PRICEWATERHOUSECOOPERS

PricewaterhouseCoopers
PricewaterhouseCoopers Tower
188 Quay Street
Level 22 Reception
Level 8 Mail Centre
Private Bag 92162
Auckland
New Zealand
Telephone +64 9 355 8000
Facsimile +64 9 355 8001
Direct Phone +64 9 355 8573
Direct Fax +64 9 355 8024

5 December 2002

Mr Peter Alsop
Supplementary Submissions on Electricity Lines
Regulation Discussion Paper
Commerce Commission
PO Box 2351
Wellington

Dear Sir

Supplementary Submission on Electricity Line Businesses Asset Valuation Methodology Discussion Paper

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 Paper presents options for asset valuation methodologies which may be used in the thresholds and control regime to be developed for large electricity line businesses ("ELBs").

2. The Commission has subsequently received submissions on the Paper from interested parties, and held a conference at which interested parties provided feedback to the Commission on the proposals directly.

3. PricewaterhouseCoopers prepared a submission to the Commission on behalf of the following 18 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; and
- WEL Networks Limited.

4. On behalf of the submission group we presented our submission at the conference on 26 November 2002, together with John Anderson of The Lines Company Limited and Peter Middlemass of Top Energy Limited.

5. This letter forms our supplementary submission following the conference, and has been prepared to address issues raised during the presentation that we consider require further explanation.

Pre-Vesting Returns

6. During the course of our presentation there was some discussion on the level of returns achieved by the industry prior to vesting. The discussion was in relation to the point made in our written submission that any attempt to claim or calculate excessive profits since vesting should also take into account the level of profits earned on assets prior to vesting. This issue of excessive profit capture from a mid-life valuation shift (from historical cost to replacement cost) is less relevant for ELBs if little or no investor return was taken prior to vesting.

7. We have undertaken a review of return data available prior to vesting, covering the 1988 – 1992 period. The following table summarises our findings.

Year End 31/3	**1988**	**1989**	**1990**	**1991**	**1992**
Return Measure[1] (nominal terms)	**(Post-tax) Return on Total Assets**	**(Post-tax) Net Income per Total Asset**	**(Post-tax) Net Income per Total Asset**	**(Post-tax) Net Income per Total Asset**	**(Post-tax) Net Income per Total Asset**
Industry Average	3.2%	2.6%	2.3%	3.3%	4.4%
EPB Average	2.5%	1.7%	2.0%	2.2%	3.9%
MED Average	4.3%	4.5%	3.4%	6.8%	5.4%
5 Year Govt. Bond Rate (post-tax)	10.6%	8.4%	8.3%	6.2%	5.1%

[1] Source: 1988, The Arthur Young Survey of the Electricity Industry, Financial Performance Over 1988, 1989 – 1992 Ministry of Commerce Annual Statistics in Relation to the Electric Power Industry in New Zealand, 5 Year Government Bond Rate, Reserve Bank

8. Interpretation of this data needs to be made with some care. The return data available in 1988 and 1989 is pre-tax, and from 1990 onwards is post-tax. For the purposes of this table, we have adjusted the returns in 1988 and 1989 to derive an estimate of a post-tax return (by dividing by one minus the corporate tax rate of 33%, i.e. divided by 0.67). It should also be noted that these returns do not accurately represent returns to the line business as they include returns to the total business activities of the Electricity Supply Authorities ("ESAs"), inclusive of line, retail, generation, appliance sales and servicing and other activities.

9. The average results for the industry over this period were significantly below the equivalent risk free rate represented by the five year government bond rate, post-tax at 33%. In addition, once the Municipal Electricity Department ("MED") returns are extracted from the industry totals, the resulting Electric Power Board ("EPB") returns are notably lower. This supports anecdotal evidence that MEDs were used by their local authority owners to subsidise Council activities in other areas. We understand that often MEDs used equivalent tariffs to those of their neighbouring EPBs to set electricity prices, which, because of their different customer and density mix, resulted in considerably higher returns than those achieved by the EPBs. This conclusion is supported by an extract from an officials paper on corporatisation[2] which states:

> *"ESAs are not currently inclined to generate profits, although they do earn small profits in some instances Municipal Electricity Departments have been reported as using these to subsidise other Council activities. Instead of paying dividends, lower prices are offered to consumers."*

10. Thus it is clear that the industry did not achieve full investor returns prior to vesting, and any analysis attempting to determine whether excess profits have been earned by the industry as a result of a mid-life valuation shift must take this into consideration.

Vesting Values

11. We also discussed during our presentation the derivation of the vesting values of Energy Companies. We noted that vesting values represented a range of values, including historical cost, replacement cost and discounted cash flow values. We also noted that the majority of our submission group vested at historical cost, and that in our view valuation was not as significant an issue as ownership at that time and therefore in the absence of replacement cost valuations, most Energy Companies adopted their historical cost values. In addition we believe that historical cost vesting values were understated due to poor record keeping and accounting policies and practices and therefore any attempt to base opening values on original vesting values is impractical and illogical. Our discussion at the conference explored the reasons why historical costs were adopted for vesting purposes.

[2] Officials Co-ordinating Committee's Paper to the Ministerial Committee on Electricity Restructuring: Distribution Industry Reform: Impact on Tariffs and Policy Options, 10 May 1990.

12. Since the conference we have searched through a number of officials papers written in the period prior to vesting to better understand how vesting values were derived, and what signals the government was sending to the industry about valuations of the new Energy Companies. The Energy Companies Act, (1992) required that Energy Companies be vested on a valuation basis to be determined by the Minister of Energy (s18). It is clear from the papers available to us that the government's original intention was that Energy Companies would be vested at ODV. For example:

> *"Electricity Supply Authorities will be required to be valued as part of the corporatisation of the distribution industry and the panel has been formed to provide a consistent and recognised approach to valuation." ... " The industry's monopoly line businesses will be valued by the optimised deprival value method (ODV), which has been agreed with the Electricity Supply Association."*[3]

13. In our written submission and presentation at the conference we summarised our understanding of the reasons why ODV was promoted as the preferred valuation methodology for these businesses. This is further supported by the extracts from officials papers summarised in Attachment 1 to this letter, including, for example:

> *"It is expected that the real value of the assets is significantly greater than the book value."*[4]

14. It is also evident that as vesting date approached, the Minister of Energy became increasingly nervous about potential future price increases arising from the corporatisation process, and due to political pressure, reversed his earlier views and publicly stated historical cost values were to be used for vesting purposes, not market value. For example:

> *"Mr Luxton said the Energy Sector Reform Bill would not force the new power companies to increase their prices." ... "Mr Luxton also announced assets of power boards and MEDs would be transferred to new power companies at book value, rather than at market value."* [5]

15. The government's position was later explained in the release of the "Guide to the Preparation of Establishment Plans", by the Ministry of Commerce in August 1992, which stated:

> *"Valuation of the energy undertaking – If it is proposed to corporatise at other than book value, then reasons for doing so should be included. Book value will be as per the estimated terminal accounts which will have to be submitted with the establishment plan and will be subject to the final audited figures."*

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[3] Joint Media Release by the Ministers of State Owned Enterprises and Energy "Electricity Distribution Accreditation Panel Appointed", 27 June 1991

[4] Letter from the Minister of Energy to the State Sector Committee – "Financial Position of Electricity Supply Authorities", not dated (response to a State Sector Committee Request of 7 August 1990)

[5] Evening Post Article "Luxton denies reforms will boost power prices", 23 November 1991

16. Thus it is clear that officials and Ministers recognised that there were issues with historical cost values and that the government's preference, in consultation with the industry, was to use ODV values for vesting purposes. However, the government made a policy reversal late in the process and endorsed historical cost for vesting purposes. This reflected political concerns about potential increases in electricity prices, not the appropriate values of the businesses themselves.

17. It is therefore understandable that Energy Companies were largely vested at historical cost, even though there were significant concerns about the validity of these values within the government, and the government's preference for ODV for vesting purposes had been openly signalled to the industry since 1990. It is noted that in most instances there was no change in the underlying beneficial ownership as a result of corporatisation, hence the structure of that ownership (e.g. trust versus share giveaway), as opposed to value, was the key issue at the time.

Historical Cost for Ongoing Values

18. We have submitted that historical cost is inappropriate for both opening and ongoing values. During our discussion at the conference we touched briefly on some of the issues associated with historical cost as a basis for ongoing value which we would like to expand on.

19. As historical cost asset registers are created from financial information sources, not physical information sources, there is no readily auditable link from the asset register to the asset in the field. Historical cost registers are populated from project costing records, which typically involve a considerable number of asset components. For example a new overhead line will include poles, 11kV and 400V conductor, distribution substations including transformers, switchgear and customer connection assets. An estimate of the life of this asset will need to be made for depreciation purposes, which will be based on an assessment of the relative lives of the core components of the project. The expected lives of components within any major capital project vary considerably. The historical register will not retain information about each individual component, its size or capacity, configuration, location or condition.

20. In addition, any refurbishment or life extending maintenance expenditure will not typically be associated with relevant individual assets in the historical cost register. For a long term asset made up of many components, most of which are refurbished over their lives, and some components replaced, it becomes impossible to assess the remaining lives of individual assets and therefore their net book value. The level of aggregation of components impacts on the level of capitalisation also, less aggregation typically results in higher levels of capitalisation as whole components are replaced more frequently.

21. It will be virtually impossible to extract individual assets from an historical cost asset register for either efficiency review purposes or where assets have been disposed of or become stranded. This will tend to result in an overstatement of the asset base. Auditors currently rely on the revaluation cycle to provide an appropriate valuation update at regular intervals to address this potential issue. In the periods between revaluations, they rely on additions, disposals (if any are identified) and depreciation (calculated from an ODV register) to estimate the value within accepted materiality limits. The revaluation cycle provides the link, via the ODV register, to the physical asset components and allows for the identification of those which do not meet the used and useful test. For this reason, ODV registers are used for asset management, rating and budgeting purposes.

22. The use of historical asset registers for ongoing value will lock in actual costs incurred on each project and remove incentives for efficient investment as a result. Depending upon how revaluations are dealt with under the regulatory regime, the use of standard costs in an ODV Handbook provides incentives for ELBs to hold down their asset capital costs (i.e. owners take the risk and reward of construction cost over- or under-runs). There are a wide range of construction practices in operation across the sector reflecting efficient and less efficient operations. As a result, some ELBs under a historical cost regime will inflate their asset bases to their advantage. This is directly opposed to the intent of the Purpose Statement, as set out in Part 4A of the Commerce Act 1986 and will presumably give rise to a need for the regulator to review the reasonableness of actual construction costs on a case-by-case basis when investigating an ELB. We believe that the use of historical cost for ongoing value will not facilitate the identification of excessive profits, nor provide the efficiency incentives sought by the Purpose Statement.

23. While tax depreciation is claimed on the basis of historical cost it is noted that the record keeping requirements and their implications differ from those likely to be adopted by a regulator. In particular when an asset ceases to be used or is disposed of and the ELB is unable to trace the physical asset back to the asset register, the IRD will not allow a write off of the remaining (unidentified) tax net book value. The ELB is generally able to continue depreciating the remaining tax net book value. In a regulatory situation it is unlikely that an ELB would be able to adopt this practice, since this would result in assets no longer in physical use continuing to be charged to customers.

24. If historical cost is adopted for ongoing values then there is currently no linkage between accounting records and physical assets. Should the regulator wish to review historical expenditure by reference to physical assets and then make some assessment as to the "used and useful" nature of that expenditure and what "efficient" costs might have been, this will be a difficult and time consuming task. ELBs will essentially be faced with two choices:

    (a) Create new, as yet unproven, systems to try to comprehensively link project costing records through to physical assets. This would require development of methodologies to allocate common project costs, break down asset costs to the appropriate level of component detail etc. In the case of disposals or stranded assets linkages would have to be developed for tracing physical assets back to

historical cost accounting records. Where only part of an asset is disposed of apportionment methodologies would need to be developed. Refurbishment of assets would also need to be catered for. Development of these systems would impose unnecessary costs on ELBs (and hence ultimately their customers and/or shareholders) since these would serve no useful business purpose, other than to accommodate a potential regulatory enquiry. Operational managers will continue with ODV databases, derived from systems which record the physical asset, for business management purposes; or

(b) Do nothing unless subjected to a regulatory investigation. Given the potential costs involved with a) above, ELBs would need to decide whether or not it is worth introducing these new systems. If ELBs consider that they are unlikely to be investigated by the regulator, they may decide not to develop comprehensive linkages between historical cost accounting records and their physical assets. ELBs may decide that it will be cheaper (on a probability weighted basis) to deal with a regulatory enquiry as it arises, on the basis that this will not be a frequent occurrence.

25. Furthermore, under an historical cost based regulatory system it is likely that over time asset values will cease to be comparable between ELBs due to some companies choosing to follow course (b) above, due to variations in construction practices (reflecting efficient and less efficient operations) and because assets will be acquired at different times (i.e. when nominal price levels are different). A likely outcome of this approach is a return to a replacement cost methodology at some stage in the future to attempt to remove from the asset base investments based on decisions made under an historical cost regime.

26. While prima facie maintenance of detailed ODV records might seem onerous for ELBs, by comparison to keeping historical cost records in a format suitable for regulatory purposes, this in fact is not the case. A significant cumulative investment has been made in ODV systems, which is now a sunk cost thereby reducing the future costs of continuing with ODV. ODV based asset records also serve other useful business purposes (asset replacement planning, budgeting, rating etc.). On the other hand comprehensive systems for linking detailed historical cost records to physical assets are not in place and would require costly investment which would serve no other business purpose.

Conclusion

27. In this supplementary submission we have addressed and clarified some of the issues arising during our discussions at the conference in support of our original written submission. The key recommendations of our original written submission were:

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.

28. In addition, in this supplementary submission we submit:

h) Little profit was taken by investors prior to vesting, particularly the EPBs, thus claims or estimates of excess profits that may have been achieved as a result of the mid-life valuation shift must be modified to reflect the very low returns taken by investors over the first part of the asset's life.

i) Prior to vesting there was recognition by officials and Ministers that historical cost values were understated, and as a result ODV was initially intended to be used for vesting purposes. Energy Companies were largely vested at historical cost following later directives from the Ministry of Energy, reflecting political concerns about potential tariff increases resulting from corporatisation.

j) Historical cost asset registers for ongoing value will not achieve the intention of the Purpose Statement as they have no link between the value and the physical asset, without creating costly new systems and methodologies – which would serve no other useful business purpose. Historical cost based asset records cannot readily, on a detailed asset basis, be optimised, allow for removal of stranded or disposed assets, or the application of accelerated depreciation if appropriate. Historical registers do not encourage efficient investment as actual costs are added to the asset base. These factors will result in a potential overstatement of the asset value, directly in conflict with the objectives of the purpose statement. Replacement cost registers do not create these same issues.

29. We would be happy to provide the Commission with further clarification on any of the points raised in this supplementary submission, our original submission or our conference presentation if required.

Yours sincerely

Lynne Taylor
Director
Financial Advisory Services

Craig Rice
Partner
Financial Advisory Services

Attachment 1: Evidence of Government and Officials Views on Valuation Methodology for the Corporatisation of ESAs

The following extracts from officials papers, media releases and press articles summarise the government and officials debate on asset valuation methodologies which occurred immediately prior to vesting.

A1. 16 March 1990, Officials Co-ordinating Committee on Electricity[1] - Paper to the Cabinet State Agencies Committee "Electricity Distribution Restructuring: Ultimate Ownership and Company Formation":

- *Includes a reference to ESA inefficiencies including "poor financial accounting." (paragraph 2)*
- *"There are some ESAs which are technically insolvent and without reconstruction of their balance sheets would not be able to be formed into companies." (paragraph 63)*
- *"Officials recommend that a specialist task force of officials and financial experts be formed to devise a set of overall objectives, guidelines and processes which could be used in the case of each ESA." (Paragraph 106)*
- *"The guidelines should include a methodology for valuing assets, reconstructing accounts, and establishing new balance sheets which would be followed by each ESA. This will help ensure that the new companies adopt appropriate pricing and investment policies…". (paragraph 106)*

A2. 10 May 1990, Officials Co-ordinating Committee on Electricity[1] - Paper to the Ministerial Committee on Electricity Restructuring:

- *ESAs are not currently inclined to generate profits, although they do earn small profits in some instances Municipal Electricity Departments have been reported as using these to subsidise other Council activities. Instead of paying dividends, lower prices are offered to consumers. In future, ESAs will be required to produce a return on assets commensurate with the riskiness of the business. This will have a tendency to increase tariffs. On the other hand a more business-like approach, with less confusion of goals, could lead to substantial off-setting efficiency gains." (paragraph 13)*

A3. Not dated (response to State Sector Committee Request of 7 August 1990), Letter from the Minister of Energy to the State Sector Committee – "Financial Position of Electricity Supply Authorities":

- *"It is expected that the real value of the assets is significantly greater than the book value."*

[1] Involving the following departments – Ministry of Commerce, Department of the Prime Minister and Cabinet, The Treasury, SOE Unit, Ministry of Maori Affairs, Ministry for the Environment, Department of Justice (Treaty Unit)

A4. 10 December 1990, Letter to Consultants from Peter Farley, Executive Director - Electricity Distribution Reform Unit, requesting proposals for a valuation of SEPS:

- *"The Establishment Board appointed by the Government to manage the corporatisation of the Southland Electric Power Supply (SEPS) wishes to have the business revalued to provide a basis for a new company, to be established about July 1991."*
- *"The basis of valuation is to be an optimised depreciated replacement cost approach with appropriate adjustment where such values cannot be sustained by a reasonable expectation of cash flows, e.g. on some rural lines."*

A5. 23 April 1991, Information Memorandum attachment to a Treasury letter requesting proposals from Consultants for joining the EDBVAP[2]:

- *"On 17 December 1990 Cabinet:*
  - *noted that because of ownership uncertainty the Government will be required to authorise the transfer of assets from Electric Power Boards (EPBs) to the new Electric Power Companies (EPCs);*
  - *agreed that the valuation of corporatised Electricity Supply Authorities (both EPCs and MED companies) be done consistently in order to facilitate monitoring, regulation, amalgamation, and the provision of a solid commercial basis for operations;*
  - *agreed that to facilitate the vesting of assets to the new companies, and to minimise costs, the valuation should be on a basis agreed by the Minister of Energy and the Minister for State Owned Enterprises, following consultation with Electricity Supply Authorities." (paragraph 1)*
- *"The absence of clear ownership of power boards requires the Government to vest the undertaking of the Boards. Ministers therefore, have a stewardship responsibility on behalf of the owners to ensure that the valuation is fair and reasonable." (paragraph 2)*
- *"If capital costs, which are a large proportion of distribution costs, were not derived from consistent valuation procedures, any resulting differences in company performance could be attributed to the valuation methodology rather than company performance" (paragraph 3)*
- *"Ministers and the ESA have agreed that the Electricity Distribution Businesses (both EPBs and MEDs) should be valued on a consistent basis according to an agreed and accepted methodology." (paragraph 4)*
- *"The Government and the industry have generally endorsed Optimised Deprival Value (ODV) as the appropriate valuation method for the monopoly lines business." (paragraph 10)*
- *Ministers will agree to a valuation where a member of the Accreditation Panel; the "nominated individuals" of the Accreditation Panel member; and the directors have*

[2] Electricity Distribution Business Valuation Accreditation Panel

certified that the valuation has been done in accordance with the guidelines and procedures contained in the "Handbook" (paragraph 19).

A6. 27 June 1991, Joint Media Release by the Minister of State Owned Enterprises and the Minister of Energy – "Electricity Distribution Accreditation Panel Appointed":

- *"Electricity supply authorities (ESAs) will be required to be valued as part of the corporatisation of the distribution industry and the panel has been formed to provide a consistent and recognised approach to the valuation."*
- *"The industry's monopoly line businesses will be valued by the optimised deprival value method (ODV), which has been agreed with the Electricity Supply Association."*

A7. 23 November 1991, Evening Post Article "Luxton denies reforms will boost power prices":

- *Mr Luxton said the Energy Sector Reform Bill would not force the new power companies to increase their prices.*
- *Mr Luxton also announced assets of power boards and MEDs would be transferred to new power companies at book value, rather than at market value.*
- *Industry representatives had been concerned power companies would have to increase prices substantially to make a commercial return had the Government transferred assets at market value. In most cases this would have meant valuing the companies at twice their present book value.*

A8. December 1991, Letter to ECNZ from the Minister of Energy:

- "*Under the Energy Sector Reform Bill, decisions on pricing, tariff rebalancing, rates of return and the phasing in of commercial operations and objectives are entirely matters for managements; Boards and shareholders, of the yet to be formed electricity power companies."*
- *"Despite these factors some concerns still exist over the exact method of application of the ODV valuation."*
- *"We also propose that the Government review the appropriate mechanisms for achieving consistent ODV valuations. This would canvass the options, including corporatising at:*
  - *full ODV value;*
  - *a scaled down ODV value; or*
  - *book value, but require a separate set of ODV based accounts for the line business as part of the information disclosure regime."*

A9. 27 May 1992, Media Release from the Minister of Energy "Book Value to Be Used for Corporatisation of Supply Authorities":

- *"Corporatisation to be completed by March 1993 and vesting of the assets will be at book value."*

- *"ODVs are favoured over book valuations for information disclosure purposes because they make it easier to make fair comparisons of the performance of distribution companies."*

A10. August 1992, Ministry of Commerce – A guide to preparing Establishment Plans:

- *"Valuation of the energy undertaking – If it is proposed to corporatise at other than book value, then reasons for doing so should be included. Book value will be as per the estimated terminal accounts which will have to be submitted with the establishment plan and will be subject to the final audited figures."*