidance provided on maintenance or capital expenditure split nor was any Statement of Standard Accounting Principle ("SSAP") guidance available from the New Zealand Society of Accountants ("NZSA"). Generally, comprehensive fixed asset registers were not maintained. In many instances all network fixed asset expenditure was simply capitalised to a single account, to which depreciation was also charged. As Electric Power Boards ("EPBs") were non-profit entities, there were no incentives to maximise profit and therefore as much as possible was expensed particularly life extending expenditure such as refurbishment, thereby understating values. Furthermore, Municipal Electricity Departments ("MEDs") generally matched the pricing policies of their neighbouring EPBs[4].

[2] With the sole exception of Marlborough Lines who use historical cost for financial reporting purposes.

[3] Original historical cost records (based on individual opening values "negotiated" in 1987 with the IRD) are currently used for taxation purposes however, these are specific to taxation legislative requirements reflecting tax specific depreciation and capitalisation policies.

[4] EPBs and MEDs were corporatised in 1993, to become what we collectively refer to as ELBs for the purpose of this submission (in some cases historical circumstances gave rise to special corporatisation arrangements; e.g. Southland Electric Power Supply and WEL Energy. WEL Energy was vested in 1989 by Act of Parliament).

1984	SSAP-3 Accounting for Depreciation	Distribution assets to be depreciated over the best estimate of their useful lives. In practice, EPBs and MEDs delayed adopting the Standard and many continued to depreciate their pooled asset at 4% per annum.
1987	"Globo" values established for taxation purposes	EPBs and MEDs became taxpayers and were required to establish opening historical cost based net book values ("NBVs") for tax purposes. Opening tax NBVs were determined by negotiation with the IRD on an entity-by-entity basis, typically book value less a 20% "discount" reflecting concerns with the quality of asset registers. The discount was not set as a result of rigorous asset register reviews. EPBs and MEDs were able to negotiate a lower discount upon proof of adequate fixed asset accounting records. It is understood that discounts in the range of 5%-20% were negotiated and in some cases discounted values were adopted for financial reporting purposes.
1991	SSAP-28 Accounting for Fixed Assets	Allowed entities to value at historical cost or valuation and provided some guidance on the capital and maintenance expenditure split, although this was not specific. Compliance with SSAP-28 was not compulsory for EPBs. There was some debate about whether it applied to infrastructure assets such as electricity distribution systems and some entities adopted infrastructure asset accounting instead, ie: the network asset was not depreciated.
1991	EDVAP[5] formed under Treasury	To develop the ODV methodology and provide a panel of expert valuation reviewers in recognition of the limitations of existing asset values for regulatory purposes.
1992	Energy Companies Act	Required corporatisation of EPBs and MEDs at a vesting valuation to be approved by the Minister, most vested at EPB/MED net book values (ie. based on historical cost), a few at valuation (DCF and DRC). Vesting values incorporated retail, distribution, generation and other businesses such as appliance sales and servicing. The primary issue at time of vesting was ownership not value.
1992	Electricity Act	Introduced information disclosure regulation, ability to impose price control, removed franchise protection, required easements.

[5] Electricity Distribution Valuation Accreditation Panel

1993	Financial Reporting Act	Required companies to comply with Generally Accepted Accounting Practice ("GAAP"), principally provided by financial reporting standards (such as SSAP-28).
1993	Corporatisation	Energy Companies vested and generated first financial statements under GAAP.
1993 - 2002	Industry Rationalisation	The number of ELBs reduced from 44 at vesting to 28 at 1 November 2002, acquired networks typically valued at cost (acquisition value) for financial reporting purposes, superseding historical cost values. Original Historical Cost records have subsequently been lost.
1994	ODV Handbook (first edition)	Handbook for distributors, includes non-mandatory standard asset lives and replacement costs, valuations required for financial performance measure disclosures.
1994	Electricity (Information Disclosure) Regulations	First disclosures required for year ended 31 March 1995 – must use ODV for Accounting Rate of Profit, Return on Assets and Return on Equity disclosures.
1994-2002	GIS[6] Mapping Systems	Most ELBs undertake digital mapping projects resulting in new, more accurate asset registers, replacing historical registers. Used for asset management, ODV and financial reporting for most. Historical registers not maintained or reconciled to GIS by most.
1998	Electricity Industry Reform Act	Required separation of lines business from energy retailing and generation, separation occurred in 1999. Energy retailing and distribution businesses were sold at values significantly in excess of accounting book value.
1998	ED-82 Accounting for Property, Plant and Equipment	Exposure Draft 82 specified its application to infrastructure assets and prohibited infrastructure accounting, compliance not mandatory. Many ELBs adopt ODV for financial reporting purposes as a result over the next few years.
1998	ODV Handbook (second edition)	Standard costs and lives become mandatory maxima, lives reviewed and updated, standard costs unchanged from previous edition, meters excluded.
1999	Electricity (Information Disclosure) Regulations	Introduces Avoided Cost Allocation Methodology ("ACAM") separation methodology for defining the line business, and replaces ARP with ROI. First disclosures under new rules for year ended 31 March 1999.

[6] Geographical Information Systems

1999	ODV Handbook (third edition)	Cosmetic changes to Handbook, no changes to standard replacement costs or asset lives.
2000	ODV Handbook (fourth edition)	Major changes to reporting requirements, optimisation and Economic Value testing, no changes to standard replacement costs or asset lives.
2000	Ministerial Inquiry into Electricity Sector	Transfers regulatory oversite from Ministry of Economic Development ("MED") to the Commission. Commerce Act amended, price control regulatory regime to be developed, ODVs audited and asset valuation methodologies reviewed.
2001-2002	Commerce Commission Asset Recalibration Audit	ODVs at 31 March 2001 audited by the Commission for compliance and consistency.
2002	FRS-3 Accounting for Property, Plant and Equipment	Replaces SSAP-3 and SSAP-28. Compliance is mandatory. Provides more specific guidance for the capital and maintenance expenditure split. Allows assets to be recorded either at cost or valuation. Valuation must be at fair value, with reference to an active market, or where no market exists, DRC. Most ELBs currently value at DRC/ODRC, other than those who have acquired networks, which value at cost.

68. As demonstrated above, the original ELB historical cost values at vesting were unreliable, understated, inconsistent and therefore inappropriate for regulatory purposes even if they could be recreated and rolled forward. The original values were depreciated over short asset lives, and arbitrarily discounted in 1987 for taxation purposes (indicating the IRD's lack of confidence in the accounting book values at that time). Lack of guidance in accounting standards and inconsistent application across the industry has resulted in a range of capitalisation policies being applied, and in more recent years a range of valuation and depreciation approaches adopted across the industry. The adoption of ODV for regulatory purposes in 1994, recognised that consistent and robust asset values were not available from historical cost records and as a result historical cost records have been superseded and in many cases lost.

69. Current ELB book values are an amalgam of original EPB/MED historical cost, vesting valuations, ODV and acquisition values. Therefore, this is also not an appropriate basis for opening values for regulatory purposes. Even if ODV revaluations were backed out the resulting adjusted book values would still be an inconsistent mixture across the ELBs.

Opening Value – Replacement Cost (DRC, ODRC or ODV)

70. In contrast to historical cost valuations, replacement cost valuations are an appropriate basis for the opening value of system fixed assets because they already exist, and are consistent and robust. These valuations are currently used for a number of purposes - regulation, financial reporting, rating and asset management and therefore are well understood and transparent. In addition, replacement cost valuation systems, processes and outcomes are subject to considerable scrutiny and review.

71. The Paper suggests that either the audited ODV values as at 31 March 2001 (presumably rolled forward if necessary) or a new ODV (or ODRC or other) value to be based on revised rules could be used as the opening replacement cost based value.

72. It is not appropriate to use the audited ODV values because they are based on an ODV Handbook which requires revision. In particular the Handbook requires amending in the following ways:

- Maximum replacement costs have not been updated for more than eight years, resulting in replacement costs being used which do not reflect current construction costs across the industry. A number of changes in construction costs and practices have occurred over this period including:
  - changes to exchange rates, labour rates and component costs;
  - construction practices, including the use of live line techniques to minimise SAIDI statistics;

- Resource Management Act costs; and
- local body requirements for traffic management, surveying and reinstatement,

which suggest that a full review of the costs included in the Handbook is long overdue. Examples of discrepancies between the Handbook and actual replacement costs incurred within the submission group are included in the table below:

Component		ODV Handbook Value $000	Current Values Experienced by Group Members $000
Distribution Lines (prior to the application of replacement cost terrain and location multipliers)			
11kV O/H	Heavy	24	32
	Medium	22	27
11kV O/H DCct	Heavy	34	45
	Medium	31	35
11kV O/H Underbuilt	Heavy	10	20
	Medium	9	12
Distribution Switchgear			
Load Break Switch		5.5	6.7
Disconnector		2.3	5.4
Distribution Transformers			
3 Phase pole mounted			
	- 30 kVA	3.6	3.0*
	- 50 kVA	4.7	3.6*
	- 100 kVA	7.0	6.1*
3 Phase ground mounted			
	- 100 kVA	7.5	8.6*
	- 200 kVA	11.5	11.5*
	- 300 kVA	13.3	14.5*
	- 500 kVA	18.5	20.8*

*purchase price only, excludes installation and fitting

- Maximum asset lives have not been reviewed since 1998 and improving knowledge and asset management practices suggest some asset lives require review. The most obvious example of an inappropriate asset life is for zone substation buildings, where the Handbook allows a maximum life of 40 years, but most zone substation buildings have an expected life of at least twice that at 80 years. Another example applies to increasing use of electronic componentry, particularly reclosers, voltage regulators and other system automation equipment, where electronic components typically have shorter economic lives than mechanical equipment.

- The clauses stipulating how asset remaining lives are to be assessed require correction and clarification, as these have led to discrepancies in valuations across the sector. Asset remaining lives must be reassessed following life extending expenditure such as refurbishment, and for consistency purposes, this should be mandatory. In addition, assets in use which have exceeded their maximum total life should be assigned a value through a reassessment of remaining life. Currently these assets are valued at Net Realisable Value ("NRV"), effectively nil.

- The list of standard asset components requires updating and extending reflecting current industry construction practice, in particular component definitions should be included for the following assets:
  - LV link boxes
  - LV pillars
  - 22kV lines and cables
  - 22kV distribution transformers
  - 11kV cable laid with 33kV cable

- Planning periods for optimisation are too short, particularly for subtransmission assets.

- Optimisation does not allow for the full economic solution to be taken into consideration, even when non asset factors form part of the solution. This is important when assessing the interface with the transmission system and the potential impact on transmission investment and associated charges.

73. These factors mean that the existing audited ODV values are not appropriate opening values because they are based on an outdated Handbook which requires amendment to ensure the current replacement cost and service potential of the asset base of each ELB is incorporated into the opening value on a consistent basis. Although this will require another valuation to be undertaken by each ELB, this is required in any case under the existing Electricity (Information Disclosure) Regulations. As ODV systems and processes are already in place and the asset register is maintained for other purposes it is not anticipated that this exercise will require ELBs to incur significant additional costs over those that will be incurred in any case.

Ongoing Value – Historical Cost (DHC, DIHC)

74. DHC or DIHC is not an appropriate basis for ongoing value because it does not ensure consistency across the industry, does not encourage investment efficiency and will require new systems and processes, duplicating existing replacement cost systems, required for other purposes.

75. The Paper suggests that historical cost data is robust to manipulation as it relies on objective data which is audited by independent parties. It also notes that consistency in valuations is an important feature of regulatory functions and that less prescription is required in the case of historical cost as it is based on actual cost.

76. However there are two key factors which oppose those conclusions and result in historical cost values being unsuitable for regulatory purposes: accounting

standards are unable to ensure consistent approaches to capitalising assets, and there are no incentives for efficiency in allowing actual costs to be capitalised.

77. Although FRS-3 is a significant improvement on earlier accounting standards in terms of defining what expenditure is capitalised and what is expensed, in practice there remains scope for interpretation which results in various approaches being adopted and accepted by auditors. In particular:

- The standard requires capitalisation of all costs which are directly attributable to bringing an asset to working condition for its intended use. The components of cost that are capitalised require some judgement, particularly in the areas of interest expense incurred during construction, project management, overheads, planning, easements, resource management and the treatment of capital contributions.

- The standard requires component level accounting, requiring components with different functions or useful lives to be accounted for separately, although aggregation of like assets is acceptable. The level of aggregation impacts on the capital and maintenance allocation - the less aggregation, typically the higher level of capitalisation, as whole components are replaced more frequently. With a higher degree of aggregation, replacement of a part of a component occurs, and this expenditure may be either capitalised or expensed depending on the impact on the total component. This trend is the same when identifying disposals.

78. Historical costs do not encourage efficiencies, contrary to the requirements of the purpose statement, as actual costs are taken into the asset base. In addition, divergent construction policies and practices across the industry will be captured into asset bases if historical costs are used making threshold comparisons difficult. In particular:

- A range of contracting practices exist across the industry including competitively tendering all construction and maintenance work to competing external contractors, competitively tendering some construction and maintenance work to external contractors, all or part of contracting services supplied by in-house contractors or fully contracting out network construction and or maintenance to network management companies. In addition project management and planning may be undertaken either in-house or by external providers. The resulting asset costs for like assets will reflect the relative efficiencies inherent in this range of construction practices, with some potentially capturing inflated costs resulting from inefficient practices.

- Although investment decisions are influenced by natural business drivers, it is not apparent that these will be achieved on a consistent basis suitable for regulatory purposes if reliance is placed on historical cost values. As a result capital and operating efficiency reviews are likely to be required to ensure efficient investment decisions are incorporated into the regulatory asset base. This will result in additional cost and uncertain outcomes for ELBs. Capital and operating efficiency reviews are discussed further in the following section.

79. A requirement for historical cost values going forward will result in additional costs for ELBs, duplicating existing replacement cost systems. The asset registers used to generate existing ODV valuations are also used for the following purposes:

- The Rating Valuations Act 1998, supported by the Rating Valuation Rules (which have the same status as regulations) require utility assets of ELBs to be valued at ODV for rating purposes. This is consistent with the rating valuation basis used for other infrastructural assets such as roading and water networks.

- Most ELBs have elected to revalue their system fixed assets for financial reporting purposes at either acquisition price or ODV/ODRC or DRC. These values have been accepted by auditors as fair value under FRS-3.

- Asset management planning processes use the ODV asset registers for both maintenance and investment planning.

80. A change in regulatory asset values is unlikely to result in changes in approach to any of these uses, with the possible exception of the impairment requirement under FRS-3, undertaken to confirm the fair value of assets.

81. Thus if historical costs are required for ongoing values for regulatory purposes, this will require an additional asset register, duplicating the ODV register already in use for each ELB. Historical registers are maintained by ELBs to record additions, disposals and depreciation between valuations however, in most cases these are not reconciled to GIS/ODV asset registers and therefore are not as accurate. It is noted that auditors will generally sign off on the annual movements in the non-revaluation years because typically the registers are deemed accurate enough to fall within the audit materiality thresholds used.

Ongoing Value – Replacement Cost (DRC, ODRC, ODV)

82. Replacement cost values for ongoing valuations meet the regulatory requirements for investment efficiency and consistency at least cost, assuming the ODV Handbook is regularly reviewed and asset component definitions, replacement costs and asset lives are regularly updated.

83. The Paper includes much debate about the compliance costs associated with the various valuation methodologies and in this respect the following points are relevant in support of replacement cost for the ongoing value:

- ODV asset registers and systems are already in place, have been developed and refined over the past eight years and represent sunk cost to the ELBs.

- The systems will continued to be maintained for rating, financial reporting and asset management purposes and therefore require very little additional "regulatory compliance cost" going forward. In most cases asset registers are linked electronically to GIS mapping systems and therefore, registers are automatically updated at the date of valuation. Potential future refinements to asset lives, replacement costs and asset components will only require updates to input tables, not significant remodelling.

- Much of the information collated for ODV valuation is required for asset management purposes, including asset quantities, ages, condition and location, load forecasts and security of supply planning criteria. Departure from ODV would not necessarily mean less sophisticated databases would be required.

- Although external experts have in most cases assisted ELBs to develop ODV asset registers and models, most ELBs have now internalised the majority of their ODV processes requiring a significantly lower level of external support on an ongoing basis. Ongoing external expert audit and review costs are expected to be considerably less than those incurred as a result of a regulatory audit of the type encountered through the recalibration exercise. For example, expert input costs for 2001 ODV valuations incurred by the submission group typically fell within a $20,000 - $40,000 range depending on the level of internal resource available and the quality of internal systems in place. The 2001 ODVs were complicated by the application of new (fourth edition) ODV Handbook rules in respect of optimisation, economic value testing and reporting. These expert costs are significantly lower than the Commission's recalibration audit costs incurred by the industry which we estimate amounted to approximately $3 per ICP across the submission group or $1.3 million.

- If the recalibration audit is an indication of the level of regulatory review costs associated with asset values, it can be expected that the capital and operating efficiency reviews associated with ongoing historical cost values will significantly exceed the compliance costs of continuing with a replacement cost value. By way of example, the Independent Pricing and Regulatory Tribunal of NSW ("IPART") is currently undertaking a capital and operating cost efficiency review of the NSW distributors prior to setting a price cap for the next regulatory period. The scope of this review is to review the prudency and efficiency of capital and operating expenditure in the following ways:
  - review proposed capital and operating expenditure plans including security of supply and service standards covering five years for operating expenditure and ten years for capital expenditure;
  - independently develop a program of future capital expenditure for each distributor;
  - review capital and operating expenditure for the immediate past four years; and
  - review growth forecasts for a five year period.

- It is anticipated that based on the NSW experience the optimisation requirements under the existing ODV Handbook will fully meet regulatory objectives while requiring significantly less compliance cost on an ongoing basis than regular capital and efficiency reviews.

84. The prescriptive nature of the ODV Handbook also allows the replacement cost method to achieve the consistency objectives of the regulatory regime, which are unable to be achieved through historical cost methods. The recent audit of valuations has highlighted a few areas of potential improvement to the Handbook for consistency purposes, but given the overall recalibration resulted in a very small reduction in values, it highlighted that a generally consistent and

compliant approach has been achieved by the industry through this valuation method.

85. It is important that ongoing values are derived using replacement costs which are updated and reviewed regularly in line with the regulatory assessment period. Replacement costs should be set each revaluation period to mimic actual replacement costs achieved through industry best practice. Current expected useful lives for each asset component should also be applied for each valuation. Asset component definitions also require regular review to incorporate current industry construction practices. The changes required to the Handbook referred to in paragraph 72 and above are required to ensure that efficient investment decisions are made promoting dynamic efficiency.

86. Regulatory valuations should continue to be independently audited by external experts for completeness and compliance with the Handbook. Assuming the issues raised during the Commission's recent audit are addressed with a revised Handbook, there should be no further requirement for the Commission to independently audit ELB valuations, other than by periodic quality reviews undertaken by independent auditors.

DRC, ODRC or ODV

87. The Paper asks which form of replacement cost methodology is preferred and meets regulatory objectives. The primary concern appears to be the cost/benefit trade-off associated with the additional analysis required for the optimisation and economic value testing over and above the core DRC value.

88. Although the optimisation analysis is onerous and appears to have had little financial impact on values (2.1% on the value of distributors' 2001 ODVs) the confirmation that least cost solutions are included in the asset base is imperative to the achievement of the Purpose Statement. The optimisation requirements place a formal discipline on ELBs in making investment decisions which

otherwise would be reliant on normal business decision making. The additional compliance costs associated with the optimisation tasks are partly sunk, as following the introduction of the 4th Edition of the Handbook in 2000, ELBs established optimisation models and processes, which in the future will require review and updating rather than recreating. We believe the inclusion of the optimisation component in the ODV methodology assists achievement of dynamic efficiency for regulatory purposes by encouraging least cost solutions to meet existing and projected demand.

89. The inclusion of the economic value component of the ODV methodology is central to the theoretical underpinning of ODV. ODV is a deprival value, what an ELB would forgo if it was deprived of the asset, and economic value is the NPV of future revenue streams. If an asset would not be replaced at the end of its useful live then the economic value will be less than its replacement cost and its deprival value will be the greater of its cash flows in use or NRV.

90. Economic value has not been significant for most of the ELBs because most assets would be replaced, i.e. are the least cost solution, given the cost of alternatives available. For those assets that are included in an ELB's ODV at economic value, this value represents its fair value, that which the investor can reasonably expect to recover from consumers over the life of the asset up to the cost of the next best alternative available to that consumer.

91. The costs of undertaking economic value assessments, like optimisations, are partly sunk. Models and processes were developed in 2001 reflecting the requirements of the new Handbook and going forward these will simply require review and updating, rather than remodelling. The selection criteria included in the Handbook for identifying network segments for economic testing however, require review. It became obvious following the 2001 ODVs that significantly more segments were caught by the minimum selection criteria than were required. In most instances a fraction, if any, of the segments that were required to be tested were subject to economic value writedowns. If the selection criteria

were altered and the EV approach simplified, the resulting surplus workload and compliance costs would reduce. Thus in our view ODV remains the appropriate valuation basis for regulatory purposes.

Summary – Cost Effectiveness

- Asset valuation methodologies will meet regulatory objectives at least cost if they are robust, transparent, consistent, reliable, achievable and avoid duplication of effort.

- Historical cost is not an appropriate basis for opening value. Original historical costs at vesting are no longer in use because they were inconsistent, understated and unreliable.

- Current book values are an amalgam of original historical cost, vesting valuations, ODV and acquisition values. Even if ODV revaluations were backed out the resulting adjusted book values would be inconsistent.

- ODV is appropriate for opening value because it meets all of the cost effectiveness criteria listed above. Opening values must however be recalculated to reflect required revisions to the ODV Handbook to ensure fair values are captured for opening values on a consistent basis.

- Historical cost is not an appropriate basis for ongoing values as it will not ensure consistency or encourage investment efficiency and will require duplicate systems and processes.

- ODV is the most appropriate valuation basis going forward because, as for opening value, it meets all of the cost effectiveness criteria outlined above, in particular it is robust and transparent, consistent, least cost and avoids duplication of effort.

- ODV is the preferred replacement cost method as it meets regulatory objectives by ensuring least cost investment decisions are made. The optimisation and economic value components of the ODV methodology are imperative to the methodology, and as systems and processes have already been developed to support these components, ongoing additional compliance costs are not significant.

Excess Profits Criteria

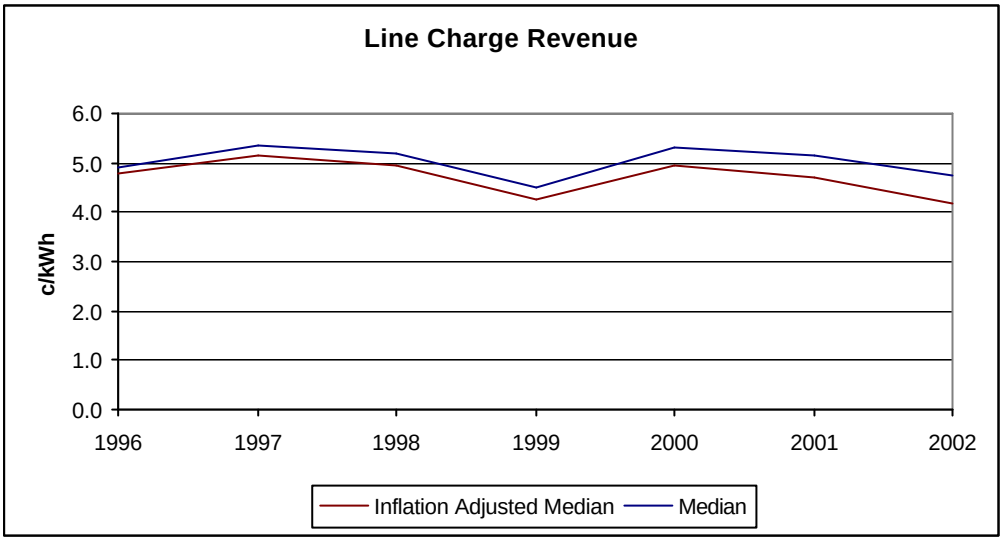
92. The Purpose Statement requires the Commission to have regard to the identification of excessive profits when developing the thresholds and control regime. Excessive profits can generally be viewed as those revenues in excess of an efficient level of costs including capital costs; both the return on capital and the return of capital. As capital costs by default are based on asset values, there is a direct link between asset valuation methodologies and identification of excessive profits.

93. As identified in our group submission on the Regulation of Electricity Line Businesses, we consider that while excessive profits need to be considered from the perspective of minimising monopoly rents, regulation (and by default the valuation framework) should focus on outputs, and in particular benefits for consumers.

94. Historical cost is used in international regimes where the regulatory frameworks are not threshold based. Each line company's planned capital expenditure is taken into account in setting individual price paths and price caps. However, under a thresholds regime, the thresholds need to be set to reflect a normalised asset replacement programme. This is not possible if depreciation and returns are based on historical cost circumstances specific to each ELB.

95. Since the light handed regime was introduced in 1995, it is useful to note the trends below in relation to line charge revenue, which on average has decreased

in real terms by 12.6% since 1996 and is now lower, in nominal terms than reported in 1996.

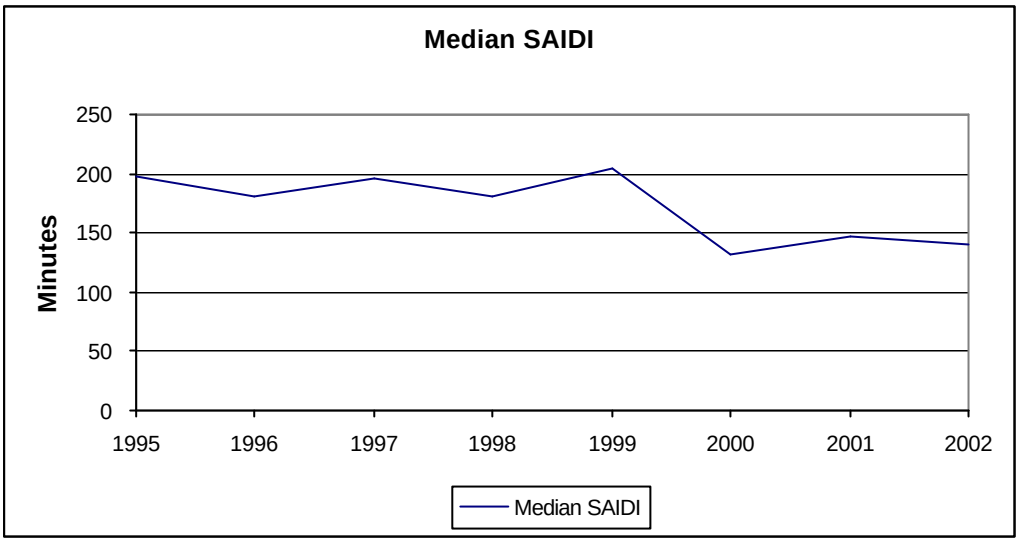


Source: Information Disclosure Gazettes (1996-2002)

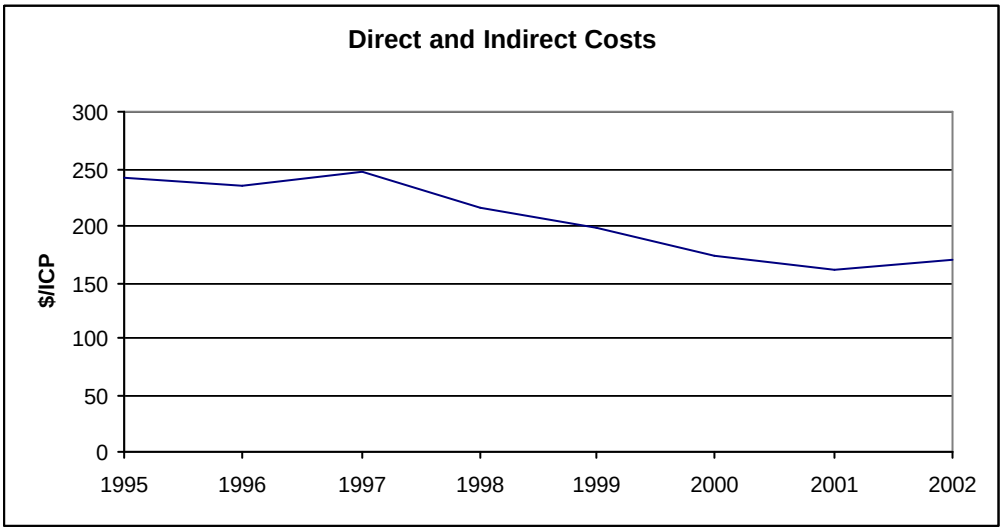
96. While average line charges have reduced, quality performance has improved on average as demonstrated below, with the consumer receiving the benefits of both higher quality of service, and lower prices, consistent with Part 4A. New Zealand distributors have high levels of reliability by international standards[7]. These high levels of service have been achieved in the context of:

- low population densities;
- large transmission and distribution distances; and
- difficult terrain and climatic conditions.

[7] Refer: Brian McGlinchy, "Reliability of Electricity Distribution Networks", September 2002.



97. During the same period, line businesses have on average reduced costs significantly. This reduction in costs needs to be considered in light of the fact that ELBs use a significant amount of imported technology and components, which have been negatively influenced by unfavourable exchange rate movements during that period. In addition, these businesses have incurred additional costs such as those imposed by the Resource Management Act, easements, rates and additional compliance costs.



Source: Information Disclosure Gazettes (1995-2002)

98. The significant reduction in average costs, compared to a smaller reduction in revenues, has lead to claims of excessive profits in the past by some industry commentators.

99. However, excessive profits need to be viewed in the context of time. Excessive profits in the short term should not necessarily be punished, particularly if they arise as a result of efficiencies in costs through innovation, which promotes longer term efficiency. The short to medium term ability to earn a return above WACC should act as an incentive to line businesses to seek efficiency through innovation. In the longer term, it is appropriate that ELBs then share the benefits of these gains with consumers.

100. It is also useful to consider the appropriateness of ROI as a proxy for WACC. ROI as a measure can be vulnerable to the life cycle of a network asset. For example, an older (depreciated) network, that requires a significant level of repairs and maintenance expenditure, is likely to have a comparably low profitability when compared to a relatively new, higher value network that is undergoing significant expansion, with lower maintenance requirements. Depending on the value of the underlying asset bases, ROI could also be significantly different.

101. As noted previously ODV revaluations need to be recognised when evaluating excessive returns. The Paper observes that some commentators have suggested that revaluation gains have not been treated as returns in the past under the ODV method. We agree that for the purposes of financial reporting this may well be the case, but in attempting to identify excessive profits through ROI disclosures under the Information Disclosure regime, the revaluations are incorporated correctly within the ROI calculation.

102. It is appropriate at this stage to again give consideration to the use of DHC as a basis for opening value. We note that it has been claimed that excessive profits

have been made by the line businesses since vesting as a result of revaluing from DHC to ODV. In this respect we note:

- Different ELBs utilised different accounting treatments, and therefore the DHC values at the time of vesting (and for some time thereafter) are not comparable. Some ELBs favoured the use of infrastructure accounting which involves some degree of subjectivity, and capital and maintenance allocations have not been consistently applied between ELBs.

- The reported vesting values understated historical cost. Traditionally ELBs tended to expense rather than capitalise all repairs and maintenance expenditure for tax purposes including life extending expenditure. FRS-3 now gives more explicit guidance on distinguishing between these types of expenditure.

- At the time of vesting, asset records were inadequate, and did not report all of the assets held by the ELBs. This is evidenced by the additional assets identified by ELBs when GIS was implemented and as asset management planning has become more robust.

- Original historical cost values were being depreciated at a rate of 4% per annum, effectively writing off assets over a 25 year life. Thus values at vesting date were seriously understated as a result of this unwarranted accelerated depreciation.

- Original historical cost values were also arbitrarily discounted by the IRD in 1987 for taxation purposes reflecting concerns with the quality of the asset registers at that time.

- The unreliability of the original values was the very reason that ODV was adopted in the first place, ensuring accurate asset registers and values were developed for regulatory purposes on a consistent basis.

- Historical costs were generally used at vesting because there were limited other options available at that time. ODVs were not finalised until after vesting, when the first Handbook was finally issued in 1994. The primary focus of corporatisation was ownership not value.

- Vesting values represented fully integrated line, retail, contracting, generation (in some cases), appliance sales and servicing, and in some instances "other" businesses, where the boundaries between "line" business assets, revenues and costs were not clear. It is not possible to determine the level of returns attributable to the line function at vesting, and we argue not possible until the post ownership separation era following the Electricity Industry Reform Act in 1998.

- Any attempt to calculate the possible extent (if any) of excessive profits since vesting should also take into account the level of profits earned on assets prior to vesting (i.e. the cumulative level of profits should be examined over the full life of assets). It is noted that, in general prior to corporatisation in 1993, most EPBs did not have a profit objective. Even if such a cumulative returns analysis could be undertaken (which is extremely doubtful for a number of reasons, including the poor quality of historical accounting records and the need to attribute a return to energy retailing) it is not clear that claims of excessive profits would be substantiated. In many instances a cumulative notional "economic value added" deficit might have existed at vesting date.

103. As noted in paragraph 46 revaluations arising under ODV should be regarded as 'revenue' when evaluating an ELB's ROI. However, since 1994 we note that the revaluations that have occurred have not been 'pure' revaluations under the ODV methodology, which is intended to capture inflationary changes. The valuations in the current version of the ODV Handbook have not changed since

the first draft of the Handbook appeared in 1992. It is apparent that the revaluations have occurred for other reasons, such as:

- corrections to items wrongly accounted for in initial ODV valuations
- changes in asset lives (potentially increasing the asset base, but also reducing depreciation)
- the discovery of previously unvalued assets.

104. These revaluations should not therefore be recognised as income, on the basis that if the asset base was accurate in the first instance, these revaluations would not have been required.

105. We are of the opinion that suggestions of excessive profits being made by the industry as a result of revaluation is flawed for the reasons outlined above, and fails to recognise the benefits consumers have received since vesting in terms of lower prices and higher service standards resulting from operational efficiencies and innovation. Any attempt to seek to recoup gains made by ELBs as a result of introducing cost saving initiatives will eliminate incentives to innovate in the future. Gains made from efficiencies should further motivate ELBs to be innovative, and should in the longer term be shared with the consumer.

106. ODV has been used in the information disclosure regime (in particular in the Accounting Rate of Profit and ROI measures) and therefore has created a very strong impression among industry participants and their advisors that ODV values were acceptable to the government (as the ultimate regulator) as the regulatory asset base. Much ELB transaction (i.e. mergers and acquisitions) analysis has been predicated on financial models driven off this assumption. It defies logic to suggest that the government's intention with the information disclosure regime was not to monitor, amongst a range of measures, returns on ODV.

107. For the purposes of meeting the excess profits criteria going forward, ODV is the preferred valuation methodology. ELBs have applied ODV consistently since regulation was introduced and a change to DHC for opening valuation could lead to potential under-recovery of investment.

Other Industry Examples

108. We note that the Commission has also given consideration to the issue of excessive returns in determining whether price control should be introduced for airports. In the airports review, the Commission identified historical excess returns based on the following formula:

Excess Returns ($) = Net Earnings – (Asset Base x WACC)

109. The underlying approach taken by the Commission in their review was that opportunity cost was the most appropriate principle to use for identifying excess profits, with the exception of specialised assets, which have a very low opportunity cost. For specialised assets, the Commission decided that the asset base used should "…have the lowest value consistent with investors' reasonable expectations at the time of the relevant investment decision (whether a decision to build a new specialised asset or acquire an equity stake in an existing specialised asset)."

110. At the time of vesting, the fixed asset registers of the ELBs were understated. The systems and recording processes at that time were insufficient to provide a true record of the asset value. With the subsequent implementation of such systems as GIS and improved asset management practices, the asset registers have been updated to more fully reflect the assets in existence at vesting. As the asset registers did not adequately reflect the underlying assets held by the businesses, it is probable that this knowledge was incorporated into the expectations of investors at that time.

111. The Commission raises the issue of excess profits being generated when asset values are switched mid-life from historical cost to replacement cost. Higher returns are generated under historical cost valuation initially as revaluations decrease prices initially, under the ODV regime, but in theory the reverse applies in the second half of an asset's life. The Commission considers that this leads to asset owners having the best of both worlds and generating excessive returns. However, prior to 1993 many of the power companies were largely customer co-operatives, and returns from the organisation flowed back to the consumer by way of artificially low prices. The issue of excessive profit capture from the mid-life valuation shift is less relevant for ELBs as generally no investor return was taken.

Summary – Excess Profits

- While excess profits need to be considered for minimising monopoly rents, regulation should focus on outputs, and in particular benefits for consumers.
- Under a thresholds regime, the thresholds need to be set to reflect a normalised asset replacement programme. This is not possible if depreciation and returns are based on historical cost circumstances specific to each ELB.
- As prices have decreased in real terms since vesting and as quality has improved, the consumer is significantly better off. ELBs are more efficient and have become more profitable, incentivised by the ability to retain some of these gains over time.
- The current disclosure regime correctly treats revaluations as income for the assessment of ROI.
- Claims that excessive profits have been earned since vesting as a result of revaluing from DHC to ODV are incorrect because:

- DHC values at vesting represented a range of values available at that time.
- Vesting values understated historical cost due to poor records, previous capitalisation policies, adoption of the IRD's globo discount and accelerated depreciation.
- Vesting values incorporated fully integrated (not lines) businesses.
- Prior to vesting, EPBs had no profit objective.

- Revaluations since vesting have not reflected inflationary changes, but corrections and the discovery of previously undervalued assets, and as such they should not be recognised as income.

- ODV was created to overcome the issues with historical cost records and values. The industry has evolved on the basis that ODV was acceptable to the government and that the government's intention was to monitor returns on ODV in addition to other performance indicators.

- The issue of excessive profit capture from a mid-life valuation shift is less relevant for ELBs as generally no investor return was taken prior to vesting.

Customer Agreements

112. As noted in our regulatory threshold and control submission, the characteristics of supply to large customers with dedicated assets differs considerably to the remainder of the network. For this reason we submitted that price and quality comparisons for threshold purposes should exclude those associated with large customers due to their unique nature, specific contract terms and ability to negotiate beneficial and asset specific terms. In this context we believe that a similar approach should be adopted when considering asset valuation methodologies as, as previously demonstrated, most dedicated supply customers have asset specific contracts which share investment risks on an agreed basis

between the customer and the ELB and reflect agreed quality of supply criteria. Such customers are able to negotiate these arrangements on an arms length commercial basis.

Capital Contributions

113. Under GAAP capital contributions are treated as income, thus no over recovery of asset cost is achieved. Consistency with GAAP provides a sensible and transparent solution to this issue for regulatory purposes. As a result, capital contributions should not be excluded from the asset base. The ODV methodology currently correctly includes contributed assets in the asset base. It should be noted that capital contributions are subject to significant year on year variance. This reinforces the requirement for regulatory assessments to be undertaken on a rolling average basis over a number of years, not a single year snapshot.

Valuation of Easements and Land

114. Currently easements are not significant value items in the asset base of an ELB although they are expected to become more so over time as access to appropriate corridors becomes more difficult. ELBs typically own land associated with network buildings (substations for example) but have historically acquired easements only where necessary for reticulation. In many cases these have not been and are still not required.

115. In principle, land and easements should be valued at fair value, representing highest and best use as defined in FRS-3. Land values are currently included in ODVs at fair value represented by market value, commonly estimated by rating value. These values are accepted as fair value for financial reporting purposes.

116. Easements are not currently treated consistently across the industry. Prior to 1993 ELBs had access rights without requirement to pay compensation. Since 1993, some ELBs have been forced to acquire easements particularly where lines are being upgraded with additional capacity. Easement costs have been either capitalised or expensed. The treatment has not been consistent. FRS-3 requires the cost to be capitalised, however there are difficulties in identifying the appropriate costs to capitalise. On an ongoing basis it is expected that Resource Management and legal costs will be incorporated and capitalised with other easement costs. ODV allows the same treatment, although there is no direction provided as to how these costs should be valued. As noted above, FRS-3 guidance is they should represent fair value, which, due to limited market evidence typically defaults to actual historical cost, particularly as easements are granted in perpetuity.

V. RELATIVE MERITS OF OPTIONS

117. The relative merits of the valuation options for opening value and ongoing value are summarised in the following tables. These are assessed against each of the evaluation criteria in turn.

Opening Value

118. In the table below, DHC refers to both historical cost book value at vesting date and most recent audited book value, the two historical cost options proposed by the Commission. ODV refers to both audited ODVs at 31 March 2001 and revised ODV (or ODRC) to be established from new rules, the two options proposed by the Commission. The following ratings have been used against the assessment criteria:

- \+ positive assessment
- \- negative assessment
- o neutral assessment.

Evaluation Criteria	DHC		ODV	
Allocative Efficiency	o	Marginal cost based pricing would generally favour opening values based on DHC as these would be lower. However, historical cost book values do not exist and cannot be recreated in a format suitable for regulatory purposes at this date.	o	ODV values do exist at this date, however, they require modification to correct the current deficiencies in the Handbook, most importantly revised asset costs, lives and assessment of remaining lives.
Productive Efficiency	o	Productive efficiency is not relevant for opening balances.	o	Productive efficiency is not relevant for opening balances.
Dynamic Efficiency	-	Adoption of DHC increases regulatory risk as since vesting, the opportunity for recovery of costs has been based on the ODV methodology.	+	The application of the ODV methodology is consistent with current practices used in investment decision making.

Cost Effectiveness					
	Coincide with the start of regulatory monitoring	-	Historical cost book values do not exist and cannot be recreated in a format suitable for regulatory purposes at this date.	-	ODV values do exist at this date, however, they require modification to correct the current deficiencies in the Handbook, most importantly revised asset costs, lives and assessment of remaining lives.
	Alignment with detailed records	-	As detailed ODV registers have not been reconciled with historical cost registers, there is significant effort required to align the two approaches. In practice this is impossible without significant estimation, as historical costs are typically recorded on a project basis, rather than an asset basis.	+	ODV values are already derived from detailed asset records, and internal asset management systems have been developed to reflect the ODV methodology, enabling valuations to be generated on an ongoing basis.
	Design, implementation and resourcing of accounting systems	-	This requires significant investment, with no guarantee of sensible outcomes across the sector.	+	There are no requirements in this respect for ODV valuations. The systems are already in place.
	Necessary level of prescription for consistency	-	Original historical values contained significant differences reflecting scope within the accounting standards, quality of underlying records and treatment of acquisitions. Creating consistent historical valuations is not possible.	+	This already exists as demonstrated by the Commission's recalibration audit. Some minor improvements could be made to further improve consistency particularly in the treatment of refurbishment expenditure.
	Time required for preparation and implementation	-	It is difficult to estimate the time required for preparation and implementation as new systems will be required and in some cases significant estimates made in the absence of detailed asset records. For those who have acquired other networks this will be especially problematic as historical systems have been lost.	-	The Handbook requires review, reissue and the ODVs recalculated. Systems are already in place to generate the underlying asset registers, however the input assumptions require review and recalculation. This process will be quicker than the historical cost alternative.
	Requirement for independent expert review and audit	-	Creating new historical cost values will require significant independent review and audit to ensure as much consistency is achieved as possible, and estimates are made on a sensible basis.	o	Assuming the Handbook is revised with appropriate consultation, there should be no further requirement for a Commission audit other than reliance on the normal audit and review process undertaken by external reviewers.

	Extent to which data requirements are subject to Economies of Scope	-	There are no economies of scope for book value, this would be a duplicate requirement to the replacement cost values.	+	ODV is subject to significant economies of scope as the underlying asset register reflects operational systems, and the DRC value is used for rating and financial reporting purposes. In addition, much of the information required for optimisation is already used for asset management purposes.
	Excessive Profits	-	DHC vesting values are not an appropriate mechanismto determine excess profits as opening balances can not be substantiated.	+	ODV allows comparability across assets when evaluating returns.

119. The table above clearly shows that ODV is the superior method for valuing the opening system fixed asset values for regulatory purposes.

VI. ONGOING VALUE

120. The following table presents a summary assessment of the alternative ongoing value methodologies against the evaluation criteria. DHC refers to both Depreciated Historical Cost and Indexed Depreciated Historical Cost, the two historical cost options proposed by the Commission. ODV refers to both Depreciated Replacement Cost (with or without optimisation) or Optimised Deprival Value, the two ODV options proposed by the Commission. As above, the following ratings have been used against the assessment criteria:

- \+ positive assessment
- \- negative assessment
- o neutral assessment.

Evaluation Criteria		DHC		ODV	
Allocative Efficiency		o	If applied appropriately, DHC can achieve Allocative Efficiency.	o	If applied appropriately, ODV can achieve Allocative Efficiency.
Productive Efficiency		o	The role of asset valuations for meeting productive efficiency is low, although values at unrealistically low levels may discourage future investment, incentivising shorter term operating expenditure.	+	ODV potentially allows for better comparability of performance measures related to asset value, particularly if ODV is also used to determine opening asset values.
Dynamic Efficiency					
	Regulatory Risk	-	A change to DHC from the existing ODV methodology signals regulatory risk, and may alter incentives to invest.	+	Since regulation of ELBs was introduced, ODV has been used to value assets, and investment decisions have been based on an understanding of the opportunity for recovery of cost under ODV. A continuation of ODV is required to minimise regulatory risk.
	Inflation	-	Indexation of DHC seeks to preserve the purchasing power of investors capital, but is unlikely to capture specific price movements of different asset classes.	+	ODV revaluations encompass specific price inflation in determining asset values for different classes of assets.
	Optimisation	-	It is difficult to optimise under DHC, so more risk may be borne by consumers.	+	ODV optimisation is more advantageous and consistent, especially if the risk of inefficient investment and technological change is high.
Cost Effectiveness					
	Design, implementation and resourcing of accounting systems	-	This requires significant investment and duplicate systems and processes.	+	There are no requirements in this respect for ODV valuations. The systems are already in place.
	Necessary level of prescription for consistency	-	Scope within the accounting standards and divergent construction practices and costs make DHC inappropriate from a consistency point of view.	+	The ODV Handbook provides the mechanism to maintain consistency going forward. This is reinforced by the requirement for valuations to be audited for compliance with the Handbook.
	Time required for preparation and implementation	-	It is difficult to estimate the time required for preparation and implementation as new systems will be required.	o	Once the Handbook is reviewed the implementation falls within the existing revaluation requirements. The systems are already in place to generate the underlying asset registers and valuation data.

	Requirement for independent expert review and audit	-	Significant independent review and audit will be required to ensure as much consistency is achieved as possible. Capital and operating efficiency reviews require additional and significant external input.	o	Reliance on the normal audit and review process undertaken by external reviewers is a cost effective way to ensure compliance. The Handbook provides consistent rules for the industry.
	Extent to which data requirements are subject to Economies of Scope	-	There are no economies of scope for book value, this would be a duplicate requirement to the replacement cost values.	+	ODV is subject to significant economies of scope as the underlying asset register reflects operational systems, and the DRC value is used for rating and financial reporting purposes. In addition, much of the information required for optimisation is already used for asset management purposes.
Excessive Profits					
	Inflation	-	Indexation gains, while compensating for inflation, do not correctly capture capital gains in relation to specific asset values.	+	The ODV revaluation generates capital gains and it is appropriate to recognise these gains when evaluating excessive returns.
	Consistency	-	DHC does not ensure costs are included in the valuation base in a consistent manner, impeding the identification of excessive profits.	+	ODV ensures the asset bases of ELBs are determined on a consistent basis, facilitating the comparison of profits on a consistent basis.

121. As demonstrated by the above tables, ODV is the preferred methodology for both opening and ongoing values. It meets the efficiency objectives, and in particular the most relevant efficiency, dynamic efficiency. From an operational and implementation point of view it is possible, practical, least cost and meets the consistency objectives of the regulatory regime. And finally, from an excessive profits perspective, it is the only realistic value that can be used to measure profits as alternative values are not reliable.