ACCOUNTABILITY IN THE RETAIL AND DISTRIBUTION SECTORS OF THE NEW ZEALAND ELECTRICITY INDUSTRY

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Sunlight is said to be
the best of disinfectants;
electric light the
most efficient policeman

Brandeis, 1933

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ABSTRACT

Since the mid-1980s organisation of the electricity industry in New Zealand has been radically reformed. The public sector reforms implemented by successive governments between 1984 and 1999 aimed to reduce or eliminate government involvement in business activities and to create competition within industries, some of which might otherwise be natural monopolies. A "light-handed" regulatory regime was introduced to monitor and control the electricity industry. To date, this regime has rejected the use of price controls and associated methods in favour of market-based methods involving competition and transparent accountability. Corporate annual reports are therefore one of the prime ways in which organisations meet their accountability obligations.

This research describes and explains the development of a disclosure index and the results of its application to the 1999 annual reports of the 33 electricity retail and distribution companies. The index was developed with the support of a panel representing 15 stakeholder groups. The disclosure index is a complex measure. It emphasises accountability through the provision of both financial and non-financial information to meet the needs of a wide range of stakeholders. It is designed to assess the comprehensiveness (both in extent and quality) of annual report disclosures. It also incorporates a best-practice model of annual reporting for electricity retail and distribution companies.

The use of the disclosure index highlights an information gap between stakeholder expectations of information disclosure and the current level of disclosure in electricity company annual reports. Out of a maximum possible Index score of 100, the average score is 56 with a range from 15 to 72. Key areas of inadequate disclosure from an accountability perspective relate to performance measures (financial and non-financial), segmental information, asset valuation details, and cost of electricity purchased/generated. The research also identified a need for trust-owned companies to be as accountable as public companies. In this respect, copies of the annual report in its entirety should be available to interested parties on request. The concern is to make electricity companies and their activities more transparent by providing sufficient, understandable and easily accessible financial and non-financial information to allow stakeholders to fairly assess performance. The annual report is an appropriate vehicle for providing this information as it is a comprehensive document available to the public on a routine basis. Improved disclosure to meet best-practice levels would contribute significantly to the effective information sharing between companies and stakeholder groups - thus improving the accountability of each entity. Feedback from the research provides each company with indications of the parts of their reports which need attention if they wish to improve the quality of their reporting.

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Jill
Auckland
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ACCOUNTABILITY IN THE RETAIL AND DISTRIBUTION SECTORS OF THE NEW ZEALAND ELECTRICITY INDUSTRY

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LIST OF ABBREVIATIONS

AIMR	Association for Investment Management and Research
ARP	Accounting Rate of Profit
CFO	Chief Financial Officer
EBIT	Earnings Before Interest and Tax
ECNZ	Electricity Corporation of New Zealand
GAAP	Generally Accepted Accounting Practice
MED	Ministry of Economic Development
NZ	New Zealand
ODV	Optimised Deprival Value
ROE	Return on Equity
ROF	Return on Funds
ROI	Return on Investment
ROTA	Return on Total Assets
SAC	Statement of Accounting Concepts
SCI	Statement of Corporate Intent
WACC	Weighted Average Cost of Capital

CHAPTER ONE

RESEARCH INTRODUCTION

1.1 INTRODUCTION

Economic entities which are significant in terms of their command over human and material resources have a responsibility to report publicly (Gray, Owen and Maunders, 1987). This responsibility is encompassed in the tenets of accountability which impose an obligation on organisations to report, at least annually, on their performance and activities. This research examines how the obligation to report has been met by New Zealand electricity retail and distribution companies. It focuses on the corporate annual report which has been identified as an important means of communication and an appropriate vehicle for meeting accountability responsibilities. The annual report is a comprehensive document that is widely available on a routine basis. The research analyses current disclosure levels in electricity company annual reports and develops a model of best disclosure practice. It advocates publication of more information in those annual reports than is currently provided.

This introductory chapter includes a brief background to the electricity industry which is followed by statement of the research problem and objectives. The research methodology is then introduced followed by an outline of the thesis presentation. The chapter concludes by outlining the scope and limitations of the study.

1.2 BACKGROUND

The research is set within the reforms of the retail and distribution sectors of the New Zealand electricity industry which commenced in 1987. The reforms were part of a world-wide move away from centralised Government control towards decentralised, competitive markets. The objective was to make the industry more efficient by introducing market disciplines through competition. The Energy Companies Act 1992 moved the retail distribution sector of the industry from a local body framework to a corporate structure which resulted in the transfer of the control of resources from the public to the private sector. As a result, accountability requirements increased.

Electric power companies are generally involved with two types of business activity: lines (distribution network) and electricity retailing. The monopoly nature of the lines business imposes a requirement for some form of regulation to prevent the abuse of monopoly power. In New Zealand, the electricity industry is monitored by a light-handed regulatory regime the cornerstone of which is the Electricity (Information Disclosure) Regulations 1994/99. These regulations are designed to prevent monopoly line companies from exploiting their position by assisting consumers and potential competitors to identify monopoly profits or other non-competitive behaviour on the part of those companies. The regulations are enforced by the Ministry of Commerce (recently renamed the Ministry of Economic Development) and require detailed disclosure of information related to performance. The Ministry publishes this information in a form which is "widely acknowledged as incomprehensible for most consumers" (Macfie, 1998, p.4).

Concern has been expressed about the accountability of electricity retail and distribution companies (Matthes,1996; Macalister,1997). This concern was compounded during the 1998 Auckland power crisis. Mercury Energy's inability to provide a continuous supply was perceived to be linked to reforms in the electricity industry particularly in the areas of corporate governance and risk management.[1]

Electricity companies provide a vital service in the economy and have a significant impact on society. Therefore, they are required to account to those who are affected by their performance. This accountability can be discharged by the provision of information about company activities. Some researchers (Firth, 1979; Walker, 1988; Marston and Shrives, 1991) consider that **annual reports** are the major medium by which listed companies communicate information to stakeholders. The Corporate Report, published in the United Kingdom in 1975, stated that "corporate reports[2] are

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[1] Inquiry into the Auckland Power Supply Failure, Ministry of Commerce, 15 May, 1998.

[2] The term "corporate report" is synonymous with the term "annual report".

the primary means by which the management of an entity is able to fulfil its reporting responsibility by demonstrating how resources with which it has been entrusted have been used" (p.16). Coy and Pratt (1996) found that the annual report has an important role in communicating and shaping the reality of the organisation in the public mind. How this "reality" is perceived depends on the extent and quality of the information provided in the annual report. Extent refers to the number of information items disclosed and quality refers to the degree of detail given in respect of those information items. The annual reports of New Zealand companies are subject to minimum levels of information disclosure specified by the Financial Reporting Act 1993, in respect of compliance with Generally Accepted Accounting Practice (GAAP), and the Companies Act 1993. Company law requires companies to provide this information free of charge to all shareholders. It is contended that for an industry that provides an essential service and has monopoly characteristics there should be a higher level of accountability than in other industries. The higher level of accountability encompasses the provision of voluntary information that meets the needs of a wide range of stakeholders.

Analysis of financial statements included in the annual reports of electric power companies over the period 1988-1992 (Hooks, 1995) showed there has been a reduction in the amount of information disclosed in the annual reports from pre-corporatisation to post-corporatisation. Therefore, the operations of electricity retail and distribution companies, as disclosed in the annual reports, appear to be less transparent than before the reforms. The Electricity (Information Disclosure) Regulations 1994/99 impose additional reporting requirements on this sector as part of the light-handed regulation regime but the information given is complex and difficult to understand (see Electricity Information Disclosure Statistics, 1997-99). According to the Ministry of Commerce, the information provided is of poor quality and lacks timeliness (Newsletter, June, 1997). David Russell, Chief Executive of the Consumers' Institute stated that "only the big businesses have the clout to tear the information apart and make sense of it all" (Macalister,1997, p.36). United Networks, the largest lines company in New Zealand, stated in their March, 2000 submission to the Ministerial Inquiry into the electricity industry, that "the current regulated disclosures are very remote from consumers" (p.4). Improved disclosure in the corporate annual report could overcome these problems.

1.3 PROBLEM STATEMENT

It is contended that because of the monopoly nature of the lines business of electricity companies and the developing role of competition in the retail sector, the annual report disclosure requirements of the Companies Act 1993 and Financial Reporting Act 1993 do not fulfil an adequate accountability role for these sectors of the industry.

1.4 RESEARCH PURPOSE AND OBJECTIVES

The purpose of the research is to develop and apply a model of best-practice reporting for the annual reports of electricity retail and distribution companies in New Zealand. The aim is to encourage greater accountability. To achieve this, the research has the following specific objectives:

(a) To develop a disclosure index, from an accountability perspective, for assessing the extent and quality of annual report disclosures of New Zealand electricity retail and distribution companies, and to incorporate, within the disclosure index, a model of best-practice reporting;

(b) To apply the index to the 1999 annual reports of electricity retail and distribution companies in order to identify the extent and quality of information currently disclosed;

(c) To review and discuss the findings with stakeholder panel members and report preparers; and

(d) To make recommendations about annual reporting by the New Zealand electricity industry in the light of the investigative findings.

1.5 METHODOLOGY

The research seeks to be descriptive, critical and then normative. The approach taken incorporates a number of the elements of the scientific approach and complements those with aspects of the naturalistic approaches, using subjective processes and acknowledging the biases, values, knowledge and traditions of the researcher and of the stakeholder groups. The methodology therefore sits to the right of the centre point identified by Laughlin (1995) as "middle-range" thinking as explained in chapter three.

The research method includes a literature analysis, data collection by questionnaire, interviews, stakeholder feedback, and an analysis of annual reports.

1.6 OUTLINE OF THE THESIS

The thesis is presented in nine chapters as follows:

Chapter One	**An Overview**
Chapter Two	**New Zealand Electricity Industry, Retail and Distribution: Background and Environment:** To provide a setting for the research topic, the thesis begins with a description of the background and environment of what was initially the New Zealand electricity retail distribution sector and subsequently became two industry sectors – retail and distribution. This chapter considers the reform process, the aims of the reforms and the regulatory regime in which the industry sectors operate.
Chapter Three	**Research Methodology and Method:** This chapter states the methodological assumptions that guide the research and outlines and justifies the research methods used.
Chapter Four	**Accountability:** The focus of the research is on the need for accountability and the research is set within this theoretical framework. This chapter examines the concept of accountability and its relevance to the retail and distribution sectors of the electricity industry.

Chapter Five	**Literature Review:** Chapter 5 provides a comprehensive summary of relevant literature particularly in relation to disclosure index studies. These studies form the basis for the development of an industry-specific disclosure index for the purpose of measuring both the extent and quality of annual report disclosure.
Chapter Six:	**Construction of the Disclosure Index:** The tenets of accountability are linked to matters of annual report disclosure in this chapter which describes the development of the disclosure index.
Chapter Seven:	**Results and Discussion:** This chapter provides an analysis and description of the extent and quality of information disclosure currently exhibited in the annual reports of the electricity retail and distribution companies.
Chapter Eight:	**Review of Findings with Stakeholders and Report Preparers:** To provide additional depth and richness to the research findings, this chapter reports closing interviews with members of the stakeholder panel and with Chief Financial Officers of a representative group of electricity companies.
Chapter Nine:	**Summary, Recommendations and Conclusion**

1.7 SCOPE AND LIMITATIONS

1.7.1 Scope

The research does not encompass the electricity industry as a whole. The scope of the study is limited to the retail and distribution companies. At the commencement of the research, these formed one sector of the industry. By 1999, as a result of further legislative reform, these became two distinct sectors.

The research involves a detailed analysis of annual reports but does not attempt to determine the level of compliance with annual report disclosure legislation as stated in the Companies Act 1993 and Financial Reporting Act 1993. Instead it adopts an accountability perspective.

1.7.2 Limitations

Research of this nature has some limitations not least of which is the element of subjectivity involved. Marston and Shrives (1991) pointed out that disclosure indices involve subjective judgment on the part of the researchers. In this research there is subjectivity involved in:

- Selecting the items for the disclosure index;
- Weighting disclosure items for their relative importance;
- Developing criteria for evaluating the quality of the disclosures; and
- Scoring the annual reports.

The researcher has sought to minimise this subjectivity by grounding the disclosure index in the relevant literature, seeking stakeholder feedback at a number of critical points in the research process, having two qualified accountants involved in the scoring process, and involving Chief Financial Officers in the validation of the final scores. Nevertheless the researcher concurs with Cooke and Wallace (1989) who considered that disclosure is an abstract concept which cannot be measured directly or precisely.

Marston and Shrives (1991) and Gray and Haslam (1990) acknowledged the difficulty of constructing a disclosure index. Gray and Haslam (1990) considered that there is no single, agreed-upon framework within which to conceptualise and collect empirical evidence about the external reporting of organisations. However, acknowledging the difficulty and the above limitations, this research enjoys the freedom implied by Gray and Haslam and advances a model for improving accountability.

In addition to the "academic" limitations described above, the industry is in a state of change and transformation. This has impacted on the research. Recent Government legislation required electricity companies to divest either the retailing or distribution (lines) business by 1 April 2004. In fact this divestment was essentially completed by March 1999. The initial focus of the research - best practice reporting for vertically integrated companies with monopoly components - has necessarily had to be adapted and modified to accommodate this change. In addition, the number of companies involved in electricity distribution and retailing has decreased during the research period.

However, there are some advantages to researching this industry:

- The continuing nature of the industry reforms will ensure that the research remains topical, even though it may be difficult to keep pace with them.
- The lines business will still remain a natural monopoly, and potentially new monopolies may emerge through the amalgamation of the generation and retailing businesses. It will remain important to monitor whether the wider stakeholders are being served well by the standard of public accountability in the industry.

On this positive note, the thesis begins by outlining the background to the retail and distribution sectors of the electricity industry.

CHAPTER TWO

NEW ZEALAND ELECTRICITY INDUSTRY, RETAIL AND DISTRIBUTION: BACKGROUND AND ENVIRONMENT

2.1 INTRODUCTION

In the mid-1980s the Government announced its decision to reform the electricity industry. This chapter outlines the changes to the retail and distribution sectors of the electricity industry from that time until 2000 as regulatory intervention became more intrusive. The chapter is organised as follows:

Section 2.2 describes the key elements of the reform process. The next section outlines the aims of the reforms and considers the issues of pricing and competition. Regulations were imposed to control the monopoly components of the industry. Section 2.4 examines regulatory methods and Section 2.5 details the components of the New Zealand regulatory regime. A summary and conclusion end the chapter.

2.2 REFORMS AND CORPORATISATION

Changes in the electricity industry are part of an ongoing programme of economic reform instituted by the 1984-1990 Labour Government, and continued by the National Government to 1999. These economic reforms have been characterised by government divestment of so-called "trading" enterprises. This is part of an international trend, where governments have passed control of airlines, railways, telecommunications, water supply (United Kingdom), airports and sea ports to the corporate sector. In many cases this was done by the sale or distribution of shares.

Prior to the commencement of these reforms the electricity industry in New Zealand was made up of two components:

1. The generation and transmission of electricity on a national basis (the "national

grid"), controlled by central government through the NZ Electricity Department (wholesale sector).

2. The distribution and supply of electricity to end-consumers in each regional franchise area, controlled by Electric Power Boards or Municipal Electricity Departments (the retail sector).

This research is concerned with the second component; **distribution** which involves the delivery of electricity from grid supply points to consumers, and **supply** which involves the wholesale purchase of electricity and its retailing to consumers, including marketing, metering and billing. Supply is commonly referred to as the retail sector.

In 1985 there were 61 electric power boards and municipal electricity departments (Electricity Supply Authorities), each with an exclusive franchise to distribute electricity in its designated area. Power Boards were managed by Board members who were elected triennially by voters registered on local body rolls. Municipal Electricity Departments were owned and operated by the local city or borough council, and supplied electricity to premises in their area.

In May 1990, the Government announced that Electricity Supply Authorities would be corporatised. The legislation subsequently enacted to give effect to this was as follows:

- The Electric Power Boards Amendment Act 1990;
- The Energy Companies Act 1992;
- The Electricity Act 1992 (effective from 1 April 1993);
- The Electricity Industry Reform Act 1998.

The effect of this legislation is discussed below.

- The Electric Power Boards Amendment Act 1990

  This resulted in the removal of the elected Board members and the election process. Commercial directors were appointed by Government to move each organisation into a corporate structure. The remaining Board members who were not appointed as directors became trustees. At this stage the trustees effectively had stewardship of the Board's assets, on behalf of the community, while corporate strategy and direction became the responsibility of the new directors.

- The Energy Companies Act 1992

  The Energy Companies Act provided for the corporatisation of the Electricity Supply Authorities. Section 18 of the Act required each Electric Power Board and Municipal Electricity Department to submit an Establishment Plan to affected parties stating how a corporate structure would be achieved. The share allocation plan was the key document in the Establishment Plan. These plans were subsequently ratified by the Minister of Energy. The result was that initial shareholdings in each company were dominated by:

  1. Customers/electors in the previous franchise area, who were issued with "free" shares.
  2. Council/community trusts who held the shares on behalf of the ultimate owners (the residents and ratepayers of the franchise district).

  Some companies also introduced additional parties to the share register as "cornerstone" shareholders, for example, other energy companies, either New Zealand or foreign domiciled who were offered shares at a price determined by the directors. In the case of widespread shareholdings, shares were tradeable either on the New Zealand stock exchange or through a secondary market.

- The Electricity Act 1992

  This resulted in the removal of franchise areas and the onus to supply all customers within a supply area. Section 170 required electricity companies to account separately for their energy trading and network distribution activities. This section included other information disclosure requirements related to the monopoly side of the industry.

The corporatisation process made electricity companies accountable to their shareholders rather than customers. A focus on profit maximisation replaced the "old" cost-plus pricing of the Electric Power Board era. The objective now was to ensure that shareholders and lenders were rewarded with a competitive return on their investment, and that there was an increase in shareholder wealth commensurate with the level of risk involved. In commenting on life after privatisation, Hyman (1986) noted that "the company's performance is related to bottom-line profit...and the achievement of these profits will be important in maintaining the company's share price in the market and its ability to raise funds in the future" (p.136).

By mid-1998, as a result of the rationalisation process, there were 37 electric power companies compared to 61 electric power boards and municipal electricity departments before corporatisation. Most of these companies were collectively owned by local government or electricity consumers through trusts.

- The Electricity Industry Reform Act 1998

  To hasten the reform process and ensure effective competition in the industry the Electricity Industry Reform Act was passed in July 1998. The purpose of the Act was twofold:
  - to ensure costs and prices in the electricity industry are subject to sustained downward pressure; and
  - to ensure that the benefits of efficient electricity pricing flow through to all classes of customers (Section 2 (1)(a)(b)).

  This was to be achieved by separating electricity distribution from generation and retail, and by promoting effective competition within electricity generation and retail (Section 2 (1)(c)(d)). An electricity lines business conveys electricity by line in New Zealand. An electricity retail (supply) business sells or generates electricity. Consequently, no person involved in an electricity lines business may be involved in an electricity retail business and no person involved in an electricity retail business may be involved in an electricity lines business (Section 17 (1)(2)).

  Electricity companies were required to achieve corporate separation by 1 April 1999 and ownership separation by 1 January 2004.

The ownership separation was intended to reduce the barriers to entry for any new retailer and to reduce the ability for the incumbent retailer to cross-subsidise retail customers and/or investments in generation from its lines business. Although the

Electricity (Information Disclosure) Regulations 1994 required "ring-fencing" of the respective businesses, it was thought that this was inadequate in terms of allowing market participants to determine if such cross-subsidisation was occurring (Helm and Jenkinson, 1998). The separation of the businesses had the advantage of improving the information provided to the Ministry of Economic Development as that information now related solely to the lines companies.

Announcement of the split-off requirement was followed by a period of intense activity in the industry. The majority of electricity companies decided to retain their lines business and to sell their retail business. In some cases contra deals were struck, where one company sold its retail business to another, while acquiring the lines network of the other party. Significantly, by far the largest investor in the acquisition of electricity retail businesses has been the New Zealand Government, through the two wholly state-owned generating companies, Contact Energy[1] and Electricity Corporation of New Zealand (ECNZ). Within five months of the passing of the Electricity Industry Reform Act 1998 these two companies gained control of retail businesses which supply approximately half of the country's power consumers. Most of the industry implemented full ownership separation by April 1999, well before the required date. The effects of the Electricity Reform Act 1998 are shown in Table 2.1. The first grouping lists the companies that chose to remain in the lines (distribution) business. The table shows the company name, the ownership of the company and the name of the company which purchased the retail part of the original business. Lines companies range in size from 5,000 electricity connections to nearly 500,000 connections and most are owned by trusts that were set up in accordance with share allocation plans prepared under the Energy Companies Act 1992. The second grouping lists the companies who chose to retain their retail business and therefore sold their lines business. The third grouping lists the generation companies which entered the retail market by buying blocks of customers from lines companies.

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[1]Contact Energy has since been privatised (shares sold to Edison Mission Energy Ltd) and ECNZ has been split into three state-owned companies: Meridian Energy, Genesis Energy, Mighty River Power.

Table 2.1

The Effects of the Electricity Reform Act 1998 (ownership split of network and retail businesses) at 1 September 2000

LINE COMPANIES	OWNERSHIP	RETAIL BUSINESS SOLD TO	NOTES
Waitaki Power Ltd	Waitaki Power Trust 100%	Meridian Energy Ltd	
Scanpower Ltd	Scanpower Customer Trust 100%	Meridian Energy Ltd	
CHB Power Ltd (Centralines Ltd)	CHB Consumers' Power Trust 100%	Meridian Energy Ltd	
Northpower Ltd	Northpower Electric Power Trust 100%	Meridian Energy Ltd	
Horowhenua Energy Ltd (Electra*lines*)	Horowhenua Energy Trust 100%	Contact Energy Ltd	
Counties Power Ltd	Counties Power Consumer Trust 100%	Contact Energy Ltd	
Tasman Energy Ltd (Network Tasman)	Tasman Electric Power Trust 100%	Contact Energy Ltd	
Top Energy Ltd	Bay of Islands Electric Power Trust 100%	Contact Energy Ltd	
Alpine Energy Ltd	District Councils 60%, Sth Canterbury Trust 40%	Contact Energy Ltd	Note 1
Eastland	Eastland Energy Community Trust 100%	Contact Energy Ltd	Bought Wairoa Power network
Hawkes Bay	Hawkes Bay Power Consumers Trust 100%	Contact Energy Ltd	
Mainpower	Mainpower Trust 100%	Contact Energy Ltd	
The Power Co	Southland Electricity Power Supply Consumer Trust	Contact Energy Ltd	Notes 1, 2 Generation sold to TrustPower
Electricity Invercargill	Invercargill City Holdings 100%	Contact Energy Ltd	Notes 1, 2
Central Power Ltd	Shares traded on Unlisted Securities Market Palmerston Nth City Council largest shareholder	Genesis Energy Ltd	
Powerco Ltd	Shares traded on Unlisted Securities Market. Controlled by New Plymouth City Council and consumer trust	Genesis Energy Ltd	Bought Wairarapa Electricity network
Wairarapa Electricity Ltd	Company no longer exists	Genesis Energy Ltd	Network sold to Powerco
Power New Zealand (UnitedNetworks)	Public co: Utilicorp 78% Shareholders Trust 10%	TransAlta	Purchased TransAlta, TrustPower networks
Southpower (Orion)	Council owned 100%	TransAlta	
Otago Power Ltd	Consumer-owned co-operative	TrustPower	
Waipa Power (Waipa Networks Ltd)	Waipa Power Trust 100%	TrustPower	
Central Electric Ltd	(Now small trust-owned generating company)	TrustPower	Sold network to Dunedin Electricity
Marlborough Electric Ltd	Marlborough Electric Power Trust 100%	TrustPower	
Ashburton Electricity	District Council and co-operative shareholders	TrustPower	
Buller Electricity Ltd	Buller Electric Power Trust 100%	TrustPower	
Wairoa Power	Company no longer exists	TrustPower	Sold network to Eastland Energy
Westpower	West Coast Electric Power Trust 100%	TrustPower	

LINE COMPANIES	OWNERSHIP	RETAIL BUSINESS SOLD TO	NOTES
Dunedin Electricity Ltd	Dunedin City Council (network managed by Delta Utility Services)	TrustPower	Sold Waipori Power (generation) Bought Central Electric network
Mercury Energy Ltd (Vector Ltd)	Auckland Energy Consumer Trust 100%	Mighty River Power Co.	
Waitomo Energy Services (The Lines Co.)	Waitomo Energy Services Consumer Trust 75% King Country Electric Power Trust 25%	King Country Energy	Bought King Country Energy network
Bay of Plenty Electricity (Horizon Energy)	Bay of Plenty Consumer Trust 77%	Todd Energy Ltd	Sold generation to Pacific Hydro Ltd
WEL Energy	WEL Energy Trust; 5% traded on USM	Natural Gas Corporation	

RETAIL COMPANIES	OWNERSHIP	NETWORK BUSINESS SOLD TO	
(A) COMPANIES WHICH WERE INTEGRATED LINE COMPANIES / ELECTRICITY RETAILERS PRIOR TO 1999			
TransAlta New Zealand Ltd	Controlled by Natural Gas Corporation (NGC) (formerly controlled by TransAlta Canada) Hutt Mana Energy Trust 12%	Sold network to UnitedNetworks Bought Power New Zealand retail Bought SouthPower and Citipower retail	30% of retail market
Trustpower	Public company. Tauranga Electricity Consumers Trust 25% Infratil NZ Ltd 29%	Sold network to UnitedNetworks Bought retail of: Otago Power, Waipa Power, Central Power, Electricity Ashburton, Westpower, Wairoa Power, Marlborough Electric, BOP, Buller Electricity, Waipori Power.	13% of retail market
King Country Energy	Customers 61.6%, Todd Energy 20% Waitomo Energy Services Customer Trust 8% King Country Electricity Trust 10% Shares traded on unlisted securities facility	Sold network to Waitomo Energy Services Bought retail of Waitomo Energy Services	1% of retail market

RETAIL COMPANIES	OWNERSHIP	RETAIL BUSINESS PURCHASED	NOTES
(B) NEW COMPANIES ENTERING RETAIL ELECTRICITY RETAIL MARKET SINCE 1999 (note 3)			
Meridian Energy	NZ Government (formerly part of ECNZ)	Waitaki Power, Scanpower, CHB Power, Northpower	Main business - electricity generation 4% of retail market
Genesis Energy	NZ Government (formerly part of ECNZ)	Central Power, PowerCo, Wairarapa Electricity	Main business - electricity generation 9% of retail market
Mighty River Power	NZ Government (formerly part of ECNZ)	Mercury Energy	Main business - electricity generation 16% of retail market
Contact Energy	Edison Mission Energy (40%) (listed as public company in May 1999, formerly part of ECNZ)	Horowhenua Energy, Counties Power, Tasman Energy, Top Energy, Alpine Energy, Eastland, Hawkes Bay, Mainpower, The Power Company, Electricity Invercargill	Main business - electricity generation 21% of retail market
Natural Gas Corporation	Australian Gas Light NZ Ltd 72%	WEL Energy	Main business - gas distribution and sales 5% of retail market
Todd Energy	Private ownership - Todd Group	Bay of Plenty Electricity	Main business - investment in energy sector 1% of retail market

Note 1. Alpine Energy, The Power Company, and Electricity Invercargill were previously shareholders in United Energy, an energy retailer. These shares were sold to Contact Energy.

Note 2. The Power Co and Electricity Invercargill networks are managed by PowerNet.

Note 3. These companies have not been included in the 1998/99 Annual Report analysis.

2.3 AIMS OF THE REFORMS

The Government's objective in instituting these reforms was "to ensure the continuing availability of energy services, at the lowest cost to the economy as a whole, consistent with sustainable development" (Ministry of Commerce, 1998b, Part D). Two key issues supported this objective:

- Pricing that reflects the true cost of providing electricity;
- Competition and choice for consumers (Electricity Industry Reform Act 1998, Sec 2 (1)(a)(b)).

A discussion of each of these issues follows.

2.3.1 Pricing

Pricing strategies have reflected the changing nature of the stakeholders in the electricity distribution industry. Prior to restructuring, Electric Power Boards were ultimately responsible to the electors, who were in the main domestic electricity consumers. The over-riding concern was to provide an acceptable level of service at a low price to this group. Thus it was accepted that commercial electricity users (who often expected a higher standard of availability and quality) would pay more than domestic customers.

Because of their influence in the election process, domestic customers demanded (and got) low prices; commercial customers accepted higher prices, as there was no alternative. In general this did not become an issue for most commercial customers, because with few exceptions, New Zealand industry is not "energy-intensive", and electricity costs do not form a major part of total costs. The result was general acceptance that domestic electricity prices were subsidised by commercial and industrial customers.

The environment in which electricity companies operate has changed. Domestic customers no longer have control over the election of boards and directors, and, since 1999, competition has emerged in the retail sector. All customers can now "shop around" for the best energy price.

The cross-subsidisation of pricing between domestic and commercial users was eliminated as part of the restructuring process. This resulted in an increase in line rental to household customers. From 1992-1997 electricity prices for domestic customers and smaller users rose more than 34% compared to an 11.5% increase in the consumers' price index over the same period (Macalister, 1997, p.40)[2]. Why did this happen? Basically, the selling prices of electricity were "allowed" to increase because of two factors:

- a lack of competition in the supply of electricity to domestic customers;
- the Government requirement to revalue distribution assets on the basis of Optimised Deprival Value (ODV)[3]. Electricity companies then focused on earning a commercial rate of return on those increased asset values.

While costs to some major electricity users have certainly decreased in response to competitive pressures, it is evident from the steadily increasing gross margins since 1990 (Hooks, 1995) that electricity company shareholders have been the main beneficiaries of the "price rebalancing" process.

In order to build market share in the competitive electricity retail business, Government-owned generation companies offered reductions in price to residential customers of up to 15%. However, as some line company assets had been purchased for more than the Optimised Deprival Value of the distribution assets (in some cases more than double ODV) and retail companies had paid up to $1,000 per customer for retail businesses, this discount rate soon became unsustainable. However, it did alert consumers to the fact that there were alternatives to the incumbent retailer. A combative relationship developed between the retailers and the line companies and this is one of the reasons for the Government seeking to impose a regulatory regime on line companies[4].

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[2] The price to commercial users declined from 20 cents per kWh in 1980 to about 12 cents in 1999. Residential prices increased from 9 cents per kWh to about 14 cents (Report of the Ministerial Inquiry, June 2000, p.19).

[3] Optimised Deprival Value is the lesser of Optimised Depreciated Replacement Cost or Economic Value on a discounted cash flow basis (such being the greater of value in use or disposal value). It stems from the premise that the value of an asset to an entity is the amount that the entity would lose if deprived of that asset.

[4] National Government, Minister of Energy, Hon. Max Bradford, in a speech to the Petroleum Exploration Association, 13 October 1999.

2.3.2 Competition

Prior to the electricity sector reforms, the distribution and supply of electricity was in the public sector. The industry was a natural monopoly[5] with substantial sunk costs associated with entry. It was therefore considered that competition was not appropriate. The cost of providing two competing networks would probably not be much less than twice what it would cost to provide a single network (Sharkey, 1982). Progressively over the past decade, consecutive New Zealand governments have pursued a strategy of removing barriers to competition in the electricity sector. The primary objective of the Government's privatisation programme was to encourage competition. In referring to privatisation of the electricity industry in the United Kingdom, Ogden (1997) stated that "the Government's commitment to 'the customer' emphasises the view that customers' interests are best served where competitive market conditions are established" (p.533). In New Zealand it was expected that competition between electricity companies would be encouraged by:

- efficiency gains,
- cheaper electricity purchases; and
- new levels of customer choice.

The first of these is a response of the company to match the price offered by more efficient competitors. The second is an attempt to lower costs, again in response to competitor behaviour. One strategy was to form purchasing agents to negotiate bulk discounts for volume. For example, Power New Zealand, EnergyDirect and Dunedin Electricity established a joint venture energy trader, Pacific Energy, whose principal activity was the purchase and resale of bulk electricity on the wholesale market. Another strategy was to invest in the construction of power stations to provide an alternative source of power. The third effect, an indicator of developing competition possible only with deregulation, was that power companies became able to compete for energy sales, even though customers were initially on the networks of other companies. However, according to Macalister (1997), at June 1997 only 7% of electricity had been traded outside the former franchise areas in the four years since deregulation. The Minister of Energy, Max Bradford, stated that "the volume of 'off-network' sales had

[5] A natural monopoly occurs when a single firm can supply a good at lower total cost than two or more firms (Steiner, 2000).

fallen from 5% two years ago to just over 3%" (NZ Herald, October 3, 1997).

Until 1998 most electric power companies operated in two businesses: they provided the lines network down which electricity reaches the consumer and they bought and sold electricity. The former has monopoly characteristics in that consumers and retailers in a given location are unable to choose an alternative company to transmit electricity to their homes or business premises. The business of trading energy is theoretically open to competition. The objectives of reducing electricity prices and providing choice for customers have involved a strategy of creating competition in electricity generation and retailing. "Bringing competition and through this, lower prices...is what the Government's Electricity Reforms Act 1998 is all about" (Hon. Max Bradford, Media Release, August 1998). In the new competitive environment consumers are able to switch between retailers for the cost of a final meter reading. This was facilitated by the introduction of deemed profiling in April 1999 which allowed retailers to determine the cost of electricity sold to customers based on average profiles of consumption. This has increased competition for customers in the retail market and in the first year (to April 2000) 4.8% of total customers switched supplier.[6] However, the structural changes have not completely solved the competition problem. Trebilcock and Gal (1999) noted the need for both regulatory measures and competition laws in order to ensure that structural changes achieve their goal. This applies particularly to the transmission and distribution sectors of the electricity industry where competition is largely absent.

Regulations have therefore been imposed in order to foster a competitive environment and to protect consumers from unfair pricing regimes which could result from the abuse of monopoly powers. The following two sections focus on the industry-specific regulatory environment within which electricity retail and distribution companies operate. Section 2.4 defines regulation then discusses some overseas regulatory frameworks. Section 2.5 details New Zealand's choice of regulatory environment.

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[6] Report of Ministerial Inquiry into Electricity, June 2000, p.18.

2.4 REGULATION

Mitnick (1980) defines regulation as "the intentional restriction of a subject's choice of activity, by an entity not directly party to or involved in the activity" (p.5). To be regulated in some way "is to be governed,...controlled" (p.2). Regulation can therefore be thought of as any type of pressure that induces businesses to change their behaviour so as to increase overall benefits to the community. Regulation theories are based mainly on public and private interest arguments. Public interest theories see regulation as a means of improving societal welfare and correcting market imperfections such as monopoly situations (Tower, 1991). Private interest theories include consumer protection theory wherein rules are designed to correct abuses that adversely affect certain groups (Mitnick, 1980) or for the protection and benefit of the public at large (Stigler, 1971). Consumers are protected by price restrictions or quality controls - "by encouraging the entry of firms that are more efficient...and by reducing industry profits to the market rate of return" (Jordan, 1972, p.152). Regulation is therefore held to be a substitute for competition (Farris and Sampson, 1973) and is a means of instituting accountability requirements.

2.4.1 Methods of Regulation

There are two approaches to regulation of electricity industries – heavy-handed and light-handed regulation. In the United States, and to a lesser extent the United Kingdom, electricity companies are subject to heavy-handed regulation. This involves stringent controls on prices and/or rates of return together with special purpose regulatory bodies responsible for supervising operations. The aim is to create a position for customers similar to that of a competitive industry where customers exercise market power over industry competitors in order to obtain the desired combination of price and quality (Ogden, 1997). The regulatory framework in those countries aims to ensure that companies focus on becoming more efficient and that the benefits of improved efficiency are passed to customers through lower prices and better service (Miller and Rose, 1988).

In the United Kingdom the main instrument of regulation is price capping through limiting permitted price increases to the Retail Price Index minus an efficiency factor "x". The "x" factor is a measure of the expected efficiency gains of the regulated utility and may be a negative or a positive number. During the regulatory period the company can retain any efficiency gains it makes that exceed the "x" factor so that this provides an incentive to minimize costs and improve productivity (Vass, 1992; Chisholm, 1994). The price cap requirement is intended to reflect what the market might have determined had there been a competitive environment. This form of regulation has been criticised (Davies and McInnes, 1982; Sherman and Visscher, 1982; Kay, Mayer and Thompson, 1986) on the basis that it is difficult to determine whether the level of performance achieved is the result of efficient management or is due to the exploitation of monopoly power. It is also difficult to estimate the efficiencies the company can achieve, and to set targets that enable the benefits of improved efficiency to be distributed equitably between consumers and shareholders. McInnes (1990) noted that price regulation provides incentives for managers to adopt income-reducing accounting policies in order to argue a case for increased prices. It can also encourage companies to reduce costs by lowering service or product quality. The Ministry of Commerce (1998) also expressed these concerns about price cap regulation and noted the potential for the required regulatory body to be captured by interest groups or to intervene in business decisions.

Rate of return regulation is used in the United States. In principle this allows the company to set tariffs to recover costs plus a "fair" rate of return on the enterprise's capital assets (Jarrell, 1979). Therefore there is an incentive to increase total allowable profits by increasing the value of total assets upon which the allowable profit is computed (provided, that is, that the allowed rate of return exceeds the cost of capital to the firm) (Kay et al., 1986; Jarrell, 1979). An increase in the value of assets reduces the rate of return, providing evidence for an increase in electricity prices. Price cap regulation is linked to rate of return regulation, as it is necessary to determine if the prospective cash flows resulting from alternative price caps provide an excessive rate of return to shareholders (Whittington, 1998).

In Australia, the states of New South Wales and Victoria have adopted revenue and price capping as a means of regulating transmission and distribution activities. Performance is monitored by State Regulators.

2.5 REGULATION IN NEW ZEALAND

Prior to corporatisation, the objective of NZ electricity retail distribution businesses was to deliver a service at reasonable cost. A more comprehensive regulatory regime was therefore not needed. Corporatisation has resulted in a new objective - maximisation of profits for shareholders - but the monopoly character of the distribution sector of the industry has not changed.

The companies' dual roles as distributors and energy sellers (prior to the Electricity Industry Reform Act 1998) carried the risk of cross-subsidisation of the contestable business at the expense of the line business customers who could be allocated an excessive proportion of corporate costs. The dual roles also gave a protection from competition as electricity companies could use their control of the distribution network to deter entry into the potentially competitive activity of electricity supply. For example, companies which are trust-owned pay a dividend to the trust, which often distributes the proceeds by crediting customers' power accounts. Mercury Energy attempted to make this distribution dependent on whether the customer buys energy from the power company. However, as the majority of power company profits are derived from line services, the counter-argument is that the customer should continue to receive the rebate even if purchasing energy from a competitor. It was therefore difficult to establish a competitive market as the incumbent had been able to offer more favourable prices by virtue of the fact that their existing customers were part-owners of the business.

Because of the possibility of anti-competitive behaviour and monopoly pricing, mechanisms have been developed to make electricity companies accountable for, and to control, their performance.

The New Zealand Government sought to obtain the benefits of competition and innovation without the heavy regulatory regimes in place in the United Kingdom and the United States. New Zealand therefore adopted light-handed regulation through yardstick monitoring. This approach, which is intended to put pressure on both costs and prices, appears to be unique in the worldwide trend to electricity deregulation. Light-handed regulation focuses particularly on the natural monopoly components of the industry (Ministry of Commerce, 1995).

In New Zealand there are four aspects to light-handed regulation:

- comprehensive information disclosure;
- general competition law;
- threat of heavy-handed regulation; and
- ownership separation.

These aspects are interdependent but it is useful to examine them separately.

2.5.1 Comprehensive Information Disclosure

Information disclosure is the cornerstone of the light-handed regulatory regime. The Electricity (Information Disclosure) Regulations 1994/1999 under Section 170 of the Electricity Act (1992) require that line companies provide extensive data on their performance to the Ministry of Economic Development (MED). The initial 1994 regulations have been replaced by the 1999 regulations. These regulations take account of industry restructuring following the Electricity Industry Reform Act 1998 and therefore increase the focus of information disclosure on line businesses and minimise disclosure by electricity retail companies. This is on the basis that retail businesses are competitive. These regulations are designed to reveal abuse of market power by electricity line companies by making the actions and activities of those companies transparent. The intention is to:

- Discourage monopoly pricing by requiring line owners to disclose annually audited financial statements, and comparable financial and efficiency performance measures for their line businesses. Disclosure is required of transfer payments between line and "other" businesses in which the company has a related party relationship; and of methodologies used to allocate costs, revenues, assets and liabilities between activities;
- Promote reliability of electricity lines, by requiring disclosure of asset management plans and reliability performance measures; and
- Promote competition in electricity retailing by facilitating comparisons of electricity retailing charges offered by competing retailers, by requiring line owners to notify final consumers of the amount of their line charge (Ministry of

Commerce, 1999).

The main impact of the revised information disclosure regulations was to remove disclosure requirements for retailers and generators and to require line owners to disclose asset management plans. The rules for the calculation of performance measures were also tightened to ensure consistency in their application.

The disclosure of financial performance measures is a significant part of the light-handed regulatory information disclosure regime. Regulations 16 and 17 of the Disclosure Regulations require line businesses to disclose three measures:

- Return on Investment (ROI);
- Return on Equity (ROE); and
- Return on Funds (ROF).

These measures are intended to indicate each electricity power company's strategy for providing commercial returns to investors and for setting price levels (Ministry of Commerce, 1994b). Return on Investment is in effect a regulatory cap. It is compared with the Government's estimate of a fair return for electricity companies determined by using an after-tax weighted average cost of capital (WACC). This reflects the appropriate rate of return for equity and debt funders of a business in line with the risks and rewards associated with the business. Line businesses have relatively low risk and therefore relatively low WACCs (Ministry of Commerce, 1997). This provides a means of measuring financial performance against the Government target thereby strengthening accountability. Returns consistently above WACCs for line businesses may indicate monopoly profits. For the period 1995-1999 the Ministry of Commerce considered that a nominal post-tax WACC for line companies of between 7.5 and 10 per cent was appropriate.[7]

There have been some problems with the above disclosures regime and these problems have undermined the transparency of the electricity companies' performance. For example, the methodology for separation of the business activities, and the ODV

[7] Report to the Ministerial Inquiry into Electricity, June 2000, p.14.

calculations,[8] was not used consistently between companies. Matthes (1996) expressed concern at the lack of truly comparable data against which power companies could benchmark their performance. The regulations do not require disclosure of revaluations, that is, they are not gazetted nor publicly disclosed. The extent to which revaluations affect financial performance measures is not obvious. It is expected that these problems will be overcome by the 1999 disclosure regulations which require the use of "avoidable cost methodology" for allocating costs, revenues, assets and liabilities among business activities and tighter ODV methodology.

It is possible to manipulate financial performance and efficiency measures such as Return on Funds and Return on Equity by adjusting useful lives of assets, asset valuations or expense allocation between business activities. Low returns can then be used as an argument for increased electricity prices to consumers. Performance measures are an important part of monitoring monopoly profits. In the 1997 and 1998 disclosures, some companies disregarded the methodology set by the regulations which treats revaluations as a component of the return on investment in the year of revaluation. The effect of this can be illustrated by the results reported by Enerco (a gas distributor). Enerco's Accounting Rate of Profit (ARP)[9] with revaluations was 35.25%, without revaluations it would have been 6.4%[10]. In a submission on the Electricity (Information Disclosure) Regulations 1999 discussion,[11] the Electricity Supply Authority (ESA) stated that the inclusion of revaluation factors in the calculation of ARP led to substantial variation in reported ARPs between companies. The reported statistics for the year ended 31 March 1998, showed that ARPs varied from in excess of 90% to minus 11%. At March 1999 the equivalent measure (ROI) ranged from 51.83% to 2.97%. This presents a poor basis for comparison when ARPs are substantially distorted by cyclic ODV valuations and does not provide helpful information about underlying profitability. Such inconsistent performance measures are therefore of limited use to consumers or competitors in judging lines

[8] The Ministry of Commerce, 1998d, reported that not all companies had undertaken the economic value v Optimised Depreciated Replacement Cost comparisons in arriving at an ODV valuation.
[9] Accounting Rate of Profit was replaced in the 1999 Electricity (Information Disclosure) Regulations by Return on Investment. The calculation for both performance measures includes revaluations in the numerator, with half the revaluations subtracted from the demoninator.
[10] National Business Review, 3 April, 1998, p.71.
[11] 20 October 1998

company performance. To be effective, yardstick monitoring requires specific criteria to enable consistent and valid comparisons to be made from year to year.

The Ministerial Inquiry into the electricity industry assessed both returns on investment and the asset base upon which those returns are calculated. As asset values increase so do revenue requirements and therefore prices. In years subsequent to a revaluation, the company has flexibility to increase prices without exceeding what may be considered to be an acceptable WACC charge. The reliability of the asset valuation is crucial for calculating the comparative financial performance of distribution companies[12].

The nature and detail of the disclosures of financial information and performance measures for the retail and distribution sectors of the electricity industry is an essential part of the accountability for the industry. Line businesses are no longer integrated with retail businesses. However, ownership separation is not a substitute for information disclosure. Because lines companies are a natural monopoly, the risk of excessive costs and margins remains. The aim of the disclosures is to increase transparency and to provide a means for interested parties to detect anti-competitive behaviour. To achieve this the information that is provided must be reliable, comparable and consistent (NZ Statement of Concepts, 4.1) both inter and intra company.

The above information disclosure requirements are backed by provisions in the Commerce Act 1986. The light-handed regulatory approach was adopted on the grounds that general competition law (Commerce Act 1986) should be sufficient to deal with potential problems from abuse of monopoly power (Ministry of Commerce, 1995). Changes to that Act have been made to ensure that this is the case.

2.5.2 General Competition Law

The second form of regulation relates to remedies available in law if anti-competitive behaviour is detected in the electricity industry. In this respect the Commerce Act 1986 provides the legal framework for general competition. The following provisions of this Act are aimed at prohibiting anti-competitive behaviour and promoting competition in

[12] Report of the Ministerial Inquiry into Electricity, June 2000, p.13-15.

the market:

- Section 27 prohibits contracts, arrangements or understandings which substantially lessen competition.
- Section 36 prohibits businesses which are dominant in a market from restricting entry of any person into a market or deterring competition in a market.
- Part IV provides for the Government to impose price control in markets where there is limited competition and where price control is considered to be in the interests of consumers or suppliers.

Electricity companies can therefore be required, under the Commerce Act (1986), to provide reasonable access to their networks by any of their competitors. If a company deliberately takes anti-competitive action such as restricting access to its lines by adopting particular pricing policies, the action would contravene sections 27 and 36. For example, the Commerce Commission alleged that Southpower acted anti-competitively in the way it tried to prevent competitors selling electricity to consumers in Christchurch. It was alleged that Southpower overstated the costs of its monopoly network business in 1994, understated the costs of its competitive electricity sales, and imposed excessive charges on competitors that its own electricity sales business did not have to pay. In April 1998, Southpower settled out of court with the Commerce Commission. The settlement required Southpower to separate its business activities into three separate companies each operating independently of each other. The businesses were required to treat each other and independent electricity retailers in the same way (Commerce Commission, 1998a).

In 1999 steps were taken to strengthen the Commerce Act's ability to combat anti-competitive behaviour. The Commerce Amendment Bill proposes significant revisions in respect of S36 (abuse of dominance) and S47 (mergers and acquisitions). The thrust of the proposed changes is to lower the threshold when a person is "dominant" in a market. The Bill ensures that a test for anti-competitive behaviour by a dominant firm is whether that behaviour has the effect or likely effect of lessening competition[13]. As at October 2000, the Bill (including a Supplementary

[13] Explanatory Note to Commerce (Control of Dominant Position) Amendment Bill, No. 296-1.

Order Paper) is before the Commerce Select Committee.

2.5.3 Threat of Heavy-Handed Regulation

If the above information disclosure and general competition laws do not result in effective behaviour, the fall-back position is the threat of increased regulation. The New Zealand Government chose light-handed regulation in the form of a disclosure regime backed by anti-competitive sections of the Commerce Act (1986). This system of control is reinforced by the specific provisions of Part IV of the Commerce Act 1986 for imposing price controls if there is clear evidence of excessive costs or profits, and Section 63 of the Electricity Act 1992 which provides for price restraints to be imposed in respect of electricity supplied to domestic premises. The Commerce (Controlled Goods or Services) Amendment Bill (May 1999) proposed changes to Part IV of the Commerce Act to give the Commerce Commission increased flexibility in administering price control. This provided powers for the Commission to use incentive-based price control or revenue caps such as CPI-X[14] and to set associated service quality standards. The Bill effectively placed all electricity lines businesses under price control to be administered by the Commerce Commission[15]. The Bill was defeated on its second reading but is indicative of an increasingly hands-on approach by the Government as it seeks to overcome the imperfections of the market.

A Ministerial Inquiry into the electricity industry was established in February 2000 by the newly appointed Labour/Alliance Government. The objective in relation to the distribution sector of the electricity industry was "to design a regulatory regime that puts pressure on cost structures and prices" (Ministerial Inquiry, 2000, para.175). The Inquiry supported the light-handed regulatory regime and recommended a strengthening of the threat of heavy-handed regulation. Following consideration of the recommendations of the Inquiry,[16] the Government proposes to introduce legislation to amend the Commerce Act to enable the Commission to use price control techniques such as CPI-X. These controls will be imposed on individual line companies if they breach thresholds set by the Commission in respect of price, rate of

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[14] CPI-X (Consumer Price Index) is the same as RPI-X used by the UK and explained in Sec 2.4.2.
[15] Commentary on Commerce (Controlled Goods or Services) Amendment Bill, May 1999, No.295-2.
[16] Government Policy Statement, Further Development of New Zealand's Electricity Industry, October, 2000.

return, or service quality. Further amendments will require the Commerce Commission to undertake a recalculation of asset values for electricity lines and to determine its preferred asset valuation methodology.

Within these policy changes the Government has sought to ensure that the threat of regulatory intervention is a real one. The proposed legislation will be introduced before the end of the year 2000 giving the Government powers to impose price controls if necessary.

2.5.4 Ownership Separation

Littlechild (1986) concluded that competition is by far the most effective protection against monopoly. Regulation is merely a stop-gap until sufficient competition develops. This philosophy underlies the New Zealand approach in which the focus has been to create competition in generation and supply (retail) and to regulate distribution in order to facilitate this. Steps have been taken to prevent the abuse of a monopoly position by restructuring electricity retail distribution companies to generate more effective competition. The requirement for separation of ownership of the line and retailing/generation components of electricity companies (Electricity Industry Reform Act 1998, Sec. 2 (c)(d)) is effectively a fourth key component of the regulatory regime for the electricity industry, and was seen as a necessary condition for the development of a competitive market.

2.6 SUMMARY AND CONCLUSION

New Zealand's electricity industry has undergone extensive change. Fifteen years ago the generation and transmission system were government-owned and distributors and retailers were publicly owned by local bodies. Today, although the government retains sole ownership of the national grid (Transpower), private companies and three state-owned enterprises compete to supply the wholesale market. Distribution and retail businesses have been corporatised. Distribution companies are a mix of trust, local body and public ownership and are prevented by legislation from owning retail activities or significant generation. A number of retail companies are integrated with generators and a competitive market for supply to final consumers is developing.

New Zealand had a choice of a heavy-handed regulatory regime or a light-handed one. Heavy-handed regulation depends on price control and an industry regulator. The Ministry of Commerce (1995) stated a number of disadvantages to this method of regulation including the tendency of the regulatory body to take over business decision-making, regulators being captured by interest groups, and regulations which effectively guarantee a cost plus rate of return and therefore reduce incentive for companies to minimise costs. In New Zealand a light-handed regulatory approach has been adopted on the grounds that the Commerce Act 1986 is sufficient to deal with potential problems from the abuse of monopoly power. Specific policies have been provided to complement the Commerce Act 1986. These have included comprehensive information disclosure, monitoring of performance, and separating monopolies from competitive activities. Information disclosure regulations for the electricity industry took effect from 11 August 1994. The requirements for information about profitability, efficiency, reliability and prices are more stringent than for the other network business in New Zealand – telecommunications. The intention is to make excessive costs and prices transparent and to enable inter-company comparisons to be made. It appears that the information currently available is complex and difficult to understand. As part of the 1998 reform package, the Government promised better published analysis of disclosed information so that customers can see how the performance of their electricity supply company compares with others (Ministry of Commerce, 1998b). This research contends that key performance measures and disclosures should be included in the annual reports of electricity retail and distribution companies. Information on company performance would then be available to stakeholders in one document. This acknowledges the combined roles of regulator (MED) and electricity companies in what is intended to be a self-regulating environment. It also acknowledges the need for effective communication of information. Despite a move towards more heavy-handed regulation, information disclosure remains an important part of the accountability process.

CHAPTER THREE

RESEARCH METHODOLOGY AND METHOD

3.1 INTRODUCTION

This chapter is presented in two parts. The first part describes the research methodology and the second part details the research method. Methodology refers to the principles by which adherents to any discipline learn to accept or reject knowledge. The methodology is thus the guiding strategy that underlies the research (Aitken, 1980). Method refers to the research process - the way in which data is collected, analyzed and evaluated.

3.2 METHODOLOGY

Guba and Lincoln (1989) identified two broad research methodologies[1] as the most widely used: scientific (commonly referred to as positivism) and naturalistic. This section of the chapter is organised as follows:

3.2.1 Scientific and Naturalistic Approaches

3.2.2 A Tailor-made Approach

3.2.3 Middle-range Thinking

3.2.4 Summary and Conclusion

Section 3.2.1 considers the appropriateness of the scientific and naturalistic methodologies, and the accompanying ontological[2] and epistemological[3] assumptions, for this research. The next two sections provide justification for the use of a "tailor-made" approach that encompasses quantitative and qualitative methods and "middle-range thinking" as described by Laughlin (1995). The methodology part ends with a summary and conclusion.

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[1] Methodology refers to ways to investigate the work and "...depends on ontological and epistemological assumptions about the nature of reality and the best ways of gaining access to that reality..." (House, 1994, p.15).

[2] Ontology is concerned with beliefs about physical and social reality (Chua, 1986).

[3] Epistemology examines the nature of knowledge and attempts to determine the limits of human understanding. Central issues include how knowledge is derived, and how it is to be validated and tested (Hutchinson, 1993).

3.2.1 Scientific and naturalistic approaches

3.2.1.1 *Scientific approach*

Accounting research has traditionally supported the use of a scientific approach[4] as a research methodology (Morgan, 1983; Chua, 1986). This methodology is grounded ontologically in the positivist assumption that an objective reality exists and epistemologically in the assumption that the observer and the observed are independent – neither influences the other (Guba and Lincoln, 1989). Further assumptions of this approach include:

- The social world can be frozen into a structured immobility thus enabling objective measurement (Ng, 1984);
- The aim of research is to describe, explain, and to predict (Abdel-khalik and Ajinkya, 1979);
- The inquiry can be both objective and value-free (Lincoln and Guba, 1985);
- The research produces verifiable and generalisable results (Guba and Lincoln, 1989);
- External and objective phenomena permit accurate observations and measurements (Tomkins and Groves, 1983a); and
- Every observed action (effect) has a cause and every cause has an effect (Guba and Lincoln, 1989).

These assumptions lead to a highly structured research approach which begins with a theory or conceptual structure from which a number of hypotheses are developed. Dependent and independent variables are then identified and data is collected and subjected to mathematical and / or statistical techniques. A set of controls provides strength to the verification of causality (Abdel-khalik and Ajinkya, 1979).

This research is based on the development and application of a disclosure index for measuring the extent and quality of annual report disclosures. Research concerning disclosure and disclosure indices has commonly supported a positivistic methodology and been framed within the theories of agency, costly contracting, or legitimacy. These theories have provided a useful framework for researchers to

[4] The term "scientific approach" is used rather than "scientific method" to recognise that there are a range of methods within the "scientific" paradigm.

investigate the incentives for voluntary reporting of information. The **agency** framework identifies two parties who influence the activities of the firm – shareholders (principals) and the managers (agents) they employ to run the firm. Each party seeks to act in their own best interest. Managers seek financial rewards for themselves, shareholders desire maximum profits. The focus of these two parties is likely to differ giving rise to a conflict of interest and what is termed "agency costs". Agency theory is based on the assumption that agents act in their own best interest to limit these costs. One way in which they can do this is by voluntarily disclosing additional information that they have available to them. By demanding more information disclosure in annual reports, shareholders can monitor managers more effectively.

There are also contracts between managers and other groups such as bondholders and customers (Jensen and Meckling, 1976). High leverage may increase conflict between managers and bondholders resulting in bondholders imposing additional monitoring. Such restrictions impose further agency costs (contracting costs). Managers may therefore provide additional disclosure to reduce these costs. This theory is referred to as **costly contracting theory** and suggests that contracting costs will increase as a result of growth in firm size and separation of ownership and control (Jensen and Meckling, 1976). Research grounded in agency and costly contracting theories has sought to identify relationships between levels of annual report disclosure and independent variables such as firm size, leverage, audit firm, company listing status, and number of stockholders.

Research concerned with the relationship between the company and its environment has used **legitimacy theory** as a framework to explain social and environmental reporting by firms (Mathews, 1993). Legitimacy is a measure of the attitude of society towards a company and its activities (Nasi et al., 1997). Legitimacy theory considers that firms voluntarily disclose information in order to promote an image of a socially aware company, thus counteracting possible threats to the firm's legitimacy which is based on the company's image.

Previous research into annual report disclosures has therefore generally been underpinned by three theories: agency theory and its related costly-contracting theory, and legitimacy theory. A scientific approach has been the methodological choice. The intention has often been to explain the relationship between managers' financial reporting decisions and compensation contracts, or variables such as earnings and company size. However, while such studies postulate reasons why managers disclose various amounts of information, Healy and Palepu (1993) noted that **they provide little evidence useful in assisting managers to form disclosure strategies to communicate effectively with stakeholders.** A concern for effective communication between a company and its stakeholders is one of the motivations for this research both in terms of the objectives of the research and the methodology adopted. Preparers of annual reports must choose which information to disclose on the basis of its usefulness to users (Davis, Menon and Morgan, 1982) and usefulness depends on the needs of users. This research posits that the quality of communication is improved when the needs of all users are recognised. The intention therefore is to identify stakeholder information needs and to compare those to the extent of annual report disclosure in order to determine if there is an information gap between the two.

A scientific approach does not typically encompass a people-oriented feedback (or phenomenological) process whereby the researched interact with the researcher so helping to determine the research. A methodology which allows the researcher to illustrate quantitative data with qualitative information and which enables the researcher to hear and consider the opinions of the respondents in an iterative fashion will provide a richer understanding than a solely scientific approach. In this research the theoretical framework is one of accountability and the aim is to see "what is going on" in the annual reports of the New Zealand electricity retail and distribution companies. Description and judgement are essential in this evaluation process (Guba and Lincoln, 1989). Therefore a scientific approach is not wholly appropriate. The descriptive aspects of a naturalistic approach can provide qualitative information to enrich quantitative research findings.

3.2.1.2 *Naturalistic approach*

The following benefits of adopting naturalistic methodology in respect of this research have been identified:

- It acknowledges the interdependence of individuals and organisations (Morgan and Smircich, 1980) and the impossibility of separating the inquirer from the inquired-into (Guba and Lincoln, 1989);
- It directs attention to the plurality of stakeholders and the different value systems they may hold (Goddard and Powell, 1994);
- It emphasises the importance of studying organisations in the context in which they operate (Tomkins and Groves, 1983a);
- It takes into account the attitudes, biases, values, and traditions of the researcher (Ng, 1984);
- It is concerned with people's thoughts and feelings (Tomkins and Groves, 1983a);
- It acknowledges there is no objective form of information nor an objective reality "out there" (Ng, 1984). It therefore emphasises the subjective nature of information (Goddard and Powell, 1994);
- It appreciates the political nature of accounting systems (Goddard and Powell, 1994);
- It allows the researcher to analyse the users' perceptions of financial reports (Ng, 1984); and
- It favours purposive sampling (the researcher selects those from whom feedback will be obtained on the basis of their knowledge and familiarity with the topic) over random sampling (Lincoln and Guba, 1985).

In respect of this research, the naturalistic approach, which supports an interactive epistemology, allows the researcher to purposively select stakeholders and to analyse their perceptions of the annual report. This is important as individuals have difference perceptions of annual reports and the accounting information contained within them. The naturalistic approach acknowledges the biases and attitudes that the stakeholders will bring to the research process and which the researcher brings to bear on the research. In this research the researcher (inquirer) and the stakeholders (inquired) work together. The naturalistic approach emphasises the subjective nature of information and the importance of interpretation. Inquiry is understood to be value-bound (Lincoln and Guba, 1985) which in no way diminishes its usefulness, but rather enhances its potential as a knowledge gathering process.

Having now considered the limitations and benefits of the scientific (positivistic) and naturalistic approaches to the research it is now appropriate to outline in more detail the approach taken.

3.2.2 A tailor-made approach

Patton (1990) considered that different research methods are appropriate for different situations. In his opinion the issue is not whether one has adhered to the "prescribed canons of either scientific method or naturalistic method" (p.39) but rather, whether sensible choices of method have been made according to the purpose of the research and the questions being investigated. There is not only considerable support for tailor-made research approaches (Laughlin, 1981; Feyerabend, 1975; Reichardt and Rallis, 1994) but also implicit recommendations for researchers to avoid an "either/or" mentality to research design.

This research incorporates elements of both a scientific and a naturalistic approach. It is underpinned by the disciplined and structured nature of a scientific approach and makes extensive use of quantitative data. At the same time there is a concern to complement this approach with the descriptive aspects of a naturalistic approach thus providing qualitative information to enrich the quantitative findings.

The research design relies on the structured aspects of a scientific approach. It is helpful to return to this approach and to use the process defined by Abdel-khalik and Ajinka (1979) as a basis to outline the approach taken by the researcher.

Abdel-khalik and Ajinkya (1979) suggested a sequence of steps that would result in an ideal scientific research design. Whilst they acknowledged a place for more naturalistic approaches to accounting research, a scientific approach was considered to be the ideal. The following steps show the influence of scientific method on this research. The words in brackets and italics indicate the parts in the Abdel-khalik and Ajinkya's sequence that are not relevant to this research. The resulting steps reflect the influence of a more naturalistic approach:

- Identify the research problem;

- Develop the conceptual and theoretical structure (*including causal links and chains);*
- Operationalize the theoretical constructs (*and relationships and state the specific hypotheses to be tested)*;
- Construct the research design;
- Implement this design by sampling and gathering data;
- Analyse observations *(in order to test hypotheses)*;
- Evaluate the results; and
- Consider and specify limitations and constraints (Abdel-khalik and Ajinka, 1979, p.10)

Abdel-khalik and Ajinkya (1979) noted that few studies follow this demanding sequence completely. The departures from their schedule as identified above are made as a positive choice, as a way to incorporate naturalistic methodology into the research rather than as a failure to meet all the requirements of the scientific method. Measuring company information disclosure cannot be carried out in a precise scientific way. Subjective judgement is an integral part of the evaluation process and influences the selection of items for the disclosure index, the weighting of those items for relative importance, the development of best-practice disclosure criteria and the scoring of each annual report. Marston and Shrives (1991) noted that researchers' subjectivity cannot be completely removed, and considered it is not reasonable to expect that it could be. Patton (1990) claimed that subjectivity is inevitable regardless of the research method used. In this research, effort has been made to minimise the subjectivity and to design and apply the main research tool, the disclosure index, in as objective a way as possible.

The research design for this study has focused on the purpose of the research rather than being restricted by one particular methodology. Laughlin (1981) argued for a "certain liberalisation on methodology" (p.342). He noted that Feyerabend's "anything goes" approach acknowledges the benefits of being liberated from traditional natural or social science methodologies by employing tailor-made methodologies. Miles and Huberman (1984) contended that researchers should be open to a "blend of epistemologies and procedures", thus allowing the research objective to guide the research design, data collection process and data analysis (p.20). This research uses a tailor-made approach which combines quantitative and qualitative approaches.

Morgan and Smircich (1980) stated "...the dichotomy between quantitative (scientific) and qualitative (naturalistic) research methods is a rough and oversimplified one" (p.491). On a more philosophical note, Tomkins and Groves (1983b) advised accountants to keep both sides of the bridge clearly in view in designing their research. The researcher can take a position at some point along the continuum – an interim paradigm (Tomkins and Groves, 1983a).

In this research, quantitative aspects of the research design included the collation of questionnaire data; the comparison of weightings allocated by other researchers and by the stakeholders to indicate the importance of each disclosure item; the scoring of the annual report disclosures, and the reporting of those results by means of numerical tables and statistical analysis. Qualitative aspects included an interview with each member of the stakeholder panel, and the transcription, coding and reporting of those interviews. In addition a number of validation checks were carried out. Verbatim transcripts of the interviews were sent to each interviewee for comment and correction. A pilot study was carried out to test the robustness of the disclosure index and this was sent to the stakeholder panel for validation. Each annual report was scored by the researcher and another accountant and arbitration followed. Final scores from evaluating each annual report were sent to Chief Financial Officers for their feedback and the research process ended with interviews of stakeholders and electricity company representatives to discuss the research findings.

This holistic approach to the research problem required subjective and interpretive analysis – a qualitative approach. The use of a stakeholder panel rather than a large sample survey was considered a more appropriate technique as it enabled qualitative data to be incorporated thus giving breadth and depth to the research and meaning to the numbers written in the questionnaire responses. By this means the researcher was able to gain a better understanding of the issues of concern. As a result, this tailor-made approach supports the interaction of the researcher and the researched to determine the optimum disclosure index. The research process is summarised in Figure 3.1 which identifies both scientific and naturalistic approach aspects as well as the use of quantitative and qualitative data. Such an approach has close parallels with the "middle-range" approach as posited by Laughlin (1995). The next section examines middle-range theory and its significance to this research.

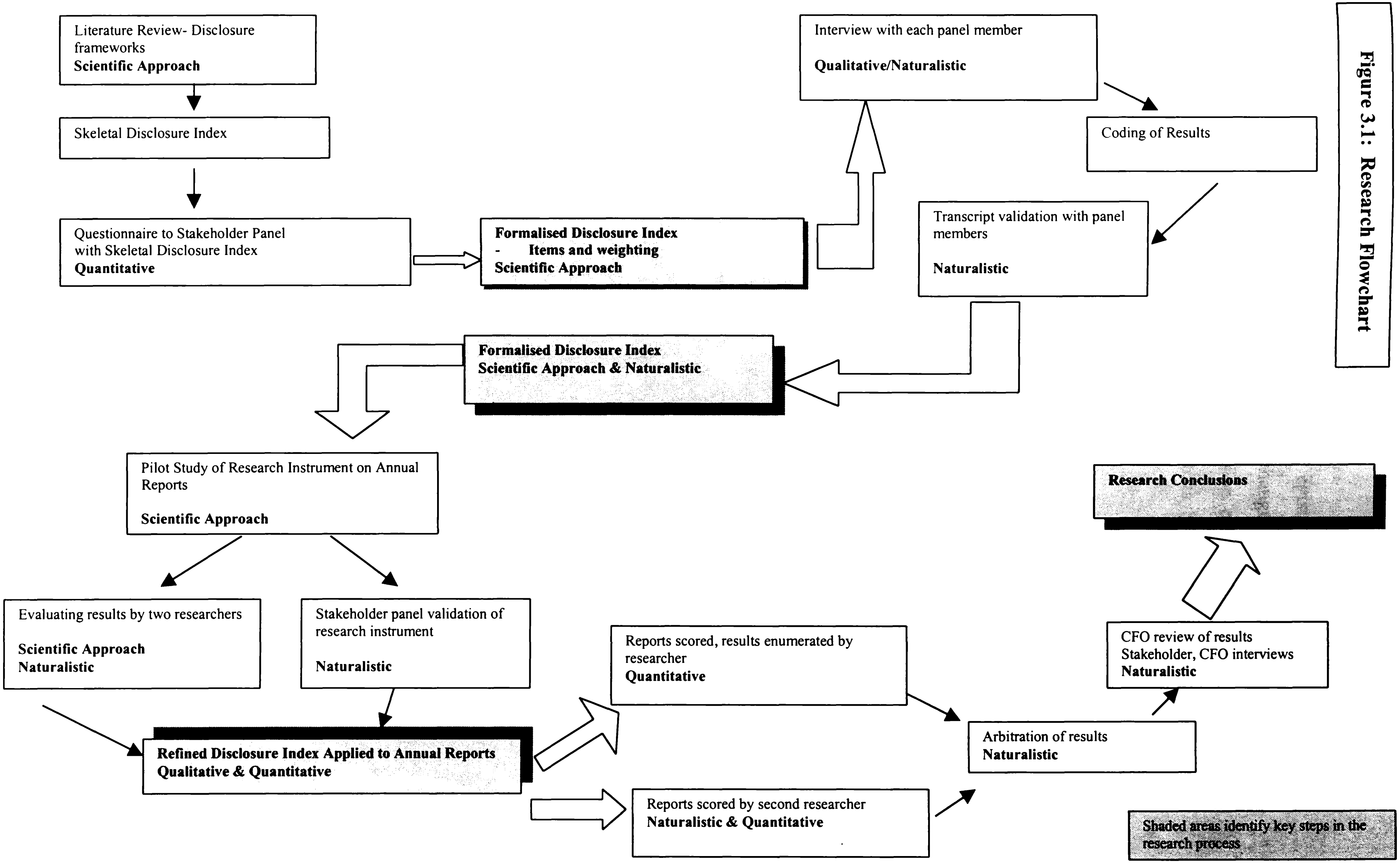


Figure 3.1: Research Flowchart

3.2.3 Middle-range thinking

Laughlin placed choices relating to ontology, epistemology, and methodology into three broad bands – theory, methodology and change. Theory encompasses ontology and epistemology. Change involves a decision on whether the intention of the research is to achieve change in the phenomena being studied. The relationship between these three areas is shown in Table 3.1.

The "fit" of this research into Laughlin's (1995) paradigm is not exact. This research has some elements of scientific method as identified by Laughlin (1995). In respect of "Role of Theory" (ontology and epistemology) and "Nature of Method" (methodology) the research is placed "to the right" of middle-range thinking. Adjustments to the Laughlin model are shown in bold in column 3 of Table 3.1 and provide a summary of theory, methodology and change characteristics as used in this research.

Table 3.1

Laughlin's Middle-range Thinking and the Tailor-made Approach Developed in This Study

	Middle-range Thinking	**Tailor-made Approach**
Theory characteristics		
Ontological belief	"Skeletal" generalizations possible[5]	"Skeletal" generalizations possible
Role of theory	"Skeletal" theory[6] with some broad understanding of relationships	***Definable theory*** with broad understanding of relationships
Methodology characteristics		
Role of observer and human nature belief	Observer important and always part of the process of discovery	Observer important and always part of the process of discovery
Nature of method	Definable approach but subject to refinement in actual situations, invariably qualitative	Definable approach – ***structured, quantitative method as well as qualitative***
Data sought	Longitudinal, case-study based. Heavily descriptive but also analytical	Longitudinal ***and horizontal study***. Heavily descriptive but also analytical
Conclusions derived	Reasonably conclusive tied to "skeletal" theory and empirical richness	Reasonably conclusive tied to "skeletal" theory and empirical richness
Validity criteria	Meanings: researchers + researched	Meanings: researchers + researched
Change characteristics	Medium emphasis open to radical change and maintenance of status quo	Medium emphasis open to radical change and maintenance of status quo

(Source: Adapted from Laughlin (1995, p. 80)

[5] The skeleton metaphor is used by Laughlin (1995) to paint a picture of incompleteness. "Skeletal" generalisations about reality require empirical detail to make them meaningful.
[6] "Skeletal" theory is complemented by empirical detail. The empirical data is the "flesh" on the skeleton.

Middle-range thinking is appropriate to this research for a number of reasons:

- It encourages flexibility and diversity in the research process;
- It holds open the possibility that change may be important;
- It recognises a material reality distinct from the researcher and stakeholder interpretations but at the same time is aware of the influence of bias and perceptions;
- It acknowledges the importance of empirical detail to make the research more meaningful and complete; and
- It incorporates both social and technical aspects of accounting systems in that it identifies accounting as a social practice rather than a context-free phenomenon (Laughlin, 1995, p.81).

Cooper and Sherer (1984) included some of the above aspects in their "political economy" approach to accounting research. Hines (1989) and Dillard (1991) also posited a sociopolitical role for accounting. This focus considers accounting within an economic, social and political environment. Cooper and Sherer (1984) are of the opinion that failure to reflect upon the context in which accounting operates ignores the social value of accounting (annual) reports and leads to an emphasis that favours the interests of shareholders over other groups in society. They suggested that research should include three imperatives: be descriptive, be critical, and be normative (p.219). Such an approach provides a broad framework for analysing annual reports and understanding their role in the economy. It also acknowledges the sociopolitical nature of the whole evaluation process. Cooper and Sherer (1984) emphasized the importance of focusing on the annual report as a whole (rather than just the financial statements) and called for recognition of the domination of monopoly companies. Both these positions are endorsed in this research.

All three aspects - descriptive, critical, and normative – are encompassed within this research. The "descriptive" element forms a substantial part of the research and involves measuring and reporting on stakeholder needs as well as on the extent and quality of annual report disclosures. Naturalistic approaches assist the description by enriching the information. Recognition of the public interest concept encompasses the "critical" requirement. The intention is to "design corporate reports which may lead to a fundamental improvement in social welfare" (Cooper and Sherer, 1984, p.208). "Being normative" is reflected in the model for best disclosure practice. In addition, Cooper and Sherer (1984) pointed out that all research is normative in the sense that it is shaped by the researcher's value judgements.

3.2.4 Summary and Conclusion

Although the distinction is somewhat simplistic, Morgan (1983) considered that the scientific approach produces one kind of knowledge and that other research paradigms are equally important and generate other kinds of knowledge. This research seeks to be descriptive, critical and then normative. The approach used incorporates a number of elements of the scientific approach and complements these with aspects of the naturalistic approach using subjective processes and acknowledging the biases, values, knowledge, and traditions of the researcher and the stakeholder group. Therefore the ontological, epistemological and methodological positions are generally encompassed within Laughlin's (1995) middle-range thinking. This approach overcomes some of the inadequacies of a scientific approach and provides the researcher with sufficient flexibility to accommodate some aspects of a naturalistic approach, in particular a reflection of the needs of users of annual report information. For this research, sound empirical understanding is necessary, enriched by qualitative insights and critical reflections within a normative (accountability) framework that proposes better disclosure practice.

Methodological assumptions indicate the research methods that are appropriate for gathering valid evidence (Chua, 1986). The second part of the chapter describes the research method.

3.3 METHOD

This research uses a variety of research methods chosen because of their relevance to the purpose of the research. This second part of the chapter is arranged as follows:

3.3.1 Research Preparation Process

3.3.2 Research Design

3.3.3 Triangulation

3.3.4 Summary and Conclusion

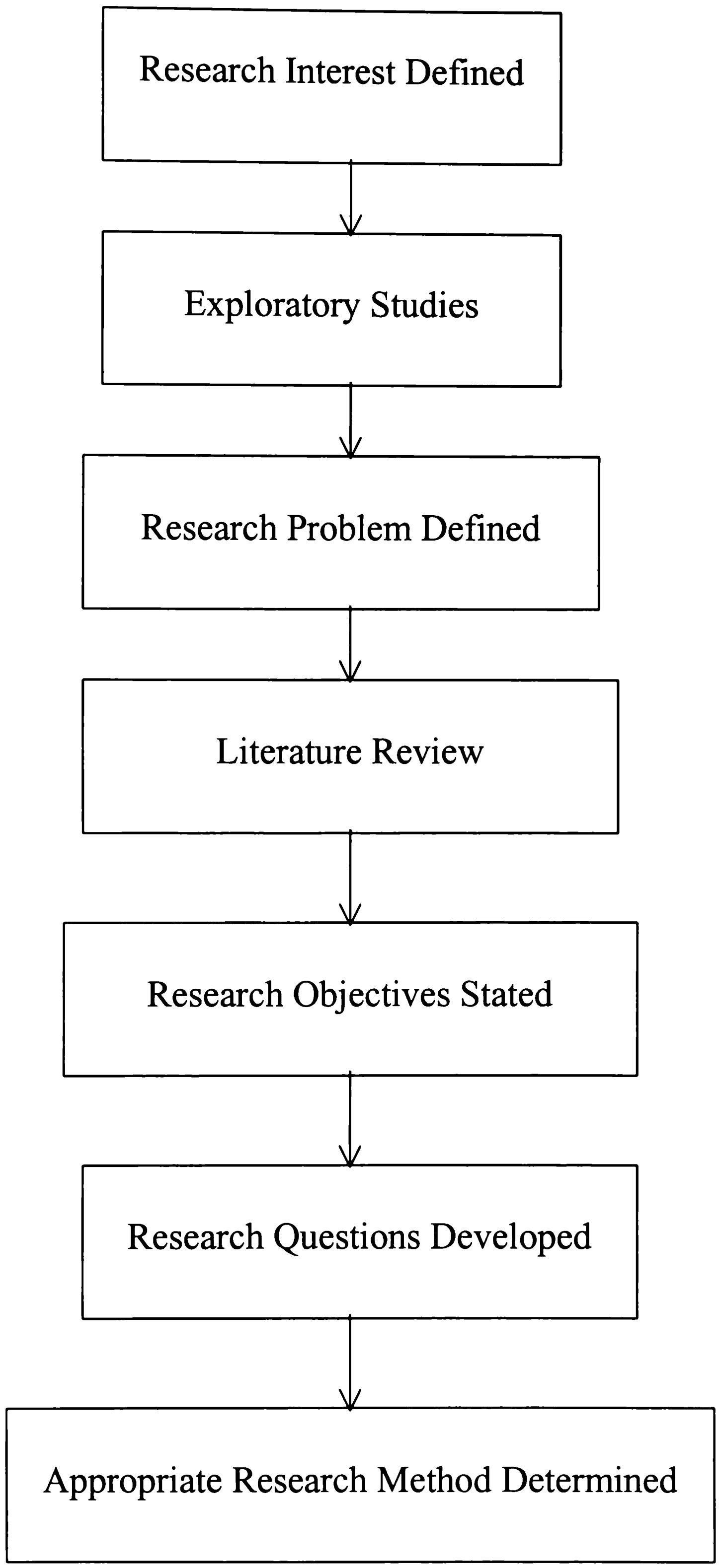
Section 3.3.1 describes each stage of the research preparation process. This description is summarised in a flow diagram (Figure 3.2). Section 3.3.2 details the stages involved in the research design and also includes a flow diagram (Figure 3.3). The chapter concludes with some comments on triangulation and a summary of this method section.

3.3.1 Research preparation process

The research preparation process is summarised in Figure 3.2 and described in this section.

Figure 3.2

Flow of the Research Preparation Process



Research Interest Defined

As the researcher has an interest in external financial reporting, consideration was given to an appropriate industry on which to focus the research. It was decided that a monopoly industry such as the electricity industry would be most appropriate. At that time there were no Electricity (Information Disclosure) Regulations and retail distribution companies were cross-subsidising business activities. The need for more accountability was evident and the annual report was considered to be the most suitable document for discharging that accountability.

Exploratory Studies and Research Problem Defined

With the corporatisation of the electricity retail and distribution industry sectors, entities became accountable to shareholders rather than to customers / electors. This resulted in a change in the objectives of financial reporting and in the financial reporting itself as the focus moved from providing a service to ensuring profits for owners. The preparation for this research began with exploratory studies that investigated the change in financial reporting. Three separate studies were undertaken. The first involved an analysis of the changes in the annual reports and financial statements of five major electric power boards / companies over a period of seven accounting periods, 1988-1994 (pre- and post- corporatisation). This was essentially a comparison of accounting policies and key financial and efficiency ratios over that period. The second study involved an analysis of the annual reports of 37 electricity retail distribution companies for the year 1996-1997. The emphasis of this study was on information disclosed in the Statement of Financial Performance, and the extent to which segmental reporting was being used. The third study involved a financial analyst who is also an author of an accounting text that focuses on appropriate disclosure of financial information. The financial analyst carried out a detailed analysis of the published financial statements of three electricity companies and confirmed that disclosure levels were less than optimal for a monopoly industry. The exploratory study therefore led to the definition of the Problem Statement:

> It is contended that because of the monopoly nature of the electricity lines business and the developing role of competition in the retail sector, the annual report disclosure requirements

of the Companies Act 1993 and the Financial Reporting Act 1993 do not fulfil an adequate accountability role for those sectors of the industry.

Literature Review

A comprehensive review of the literature was carried out in order to gather information on the design and use of disclosure indices as a research tool. From this review a list of potential items for the proposed disclosure index was drawn up.

Research Objectives and Research Questions

The exploratory study and the literature review led to the development of two key research objectives:

- To develop a disclosure index, from an accountability perspective, for assessing the extent and quality of information disclosure in the annual reports of New Zealand electricity retail and distribution companies, and to incorporate, within the index, a model of best-practice reporting; and
- To apply the disclosure index to the 1999 annual reports of New Zealand electricity retail and distribution companies with a view to making recommendations for future reporting.

The process of developing the research questions resulted from defining the research problem and specifying the objectives. The following questions were used to guide the research design, data collection process and data analysis:

1. What is meant by accountability in the retail and distribution sectors of the NZ electricity industry?
2. What information do stakeholders consider should be disclosed in the annual reports of electricity retail and distribution companies?
3. Are some information items more important than others?
4. Are the information needs of stakeholders being met?
5. How can "extent" of annual report disclosure be measured?
6. Should "quality" of disclosure be assessed as well as "extent" of disclosure? If so, how?
7. What is "best practice" disclosure for electricity companies?

Appropriate Research Method Determined

This preparatory work enabled an appropriate research method to be determined and this is described in the following section.

3.3.2 Research design

Following the initial preparation phase, the research was developed in three stages as outlined in Figure 3.3.

Stage I involved the first steps in the development of the disclosure index. Full details of this process together with justifications for the methods chosen are given in chapter 6, "Construction of the Disclosure Index". This section provides a summary only. The main emphasis of the section is on the processes put in place to ensure the validity and reliability of the research. Stage I sought to collect both quantitative and qualitative information using methods appropriate to the research questions.

Data Collection

A list of potential items for the draft (skeletal) disclosure index was drawn up from the extant literature and discussions with relevant parties. The data collection process followed. The list of potential disclosure items was developed into a questionnaire which was sent to a purposively-selected panel of experts who gave feedback on the items they thought should be disclosed in the annual reports of electricity retail and distribution companies from an accountability perspective. The aim was to determine the type of information sought by different users of annual reports. This method was chosen in preference to mailing a questionnaire to a large random sample as the intention was to obtain an enriched study rather than to make generalizations from the sample to the larger population. In addition, a large random sample is likely to have a low response rate due to the specialised knowledge required and time-consuming nature of the questions. The panel members also weighted the items for level of importance using a five point rating scale. This quantitative data was supplemented by qualitative data obtained by individually interviewing each panel member. These were standardized open-ended interviews in which respondents stated why they had rated each disclosure item as they had. This gave an opportunity for participants to express their opinion or to clarify items in the questionnaire.

Figure 3.3
Summary of Research Stages

Preparation

- Exploratory studies
- Research problem defined
- Literature review
- Research objectives stated
- Research questions developed
- Appropriate research method determined

Stage I

Development of Disclosure Index

Data Collection
- List of potential items
- Selection of panel of experts
- Questionnaire
- Interviews

Data Analysis
- Collate questionnaires
- Transcribe interview tapes
- Validate interviews
- Validate weightings
- List of items and weightings

Stage II

Development of Disclosure Index and Feedback
- Develop quality criteria
- Pilot test
- Report to stakeholders
- Final index

Stage III

Evaluation
- Evaluate and score annual reports
  - researcher
  - accountant
- Validation by CFOs
- Results
- Final Interviews
- Conclusions

Data Analysis

The data analysis process involved transcription of the interview tapes and collation of the questionnaire responses. The following validity checks were in place for each of these processes:

- Each panel member was sent a copy of the verbatim transcription of their interview and given an opportunity to comment on its validity.
- The weightings given by the panel of stakeholders were collated and a mean weighting was calculated for each disclosure item. This mean was then compared with the weightings given to each item by other researchers. Comments from the stakeholder interviews were used to justify any significant differences in the weightings and to enrich the numbers. Within the context of "middle-range thinking" (Laughlin, 1995) the interviews added "flesh to the skeleton".

The data collection and analysis processes lead to the development of a Draft Index of disclosure items and relevant weightings for level of importance to be used in the index.

Development of Disclosure Index and Feedback

Stage II involved further development of the disclosure index. This development related to criteria for assessing the quality of the disclosures. The degree of detail required for "best practice" disclosure of each information item was identified and stated as a benchmark against which to score quality of disclosure. Disclosures in each annual report were compared to this benchmark and awarded an appropriate score. Validation was an essential part of this process and involved the following steps:

- A pilot study was carried out on 6 annual reports. The annual report disclosures were scored by the researcher and by another academic experienced in assessing annual report disclosures.
- The results of the pilot study were sent to the panel of stakeholders for further feedback.

The index was finalised and made ready for stage III, the evaluation process.

Evaluation Process

The most important validity check for this stage of the research related to the scoring of disclosure levels in each annual report. It was important that this process be consistent, careful and thorough. Precise and unambiguous benchmark criteria assisted in this. A detailed score sheet was drawn up. Each annual report was read and the page number reference for each disclosure item was recorded. Each item was then checked carefully against the disclosure criteria and a score allocated. This process was carried out methodically and meticulously by the researcher and repeated independently by another accountant familiar with annual report disclosures. An arbitration process followed. Both parties met after groups of three reports had been scored and comparisons were made of scores given for every item in the index. Where there were differences, the disclosure item and the best practice criteria were read again and considerable discussion followed until a consensus was reached. This process was conscientiously carried out for each and every annual report and for each and every disclosure item. The intention was to provide a check on any bias that could influence the evaluation and to ensure credibility and consistency in the scoring.

There is support in the literature for validating scores in this way. Lincoln and Guba (1985) asserted that reliability is typically demonstrated by replication. Because the annual report remains constant over time there is no obstacle to repeating the evaluation process. Christenson (1980) also noted that a result can be considered to be objective if another observer using the same technique obtains the same results. Marston and Shrives (1991) considered that index scores awarded to companies can be considered to be reliable if results can be replicated by another researcher.

Final validation was obtained by sending the results to each Chief Financial Officer for approval and feedback.

Results

The final part of Stage III involved careful analysis of the recorded annual report scores and drawing conclusions from those results. This analysis had the following aims:

1. To compare the mean score obtained for each information item of the disclosure index with the level of importance of that item as identified by the mean weighting given to the item by the stakeholder panel.

2. To report the scores given to each information category for each company and the final score for the annual report as a whole for each company. These scores are arranged as follows:
   - Highest to lowest scores for the annual report as a whole;
   - Public companies compared to trust/council-owned companies; and
   - Large companies compared to other companies.

3. To identify and report the strengths and weaknesses of the three highest scoring and the three lowest scoring annual reports.

4. To examine any significant difference in the scores of large companies and the other electricity companies, and between public companies and trust-held/council-owned companies for the different information categories. The analysis included the Anderson-Darling normality test, and the Kruskal-Wallis test. Most parametric statistical techniques assume that the data comes from a normal distribution with the same variance in the population. An Anderson-Darling normality test was performed for each comparative group to examine whether or not the observations rejected these assumptions. All information categories rejected either one or both of these assumptions. Therefore the non-parametric Kruskal-Wallis test was performed for all information categories.

5. To examine and discuss the above findings.

Interviews with stakeholders and electricity company representatives

In order to complete the research process, further feedback was sought from stakeholders and electricity company Chief Financial Officers. This involved a second round of interviews in which opinions were sought on key findings from the analysis of the results.

An essential element in the research process has been the need to ensure that the subjectivity involved is reduced as far as possible and to incorporate validation checks at key points. This has involved using triangulation method as outlined in the next section.

3.3.3 Triangulation

Triangulation involves multiple methods of observation. It is a strategy for reducing bias in the data and is an essential requirement for ensuring that evaluation results have credibility. Triangulation has been used in this research. Denzin (1978) identified four basic types of triangulation:

- data triangulation which is the use of a variety of data sources in a study;
- investigator triangulation which involves different evaluators;
- theory triangulation in which multiple perspectives are used to interpret the data; and
- methodological triangulation which involves a number of methods in the research process.

In this research, data triangulation involved the use of quantitative and supporting qualitative data - having interviews to support and extend the questionnaire data. Investigator triangulation was also used. Two people independently scored each annual report. The research included elements of scientific and naturalistic research methods so methodological triangulation was also present.

Patton (1990) noted a fifth type of triangulation - analytical triangulation - in which those who are studied review the findings. Analytical triangulation was also present in this research. The results of the annual report evaluations were sent to Chief Financial Officers for validation, and issues arising from the analysis of the results were discussed with stakeholders and with electricity company representatives.

3.3.4 Summary and Conclusion

The research process was a structured one following through from research objectives and questions to appropriate methods for data collection, analysis and evaluation. Data was collected by means of a questionnaire sent to stakeholders represented by a panel of experts, interviews with stakeholders, and analysis and evaluation of each electricity retail and distribution company's annual report. The data collection, analysis and evaluation processes were systematic, careful and thoughtful.

Judgement was an integral part of the whole process, particularly the evaluation process. Therefore, clearly defined criteria against which to make these judgements were put in place. The criteria for assessing the quality of disclosures were carefully applied but even so judgements were subjective as were the criteria themselves. The selection of the disclosure items and the opinions of stakeholders reflected in the weighting for importance of each disclosure item were also subjective. Accordingly, neither the data collection nor the evaluation process could be said to be value-free or completely objective. Nevertheless, careful validity checks were made throughout the research process to ensure the reliability of the results.

It is unlikely that another researcher would produce exactly the same disclosure index, but given the detailed and structured nature of the evaluation process, another researcher is more likely to obtain the same score in applying the index to corporate annual reports. However, the credibility of the results will be proven by their acceptance as reasonable by those most interested in and knowledgeable about electricity company annual reporting, especially preparers and board members. The credibility of the results will also be proven by the ability of the findings to motivate change in the annual reporting of information by electricity retail and distribution companies.

CHAPTER FOUR

ACCOUNTABILITY

4.1 INTRODUCTION

This chapter describes the theoretical framework of accountability within which the research is set. This theoretical framework influenced the development of the disclosure index to measure the extent and quality of information presented in electricity company annual reports.

The Corporate Report (1975) states that: "Public accountability...arises from the custodial role played in the community by economic entities" (para. 1.3). Corporatisation of the electricity industry has resulted in the transfer of ownership and management of resources (particularly electricity transmission and distribution networks) from local communities to electricity companies. Command over those resources imposes an accountability requirement - a system of checks and balances (Briloff, 1986). As these companies increase their power and influence in society their accountability becomes more important. This chapter addresses that accountability by discussing four aspects in the following sections:

- 4.2 What is Accountability?
- 4.3 Accountability to Whom?
- 4.4 Discharging Accountability
- 4.5 Accountability, Regulation, and Trust.

Section 4.2 considers what accountability is by considering stewardship and agency relationships. The monopoly nature of the electricity lines businesses extends accountability beyond the commonly cited two party relationship. Section 4.3 focuses on the parties to whom accountability is owed in a general sense and then considers the retail and distribution sectors of the New Zealand electricity industry in particular.

Having posited that the electricity industry has wide accountability obligations, section 4.4 considers how that accountability is discharged. It addresses some aspects of information provision – financial and non-financial information; decision-usefulness and accountability; qualitative characteristics; elements of accountability; performance measures; and the annual report.

Although the New Zealand economy is driven by free market policies, some sectors of the electricity industry are subject to regulation. Accountability can be imposed by regulation but if that regulation is not forthcoming, then accountability depends on a relationship between management and stakeholders that encompasses trust. A discussion on these concepts is included in section 4.5 and a summary and conclusion end the chapter.

4.2 WHAT IS ACCOUNTABILITY?

Jackson (1982) considered that accountability "involves explaining or justifying what has been done, what is being done and what has been planned....Thus, one party is accountable to another in the sense that one of the parties has a right to call upon the other to give an account of his activities" (p.220). A number of authors (Benston, 1982; Tricker, 1983; Stewart, 1984; Sherman, 1988; Van Peursem, 1990; Gray and Jenkins, 1993; Guthrie,1993; Demeritte, 1995) support this concept of accountability. If one party has a right to an account, the other party conversely has a duty to give that account.

The Australian Conceptual Framework (Statement of Accounting Concepts (SAC2)) defines accountability as "...the responsibility to provide information to enable users to make informed judgements about the performance, financial position, financing and investing, and compliance of the reporting entity" (para. 5).[1] Mulgan (1997) stated that accountability is the responsibility of one person to another as the result of a relationship in which one person (or group) entrusts another with the performance of certain duties. In return the person (group) responsible for performance, is responsible to the person (group) to whom the duty is performed. Such "relational responsibility" is the foundation of a company structure (p.26).

Tricker (1983) included this "relational responsibility" as part of overall corporate governance and identified a conceptual relationship between corporate governance

[1] The Australian Conceptual Framework is examined here as it is a more detailed document than the New Zealand Statement of Concepts and therefore discusses the concepts in greater depth.

and accountability. As an element of corporate governance, accountability is the process by which the company is held accountable for the outcomes of its decisions and actions. In this stewardship sense, accountability ensures that delegated power is not abused.

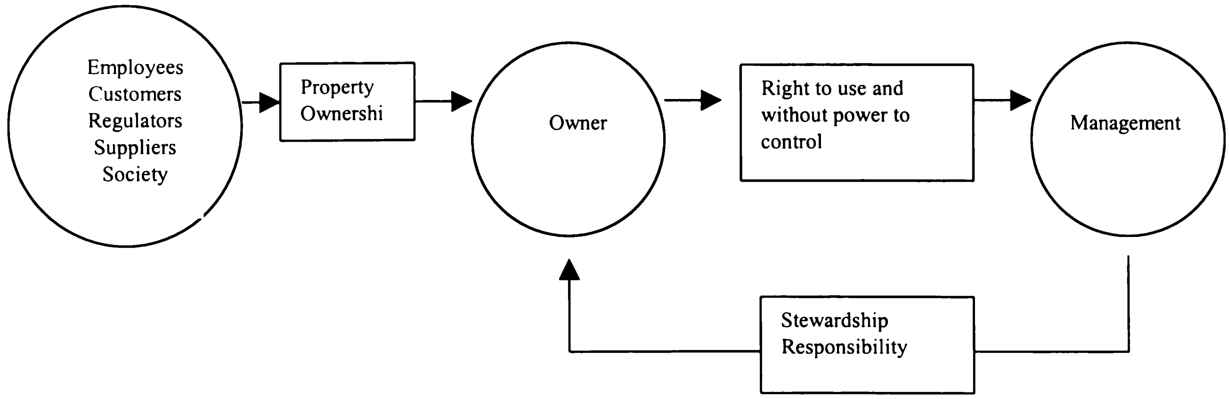
Accountability therefore encompasses a responsibility to "give an account" to those to whom one is accountable. It stems from the stewardship responsibilities of company managers and the impact companies have on society. The next section addresses the issue: to whom are companies, and the electricity and distribution companies in particular, accountable? Who has the right to information about the company?

4.3 ACCOUNTABILITY TO WHOM?

The separation of ownership and management in a company structure has traditionally imposed a stewardship relationship between owners (shareholders) and managers. Managers are stewards of the resources provided to them by owners and a stewardship relationship begins when the manager accepts the resources and related responsibilities (Gray and Jenkins, 1993). The steward (manager) is required to account for the resources entrusted to him or her. This relationship is demonstrated in "The "Classical Stewardship" model adapted from Chen (1975) and shown in Figure 4.1.

Figure 4.1

The Classical Stewardship Concept



Adapted from Chen (1975, p.538)

Within this stewardship model, the owners control the business and managers are held responsible solely for the owners' interests.

The stewardship function may be explained in an agency relationship in which there is a contractual relationship between two parties: the Agent and the Principal (Lee, Staunton and Eddie, 1999). The Principal passes control of resources to the Agent on the basis of a contractual relationship. This contractual relationship requires the Agent to provide information to the Principal in respect of the custody and use of the owner's resources (Perks, 1993; Sherer and Kent, 1983). The Agent is thus the accountor, that is, the one required to give an account. In a company structure this is generally acknowledged to be the directors. The Principal is the accountee and the one to whom the account is given, for example, the shareholders. Accountability is necessary because of the separation that exists between the functions of the Principal and the Agent. The accountability relationship provides the control linkage.

There is some difficulty in extending the Principal-Agent model to this research as the intention is to acknowledge multiple Principals (stakeholders), a concept that does not fit easily into the model. In this respect, Shankman (1999) noted that agency and stakeholder views of the firm are often described as polar opposites.[2] According to Sherer and Kent (1983) and Gray et al. (1995) the scope of accountability is broader than the relationship between owners (Principal) and managers (Agent). It extends to all parties affected by the activities of the organisation. In their view managers are agents for each set of participants and for the participants as a whole. Therefore, accountability has a broader perspective than the shareholder/manager relationship of the stewardship function (Beaver, 1981; Mitroff, 1983). Chen (1975) stated that management is not merely the steward of the owners but also of employers, customers and society as a whole. In her opinion, large businesses are "public stewards" (p.539). This relationship is shown in Figure 4.2 which depicts the interests of the owner group and other stakeholders as of equal importance.

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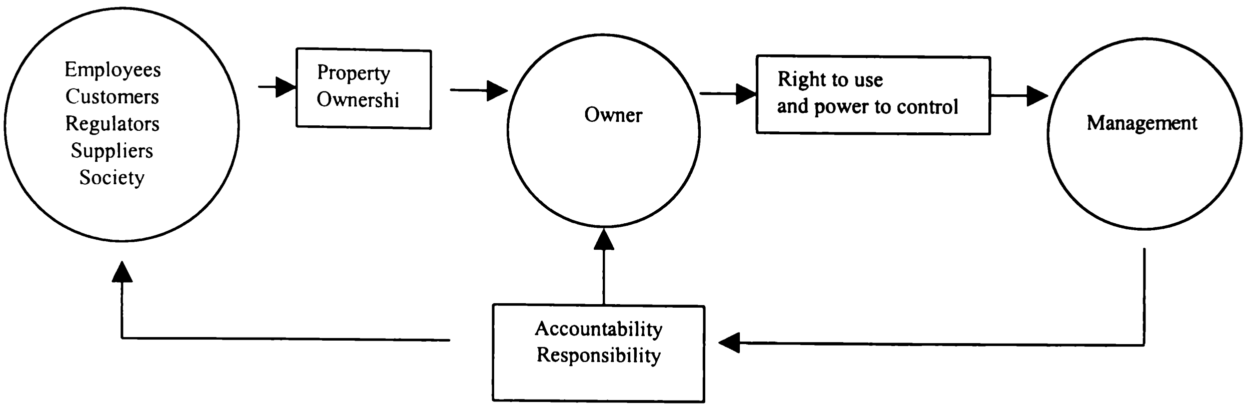
[2] It should be noted that Shankman (1999) argued that agency theory must include a recognition of stakeholders in order to overcome "the institutionalized bias in the marketplace towards the interest of shareholders over other stakeholders" (p.330).

Figure 4.2
The Managerial Accountability Concept



Adapted from Chen (1975, p.539)

This research recognises the responsibility of corporate management to give an account to a broad group of stakeholders. By law, companies have an obligation to report (give an account) to shareholders on their activities (stewardship). However, because of the impact that companies have on society in an economic, social, political and financial sense, this obligation is extended to the broader "responsibility to report to society". This view is endorsed by Gray et al. (1987) who considered that an economic entity has a responsibility to report publicly if the results of its activities have significant economic implications for the community as a whole. The view is also supported by the New Zealand Statement of Concepts for General Purpose Financial Reporting which state that the responsibility to report publicly is broader than the legal obligation and arises from the role played in the community by the reporting entity (cl.2.2). This establishes accountability responsibilities to user groups other than shareholders.

Anshen (1980) stated that society gives the corporation permission to operate, thereby contributing to the viability of the organisation. Therefore, the corporation is accountable to society for the way in which it operates. This research posits that "society" includes anyone who has an interest in or is affected by the decisions of the reporting entity - lenders, shareholders, employees, consumers, suppliers, government, regulatory authorities, communities and the public generally. This list encompasses those with a direct and an indirect interest in the company. The group are collectively referred to as "stakeholders of the electricity retail and distribution companies". Tower (1993) used the term "stakeholders" to describe the accountee groups considered to have a right to corporate data. This extends the concept of stakeholders beyond those with whom the company has a contractual relationship and acknowledges that all individuals are in some way stakeholders in the firm's activities (Freeman, 1984) and that the interests of those stakeholders are "of intrinsic value" (Shankman, 1999, p.323).

Mulgan (1997) noted that SAC2[3] acknowledges this by suggesting the following groups of users of general purpose reports. Possible examples of each group are included in brackets:

- Resource providers (includes employees, lenders, creditors, suppliers, investors, taxpayers, parliament);
- Recipients of goods and services (includes customers, ratepayers, taxpayers);
- Parties performing a review or oversight function (includes media, environmental groups, consumer' advocates, analysts, auditors).[4]

In addition to the above groups of general purpose report users, Coy, Dixon, Buchanan and Tower (1997) identified comparable organisations - sibling organisations/ competitors - as another user group. In acknowledging that companies are accountable to all these groups of users SAC2 promotes the stakeholder concept of accountability that is adopted in this research.

Parker (1982) identified annual report users as a large, heterogeneous audience engaged in a wide variety of activities. It is interesting to note that Perry (1999) reported that KPMG have acknowledged this wider audience in their model annual report for 1999 which moves beyond the shareholder focus to recognise a range of stakeholders including employees, customers and local communities.

Accordingly, the accountability of the retail and distribution sectors of the electricity

[3] SAC2 is the Australian Statement of Accounting Concepts.
[4]The New Zealand Statement of Concepts identifies three groups: resource providers; representatives of groups such as voters or shareholders; analysts and media (cl.2.3).

industry is considered in relation to a wide range of groups in society who effect or are affected by the company's performance. It acknowledges accountability to the three categories of stakeholders as identified by Rubenstein (1986):

- Input stakeholders – owners, employees, suppliers and creditors;
- Output stakeholders - consumers, distributors and users of the company's product; and
- Environment stakeholders - the community, local and central government, competitors and other interested parties.

It is contended that accountability to output and environment stakeholders, particularly consumers, users, and the local community, is proportionately more important if the product produced is essential to life, and there is no alternative supply. This applies particularly to the lines segment of the electricity distribution industry. A continuous supply of electricity is critical to the survival of industry, communities, and society as we know it. There is currently only one network in each community to deliver this commodity.

Each lines business is commonly described as a "natural monopoly". This has been achieved because of certain privileges which have been offered in the past to these businesses by the government and by the community in which each business operates. These privileges have included the granting of exclusive franchise areas, the ability to rate property owners to provide an assured income stream, and the availability of Government-guaranteed finance at favourable rates. While these special privileges have now been terminated, the fact that they existed for over 60 years has given power companies an economic advantage over any prospective new market entrants. This ensures that the monopoly position will endure for many years.

In these circumstances it is contended that consumers and the community have a right to demand a higher level of accountability than other industries where the barriers to new entrants are not as high, or where the product is not so critical to modern life as it exists.

It should also be noted that the majority of electricity company owners in New Zealand are trusts. The capital beneficiaries under these trusts are the councils, electors, or electricity consumers in the area that was served by the trust when it was set up. These beneficiaries are important stakeholders, particularly as they are likely to have dual roles, as customers and as owners. How power companies account to these stakeholders is therefore very important.

Because of their role in the community, electricity companies have a broad accountability in respect of those to whom they report. This has a direct influence on the reporting approach of the entity, emphasising the need to ensure corporate accountability by broadening the scope of the information provided to the public. Only then can corporate accountability be properly discharged. The next section considers how this may be done.

4.4 DISCHARGING ACCOUNTABILITY

Accountability is manifested through appropriate information being made available to stakeholders. This section considers how accountability is discharged by examining the following aspects of information disclosure:

- Financial and non-financial information;
- Accountability versus decision-usefulness;
- Qualitative characteristics;
- Elements of accountability; and
- Performance measures.

Finally there is a discussion on the role of the annual report in drawing these components together.

4.4.1 Financial and non-financial information

In considering the elements of accountability Day and Klein (1987) stated that accountability "is all about the construction of an agreed language or currency of discourse about conduct and performance, and the criteria that should be used in assessing them" (p.2). From a corporate entity point of view, the "agreed language" has been the language of accounting, and accountability has traditionally been discharged through the publication of financial reports. Such reports are the main means of communicating financial information about the company to third parties and so are fundamental to discharging accountability to these stakeholders (Walker, 1988; Firth 1979). Miah (1990) noted that financial accountability is discharged when an entity reports in such a manner that financial viability is revealed, the costs of providing services are disclosed and the efficiency and effectiveness of operations can be assessed. This reflects the legal requirement for companies to provide audited financial statements to shareholders on an annual basis.

However, accountability requires more than just financial information. It includes non-financial information and the evaluation of that information. According to Stewart (1984) financial language is important to accountability, but if it is the only language, the basis of accountability will be limited. Gray et al. (1987) agreed and described accountability as the, "onus, requirement, or responsibility to provide an account (by no means only a financial account) or reckoning of the actions for which one is held responsible" (p.2). In their opinion accountability is being liable to be called upon to account for that for which one is answerable within a wider context than the financial statements in the annual report.

In similar vein other researchers (Ramanathan, 1985; Miah, 1988, 1991; Wallman, 1996; Hughes, 2000) have argued that non-financial information is necessary for stakeholders to evaluate the performance of an entity. Such information enhances the usefulness of corporate annual reports.

The New Zealand Statement of Concepts acknowledges the need to extend the accountability of companies beyond the traditional role of providing a **financial** account to stakeholders: ...*As the transactions and events being reported may have both financial and non-financial effects, general-purpose financial reports may contain both financial and non-financial information* (cl.1.5).

In summary, information – both financial and non-financial – is needed in order to discharge accountability. Information is also used for decision making. Should one of these roles be more important than the other when considering what should be disclosed in an annual report? The next section considers this question.

4.4.2 Accountability versus decision usefulness

Belkaoui (1983) expressed a commonly held view when he stated that the primary function of corporate reports is to provide useful information to assist decision making. More recently, others (Ijiri, 1983; Roberts and Scapens, 1985; Williams, 1987; Porter 1990; Tower, 1993; Coy, 1995) have argued that an accountability framework is superior to a decision usefulness one.

Ijiri (1983) noted that, in an accountability-based framework, the objective is to provide a system of information flow between the accountor and the accountee. The accountability paradigm thus has two essential aspects:

- the provision of information; and
- the accountee group.

The first aspect acknowledges the fundamental responsibility of companies to account for their performance and position through the provision of information (Mulgan, 1997). Under an accountability paradigm corporate reports would provide more comprehensive information. This would include a description of the organisation and its participants, the identification of objectives and targets, the provision of relevant information to monitor progress towards those objectives and targets (Sherer and Kent, 1983) as well as a range of performance measures and greater emphasis on future prospects. The second aspect evolves from the accountability function of corporate reports as described at the beginning of this chapter. It acknowledges the need to report to a number of "accountee groups…or even the entire society" (Porter, 1990, p.51). The accountability paradigm is thus a broad one.

The decision usefulness paradigm is based on an assumption that the purpose of corporate reports is to assist users in making decisions about investing in or financing the reporting entity (NZ Statement of Concepts, cl.3.1(c)). Therefore, the emphasis is generally on providing information to investors to support economic decisions. The decision usefulness approach implies that only information relevant to this decision making process should be included in corporate annual reports. Such an approach "is based on a concept of markets, and assumes resources will be allocated more efficiently when rational economic decisions are facilitated" (Coy, Fischer and

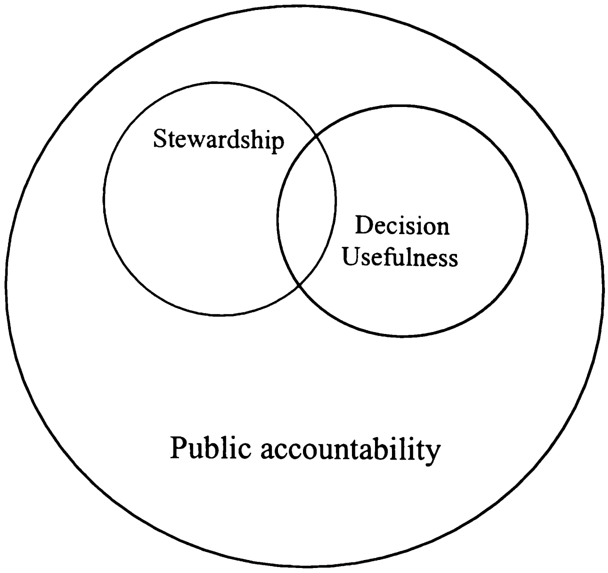
Gordon, 2000, p.4)

The accountability paradigm adopted for the purpose of this research is based on the premise that accountability reports would be more comprehensive and meet the needs of a wider user group than decision-based reports. Tower (1993) considered that an accountability-based framework is concerned with the interests of both the accountee and the accountor and that the objective of achieving fairness for both is not a requirement of a decision-based system. In discussing the concept of accountability Stanton (1997) noted that fairness is an inherent property of accountability. The principle of fairness is important for ensuring equity among stakeholder groups. It acknowledges that annual report information must meet the needs of all users, not just those who have primarily economic decisions to make about the reporting entity (Coy et al., 2000). This was a further consideration in adopting the accountability focus for the research, and forms the basis of a call for the provision of more information than is currently provided in the corporate reports of New Zealand electricity retail and distribution companies.

Because the focus of the research is on the corporate report as a whole and therefore on financial and non-financial information, the decision-usefulness objective becomes embodied within the accountability framework to some extent. However, it is not the primary focus in determining the information needs of users. As Mulgan (1997) noted: "...the process of reporting is matched by a complementary process of information-seeking and investigation on the part of those in authority to whom accountability is owed" (p.27). This dual decision-making and accountability role is supported by Jones (1992) who stated that "if the accountee was entirely passive, accountability would be an empty notion" (p.260). Accountability therefore implies some purpose which must inevitably lead to a decision. Coy et al. (2000) also considered the dual roles of annual report information. In a slightly different approach they postulated that information has a decision usefulness and a stewardship role. Both these roles are encompassed within an accountability paradigm. Coy et al. (2000) demonstrated this relationship in the following diagram which summarizes Ijiri's (1983) concept of an accountability, stewardship framework and a decision-making framework.

Figure 4.3

Public Accountability



Hypothesized relationships between stewardship, decision usefulness, and public accountability (Coy et al., 2000, p.3).

The significance of the diagram is that it emphasises the importance of the accountability role of information.

The NZ Statement of Concepts separates accountability from decision usefulness and states that financial reporting has two roles. The first relates to accountability: *financial reports should assist users to assess the reporting entity's financial and service performance, financial position, cash flows and compliance* (cl.3.1(a)(b)). The second is an informative role: *providing information to assist users in making decisions about providing resources or doing business with the reporting entity* (cl.3.1(c)). However, the Statement of Concepts also recognises the link between decision usefulness and accountability, as shown in Figure 4.3, and suggests that general purpose reports assist companies in discharging accountability by providing useful information for decision making (cl.3.1).

To be useful in meeting the objectives of financial reporting – both the accountability role and the decision making role – information needs to have certain qualitative characteristics. The next section describes those characteristics and their relevance to this research.

4.4.3 Qualitative characteristics

Accountability involves a focus on information. The usefulness of information depends on its quality. In this research, usefulness is used in the context of discharging accountability requirements. One of the aims is to measure the quality (usefulness) of the information disclosed in the annual reports of electricity retail and distribution companies.

The NZ Statement of Concepts confirms that the quality of the information provided in financial reports determines the usefulness of those reports to users (cl.4.1). It identifies four characteristics by which quality can be measured: reliability, relevance, understandability, and comparability. Information is reliable when it is free from material error or bias. It is not possible in this research to evaluate the reliability of the information disclosed in the corporate reports. Therefore, in the context of this research, the analysis of quality of information disclosed in the annual reports of New Zealand electricity retail and distribution companies is mainly dependent upon the characteristics of relevance, comparability, and understandability.

Relevance is important because it encompasses feedback and predictive value as well as timeliness. With regard to this research it is contended that information about the general development of the business, feedback about past predictions, and discussion of the future economic environment are a necessary part of discharging accountability. Feedback information is closely related to accountability. It enables users to assess how well management has performed by comparing expectations and achievements (Henderson and Peirson, 1995). The Australian Statement of Concepts (SAC3) defines relevance as: *the quality of financial information...which enables users to assess the rendering of accountability by preparers* (para. 5).

Completeness of information also affects it relevance and is related to the degree of detail given. In this research the evaluation of the quality of information disclosures is concerned with the degree of detail in each disclosure item.

Relevance encompasses another aspect of information – timeliness. This is the time that elapses between the end of the financial year and the publication of the annual report. Substantial delays reduce the relevance of the information to users. The Financial Reporting Act 1993, requires publication within five months of balance date. Sherer and Kent (1983) reported that the effectiveness of annual reports in discharging accountability is limited as they are not usually available until several months after the end of the financial year and therefore the information they contain is dated. A timeliness check was included as part of this research. The cumulative total of availability to the public of the 1998-99 annual report was as follows:

At three months	6%
At four months	61%
At five months	85%
At six months	97%
At seven months	100%

Therefore, 85% of the annual reports were received within the statutory requirement. The remaining 15% were all trust-held companies.

Comparability is important to enable users to compare reports of different entities and reports of the same entity over a period of time in order to identify similarities, differences and trends. The disclosure index developed for the electricity companies annual report analysis places considerable importance on the need to report trends in performance measures. Comparability implies the need to inform users of the policies employed in preparing the financial statements, changes in those policies, and the effects of those changes (Statement of Concepts cl.4.15). The information required by users to assess the discharge of accountability obligations should be presented in a common way to facilitate electricity industry comparisons. Currently, as very few companies include performance measures, intra- and inter-company comparisons are extremely limited. The best-practice model, developed in this research, specifies appropriate performance measures to be included in the annual report and recognises the interdependence of the above qualitative characteristics of relevance, completeness, and comparability.

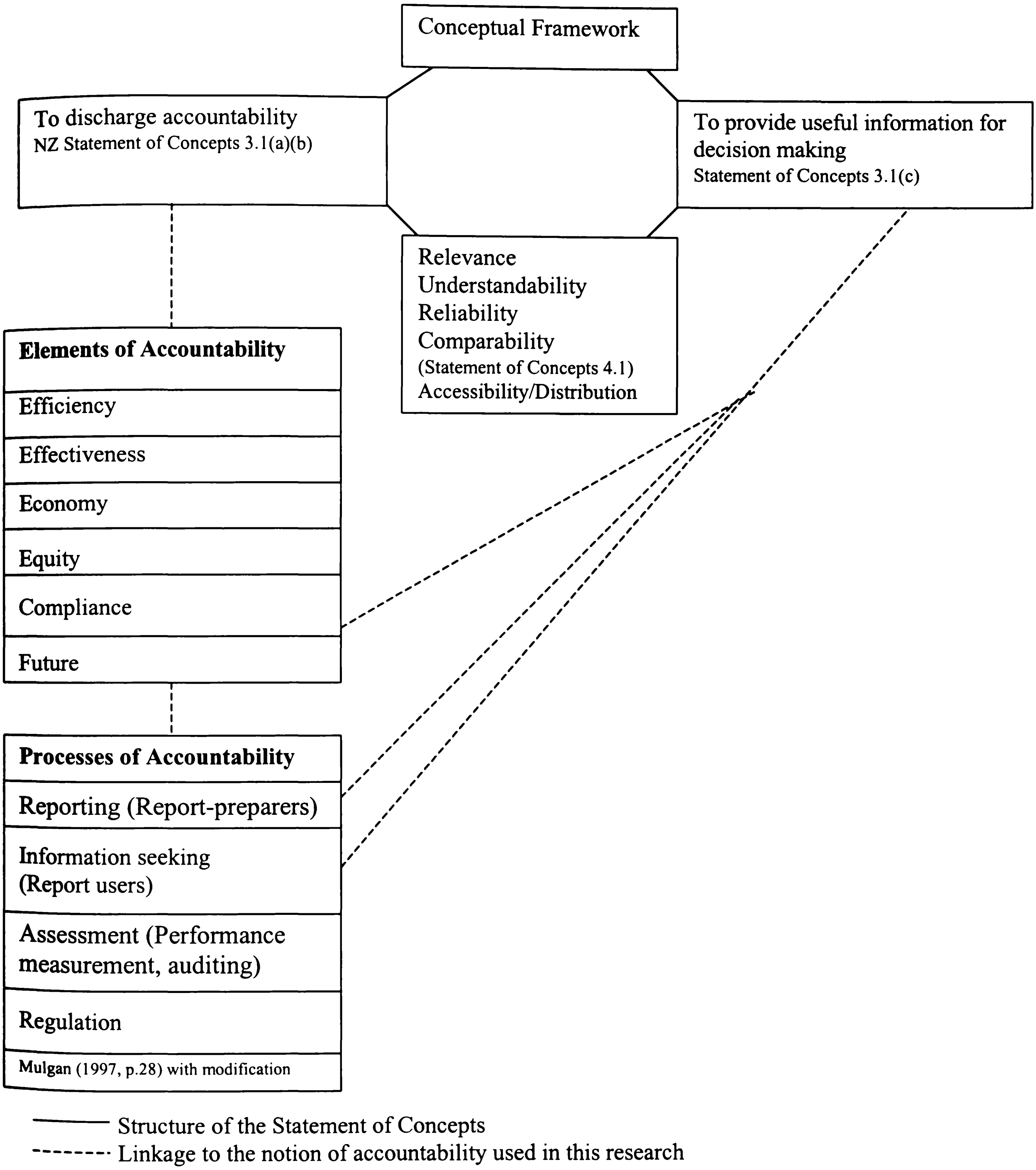
Understandability relates to the way in which the information is presented. Information should be presented in such a way that users can comprehend its meaning. Preparing information in the most understandable manner makes it useful to a wider range of users. An illustration of this characteristic is demonstrated in the 1999 Annual

Report of Westpower Ltd. Westpower reported a loss on sale of their energy and generation business of $36.8m. The assets were shown to have a book value of $39m and the report stated that the sale price of the assets was $40m. It is not clear, from the information given in the annual report, how the loss arose.

Coy et al. (2000) extended the concept of qualitative characteristics of financial information to include qualitative characteristics of annual reports as a whole. They identified two additional qualitative characteristics which they considered are important in the context of an accountability approach - accessibility and distribution. Accessibility refers to how easily stakeholders can access an entity's annual report. Coy et al. noted that this aspect is more important from an accountability perspective than from a decision usefulness one, as stakeholders, in the broad sense, are less likely to make a deliberate attempt to obtain an annual report than those who require an annual report for making specific decisions. Accessibility includes making stakeholders aware that an annual report is available. Distribution implies that "the greater the number and spread of reports distributed among the stakeholder groups, the better" (Coy et al., 2000, p.22). This aspect is particularly important in the electricity industry as a number of trust-held line companies have a broad accountability to large numbers of consumers who, as beneficiaries rather than stakeholders, are not covered by statutory obligations for annual report distribution.

In order to effect accountability the annual report should be accessible, widely distributed and communicate both financial and non-financial information that is relevant, complete, comparable and understandable. The NZ Statement of Concepts provides a foundation for this requirement as is shown in Figure 4.4 which demonstrates the links between the Statement of Concepts and the concept of accountability as used in this research.

Figure 4.4
Accountability and the Conceptual Framework



Adapted from Lee at al. (1999, p.5)

Figure 4.4 includes the objectives of general purpose financial reports and the qualitative characteristics essential to ensure that information is useful. It shows the relationship between accountability and decision making and includes four components of accountability as defined by Mulgan (1997). Mulgan considers that accountability consists of four processes:

Reporting;
Information-seeking;
Oversight; and
Supervision.

"Reporting" relates to the concept of "giving an account to those to whom one is responsible or accountable" (p.27). In his opinion this process is complemented by the second process - information-seeking by those to whom accountability is owed. The third process is one of oversight by means of performance assessment and audit. The final process is a supervisory role, defined for the purpose of this research as regulations under which electricity retail and distribution companies operate. Accountability can thus be discharged by providing useful information to interested parties and strengthened by assessment and regulation (Lee et al., 1999).

Figure 4.4 also identifies a number of informational aspects that together form the basis for discharging accountability and evaluating information disclosure requirements for electricity company annual reports. These are often referred to as the elements of accountability and are described in the next section.

4.4.4 Elements of accountability

Accountability comprises a number of elements sometimes referred to as tenets. The Australian SAC2 indicates that in order to fulfill the accountability function financial reports need to contain information applicable in assessing **economy**, **efficiency** and **effectiveness** of resource use. SAC2 therefore identifies three elements of accountability: economy, efficiency and effectiveness. The meanings of these terms adopted here are:

Efficiency refers to the extent to which outputs are maximised from a given set of inputs, or inputs are minimised for a given level and quality of output (Perks, 1993).

Effectiveness refers to the extent to which the objectives of operations, activities and/or programmes are achieved (AARF, 1990).

Economy refers to the extent to which resources of a given quality are acquired at the lowest acquisition cost (Perks, 1993).

Coy (1995) identified a further three fundamental elements in respect of annual report disclosures appropriate to an accountability framework – compliance, future, and equity. The meaning of these terms in respect of their relevance to the annual reports of New Zealand electricity retail and distribution companies is as follows:

Compliance refers to information to meet the reporting requirements of Generally Accepted Accounting Practice (GAAP).

Future refers to information that assists users in making predictions about the future. This could include an assessment of the entity's prospects based on assumptions about future economic conditions and courses of action (NZ Statement of Concepts cl.3.8).

There are two aspects to **equity**: equity in terms of fair distribution of wealth and equity in terms of access to information. Coy (1995) adopts the term equity to mean disclosure of information about disadvantaged, minority or under-represented groups. In terms of this research, equity refers to equal access to relevant information for all stakeholder groups (Cooper and Keim, 1983; Lev, 1988; Stanton, 1997). It also refers to equity in respect of the information provided. Scott (1941) expressed this concept: "Accounting must afford equitable treatment of all interests actually and potentially involved in the financial situations covered by accounts" (p.342). This equity-orientation and its related "public interest" criteria for disclosure choices is one of the underlying factors in the call for increased accountability in the retail and distribution sectors of the electricity industry through annual report disclosures. Effective corporate disclosure requires that a company respond to all users' information needs not just the needs of shareholders. Only then is accountability discharged. This research considers the annual report to be the most appropriate means of communicating this information. The equity element of accountability relates to equal opportunity to access the information and to all stakeholders having their information needs recognised.

It is important that a disclosure index designed to assess the level of information disclosed in annual reports from an accountability perspective be grounded in these elements: efficiency, effectiveness, economy, compliance, and future. This aspect is addressed in chapter six.

The accountability paradigm recognises the need to assess the efficiency and effectiveness of the organisation. This involves a variety of financial and non-financial performance measures. A performance measure is a comparison between two or more numbers in order to show how effectively or efficiently the entity is operating. The next section considers the role of performance measures in discharging accountability.

4.4.5 Performance measures

Within an accountability paradigm, corporate reports are oriented not only towards the stewardship function of the accountor but also towards measurement of performance (Ijiri, 1983). Gray (1991) also identified a relationship between performance measurement and accountability. In his opinion performance measures, particularly those that report on effectiveness, are a means of discharging accountability. Similarly, Thomas (1997) referred to the use of performance measures as "results-based accountability" (p.29).

Financial targets and measures are an important aspect of measuring performance. However, the electricity company disclosure index emphasises discharging accountability though the provision of wider performance information than the traditional financial accounting information. This is particularly important in the electricity industry where improvements in financial performance measures may be achieved at the expense of standards of service. Therefore, non-financial performance measures must also be included. Hughes (2000) noted that providing such measures moves annual reporting from "financial" to "business" reporting as recommended by the Jenkins Committee (AICPA, 1994).[5] The aim is to include performance measures which can be useful to a broad range of users. Boyne and Law (1991) noted that multiple measures of performance are particularly needed when there are multiple publics.

Davies and Shellard (1997) identified the following areas in which performance measures discharge accountability requirements:

- Measuring financial performance;
- Indicating the volume of output;
- Assessing the quality of service; and
- Evaluating the efficiency and effectiveness of service provision.

These groupings acknowledge the holistic nature of performance reporting in that no single measure can give an adequate picture of company performance. A number of performance measures, both financial and non-financial, are needed to ensure accountability, and to provide a benchmark for comparison with other organisations.

Each of these areas is addressed in the electricity industry annual reporting disclosure index which includes a range of performance measures relating to financial performance, pricing, efficiency and the market.

The elements of accountability include measuring the performance of the entity in relation to pre-determined targets in order to measure the efficiency and effectiveness of the organization in meeting its objectives. The following table relates Davies and Shellard's (1997) performance measure groupings to those performance measures suggested in this research as a necessary part of discharging accountability requirements in the electricity retail and distribution sectors. The groupings are shown in bold on the left of the table and their relevance to the information items in the disclosure index is shown on the right.

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[5] Improving Business Reporting - A Customer Focus. The Jenkins Committee was the Special Committee on Financial Reporting of the American Institute of Certified Public Accountants.

Table 4.1
Performance measures: NZ electricity retail and distribution companies

Davies and Shellard (1997) Groupings	Disclosure Index Items
Measuring financial performance:	Debt to equity Funding cost cover Net tangible assets per share EBIT/Average net funds employed Dividend per share Return on assets Return on equity
Volume of output:	Average consumption kWh per customer Number of customers per sector Change in market share in major areas of activity
Quality of service:	Total number of interruptions Average total duration of interruptions of supply per customer Average no. of interruptions of supply per customer No. of faults per 100 km of prescribed voltage line
Efficiency and effectiveness:	Total costs per kilometre Total costs per customer Average domestic power bill Pricing information Overhead costs per retail customer Accounting rate of profit

The accuracy and validity of the performance measures are key issues. Van Peursem, Pratt and Lawrence (1995) warned that performance measures must not be considered in isolation. In order to obtain a full understanding of the organisation a number of indicators are needed. Van Peursem et al. also drew attention to the lack of precision and reliability of some measures. However, they concluded that a wide range of performance measures can serve a useful purpose in creating a holistic impression of the organisation.

Inter- and intra-company comparisons (between companies and successive years of each company) must also be treated with caution. In the year ended March 1999 most electricity companies have reported higher than normal profits because of extraordinary gains from the sale of either retail or lines businesses as required by the

Electricity Reform Act 1998. Other comparisons also need to be made with caution. For example, in comparing return on equity it is necessary to consider whether the company has revalued its assets. Upward revaluations produce a higher equity base.

Performance measures, including non-profit measures, strengthen and enhance accountability. Perry (1999) stated that the new focus for business reporting will include a broader range of performance measures in accordance with the intention of recognising a range of stakeholders.

Having considered that provision of information is the basis for discharging accountability and then having described and discussed various aspects of this information process, the final section on discharging accountability examines the most appropriate format for presenting those information requirements. The role of the annual report is outlined below.

4.4.6 The annual report

This research focuses on the annual report as a vehicle for discharging accountability. This approach is supported by a number of researchers (Chenhall and Juchau, 1976; Winfield, 1978; Chang and Most, 1985; Boyne and Law, 1991). Boyne and Law (1991) asserted that the annual report is the only comprehensive statement of stewardship available to the public. Similarly Marston and Shrives (1991) concluded that the annual report is the most comprehensive document available to the public and is therefore the "main disclosure vehicle" (p.196). Others (Cyert and Ijiri, 1974; Hossain and Adams, 1995; Cooke, 1991), considered that the annual report (including financial statements) is the single most important source of information to shareholders, prospective investors and other user groups. Similarly other researchers (Singhvi and Desai, 1971; Firer and Meth, 1986; Cooke, 1991; Botosan, 1997) identified the annual report as an important form of corporate disclosure. Chang and Most (1981) reported that New Zealand stakeholders exhibit a strong belief in the importance of corporate reports as a source of information. Studies carried out in Australia by Anderson (1981) supported this view. Anderson ascertained that corporate annual reports were considered to be the most important source of information for institutional investors.[6] However, this focus on the annual report does not imply that it is the only means of communicating information to stakeholders. Gray et al. (1995), identified press releases, special purpose reports and informal meetings with financial analysts and corporate executives as other communication methods but supported the contention that the annual report is a "significant element in the overall disclosure process" principally because it is the most widely available information about public companies (p.45). Therefore, while acknowledging that there are other ways in which companies can transmit information to interested parties, this research limits the assessment of the extent and quality of information disclosures to the corporate annual report.

In summary, three main areas of accountability have been considered: what accountability is, to whom companies are accountable, and how accountability is discharged. Figure 4.6 summarises the discussion by presenting the components of an accountability framework for NZ electricity retail and distribution companies annual reporting. It includes the elements of accountability, the accountability process and the objectives of annual reporting. Input from these aspects of accountability forms the framework of the annual reporting model used in this research.

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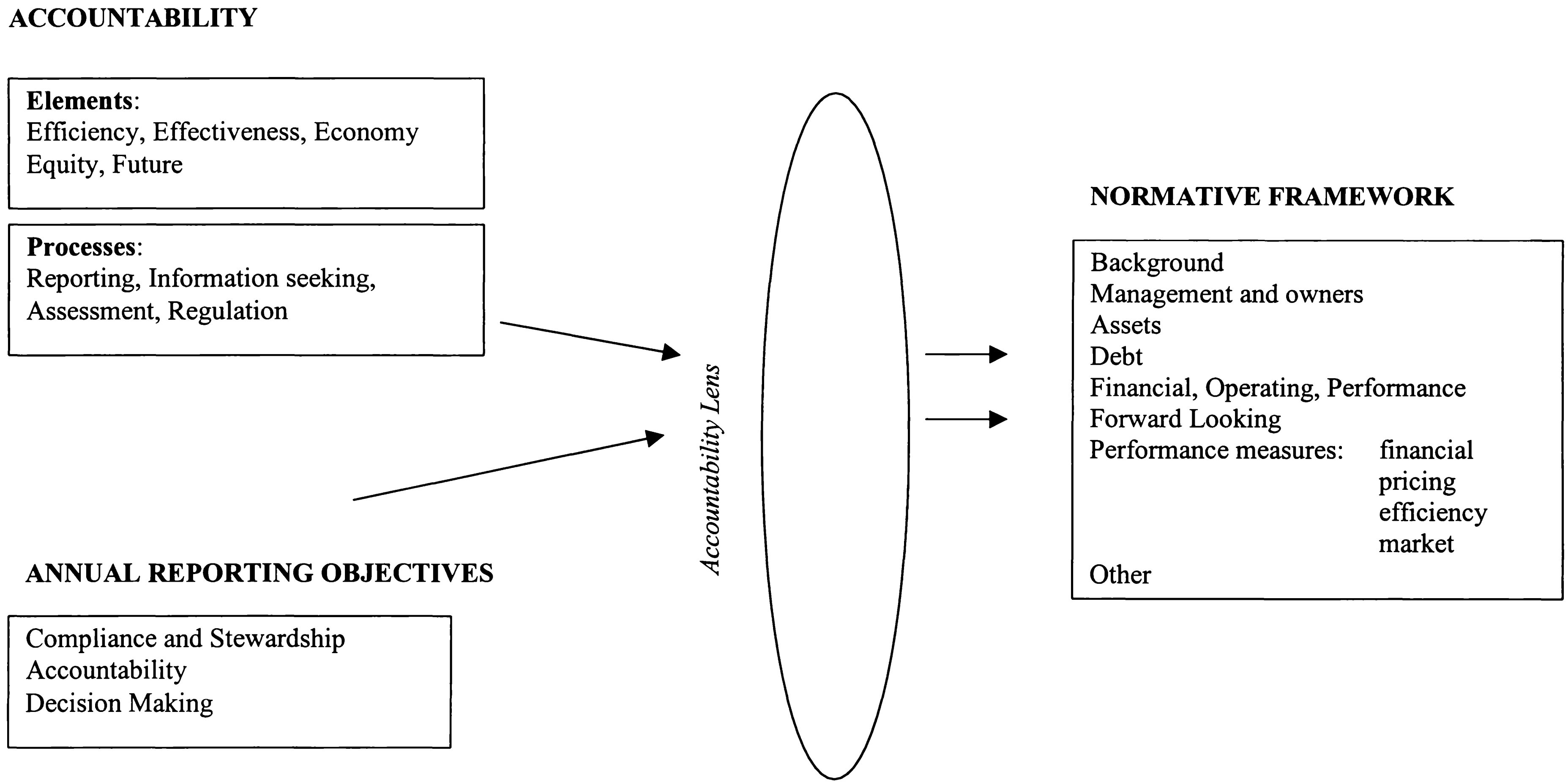
[6]Other researchers (Lee and Tweedie, 1976; Chenhall and Juchau, 1977; Lapsley, 1993), found evidence that users often have little understanding of the meaning of information they receive and therefore economic actions result through advice from third party users. This may have implications for the degree to which annual reports are used by a heterogeneous audience (Parker, 1982). However, although the annual report is not the only source of information about the performance of a company, it is considered to be an influential source because of its wide coverage and availability. It provides a wide range of summary information in a single source on a routine basis.

Figure 4.5
Components of the Normative Accountability Framework for New Zealand Electricity Retail and Distribution Companies Annual Reporting



Adapted from: Coy (1995 p.10)

The fourth aspect of accountability – the role of regulation in imposing accountability on the electricity retail and distribution companies is described below.

4.5 ACCOUNTABILITY, REGULATION, AND TRUST

4.5.1 Regulation

Because the entities involved are structured as companies the research is set in an environment of disclosure regulation. Therefore, it is necessary to consider briefly the role of regulation in respect of annual report disclosures. In New Zealand three parties regulate the content and extent of disclosures in company annual reports: the Accounting Standards Review Board, the Institute of Chartered Accountants and the Stock Exchange. The Financial Reporting Act 1993 and the Companies Act 1993 impose legislative requirements. Regulation applies to the mandating of the type of information to be included, the form of presentation, and the regularity with which reports are to be produced. Preparers have a statutory duty to report the activities of the enterprise in a timely and understandable manner (NZ Statement of Concepts cl. 4.4 - 4.8). Regulation, in the form of legally-backed financial reporting standards, aims to ensure that the information does not differ significantly across companies allowing inter-company comparisons to be made. Zund (1983) noted that there are no market incentives that will reward firms for making it easier for investors to make such comparisons. Based on Zund's view, regulation is necessary to ensure effective comparability.[7] This is supported by Cooper and Keim (1983) who posited that in the absence of a perfect market, regulation helps to ensure that information is distributed equitably and efficiently to all users. This research focuses on the annual report as the means of ensuring equal access to information.

New Zealand electricity companies are reporting entities[8] as defined in the Financial Reporting Act 1993. Section 11 of that Act requires the financial statements of all

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[7]On the other hand, Ross (1979) asserted that disclosure regulation inevitably results in costs that exceed benefits and hence disclosure regulation is undesirable. Other researchers have argued that unregulated information markets can produce efficient allocations of accounting information (Benston, 1973; Gonedes and Dopuch, 1974). In order to attract and keep resources, companies would provide adequate and reliable information. Reasoning derived from agency theory supports the expectation that managers will voluntarily disclose information that maximizes the wealth of shareholders.

[8] A reporting entity is defined in the Financial Reporting Act 1993 as an issuer, or a company other than an exempt company (Sec 2 (1)).

reporting entities to comply with Generally Accepted Accounting Practice (GAAP). The Companies Act 1993 (S.208-209) requires that all companies prepare and distribute an annual report to **shareholders**. In addition the Energy Companies Act 1992 (Sec. 44(3)) requires audited financial statements to be delivered to **shareholders** within three months of the end of each financial year.

A number of electricity companies are owned by a trust. The shareholders are therefore the trustees. In these circumstances an annual report may not be distributed if the shareholders (trustees) waive receipt of it. The trust is under no obligation to make the annual report available to the public unless provided for in the Trust Deed. Beneficiaries under the trust are usually customers connected to the network. Therefore, trust ownership of electricity companies is generally synonymous with "public" or "community" ownership. It is a curious anomaly that such companies, if they wished, could be substantially unaccountable to parties, other than trustees, simply by deciding to withhold public distribution of their annual reports.

In order to assess the availability of information and related public accountability, the twenty trust-held companies were surveyed in respect of the following aspects:

- availability of the Trust Deed;
- availability of the corporate annual report;
- appointment of directors; and
- appointment of trustees.

It was difficult to obtain responses from all of the trust-owned companies. Initial contact was by email on the basis that respondents could reply in a simple and timely manner. After a second email message had been sent, eight companies had not responded so a letter was sent to these eight companies requesting a copy of the Trust Deed. Four companies responded. A letter was then sent to the secretary of Energy Trusts of New Zealand seeking assistance in obtaining the relevant information from the remaining four companies. A reply was not received. The following summarises the responses received from the sixteen companies.

Availability of the Trust Deed

The companies that responded indicated that their Trust Deed was available to the public. Copies are available for inspection at the trust office and/or the office of the company. Photocopies may be made but in some cases there is a charge for these ($17.25 and $25 for the two copies obtained by the researcher).

Availability of the corporate annual report

The qualitative characteristics of annual reports as defined by Coy et al. (2000)[9] include accessibility and distribution. From an accountability perspective accessibility and distribution refer to the ability of stakeholders to easily obtain a copy of the annual report. The Trust Deeds do not provide for distribution of the company annual report to the public although three companies stated that it was available on request. Pamphlets with summarised financial statements and performance highlights are distributed to beneficiaries. In interviews with three trust-held companies, Chief Financial Officers stated that the company had received positive feedback on this approach. The company considered that this type of communication was more likely to be read by beneficiaries and was less expensive than producing large numbers of full annual reports. Provided that the full annual report is available to beneficiaries on request then this appears to be a sensible approach. However, there is concern that three companies stated that a full annual report would not be given to a beneficiary. The audited financial statements of the trust (not the company) are available for inspection at the Trust office and/or the office of the company.

Appointment of Directors

The directors are generally appointed by the trustees. In the case of Vector, although all the issued capital of the company is held by the Auckland Consumers' Trust, the majority of the directors are appointed by an Auckland-based law firm.

Appointment of Trustees

Trustees are appointed on a rotational basis by either network-connected customers or those on the electoral roll for the district.

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[9] See section 5.4.3 of this chapter.

One company has a more closed approach. Curriculum vitae of applicants are assessed by an independent consultant and final appointment is made by a selection panel.

The lower level of accountability in trust-held companies compared to public companies or council-owned companies is of some concern. The Report of the Ministerial Inquiry (June 2000) recommended strengthened governance and accountability of trust-owned line companies and noted that such companies should be subject to normal accountability mechanisms as for other custodians of public funds (p.44).

Some public accountability is imposed by Sec. 6 of the Electricity (Information Disclosure) Regulations 1999 which require every line owner to publish and publicly disclose financial statements for that financial year in respect of the lines business activities. These must be prepared in accordance with GAAP and disclose specific information as stated in the regulations. "Publicly disclose" means that on request, companies should post the information to the applicant or make it available for collection (Electricity (Information Disclosure) Regulations 1999 Sec. 2). It would appear that a few trust-held companies are not meeting this requirement. Four trust-held companies initially refused to provide the researcher with a full annual report on the basis that their accountability commitments were to their trustees only. These are small to medium sized companies (average total assets \$62m, average revenue \$26m). The summarised financial statements did not comply with the Information Disclosure Regulations. When the purpose of the research was outlined, three companies sent additional photocopied pages. In one case, the researcher was required to send a letter confirming that the information would be used for research purposes only. It is accepted that the cost of providing all beneficiaries with a copy of the annual report exceeds the benefits. However, it is important that a full annual report be available on request. This concern is explored further in chapter eight.

The accounting literature has highlighted an increasing demand for corporations to provide more financial and non financial information on corporate activities than the minimum necessary to satisfy legislative requirements (Buzby, 1974; Bromwich and

Hopwood, 1983; Porter, 1990). In a study on the usefulness of corporate reports for institutional investors, Anderson (1981) found that at least 72.4% of respondents desired the provision of additional (voluntary) information in annual reports. Although all "reporting entities" must meet minimum disclosure requirements under the Financial Reporting Act 1993, the amount of additional information disclosed in annual reports varies substantially. Companies also have discretion as to the amount of detail they provide in mandatory disclosures. Lang and Lundholm (1996) included reduced information asymmetry as a benefit of improved information disclosure policies. This research is based on an assumption that increased disclosure would enhance accountability to a wide range of stakeholders as well as ensuring equal access to that information.

According to Burggraaff (1983) "there is no reason based in professional expertise to oppose demands for additional disclosure" (p.7). However, preparers are concerned to control what and how information is prepared. The conflict between the objectives of preparers and the needs of stakeholders is considered by Tweedie and Whittington (1990) to be a primary justification for regulation in this area. Parker (1991) also suggested the use of regulation to address disclosure adequacy. Market forces cannot be relied upon to instigate the provision of more comprehensive information. Therefore, regulation may be the only means of obtaining a higher level of communication and transparency. However, it is unlikely that the New Zealand Government will see fit to impose additional annual report disclosure requirements for companies holding monopoly positions or providing essential services. A letter received from the National Party Minister of Energy, Hon. Max Bradford,[10] during the course of the research, implied that data required to be disclosed by the Electricity (Information Disclosure) Regulations provides sufficient insight into the performance of electricity companies. In his opinion the regulations are designed specifically to provide transparency in reporting the performance of the electricity line businesses. However, the Ministry of Economic Development has described the performance of line owners in meeting their information disclosure requirements as "almost without exception, highly unsatisfactory".[11] Similarly the Report of the

[10] 18 August 1998
[11] Electricity (Information Disclosure) Regulations newsletter, No. 16, December 1999, Ministry of Economic Development.

Ministerial Inquiry into Electricity noted that "in spite of the information disclosure regime, which has been in place since 1994, the available information is poor and there has been little meaningful or helpful analysis of distribution companies' performance" (June, 2000, p.25).

On the basis that industry-specific regulation of annual report disclosures is an unlikely possibility, the call for increased disclosure within the easily accessible annual report is positioned within a framework of trust.

4.5.2 Trust

The concept of trust usually sits within the context of behavioural studies. In a management framework such studies have been concerned with interpersonal and organizational trust. However, economic activities are embedded in networks of social relations which involve trust (Granovetter, 1985). Kilpatrick and Lapsley (1996) highlighted the crucial role played by trust in a regulator - regulatee relationship. Therefore, it is appropriate to apply this concept to the New Zealand electricity industry.

Whitener et al. (1998) identified three elements of trust:

- An expectation that the other party will act benevolently;
- An inability to control or force the other party to fulfil this expectation; and
- A level of dependency on the other party.

These elements are present in the electricity company – stakeholder relationship. The intention is that, if there is a gap between what the electricity company stakeholders' panel confirms as user expectations, and what is currently provided in electricity company annual reports, electricity companies will be motivated to improve the level and quality of disclosures in that document. Rather than impose greater controls on the annual reporting of these companies there is an implied trust that they will respond accordingly. Such "trustworthy" behaviour is an acknowledgement of the contribution stakeholders make to the company and invokes a corresponding obligation to reciprocate by providing a benefit in return (Whitener et al., 1998). The annual report is an important means of communication between a company and its stakeholders. Open and complete communication is an essential part of the trust process.

Because of the strategic position electricity companies have in New Zealand, this research calls for a greater amount of information than is currently provided in the corporate annual report. In the absence of regulation, this will require voluntary disclosure, thus complementing annual reporting regulations with considerations of trust. Trust then acts as the control mechanism. This concept acknowledges the broader social context of annual reporting and the "public accountability" aspects of the relationship between electricity companies and their stakeholders. The concept fits within the stewardship core of accountability and encompasses an obligation as well as a sense of co-operation and responsibility.

4.6 SUMMARY AND CONCLUSION

The scope of accountability is broader than that implied by the relationship between managers and owners of the company – it extends to all parties who are affected by the behaviour of the organisation (Sherer and Kent, 1983). This research goes beyond the financial statements as a means of discharging accountability responsibilities. It focuses on the corporate report as a whole and on a broad range of users' information needs. It examines what should be published in the annual reports to meet accountability expectations. Further it implies a trust that management will take the initiative to fulfil these expectations.

Guthrie (1993) noted that the use of the corporate form has made it much more difficult to monitor and evaluate the broad economic and social role of entities in any comprehensive way. However, in spite of this problem such monitoring is particularly important in the absence of a competitive market where reporting becomes the main vehicle for judging a company's performance. The reporting requirements of the Financial Reporting Act 1993 and the Companies Act 1993 focus on a decision making perspective. Feedback from the stakeholder panel used in this research indicates that the information required from that perspective is inadequate when an accountability approach is adopted. It is contended that the requirements of the Companies Act 1993 and the Financial Reporting Act 1993 provide insufficient information for discharging accountability in the retail and distribution sectors of the electricity industry. The Government acknowledged this with the introduction of the Electricity (Information Disclosure) Regulations 1994, 1999 pursuant to Sec.170 of the Electricity Act 1992. These regulations require electricity line companies to "publicly disclose" certain information. This includes publication in the "Gazette" and there is currently a proposal to disclose the information on the Internet. However, this does not mean that the information is widely available to all the stakeholders, and retail companies are exempt from the disclosure regulations.

Over a period of time, reporting and interpretation of the regulations have changed, making comparisons difficult. The concern is to make electricity companies and their activities more transparent by providing sufficient, understandable, and easily accessible financial and non-financial information to stakeholders to allow them to fairly assess performance. The best way of achieving this is through more thorough and comprehensive reporting in the corporate annual report.

CHAPTER FIVE

LITERATURE REVIEW: Disclosure Indices

5.1 INTRODUCTION

Since Cerf's research in 1961, researchers have sought to assess, compare and explain differences in the amount of information disclosed in company annual reports. In order to measure the standard of this disclosure a number of researchers have quantified the level of company annual report disclosure by means of a disclosure index. A significant part of this research involves the development of such an index to measure disclosure of information in the annual reports of NZ electricity retail and distribution companies.

Coy (1995) defines a disclosure index as:

> "...a qualitative-based instrument designed to measure a series of items which, when the scores for the items are aggregated, gives a surrogate score indicative of the level of disclosure in the specific context for which the index was devised" (p.121).

A disclosure index therefore begins with a list of information items which could/should appear in a company's annual report. These items may be weighted for degree of importance and may cover statutory and/or voluntary disclosures. A method of scoring the level of disclosure is then devised resulting in a detailed measurement system which in its entirety forms a disclosure index.

This literature review concentrates on how various disclosure indices have been developed and on the methods used to obtain a score that measures the level of disclosure. To this purpose the review is arranged in the following sections:

5.2 Disclosure Indices

5.3 Assessing Quality of Disclosure

5.4 Scoring Levels of Disclosure

5.5 Summary and Conclusion

As disclosure indices in general have been developed from extant literature, the most appropriate approach to the literature review is to detail the use of disclosure indices in chronological order. This is the basis of section 5.2 which gives details of the various disclosure indices used to measure "extent" of disclosure. "Extent" refers to the number of items disclosed. In this electricity industry research the analysis of annual report disclosure involves both extent and quality of disclosure. Section 5.3 therefore details the different approaches to scoring quality of disclosure. Section 5.4 explains the scoring process used by other researchers. The final section provides a summary and discusses the electricity industry disclosure index and the scoring for levels of information disclosure in relation to methods used by other researchers.

5.2 DISCLOSURE INDICES

The perceived trade-off between costs of additional disclosure – collection, production, dissemination and proprietary costs – and the possible reduction of political costs (government intervention) has resulted in a number of researchers seeking to test the relationship between firm size and the general level of financial information voluntarily disclosed by companies in their annual reports. Other researchers have sought to identify a relationship between various firm-specific variables drawn from agency theory[1] and voluntary disclosure levels. The intention has often been to identify the motivation for the disclosure of voluntary items of information. This research on electricity company annual reports does not attempt to make such causal links. Therefore, the literature review focuses on the actual disclosure indices that have been developed with the purpose of determining a score that indicates a certain level of disclosure. The review describes relevant research over the period 1961 to 2000. It can be seen that, despite the subjectivity involved with obtaining a score for the degree of annual report disclosure, disclosure indices have been widely used for this purpose and the methods have been consistent over time. A summary of methods employed by the various researchers is included in Table 5.1. This table details whether the index is weighted or unweighted, the number of items in the index, the group that allocated the weightings, the purpose of

[1] One way agents (managers) can reduce agency costs is to provide additional information on a voluntary basis. Agency costs as defined by Jensen and Meckling (1976) include monitoring expenditures by principals (shareholders), cost of equity and cost of debt. A number of studies draw comparisons between voluntary disclosure and firm characteristics such as listing status, auditor type, cost of equity capital, debt/equity ratios, number of shareholders, total assets, rates of return.

Table 5.1	LITERATURE REVIEW OF THE USE OF DISCLOSURE INDICES							
	YEAR	W/UW	WEIGHTS	ITEMS	WEIGHT GROUP	PURPOSE	INDEX BASE	QUALITY
Cerf	1961	W	1-4	31	Security analysts	Disclosure and company characteristics	Literature	No
Copeland & Fredericks	1968	UW		6		Common stock disclosures	Researchers	Some
Singhvi & Desai	1971	W	1-4	34	Security analysts	Disclosure and company characteristics	Cerf	No
Baker & Haslam	1973	W	1-5	33	Investors	Information needs of investors	Author	No
Buzby	1975	W	0-4	39	Financial analysts	Disclosure and company characteristics	Literature	Some
Barrett	1977	W &UW	0-4	17	Literature & author	International disclosure	Literature and researcher	Yes
Benjamin & Stanga	1977	W	0-4	79	Financial analysts, Loan officers	Information needs of user groups (2)	Literature	No
Firth	1978	W	1-5	75	Preparers, auditors, users	Information needs preparers, users	Literature	No
Firth	1979	W	1-5	48	Financial analysts	Disclosure and company characteristics	Literature	No
Wiseman	1982	UW		18		Environmental disclosures	Literature	Yes
McNally et al.	1982	W	1-5	41	Financial editors, Stock Exchange members	Disclosure and company characteristics	Literature, financial reports	No
Firer & Meth	1986	W	1-5	49	Financial directors, Investment analysts	Disclosure and investor needs	Literature, financial reports	No
Robbins & Austin	1986	W	anchor 10	27	Bond analysts	Simple v complex measure	Literature	Yes
Chow & Wong-Boren	1987	W & UW	1-7	89	Loan officers	Disclosure and company characteristics	Literature, texts, authorities	No
Wallace	1988	W&UW	0-5	185	Different user groups (6)	Disclosure public companies in Nigeria	Literature	Yes
Cooke	1989	UW		224		Disclosure and company characteristics	Literature, IASC, law, accountants	No
Giroux	1989	UW		57		Public choice theory & disclosure	Government GAAP, practice	Yes
Gray & Haslam	1990	UW		26		Disclosure British universities	CVCP, Government report	No
Tong et al.	1990	W	1-5	25	Financial analysts	Disclosure and company characteristics	Literature, financial analysts	Some
Dixon et al.	1992	W	1-3	43	Literature	NZ university disclosures	Gray & Haslam, NZSA	Yes
Cooke	1992	UW		165		Disclosure and company characteristics	Literature, IASC, law, accountants	No
Adhikari & Tondkar	1992	W & UW	1-5	44	Cross national equitymarket experts	Environmental factors & SE requirements	Literature and SE list requirements	Some
Malone et al.	1993	W	0-2	129	Financial analysts- oil & gas	Disclosure and company characteristics	10-K annual reports	No
Lim & McKinnon	1993	W	1-3	39	Authors and academics	Disclosure and political visibility	Annual Report Handbook AIM	No
Meek et al.	1995	UW		85		Disclosure and company characteristics	Literatuare, SE, EC requirements	No
Tower et al.	1995	W	1-3	43	Authors	Disclosure in NZ Universities	Literature	Yes
Hossain et al.	1995	UW		95		Disclosure and company characteristics	Literature	No
Wallace & Naser	1995	UW		16		Disclosure and company characteristics	Researcher	Yes
Gray et al.	1995	UW		128		International v domestic	Literature, practice, international trends	No
Raffournier	1995	UW		30		Disclosure and company characteristics	4th and 7th EC Directives	No
Zarzeski	1996	W & UW	1-4	52	Literature	Disclosure and culture, market forces	Literature	No
Carson & Simnett	1997	UW		8		Corp gov disclosure & co.characteristics		Some
Botosan	1997	UW		5		Disclosure and cost of equity capital	AICPA, SRI Intern, CICA	Yes
Craig & Diga	1998	UW		530		Commonality of statutory requirement	Stat requirements - 5 ASEAN countries	No

KEY:			
W/UW	Weighted or unweighted index	**PURPOSE**	Why the research was carried out
WEIGHTS	Weightings of importance	**INDEX BASE**	The basis from which the index was derived
ITEMS	No. of items in the index	**QUALITY**	Whether quality of disclosures was measured
WEIGHT GROUP	Those who weighted the items		

the research, the basis on which the index was developed and whether the index measures quality as well as extent of disclosure.

Cerf (1961) carried out empirical research to determine adequacy of disclosure in annual reports. He did this by using an index of 31 information items which he developed by reviewing relevant literature and interviewing security analysts. The items were weighted on a scale of 1 - 4 to indicate their relative importance. Cerf sought to determine if there was any relationship between levels of disclosure and three company characteristics: asset size, number of stockholders and listing status.

Singhvi and Desai (1971) extended the work of Cerf (1961) by adding three more company characteristics to the relational analysis: size of the audit firm, rate of return, and earnings margin. They analysed the annual reports of 155 companies and statistically tested the relationship between level of disclosure and the six company characteristics. Their index of 34 items included financial and non-financial items, and security analysts assigned a weighting to each item on a scale of 1 to 4.

Using an approach similar to Singhvi and Desai (1971), Buzby (1974) developed an index of 39 items of financial and non-financial information to assess disclosure in 88 small and medium sized companies over a one year period. The selection of items for the disclosure index was also based on the needs of financial analysts. In allocating a number from 0 to 4, professional analysts indicated the importance of a given item relative to other items in the list. The analysts took into account the cost factor of the information. The results indicated that many of the items were inadequately disclosed by small companies. In a similar study, Buzby (1975) examined the relationship between levels of disclosure and two company characteristics: company size and company listing status.

In a move away from the agency theory aspect of disclosure, which had dominated the use of disclosure indices as a research tool, Barrett (1976, 1977) refined the work of Cerf (1961), Singhvi and Desai (1971) and Buzby (1975) to quantify both extent and quality of financial disclosures using a weighted index of 17 items. This was a relatively small number of items but the intention was to keep the list compact to minimise the complexity of gathering data from seven countries over a 10 year period. Barrett's (1976, 1977) research, which provides an inter-country comparison of the extent of financial disclosure, extended earlier studies by considering annual reports for more than one year and for more than one country.

Benjamin and Stanga (1977) used a disclosure index of 79 items to compare the perceived informational needs of two groups of primary users of external accounting information: commercial bank loan officers and professional financial analysts. Each group assigned weights of 0 to 4 to items in the disclosure index based on the perceived importance of disclosing those items. The conclusion that the two groups do not seem to value information in the same way acknowledges the subjectivity involved in weighting an index to indicate the relative importance of items. Not only do perceptions of the importance of each item differ between user groups, but the items may mean different things to different members of the user group. In a similar research project, Firth (1978) used various interested parties (preparers of accounts, auditors and users) to weight 75 disclosure items for importance on a scale of 1 to 5. He also found that there were substantial differences between preparers and users and between different users in what they perceived as important.

In a further study, Firth (1979) constructed a list of 48 items, drawn from the literature, that were or could be included in an annual report. He excluded items that had to be disclosed because of statutory regulations and included additional statements such as a Statement of Value Added as recommended by the Corporate Report (1975). Financial analysts weighted the items in terms of importance. The weighted list was then applied to a sample of annual reports for the 1976 year and a disclosure score was calculated for each one. The relationship between firm characteristics and disclosure levels was the focus once again. The aim was to determine the impact of size, stock market listing and auditors on voluntary disclosure in United Kingdom corporate annual reports.

Researchers then began to extend the research carried out in the United Kingdom and the United States to other countries with the intention of determining whether previous determinants of disclosure levels were applicable in other reporting environments. McNally, Eng and Hasseldine (1982) complemented and extended previous studies by examining discretionary disclosure practices in New Zealand and their association with certain corporate characteristics. The index consisted of 41 items of a financial and non-financial nature. As with most of the preceding studies, the research focused on the information needs of investors and therefore the importance weightings of 1 to 5 were assigned by financial editors and stock exchange members.

Firer and Meth (1986) adapted the work of Firth (1979) to design an index relevant to South Africa. Their weighted index related to 49 voluntary disclosures and was investor-related. The items were evaluated for importance on a scale of 1 to 5 by two groups: investment analysts and financial directors. Firer and Meth's (1986) results indicated that preparers of financial statements do not appear to be meeting the needs of investors. The use of financial analysts/editors as a proxy for investors appears to be a limitation of this and other studies. It is possible that individual investors may have different information needs than professional analysts and therefore have a different view of the relevance and importance of some items.

Chow and Wong-Boren (1987) sought to correlate disclosure levels of Mexican companies with a number of firm-specific variables and calculated a weighted and an unweighted score of voluntary financial disclosure practices. Like most previous researchers they concentrated on the importance of items being disclosed and not on the quality of disclosure. Chow and Wong-Boren's index of 89 items was weighted for degrees of importance by loan officers on a scale of 1 to 7. Their finding that almost identical results were obtained using either weighted or unweighted disclosure scores has influenced the research of the 1990s and is frequently stated as a justification for the use of unweighted indices (Marston and Shrives, 1991; Wallace and Naser, 1995; Hossain, Perera and Rahman, 1995; Meek, Roberts and Gray,1995; Gray et al., 1995).

Tong, Kidam and Wah (1990) developed a disclosure index of 25 voluntarily disclosed information items which were weighted for relative importance by financial analysts on a scale of 1 to 5. Their aim was to measure the extent of voluntary disclosure in Malaysian corporate annual reports and relate it to the size of the company and the influence of auditors.

The financial community was certainly perceived to be the predominant, if not the only, interested party in respect of annual report disclosure research from 1961-1986. The focus during this period was on one user group, corporate investors, and most of the weighting for importance was done by surveying the opinions of financial analysts using a 4 or 5 point rating scale. Robbins and Austin (1986) took a different approach to the recognition of the relative importance of the 27 items in their disclosure index. They used an anchor of 10 to reflect the importance of the operating budget. If an item was half as important as the operating budget, analysts allocated a score of 5.

In a move away from a financial analyst focus, Wallace (1988) took another approach and developed not one, but six weighted disclosure indices based on the preferences of chartered accountants, financial analysts, civil servants, other professionals, managers, and investors. This was the first research involving disclosure indices to acknowledge a wider group of stakeholders. Wallace emphasised the "general purpose" nature of financial reports that meet the needs of all users. He included items omitted from some previous indices in which selection of items had depended on the orientation of the user group. Items had been omitted on the basis that they would be irrelevant to investors. Wallace (1988) assessed the extent of financial reporting by a sample of publicly quoted companies in Nigeria over a five year period. His index of 185 items was much larger than any used prior to this date and included voluntary and mandatory disclosure items. The use of an unweighted index was based on the opinion that the number of items of information included in the index was sufficient to even out the differing preferences of the different user groups. Wallace noted that the unweighted index could obscure the different perceptions of importance of the disclosure items so weighted indices were also constructed. The intention was to use the weighted indices to determine disparity between actual disclosure and what external users considered desirable.

Cooke (1989) continued the wider approach used by Wallace (1988) which concentrated on the general purpose nature of financial reports serving the needs of all users. As Cooke's (1989) research was not focused on one particular user group, he therefore decided that weighting did not provide additional benefits. In addition, his research was not limited to financial statements but extended to the entire contents of the annual report. The list of 224 disclosures included statutorily required and voluntary items. The development of a disclosure index for the retail and distribution sectors of the NZ electricity industry emulates the approach taken by Cooke in three respects: evaluating the annual report as a whole; including both voluntary and mandatory items; and not limiting the research to the information needs of one group.

The application of earlier research methods to a range of countries continued through the 1990s. In 1991 and 1992 Cooke extended his earlier studies to examine voluntary disclosures in the annual reports of Japanese companies. In accordance with his "general purpose" annual report assumptions, the unweighted indices consisted of 106 items (1991) and 165 items (1992) in order to capture the information needs of a variety of users.

Wallace, Naser and Mora (1994) and Wallace and Naser (1995) also used an unweighted index in assessing what they called the "comprehensiveness" of mandatory disclosure in corporate annual reports of Spanish firms and firms listed on the Hong Kong Stock Exchange. As with most other research of this kind, the aim was to examine determinants of disclosure levels. The focus on comprehensiveness of disclosure and on mandatory rather than voluntary disclosures both supported and extended the previous research. These appear to be the first studies where the evaluation of disclosure was limited to mandatory items, that is, voluntary disclosures were ignored. Craig and Diga (1998) also focused on mandatory disclosures. They catalogued the nature of disclosure requirements in five ASEAN countries in order to identify common statutory requirements. The resulting list of 530 items was used to test the association between disclosure levels and six company variables including country of origin.

In 1995, Hossain et al. used an unweighted index based on the work of a number of researchers (Firth, 1979; McNally et al., 1982; Chow and Wong-Boren, 1987; Cooke, 1989; Gray et al., 1995) to examine the level of voluntary disclosure by companies listed on the NZ stock exchange and five firm-specific characteristics. In a similar study Raffournier (1995) tested for the presence or absence of annual report voluntary disclosures of Swiss-listed companies using a dichotomous scoring system.

During the 1990s the use of disclosure indices as a research tool was extended into the public sector environment. Gray and Haslam (1990) reviewed external reporting by British universities. They developed an unweighted disclosure index of 26 items. This was based on two studies by the Committee of Vice Chancellors and Principals and relevant Statements of Standard Accounting Practice.

Dixon, Coy and Tower (1991) developed a disclosure index based on that of Gray and Haslam (1990) and various New Zealand accounting promulgations in order to assess the extent of disclosure in New Zealand tertiary education institutions from 1985-1989. The index was further refined by the same authors in 1992. The 43 items were weighted for importance on a 1 to 3 scale based on weightings reported in relevant literature. Later research by Tower, Coy and Dixon (1995) reduced the number of the items in the index to 26.

The public sector research has been quite different from most other research involving a disclosure index as a measurement technique. In seeking to identify a relationship between company-specific characteristics, other researchers have formulated and tested a number of hypotheses. The public sector research of Gray and Haslam (1990) and Dixon et al. (1991) focuses on public accountability and takes a normative approach with a view to improving external reporting in this sector. A similar approach was used by Thomson (1993b) who considered the influences on financial reporting as the nationalised United Kingdom electricity supply industry became privatised. The main focus of her research was to examine changes in accounting policy. However, examining incentives for disclosure levels continued as a research interest. In 1993 Lim and McKinnon considered the effect of the political visibility of public sector statutory authorities on disclosure levels. They developed an index of 39 items based on the Australian Institute of Management's (AIM) disclosure guidelines. Their approach was somewhat different as they classified the items as financial or non-financial and as sensitive or non-sensitive information. The 36 non-sensitive items were weighted for relative importance on a scale 1 to 3.

Some of the more recent research has had a different focus. On the assumption that disclosure levels are influenced by environmental factors, Adhikari and Tondkar (1992) based their research on the studies of Buzby (1975) and Barrett (1976). They investigated the relationship between the stock exchange disclosure requirements of 35 stock exchanges, and environmental factors related to economic and equity market issues in the countries in which each exchange operated. They developed both a weighted and an unweighted score for the 44 disclosure items. The weightings were assigned on the basis of importance to a cross national group of experts in the equity market. The weightings of 1 to 5 were distributed among sub-elements in order to give credit for partial disclosures. The results obtained from both models were largely consistent. As has been typical of most of the research involving disclosure indices, the study focused on the investor group and did not consider the disclosure needs of other users.

In a more specific study, Carson and Simnett (1997) examined the level of corporate governance disclosures in the 1995 annual reports of 473 Australian companies. Eight elements were addressed and these were not weighted for the importance of the disclosure.

Instead of testing for association between levels of disclosure and firm characteristics, Zarzeski (1996) examined the relationship between 52 mandatory and voluntary disclosure items and market and cultural forces across seven countries. The weightings for the disclosure index were based on those used by Adhikari and Tondkar (1992).

Despite these new approaches to disclosure level research, agency theory has still dominated the more recent studies. In order to assess the relationship between a number of company characteristics, including leverage, and voluntary disclosure, Meek et al. (1995) compared annual report disclosures of multi-national corporations from the United States, United Kingdom and Continental Europe. They selected 85 items arranged in three groups: strategic information, non-financial information, and financial information based on the information needs of investors as well as social accountability to other stakeholders. Items were scored dichotomously and the index was unweighted. Botosan (1997) examined the relationship between voluntary disclosure and cost of equity capital using an unweighted list of five items.

In general the research has not been industry-specific. However, as research involving firm-specific characteristics, disclosure levels, and a number of countries has been exhaustive, researchers have recently begun to concentrate on particular industries. Craswell and Taylor (1992) examined disclosure of reserves in the oil and gas industry of Australia. Malone, Fries and Jones (1993) developed a weighted index of disclosure items to compare the extent of financial disclosure with a number of variables. Their index included 129 items of disclosure found in the United States Securities and Exchange Commission 10K reports and related these to the annual reports of a sample of United States oil and gas firms. Once again the items were weighted by financial analysts, this time using a 0 to 2 scale. Botosan (1997) also focused on one industry sector - the machinery industry.

Summary:

Cooke and Wallace (1989) noted that financial disclosure is an abstract concept which cannot be measured directly. However, the above literature review indicates that it is possible to use a disclosure index as a surrogate measuring device to measure levels of disclosure. The first step is to select the items for the disclosure index. In this respect the number of items identified in previous research ranges from 17 (Barrett, 1976) to 530 (Craig and Diga, 1998). Researchers have generally adapted indices developed in previous research. This electricity industry research extends the previous disclosure indices by developing an industry-specific index based on the views of a wide range of stakeholders. The index includes 67 disclosure items in order to recognise the information needs of this wider group. The validity of the index is dependent on the selection of items. The index in this research is not restricted to a list of items obtained from the extant literature and considered relevant to the researcher or a particular user group. Rather, it reflects the information needs of a group of stakeholders represented by a stakeholder panel. Thus the index is derived empirically and incorporates the annual report as a whole, not just the financial statements. Because the index is specific to a particular industry it has the limitation of preventing any direct comparison with other research. However, as that is not the primary focus of the research it is considered that the benefits of a "tailor-made" index outweigh this limitation.

Research in the 1990s tends to have favoured the use of unweighted indices. The review of the current literature shows that most of the more recent studies involving disclosure indices have used unweighted indices based mainly on the belief that weighting does not add additional benefits (Cooke, 1989) and on the finding that unweighted and weighted scores are virtually the same (Robbins and Austin, 1986; Chow and Wong-Boren, 1987; Adhikari and Tondkar, 1992). In addition, the degree of subjectivity involved in allocating weightings has been a deterrent to this approach. No doubt the simplicity of developing an unweighted index has also been an incentive. Raffournier (1995) noted that the assumption that every information item is equally important for all users of annual reports is probably incorrect. However, in his opinion, "the resulting bias is lower than if an erroneous weighting had been used" (p.270). In this research it is contended that the addition of weightings adds value to the disclosure index despite the subjectivity involved. Marston and Shrives (1991) gave a simple illustration to show that weighted and unweighted scores do not necessarily give the same results:

> "Consider an index of 100 items that is weighted with the first 50 items having a weight of two and the remaining 50 items having a weight of one. Company A discloses all of the first

> 50 items and no others and company B discloses all of the second 50 items and no others. Using the unweighted index both companies will score 50. Using the weighted index company A will score 100 and company B will score 50" (p.208).

When a large number of items are included in a disclosure index, the weighting effect is less significant. However, weightings serve to identify the importance of the item and may encourage preparers to improve disclosure of those items deemed to be particularly important.

A decision to identify the relative importance of each disclosure item therefore involved a second step in the development of the disclosure index. In this respect, most of the above-cited research focuses on the informational needs of professional financial analysts when selecting and weighting the items and therefore does not relate to the needs of other user groups. Not all users are "astute professionals" and according to Knutson and Napolitano (1998), the markets operate efficiently and fairly only when the same information is available to all. Accordingly, this research is based on general purpose reports that meet the needs of all users, and appropriate weightings were sought from a wide range of stakeholders.

5.3 ASSESSING QUALITY OF DISCLOSURE

Most researchers who have used disclosure indices to assess levels of disclosure have measured only extent of disclosure, that is, the presence or absence of selected items. The scoring of levels of annual report disclosure of the New Zealand electricity retail and distribution companies involves an analysis of both extent and quality of disclosure. The literature review therefore also details various approaches to assessing quality of disclosure. "Quality" refers to completeness, accuracy and reliability (Singhvi and Desai, 1971). It is not possible in this research to assess the accuracy and reliability of the information disclosed so the term "quality" is used in the sense of completeness or full disclosure (Imhoff, 1992). Wallace (1988) and Adhikari and Tondkar (1992) referred to the degree of detail in the disclosures as the "intensity" of the information. Wallace et al. (1994) used the term "comprehensiveness" and identified this as a construct of quality. Comprehensiveness also refers to the level of detail of the information provided. Wallace and Naser (1995) believed that in order to be comprehensive, a reported item of information "has to provide the reader with a sense that no important aspect has been left undisclosed" (p.327). Quality in terms of comprehensiveness of disclosure has been measured in previous disclosure index research and that approach is used for this research. The aim is to distinguish between poor and excellent disclosure of items. This distinction is assessed by means of best-practice criteria which provide a benchmark for each disclosure item.

Copeland and Fredericks (1968) sought to quantify levels of disclosure and developed an unweighted index for use in evaluating financial statements in company annual reports. In order to overcome some of the subjectivity involved in grading items of disclosure as poor, average or excellent they considered an objective approach to measuring disclosed information. This involved counting the number of words and numbers shown in the accounts. However, this method is not considered a reliable means of measuring disclosure mainly because it is doubtful whether a number that is not accompanied by explanatory words actually conveys information. In addition, counting words is not a satisfactory approach because it does not acknowledge repetitions.

Buzby (1975) distributed the weightings for level of importance of disclosure of some items between sub-elements of the item in order to give credit for partial disclosures. (For example, disclosed items received the item's mean score (full credit) or half credit.) This method was also used by Tong et al. (1990) and Adhikari and Tondkar (1992). In a similar approach Barrett (1976, 1977) gave credit for degrees of specificity of sub-elements of information. (For example, a financial history of 10 years scored the maximum possible index score of 4; 5 to 9 years scored a 3; and 2 to 4 years scored 2.) These approaches, which are effectively an extension of the weighting system used to measure extent of disclosure, acknowledge the importance of distinguishing between poor and excellent disclosure of individual items. However, they could be improved by the inclusion of a precise statement of disclosure requirements. This would reduce the level of subjectivity involved in allocating the scores.

In a more sophisticated approach, Robbins and Austin (1986) used a compound scoring system in which qualitative items were rated according to degree of specificity. Their index incorporated the approaches used by other researchers (Copeland and Fredericks, 1968; Buzby, 1975; Firth 1979; Wiseman, 1982). They identified items of information as dichotomous, qualitative or qualitative/ quantitative. The dichotomous items (20 of the 27) were single pieces of information which were either presented or not presented. The qualitative information (4 of the 27 items) was scored on the basis of a word count. The remaining three items (qualitative / quantitative information) were scored on the basis of number of words and the score was adjusted if detailed quantitative data were also provided.

Wallace (1988) also made some allowance for the degree of detail of the disclosures and allocated scores on the basis of "intensity" of information by scoring sub-elements in a similar way to Barrett (1977). However, the scores allocated by Wallace (1988) were separate from the weighting for importance of each item. Similarly, Wiseman (1982) and Giroux (1989) used a scale of 0 to 3 for different degrees of specificity of disclosure of each item in studies of environmental (Wiseman) and pension and employee benefit (Giroux) disclosures in company reports. Wiseman (1982) gave the highest score (3) for quantitative disclosure; non-quantitative disclosure scored 2 and disclosure in general terms scored 1. This method has been criticized on the basis that a number is not necessarily worth three times more than a comment (Marston and Shrives, 1991), although Botosan (1997) argued that quantitative information is more precise and therefore more useful. Giroux (1989) did not appear to state disclosure criteria but rather to award a score of 3 for reasonably complete disclosure and a 1 or 2 for lower disclosure quality. In all cases the allocation of scores for quality is subjective. The electricity industry research seeks to lower this subjectivity in two ways:

- By clearly stating benchmark criteria that represent best-practice reporting;
- By involving two people in the scoring of each disclosure item – an approach used by Wiseman (1982) and Dixon et al. (1992).

Botosan (1997) used a simple points system in identifying an association between voluntary disclosure level and cost of equity capital. Points were given for each item in the index that was disclosed, then additional points were given for more specific disclosure. (For example, in the category on background information, one additional point was given per item if the information disclosed included quantitative data not ascertainable from the basic financial statements.) Eng and Teo (2000) used a similar approach and allocated scores of 1 - 3 (and for one item, 1 - 5) for relative quantity of information provided. There were no defined criteria for what constituted "brief" information (a score of 1) or "detailed" information (a score of 3). In both studies only selected items from the index were scored for quality of the information. Therefore, the scoring for quality is less comprehensive than that used for the electricity industry research where detailed benchmark criteria for assessing quality are stated for each disclosure item.

Dixon et al. (1992) rated items for quality on a three point scale. This method is similar to that used by Copeland and Fredericks (1968). Tower et al. (1995) sought to improve on their earlier work and altered the three point quality scale to a five point system. In a later study, Coy (1995) designed criteria which represented "standard" disclosure of each item and allocated scores using this as a benchmark with a score of 5. If disclosure was considered to be 20% better than the standard then a score of 6 was allocated. This provides an index that is more discriminatory than that used by other researchers. Of the few researchers who have attempted to score for degree of specificity or quality of individual disclosures (Robb, 1980; Wiseman,1982; Robbins and Austin, 1986; Wallace, 1988; Giroux, 1989; Adhikari and Tondkar, 1992; Botosan, 1997; Eng and Teo, 2000) the works of Tower et al. (1995) and Coy (1995) provide the most comprehensive system and are used as a blueprint on which to base development of a disclosure index to assess quality of disclosures in the electricity company annual reports.

Summary:

Previous research indicates that scoring for the quality of disclosures adds another dimension to the disclosure index. The New Zealand electricity industry disclosure index is set within a framework of accountability. Within this context, it is not appropriate to simply consider whether or not an item has been disclosed. On this basis a company could score 100% and yet produce an annual report that lacked the degree of comprehensiveness required to fulfil accountability obligations. All of the methods discussed in the above section have credibility in terms of their ability to provide a score for the degree of detail given for each disclosure item. However, a method that defines optimum or "best practice" disclosure criteria and assesses the comprehensiveness of each disclosure in relation to these criteria is considered to give a more relevant and stringently assessed score than one that is simply an extension of the weighting system. Despite the subjectivity involved in the scoring process it is contended that the electricity industry index has the ability to provide better information about the quality of disclosure than a word count or a scoring system that applies to only some of the index items or that awards points on the basis of information being qualitative or quantitative. Therefore, the more complex method is used in this research to score quality of disclosures in the annual reports of New Zealand electricity companies.

5.4 SCORING LEVELS OF DISCLOSURE

Obtaining a score to indicate extent of disclosure levels depends on whether the index is weighted or unweighted and whether the scoring is dichotomous (scores for presence or absence of an item) or involves assessment for quality of information.

Unweighted indices

In all cases where unweighted indices have been used to measure extent of disclosure, scoring involves the total of items disclosed shown as a percentage or ratio of the total possible score applicable to the firm.

Weighted indices

Where weighted indices have been used a mean weight for a particular item was calculated by summing the integer values assigned to the item and then dividing the total by the number of individuals who assigned the weighting. This mean weighting represents the relative importance of each disclosure item.

The disclosure score is the sum of all items disclosed with each item weighted by its mean importance rating. If an item is disclosed, then the weighting is added to the total disclosure score. This is then divided by the total possible score. As noted in this literature review, a few of the indices have also assessed quality of information. In some cases the weighting given to a particular item was split between sub-elements of that item and a final score was obtained as above. In all cases the final score was the total score divided by the total available points. This enabled recognition to be given to the fact that some disclosure items would not be relevant to some companies in the sample. For example, some items in the electricity industry index are applicable only to line companies and others are applicable only to retail companies. The electricity industry research emulates that of Tower et al. (1995) and Coy (1995) in using a more complex scoring system which provides for the relative importance of each disclosure item, the applicability of each item to each company, and allocates scores on the basis of pre-set criteria for the degree of detail of each disclosure item. In the electricity industry research the pre-set criteria relate to clearly defined best-practice disclosure.

5.5 SUMMARY AND CONCLUSION

This literature review and the accompanying summary table (5.1) show that most research involving disclosure indices has been for the purpose of testing correlation between levels of disclosure and various company characteristics. The theoretical framework for these studies has been agency theory. Agency theory suggests several firm-specific variables for explaining variation in voluntary disclosure of information. These include firm size, financial leverage, and cost of equity capital. Size was the most commonly tested variable and most analysis was carried out over a one year period. This positivist approach has involved the stating of an hypothesis in respect of each chosen variable followed by appropriate statistical techniques to investigate the relationship between company-specific characteristics and the index of disclosure items.

In contrast, the electricity industry research is set within a theoretical framework of accountability. This perspective requires a more comprehensive form of reporting which includes a wide range of information about company objectives, performance measured against those objectives and other indicators that measure the financial, efficiency, and reliability aspects of performance. The focus is on determining "what is" in respect of annual report information (a descriptive and critical approach) and then to posit "what ought to be" (a normative approach). The testing of hypotheses is not considered to be relevant in this process.

This research complements and extends the previous research in a number of ways. Most of the prior research has concentrated on disclosures in the financial statements. This research broadens the focus from financial statements to the wider range of information necessary to meet the information needs of all users. It therefore analyses the annual report as a whole and is based on a belief that stakeholders should be able to obtain relevant quantitative and qualitative information on company activities and results from one document (Dixon et al., 1992).

Previous studies have concentrated on the annual reports of major publicly-held companies and have not been industry-specific. This research is unique in that it examines the annual reports of an entire industry sector. Further research could compare and contrast the results of the electricity industry with those of other industries, such as telecommunications, to ascertain if there is an industry influence in reporting quality or to ascertain the effect on disclosure of operating in a regulatory environment.

A number of researchers have used unweighted indices. This treats all items as of equal value and is considered to be a less stringent approach than a weighted index which recognises some items as more important than others. Where weightings for level of importance of the disclosure items have been used, they have commonly been allocated by one stakeholder group, financial analysts. Measures of disclosure that are based on the informational needs of professional analysts may not adequately reflect the needs of other user groups. This research uses a wide range of stakeholders to allocate weightings and enriches those responses with follow-up interviews.

Most previous research measures only extent of disclosure or in some cases, the quality of some information items in the index. This research attempts to quantify disclosure **extent and quality** for all the items in the disclosure index. The fundamental question is: How well do the general purpose annual reports of the electricity distribution and retail industry communicate financial and non-financial information to stakeholders? It is considered that a more comprehensive approach that scores every item in the index for quality provides better information about disclosure levels than a simple dichotomous scoring system that simply records the presence or absence of an item. In addition, a dichotomous scoring system has shortcomings when both financial and narrative information is being assessed.

Most of the research using disclosure index method is associated with voluntary disclosures. This is a direct result of the agency theory framework within which it is set. Those researchers who have acknowledged a wide group of parties for whom annual report disclosures are of interest, have included both mandatory and voluntary items of disclosure. The electricity industry disclosure index is included in this category. Wallace and Naser (1995) and Craig and Diga (1998) are exceptional in their attempt to measure mandatory disclosures only.

The aim of this research is to provide an indication of the quality of reporting in an industry that has monopoly characteristics. The literature review has assisted in the development of a disclosure index to accomplish this aim. Because of the uniqueness of the industry and the uncommonly used accountability perspective, the prior research provides a foundation from which to build a specific index for the industry. This index is related to the information needs of a broad range of stakeholders.

CHAPTER SIX

CONSTRUCTION OF THE DISCLOSURE INDEX

6.1 INTRODUCTION

The emphasis of this chapter is on information disclosure. The focus is on the annual report as a comprehensive statement designed to discharge accountability requirements in an industry that has monopoly characteristics. The intention is to assess the levels of disclosure within the annual reports of the retail and distribution sectors of the electricity industry for the 1998/99 financial year.

Robb (1996) defined disclosure as "the displaying or reporting of information in financial statements, notes thereto, or in the auditor's report" (p.27). This research extends Robb's concept to encompass disclosure in the annual report in its entirety, that is, financial statements, notes to the accounts, reports by management and other supplementary information. This information enables users to make informed judgements concerning the organisation's performance.

The chapter is organised as follows:

Information disclosure is not without cost. Section 6.2 considers the cost/benefit relationship of increased disclosure. It is argued that the benefits of additional disclosure exceed the costs. The next step involved designing a disclosure index to assess current levels of disclosure in the annual reports of the retail and distribution sectors of the electricity industry. The remainder of the chapter describes the development of the disclosure index used to score extent and quality of information disclosed in those annual reports. The chapter ends with a summary and conclusion.

6.2 COSTS OF DISCLOSURE

Tower (1993) emphasised the need for better communication by providing both quantitative and qualitative information within corporate reports. This would increase corporate accountability by broadening the scope of disclosure beyond the present financial focus to ensure that sufficient and meaningful information is provided. An annual report is considered sufficient and meaningful if all relevant information has been reported and disclosed.

Attitudes to voluntary disclosures depend upon the perceived relationship between cost/benefit trade-offs (Ho and Wong, 1999). Provision of additional information may allow investors to assess more accurately the value of a company but, on the other hand may put firms at a competitive disadvantage and involve additional costs (Firer and Meth, 1986). Disclosure costs fall into two categories. The first relates to the cost of collecting data, developing, presenting, and disseminating information. The second is the most contentious and relates to competitive disadvantage from additional disclosures. Craswell and Taylor (1992) referred to these costs as proprietary costs. Proprietary costs are those costs imposed on the firm if the information disclosed can be used by external parties such as competitors, shareholders or employees in a way that is harmful to the firm. In this respect, Craswell and Taylor (1992) noted that disclosure of oil and gas reserves may reduce their proprietary value to the firm as competitors could use the information to plan their own exploration and production strategies. Firms will disclose information for which there is a demand provided they consider that the increase in firm value from disclosure will offset the decrease in firm value from proprietary costs (McKinnon and Dalimunthe, 1993). Therefore companies have to balance the desire to protect a competitive advantage with the need to inform stakeholders. The Association for Investment Management and Research (AIMR) (1997) reported that Microsoft Corporation and Oracle Corporation published detailed segmental information in their annual reports yet these controversial disclosures do not seem to have harmed their competitive position. Fergusson, Lam and Lee (1999) also found that highly competitive industries with relatively short product lives do not necessarily curtail voluntary disclosure in order to avoid leakage of information to competitors. In addressing the issue of rights to information, Stanton (1997) argued that "Corporations cannot claim the right to privacy on the grounds of protecting their competitive position when such privacy reduces the welfare gains for society as a whole" (p.691).

It is in the interests of society as a whole that costs are not incurred without corresponding benefits. In respect of this research, the cost-benefit relationship of providing additional information is acknowledged but it is thought that provision of voluntary annual report disclosures has net benefits in that stakeholders' information needs are met and accountability requirements are discharged. It is contended that information produced for the electricity industry regulatory body, the Ministry of Economic Development (MED), can be provided to others by means of the annual report at little additional cost[1]. If we consider this information to be a "public good"[2] then, according to Cooper and Keim (1983), its provision to a single body makes it equally available to others at no cost. Such information would be helpful to users while not harming the competitive position significantly.

Price (1998) noted that the costs of using information increase when that information is difficult to obtain. In addition there are costs associated with using information if it involves additional knowledge, analysis or interpretation. It is contended that disclosure of additional information in one document, the annual report, would reduce such costs. It has been suggested that the MED should support the preparation of one set of accounts for statutory and regulatory purposes. This would necessitate only one audit to be carried out and would remove the need to publish accounts in the Gazette.[3]

Ball and Foster (1982) cautioned against conclusions that more disclosure is better.

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[1] Disclosures required under the Electricity (Information Disclosure) Regulations 1994/99 are produced by the MED as Electricity Information Disclosure Statistics each year. This additional information is not usually provided in the annual reports.

[2] If those who do not pay for information cannot be excluded from using it and if these "free riders" value that information, then the information is a public good (Demski and Feltham, 1976).

[3] Submission to Ministry of Commerce on Proposed Electricity (Information Disclosure) Regulations 1999 by Mercury Energy Ltd, October 1998.

Their particular concern relates to the use of index scores to make inferences about disclosure adequacy. Since 1982 a number of researchers (Firer and Meth, 1986; Robbins and Austin, 1986; Chow and Wong-Boren, 1987; Tong et al., 1990; Dixon et al., 1991; Adhikar and Tondkar, 1992; Wallace and Naser, 1995; Gray et al., 1995; Meek et al., 1995; Carson and Simnett, 1997) have carried out analytical studies on annual report disclosures. These researchers have been cautious about making inferences about causal relationships. This particular research does not intend to make inferences of causality and the costs associated with the provision of additional information are taken into account. It is grounded in a belief that the quality of communication can be improved by greater disclosure and by recognising stakeholder needs. The aim is to ensure that electricity company annual report disclosure meets the needs of all users.

6.3 DEVELOPMENT OF THE DISCLOSURE INDEX

The aim of the research was to identify annual report disclosures that should be made from an accountability perspective and then to develop a framework for evaluating the extent to which the annual reports of electricity distribution and retail companies met those expectations. Gray and Haslam (1990) suggested that a systematic enquiry could be made into the contents of annual reports by using content analysis. Such a content analysis would be dependent upon the development of a disclosure index. A disclosure index is a list of items that could/should appear in a company's annual report. Prior research demonstrates that disclosure indices are a useful research tool. Thus an index of disclosure items was used in this research to conduct a systematic enquiry into disclosure practices by electricity retail and distribution companies.

Developing a disclosure index in order to assess and quantify the levels of disclosure in those annual reports involved four major steps:

1. Identification of potential items for the index;
2. Development of the draft index: using feedback of an expert panel;
3. Development of the draft index: weightings and quality criteria; and
4. Development of the final index following preparation of a pilot index and review by the expert panel.

Figure 6.1 outlines the process involved in each of the development steps. This is followed by a detailed explanation of each step.

Figure 6.1

Development of the Disclosure Index

IDENTIFICATION OF POTENTIAL ITEMS:

Development of a comprehensive list from:
Literature Review

Summarisation of the collated material

Addition of other relevant items from:
Comprehensive Model of Business Reporting (FASB)
Association for Investment Management and Research (1997)
Electricity (Information Disclosure) Regulations 1994/99
Financial Analyst, Company Accountant, Academics

Refinement of the index
Accountability Tenets

↓

DEVELOPMENT OF DRAFT INDEX: FEEDBACK PROCESS

Selection of Panel of Stakeholders(15)

Questionnaire

Interviews (15)

↓

DEVELOPMENT OF DRAFT INDEX:
Weightings
Allocation of weightings to each disclosure item
Validation of weightings
Quality Criteria
Measuring quality of disclosures

↓

DEVELOPMENT OF FINAL INDEX:

Pilot study
Scoring of annual reports
Stakeholder panel feedback

6.3.1 Identification of potential items for the index

An iterative process was used to select potential items to be included in the disclosure index. With the exception of Coy (1995)[4] an iterative process does not appear to have been used in extant indices. Other researchers have obtained user group input into the **weighting** of the index items but generally have not involved user groups in the **selection** of the items. Rather, selection of items has been based on extant literature.

The selection of potential items for disclosure involved an extensive literature review. Wallace and Naser (1995) commented that there is no general theory on the items to select for investigating the extent of disclosure and Coy (1995) identified the lack of a theoretical framework as a weakness in the extant indices. Coy introduced a theoretical framework into his research by developing an index for assessing quality of university annual reports from a public accountability perspective. Based on Coy's research, the index used for assessing extent and quality of disclosure in the electricity retail and distribution sectors is developed within the theoretical framework of public accountability and potential items for disclosure were selected on this basis (see Table 6.0). In this respect, public accountability refers to a public right to know about the current state and performance of the organisation. The conceptual framework on which the accountability index is based includes the interests of all stakeholders: both accountors and accountees (Ijiri, 1983).[5]

In order to identify items of financial and non-financial information that should be disclosed by companies in their annual reports an analysis was made of disclosure indices by other researchers (Singhvi and Desai, 1971; Baker and Haslam, 1973; Buzby, 1975; Barrett, 1977; Benjamin and Stanga, 1977; Firth, 1978, 1979; McNally et al., 1982; Firer and Meth, 1986; Robbins and Austin, 1986; Chow and Wong-Boren, 1987; Tong et al., 1990; Adhikari and Tondkar, 1992; Meek et al., 1995; Zarzeski, 1996; Carson and Simnett, 1997). This initial analysis was followed by:

[4] Coy (1995) used the Delphi method to obtain consensus on the importance of items of disclosure.
[5] Ijiri (1983) refers to those who give an account as accountors and those to whom the account is given as accountees.

- Development of a comprehensive list of all disclosure items referred to in the literature;
- Summarisation of the collated material;
- Addition of other relevant items; and
- Refinement of the index.

The end result was a list of 82 potential items to be included in a questionnaire.

6.3.1.1 *Development of a comprehensive list*

As the aim of the research was to measure the extent of "aggregate disclosure" (Cooke, 1993, p.521), both mandatory and voluntary disclosures were included. The indices used by previous researchers were collated on a spreadsheet resulting in a "major index" of 234 items. Items with similar meanings were combined. In some cases the researchers had allocated each item a value based on the relative importance of each information item to the relevant user, (for example, 0 for unimportant, 4 for essential.) Each item was recorded in the major index according to its weighted figure. If weightings were not used by the researcher then a score of "one" was used to indicate the presence of the item in the disclosure index. A total score was obtained for each item to indicate how important it was for an item to appear in the annual reports. This enabled the researcher to see which items were most commonly regarded by other researchers as significant in measuring the extent of disclosure. The number of times an item appeared in the major index was also recorded. The items were then sorted into various categories as shown in Appendix A.

6.3.1.2 *Summarisation of the collated material*

Robbins and Austin (1986) used a different weighting method in their index from that used by the other researchers. Robbins and Austin used the item "operating budget" as an anchor item and assigned it a score of 10 points. Analysts then allocated a range of marks in respect of importance of disclosure in relation to the anchor item. These numbers which ranged from 5.068 – 22.974 distorted the totals in the major index so a summary index was prepared both with and without the index of Robbins and Austin. The items with the highest scores or the highest number of repetitions were then included in an index of the 76 "highest scoring items" (see Appendix B). These items were examined and 37 were selected for a "summarised index" on the basis of their frequency of use by other researchers, their high ranking of importance as evidenced by the total score for the item, or their particular relevance to the electricity industry study. These items are listed below and shown by means of an asterisk in the listing of highest scoring items in Appendix B.

<u>Selected items for a "summarised index"</u>.

Total debt outstanding
Brief narrative history of firm
Statement of strategy/objectives
Number of employees
Labour turnover
Expenditure on human resources
Cost of Goods Sold
Advertising expenses, current year
Breakdown of expenses, fixed and variable
Research and Development for current year
Depreciation method
Capital expenditure current year
Planned capital expenditure
Principal plant, property (location etc.)
Changes in plant and property etc.
Fixed Asset composition
Forecast next years profits/earnings
Cash projections 1-5 years
Discussion of major factors influencing next year
Responsibility, experience of executive/senior management
Information on directors, names, salaries, affiliations
Identification of senior management and functions
Names and salaries of management
Contingent liabilities
Segregation of Current Assets and Current Liabilities
Comparison of budget v actual operating results
% plant capacity utilised
Information on accounting methods used
Corporate responsibility - expenditure on environment
Number of stockholders
Breakdown of sales revenue by major product/customer class
Breakdown of earnings
Discussion of results for past year
Share of market in major areas of activity
Historical summary of share price and trade volume
Historical summary of operating and financial data
Major industry trends

Some items were used frequently in previous disclosure indices but omitted from the above selection. In particular, disclosure items related to inventory, inflation, pensions schemes, and taxes were not considered relevant to the electricity industry study. Segmentation of sales was relevant but other sales information such as "backlogs in order book" and "summary of major products sold" were not relevant to the electricity industry although their disclosure was considered to be important by other researchers.

6.3.1.3 *Addition of other relevant items*

The aim of this step is to identify items that should be added to the "summarised index" in order to develop a list of potential items for the disclosure index. The proposed Comprehensive Model of Business Reporting (Financial Accounting Standards Board, 1996) was analysed, and items identified as important to the information needs of users were added to the "summarised index". In addition adjustments were made based on the disclosure evaluation index published by the Association for Investment Management Research (AIMR, 1997). This analysis is conducted by industry-specific subcommittees composed of leading analysts and contains evaluations of the informativeness of company disclosures in annual published information. An advantage of this data is that the emphasis is on all aspects of disclosure which are viewed as important by analysts rather than on a single aspect such as whether a cash flow forecast is disclosed. The following items were added to the index from these two sources:

Description of principal activities
Major contractual relationships
General development of business
Names of dominant customers
Number of shares owned by directors, management, employees
Related party transactions
Assets by segment
Details of measurement basis of assets
Details of unusual or non-recurring items
Goodwill written off
Debt to equity ratio
Goodwill
Details of reserves and movements in reserves

The Electricity (Information Disclosure) Regulations 1994[6] were also examined for appropriate disclosures to be included in the annual report. As a result the following items were added to the index:

[6] The Electricity (Information Disclosure) Regulations 1994 were superseded by the 1999 regulations. These were examined for relevant items when the final index was developed.

ODV valuation of network assets
Amount of asset revaluation each year
Return on total assets
Return on equity
Accounting rate of profit
Efficiency measures:
- Total number of interruptions
- Average total duration of interruption of supply per customer
- Average number of interruptions of supply per customer
- Number of faults per 100 km of prescribed voltage line
- Direct line costs per kilometre
- Indirect line costs per customer

A financial analyst was then asked to analyse three electricity distribution company annual reports for the 1997-98 year. The following significant disclosure items identified in this study and not included in the list of potential items were added to the list:

Capitalised interest
Long Term investments
Investments purchased and sold
Funding costs
Funding cost cover
Dividends per share (cents)
Dividend yield
EBIT/Average net funds employed
Price earnings ratio
Earnings per share
Interest rate on debt
Net tangible assets per share

The list of items was then evaluated by an electricity distribution company accountant and two academics who were experienced users of annual reports. The accountant extended the item "cost of goods sold" and added a number of relevant performance indicators:

Overhead costs per retail customer
Index of electricity prices per market segment compared to CPI
Average energy price per unit
Average domestic power bill
Pricing Information
Average consumption kwh per customer (5 years)
Number of customers by sector

The accountant also recommended that the items "number of employees" and "labour turnover" which were significant disclosures in the reviewed literature be omitted on account of the extent to which work in the industry is contracted out.

The academics added further segmental information:

Sales volume by segment
Breakdown of expenses by segment
Profit for each segment

This completed the list of potential disclosure items. The index was then refined by assessing each item for suitability in terms of the accountability focus of the study.

6.3.1.4 *Refinement of the index*

As the focus of the research is provision of information for accountability purposes rather than decision-usefulness, the refinement of the index was based on this concept. The aim at this point of the research was to finalise a list of potential items for a draft index that could be included in a questionnaire. The list of potential items for the disclosure index for this research reflected a wide ranging approach such as that used by Cooke (1989) and Wallace (1988), where items were not excluded because they were likely to be irrelevant to a particular user group or because the items were required to be disclosed by statute. However, the focus on accountability was maintained. Therefore, each disclosure item was linked to the elements of accountability as described in chapter 4 to ensure its inclusion was appropriate in respect of this focus. The relevance of each disclosure item to each of the accountability elements[7] is shown in Table 6.0.

[7] The element "equity" is omitted from this analysis as it relates to access to information rather than to the information items themselves.

Table 6.0
Annual Reporting Model:Disclosure Items and the Elements of Accountability

Elements of Accountability

	Annual Report Disclosures	Compliance	Efficiency	Effectiveness	Economy	Future
1.0	**Background about the Company**					
1.1	Brief narrative history of the company.		x	x	x	
1.2	Management's objectives and strategies		x	x	x	x
1.3	Description of principal activities.			x		x
1.4	Major contractual relationships.		x	x	x	x
1.5	General development of business.		x	x	x	x
2.0	**Information about Management, Major Shareholders, Related Party Transactions**					
2.1	Names, backgrounds, affiliations, remuneration of directors	x		x		x
2.2	Names, functions, remuneration of executive management	x		x		x
2.3	Major owners of company's stock and number of shares owned			x		x
2.4	Number of shares owned by directors			x		
2.5	Related party transactions	x		x	x	x
3.0	**Assets:**					
3.1	Assets by segment: energy, contracting, network, generation		x	x	x	x
3.2	Details of measurement basis of assets	x	x	x	x	x
3.3	ODV valuation of network assets		x	x	x	x
3.4	Amount of asset revaluation each year	x	x	x	x	x
3.5	Fixed assets purchased and sold in current year		x	x	x	x
3.6	Fixed asset details	x	x	x	x	x
3.7	Investments	x	x	x	x	x
3.8	Goodwill	x	x	x	x	x
3.9	Capitalised interest	x	x	x	x	
3.10	Location, nature, productive capacity of principal plant		x	x	x	x
3.11	% plant capacity utilized		x	x	x	x
3.12	Depreciation method	x	x			
3.13	Capital expenditure planned					x
3.14	Current assets: debtors, inventories, cash	x		x		
3.15	Asset Management Plan		x	x		x
4.0	**Debt:**					
4.1	Total debt outstanding and debt repayment schedules	x		x		x
4.2	Current liabilities: creditors and provisions	x	x	x		x
5.0	**Financial, Operating and Performance Related Data:**					
5.1	Breakdown of sales revenue by segment	x	x	x		x
5,2	Sales volume by segment		x	x		x
5.3	Breakdown of expenses by segment		x	x	x	x
1.3	Profit for each segment as above	x	x	x	x	x
5.5	Other earnings		x	x		x
5.6	Cost of electricity purchased, generated, distributed		x	x	x	x
5.7	Major elements of costs: restructuring, redundancies,		x	x	x	x
0.6	Details of unusual or non-recurring items	x	x	x	x	x
5.9	Goodwill written off	x	x	x	x	
5.10	Funding costs	x	x	x	x	x
5.11	Discussion of results for past year			x		x
5.12	Historical summary of operating and financial data (5 years)			x	x	
6.0	**Forward-Looking Information:**					
6.1	Forecast of next years profits/earnings			x		x
6.2	Discussion on major factors influencing next year			x		x
6.3	Comparison of actual business performance to previously disclosed information.			x		
7.0	**Performance Measures:**					
7.1	Debt to equity ratio		x	x		x
7.2	Funding cost cover (times interest covered)		x	x	x	x
7.3	Net tangible assets per share		x	x		x
7.4	EBIT/Average net funds employed		x	x	x	x
7.5	Dividend per share (cents)		x	x		x
7.6	Return on total assets		x	x	x	x
7.7	Return on equity		x	x	x	x
7.8	Accounting rate of profit		x	x	x	x
7.9	Overhead costs per retail customer		x	x	x	x
	Pricing Measures:		x			
7.10	Average domestic power bill		x			x
7.11	Pricing information		x			x
	Efficiency Measures:					
7.12	Total number of interruptions		x	x		x
7.13	Average total duration of interruptions of supply per customer		x	x		x
7.14	Average number of interruptions of supply per customer:5-10yrs		x	x		x
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs		x	x		x
7.16	Total Costs costs per kilometre		x	x	x	x
7.17	Total Costs per customer		x	x	x	x
	Market Measures:					
7.18	Average consumption kwh per customer (5 years)		x	x		x
7.19	Number of customers by sector		x	x		x
7.20	Change in market share in major areas of activity		x	x		x
8.0	**Other Information:**					
8.1	Information on accounting methods used	x	x	x	x	x
8.2	Contingent liabilities	x	x			x
8.3	Forward contracts for committed purchases		x			x
8.4	Capital contributions by customers		x			
8.5	Dividend distribution policy			x		x

As a result of the iterative process described so far, 82 possible items for disclosure were identified for inclusion in a questionnaire (see Appendix C). The relevant literature shows that there is no commonly used criteria to determine the number and selection of items for a disclosure index. Full disclosure indices[8] ranged from 17 items (Barrett, 1977) to 530 items (Craig and Diga, 1998[9]). Other researchers (Benjamin and Stanga, 1977; Chow and Wong-Boren, 1987; Wallace, 1988; Malone et al., 1993; Cooke, 1993; Hossain, Tan and Adams, 1994; Meek et al., 1995; Fergusson et al., 1999) included over 70 items in their indices.

There are advantages and disadvantages to including as many as 82 items in a disclosure index. It was felt that including a wide range of potential disclosure items identified in the extant literature allows a panel of stakeholders to select the most important of these in respect of annual report disclosures. This reduced the subjectivity and bias that would be involved if the researcher presented only a few items that represented the researcher's opinion of items that should be disclosed. Cooke (1992) considered that when the focus is disclosure to a wide range of users an extensive list of items, both mandatory and voluntary is appropriate. In addition, Wallace (1988) asserted that having a large number of items in the proposed index evens out differing preferences of the different user groups. This was an important consideration and was thought to increase the justification for retaining 82 items in the questionnaire. A disadvantage of including this many items is a concern that respondents, who have been asked to consider the importance of disclosing each item, will see the task as too large to give it focused attention. A large number of items also makes it difficult to maintain focus on a personal benchmark or anchor item in respect of allocating ratings for importance. However, it was felt that the follow-up interview in which each panel member discussed his/her responses with the researcher considerably reduced both these problems. Thus it was considered

[8] Compared to those indices which assessed disclosure of particular areas of corporate reporting: Carson and Simnett (1997) examined corporate governance disclosures and Copeland and Fredericks (1968) examined common stock disclosures.

[9] Craig and Diga (1998) developed a disclosure checklist of statutory disclosures required by at least one of the five ASEAN countries in their study. Prior to this, the largest disclosure index was 224 items (Cooke, 1989).

that the arguments for a greater number of items outweighed those for a fewer number of items.

The possibility of giving panel members a blank sheet of paper each and asking them to list the items they thought should be disclosed was considered. However, this was rejected as it was felt they would become confused by the unstructured situation and be reluctant to be involved in the research because of the extra amount of time this would involve. Coy (1995) also rejected this approach on the basis that respondents are unlikely to be able to recall detailed disclosure in annual reports. Anthony (1978) and Sutcliffe (1985) also noted the difficulty in identifying stakeholders' needs on account of the inability of stakeholders to articulate their needs. In Coy's (1995) opinion more meaningful responses could be obtained by listing potential items of disclosure. The questionnaire and the interviews were designed to make it easy for panelists to confirm, reject or modify those items.

6.3.2 Development of the draft index: feedback process

Once a list of potential items had been established the researcher sought to obtain the opinion of stakeholders in respect of items that should be disclosed and the degree of importance of those disclosures. This involved three steps:

- Selection of the panel of stakeholders;
- Data collection by questionnaire;
- Confirmation and validation via interviews with panel members.

These steps were followed by the development of the draft index weightings and quality criteria.

An explanation of each step now follows.

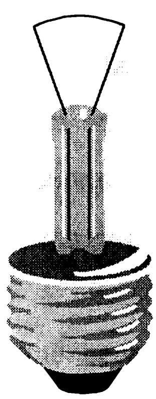
6.3.2.1 *Selection of the panel of stakeholders*

Shareholders' interests have been predominant in previous research of this nature. Most disclosure indices reported in the literature have had the items weighted for importance by one user group, financial analysts (investors), on the basis that this group represents experienced users of financial reports and because the research has been concerned with the needs of investors. As the focus of this research is on information for accountability purposes rather than for decision-making it was more appropriate to use a range of different users. Annual reports are used by various parties often with opposed interests and Gray et al. (1995) noted that it is the role of general purpose annual reports to satisfy multiple information needs. A wide range of stakeholders was chosen in the belief that information in the annual report should not favour one particular user group and that quality of communication is improved when the needs of all stakeholders are recognised.

Wallace and Naser (1995) rejected a weighting system elicited from the perceptions of one or two user-groups on the basis that one or two user-groups are only a subset of users of annual reports. The annual report is a specialised and complex document. Therefore, it was felt that panel members for the electricity industry research should be familiar with financial disclosures and information generally contained in company annual reports. Dinius and Rogow (1988) noted that methodologies such as expert judgement are acceptable in the inexact sciences. Fifteen candidates representing a range of stakeholder groups were selected on this basis. The aim was to have a panel of experts. An expert is someone who has special knowledge about a specific subject. The chosen panelists were experts in the sense that they knew more about the topic than most people would (Martino, 1983). Therefore, selection was purposive rather than random (Kuzel, 1992; Morse, 1989).

A letter of invitation which outlined the objectives of the research, the process, and the degree of commitment required of panel members was sent to representatives of the following fifteen stakeholder groups: auditors, lenders, central government, major electricity users group (MEUG), energy trusts, academia, financial analysts, financial reporter, consumers' advocate, environmentalists, preparers, directors, industry consultant, informed consumers, electricity company employees (shown in Figure 6.2). The panelists were chosen because of their stakeholder position and because of their knowledge of what might be disclosed in corporate annual reports and the importance of those disclosures from an accountability perspective. Therefore, the panel could be said to be experts in both a technical and a professional sense. It was expected that selection of a panel of this nature would ensure more willingness and commitment to the research. Following the issue of letters of invitation, seven replies were received by return mail and the remaining eight were received within the following week. Only one contact declined the invitation to be involved with the research. A letter of invitation was sent to an equivalent stakeholder and a prompt reply was again received. It was felt that such a prompt response indicated the interest and motivation of the participants and that this willingness to contribute would influence the level of effort and consideration they put into their responses.

Figure 6.2
Electricity Company Stakeholders



Auditor: Audit partner, big 5 firm, 26 yrs experience
Lender: Chartered Accountant, 10 yrs banking experience
Regulator: Compliance Electricity (Information Disclosure) Regulations 1994/99, 5 yrs
Preparer: CFO electricity industry, 6 yrs
Academic: Chartered Accountant, 10 yrs practice, 19 yrs academia
Environmentalist: Energy campaigner 25 yrs, Trustee of an energy trust
Employee: Chartered Accountant, 33 yrs experience
Consumer: GM, Finance, listed co., 30 yrs experience
Financial Reporter: Business journalist, 20 yrs experience
Industry Consultant: Investment co., 6 yrs experience
Consumers' Advocate: Analyst, consumer org., 13 yrs experience
Director: Electricity industry consultant, 34 yrs experience
Energy Trust: Chartered Accountant, electricity industry 19 yrs
Major Electricity Users: Contestable policy advisor, 20 yrs experience
Financial Analyst: Self-employed, 30 yrs experience

6.3.2.2 *Data collection by questionnaire*

After selecting the panel of stakeholders, the next step in preparing the draft index was to prepare the questionnaire. The questionnaire was designed to elicit the opinions or views of the panel of experts on the relative importance of a number of potential items for disclosure in electricity company annual reports.

The questionnaire outlined the objectives of the research, explained the method of rating the items for importance and included a categorised list of potential items for a draft disclosure index. It was sent to the 15 stakeholders. An explanatory sheet was included in order to give additional information about the meaning of some of the disclosure items (the questionnaire is shown in Appendix C).

The panel was asked to consider two issues: what should be disclosed in the annual reports of electricity retail and distribution companies, and how important each disclosure is considered to be from an accountability perspective. Users of annual reports may consider some items of information to be more important than others. In order to take this into consideration panel members assigned "importance" ratings (weightings) to each item. Firth (1980) thought that indicating the importance levels of various items might encourage some firms to increase disclosure of the most important items. This would certainly be a desirable outcome of this research.

Panelists were asked for their opinion about 82 annual report disclosure items divided into nine categories. It was acknowledged that conflicting objectives between stakeholders results in different preferences for items that should be disclosed in annual reports. However, as the focus of the research is on general purpose reports that recognise multiple users (Cooper and Sherer, 1984) the opinions of a wide-ranging stakeholder group were sought.

Despite the benefits of quantifying opinions on an open-ended ratio scale, Coy (1995) noted that it was unrealistic to ask panelists to give opinions on whether or not an item should be disclosed and also to identify its relative importance to all other items on an open ended ratio scale. Other researchers who have used disclosure indices have limited the ratings to a simple ordinal scale. Therefore, it was decided to use a Likert-type rating scale as follows:

0	1	2	3	4
Should **not** be disclosed	Should be disclosed but is of **minor importance**	Intermediate importance	Should be disclosed and item is **very important**	It is **essential** to disclose this item

Ingram and Robbins (1992) advised that a Likert-type scale limits the extent to which respondents can differentiate their responses. In addition respondents may differ in their interpretation of the level of importance indicated by a particular numerical value. However, although there is a lot of subjectivity involved in making the determination and difficulty in assigning a numerical value to what is essentially an opinion, Sutton (1997) considered it to be a reasonable approach. Such scales have been used extensively in previous disclosure research. Malone et al. (1993) used a three point scale for ease of completion. They reported that studies (Johnson, Smith and Tucker, 1982; Matell and Jacoby, 1972) have shown that the validity of a questionnaire and the number of scale points of its items are independent. Elmore and Beggs (1975) noted that research indicates that a 5 point scale is probably as effective as any and that an increase from 5 to 7 points on a rating scale does not statistically improve the reliability of the ratings. Most of the previous research used a five point scale either 1 to 5 (Baker and Haslem, 1973; Firth, 1979; McNally et al., 1982; Firer and Meth, 1986; Tong et al., 1990; Adhikari and Tondkar, 1992) or 0 to 4 (Buzby, 1975; Barrett, 1977; Benjamin and Stanga, 1977).

A five point scale was chosen, based on the extent of its use in previous related research. The scale was found to be easy to comprehend and quick to use. Each stakeholder was asked to review the suggested items and to indicate the ones he/she thought should be disclosed by placing a number 1 - 4 alongside the item. The relative importance to users of the items of information included in the index was reflected in the weightings they assigned to each item. The placing of a 0 indicated the item should not be disclosed. Panel members were also asked to consider the cost of reporting an item and to exclude the item by placing a 0 alongside it and writing C/B if they considered the cost of reporting exceeded the benefit to stakeholders of having it. Space was provided for additional disclosure items to be added and weighted if desired.

The literature shows that some disclosure indices were weighted for the degree of importance of the items and others were unweighted. Of the 34 included in the literature review, 15 researchers used weighted indices, 5 used both weighted and unweighted, and 14 used unweighted indices (shown in Table 5.1). Without weightings, all disclosure items are of equal importance. Unweighted indices were used for simplicity or to avoid biasing the data by using the preferences of one particular user group. As this research does not focus on a particular user group such biasing does not have to be considered. Gray et al. (1995) and Fergusson et al. (1999) noted that an unweighted index reduces the subjectivity inherent in assessing the relative importance of each disclosure item. Gray et al. (1995) supported other researchers (Firth, 1979; Chow and Wong-Boren, 1987; Cooke, 1989, 1991) in contending that if there are a large number of items in the index then the ranking of companies may be expected to be the same using either weighted or unweighted scores. On this basis, Gray et al. (1995) used an unweighted index. However, Wallace and Naser (1995) expressed caution in adopting this assumption and noted that it may not be true in all cases.

Not all disclosure items have the same importance. It is contended that acknowledging the relative importance of each disclosure item is an important aspect of the disclosure index and adds a user focus to the research by incorporating the information needs of those users. These benefits outweigh the subjectivity inherent in the weightings. The weightings result from feedback from a wide range of stakeholders so that the bias that would be imposed by just one-user group, for example, financial analysts, is avoided and may be eliminated. Although the rankings of the companies may be the same using either a weighted or an unweighted index, weightings have the advantage of informing managers of the perceived importance of each disclosure item.

The questionnaire was used to identify the panel's judgement of what should be disclosed in the annual reports of electricity retail and distribution companies and the relative importance of those disclosures. However, it is acknowledged that those judgements are subjective and reflect the attitudes and knowledge of the participants. The next step, a follow-up interview, allowed the researcher to understand the underlying reasoning behind those judgements.

6.3.2.3 *Interviews with panel members*

Miles and Huberman (1994) noted that qualitative research is useful when one needs to validate and explain quantitative data gathered from the same group. Therefore, it was decided to add another meaningful layer to the research (Lee, 1991) by interviewing panel members about their responses. It was also thought that this could prevent a problem identified by Ingram and Robbins (1992) in which responses of those who do not examine the questionnaire carefully, distort the results relative to the responses of those who are more thoughtful.

One week after the questionnaires had been mailed out an interview appointment was made with each panel member to discuss the responses made on the questionnaire. Interviews were used as a follow-up to the sending out of the questionnaire to obtain further information from respondents regarding their selection and weighting of items and to ensure that questionnaires were completed. The intention was to gain insight into the different opinions on what should be disclosed in electricity company annual reports and the principal arguments for and against those opinions. Thus the interview helped to interpret and illustrate the quantitative data and eliminated the need to check responses for response bias[10]. The interview was to ensure a more considered response than could be obtained from a questionnaire particularly one of this nature where there is a possibility of what Sekaran (1984) describes as a "halo" effect where respondents become bored with the questionnaire, fail to concentrate on their responses to individual items and therefore continue to repeat the same level of response throughout the questionnaire.

Each panel member was asked to comment on his/her reason for allocating a particular weighting to each potential disclosure item. No attempt was made to get a panel member to change his/her mind. The interviews were recorded and transcribed and the transcription was sent to each interviewee for comment, correction and confirmation. This gave interviewees an opportunity to check the data and to make

[10] Response bias results where those who don't respond or respond after a considerable time lag may have different opinions from those who do. The interview allowed for the correction of any "response error" when the respondent had failed to give a rating to all items in the questionnaire.

any alterations or additions. This also gave respondent validity to the study (Bryman, 1988).

The panel was very co-operative and their comments and explanations of their reasoning provided a richer and deeper understanding of the underlying issues relating to accountability by the electricity industry. Input from the questionnaire and the enriched responses from the interview were used to compile the draft index.

6.3.3 Development of the draft index: weightings

The aim at this stage was to use feedback from the questionnaire and interview process to refine the list of items for the disclosure index and to allocate weightings to indicate the relative importance of each information item. Therefore, the first step in developing the draft index involved collating the questionnaires and transcribing the interview tapes. Once the feedback process was completed, the transcriptions were grouped by related items and issues (Patton, 1990; Coy, Dixon and Tower, 1994). Material from the transcripts is used in the following discussion which is in two parts:

- allocation of weightings to each disclosure item; and
- validation of weightings.

6.3.3.1 *Allocation of weightings to each disclosure item*

The weighting for a particular disclosure item was initially calculated by summing the ratings assigned to the item by the fifteen panelists and then dividing the total by fifteen to obtain a mean score. The higher the score the greater the importance that that item should appear in the annual report. A mean was used to summarize the response scores because it gave equal weight to each of the responses. A median would have been less appropriate given the limited range of scale values (Buzby, 1975). Parametric statistical tests are generally considered to be appropriate only when measurement on an interval or ratio scale has been achieved (Siegel, 1956). Despite the theoretical shortcoming that the index does not possess pure interval power, Coy et al. (1993) considered it reasonable that simple parametric calculations like arithmetic means might be used without producing misleading results. Gregoire and Driver (1987) considered that using parametric tests on ordinal data does not lead to great problems. A descriptive mean is commonly used by business researchers to describe attitudes expressed by means of a Likert-scale (Murphy, 1981). Dinius and Rogow (1988) stated that it is important to report means in order to disclose the wide disparity of panel member opinion. Therefore, the mean has been used as a descriptive statistic.

A table showing the weightings given by individual panel members is included in Appendix D. The two most highly rated items are "Information on accounting methods used" and "Details of the measurement basis of assets". Other "Asset" related items that rated highly are: Optimised Deprival Value of network assets, Amount of asset revaluation each year, Total fixed asset details, Investments, Depreciation method, and Current assets. In other categories items weighted highly were: Total debt outstanding, Current liabilities, Breakdown of sales revenue by segment, Major elements of costs, Details of unusual or non-recurring items, Goodwill written off, Discussion of results for past year, and Comparison of actual business performance to previously disclosed information. The category "Other Information" was rated as the most important category mainly because of the strong demand for information on "Accounting methods used". The group of "Efficiency Measures" were also rated highly. Further discussion of the relative importance of the disclosure items is included in section 6.3.3.2.

The spread of weightings as shown in Appendix D is a result of the diverse nature of the panel and the different objectives and focus of each panel member. The descriptive mean was compared to weightings given by other researchers for the same item by calculating a normalised mean[11] for each item in the literature that corresponded with items in the electricity industry disclosure index (Appendix E). The intention was to give validity to the weightings given by the panel and to the use of the mean weighting for each item in the draft index. This should also assist in overcoming a limitation cited by Wallace (1988) where the relative importance of

[11] Researchers have used various rating scales e.g. 1-4, 1-7. Therefore the mean weighting they gave to an item was normalised: their mean / scale maximum - scale minimum.

each item to all user groups may have been neutralised by using a range of stakeholders with different views.

6.3.3.2 *Validation of weightings*

The following section presents a table for each disclosure category which shows:

- The frequency of weightings given by panel members for each disclosure item in the questionnaire;
- The mean of those weightings;
- The normalised means for the weightings for the electricity industry, as derived from this research; and
- The normalised means of weightings documented by other researchers.

A discussion follows each table.

The tables are presented as follows:

Table 6.1: Background about the company

Table 6.2: Information about management, major shareholders, related party transactions

Table 6.3: Corporate responsibility

Table 6.4: Assets

Table 6.5: Debt

Table 6.6: Financial, operating and performance information

Table 6.7: Forward looking information

Tables 6.8a-6.8d deal with the following performance measures:

Table 6.8a: Financial performance measures

Table 6.8b: Pricing measures

Table 6.8c: Efficiency measures

Table 6.8d: Market measures

Table 6.9: Other information

Background about the company

Table 6.1 Background about the company

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Brief narrative history of the company	1	8	1	2	3	1.9	0.47	0.55
Management's broad objectives for the company	1	2	2	4	6	2.8	0.70	0.70
Management's principal strategies to achieve objectives	3	1	2	4	5	2.5	0.62	0.70
Description of principal activities	1	2	4	5	3	2.5	0.62	
Major contractual relationships	2	1	1	3	8	2.9	0.73	
General development of business	1	1	3	4	6	2.9	0.72	
Names of dominant customers	4	2	2	4	3	2.0	0.50	0.66

Each item was weighted for importance on a scale of 0-4:
0 should not be disclosed
1 minor importance
2 intermediate importance
3 very important
4 extremely important, disclosure essential

The **frequency** columns show the number of stakeholder panelists who gave each of the ratings. There were 15 panellists altogether.
The **mean** is the (sum of the ratings x frequencies)/15.
The **normalised means** are a conversion of the scales used by other researchers e.g. 0-4, 1-7 to a common scale. A mean is then calculated for the scores given for each item by all researchers. This is compared to the mean for each item in the electricity industry index.

Background information about management's objectives and strategies is useful as it provides a context within which to interpret other information about the firm (Botosan, 1997). Voluntary disclosures included in this section help in understanding those objectives and strategies.

Table 6.1 shows that 57% of the panel considered items in this category to be very important or extremely important. Although exact comparisons between weightings for importance in the electricity industry disclosure index and indices used by other researchers could not be made for all index items, the weightings given in this category appear to be very similar for both groups. Identical comparisons could be made for three items in this category. In respect of "Brief narrative history of the company", the normalised mean for other researchers for this item was 0.55. The panel gave this a normalised rating of 0.47. Information about management's strategies and objectives was included as two items in the questionnaire. These were rated as 0.70 and 0.62 by the panel compared to 0.70 by other researchers for the combined item.

Comments by panel members who rated this item as extremely important included:

> "The objectives and strategies are particularly important when network investment is very long term" (preparer).

> "Trust-owned companies in particular, have conflicting objectives. They may focus on delivering electricity at least cost to their community without a commercial return on their assets or they may concentrate on maximising the return on their investment. Stakeholders need to know what their objectives are" (employee).

> "Disclosure of strategies gives people opportunity to comment on how the utility is going to go about achieving its goals and whether there is likely to be any negative impact on consumers – if so this raises policy concerns from a government perspective" (regulator).

The Major Electricity Users Group (MEUG) considered that this part of the annual report should give information on the basis of valuing and pricing of services. Their concern was to see the regulation of line monopolies move to a more industry self-regulating basis with all stakeholders (consumers, line managers, line owners, retailers/generators) reaching a consensus on forward prices and investment plans within broad principles established by government. Therefore, in their opinion this section of the annual report is extremely important.

Disclosure of information about major contractual relationships was considered to be extremely important by 53% of the panel. The employee noted:

> "In the retail sector these will become more important because retailers may be exposed to mismatches between retail contracts and wholesale supply contracts. Without the buffer of certainty from line rentals their profitability may be highly volatile. At the extreme they could become margin traders, with minimal asset backing, making or losing money by betting on which way the wholesale market will move" (employee).

"Names of dominant customers" was regarded as more important in previous studies with a normalised rating of 0.66 compared to the panel rating of 0.50. Table 6.1 shows that 53% of the panel considered this item of low importance. Panel opinions on this varied from:

> "Particularly important for line businesses who will have a huge credit risk against one or two people" (auditor)

> to

> "A series of names won't mean a great deal to people" (consumer).

It was decided to omit this item from the draft index.

In summary, most of the disclosure items in this category were considered at least very important by the panel. Items 1.2 (Management's broad objectives for the company) and 1.3 (Management's principal strategies to achieve objectives) were combined as "Management's objectives and strategies" for entry into the draft index and "Names of dominant customers" was omitted from the index.

Information about Management, Major Shareholders, Related Party Transactions

Table 6.2 Information about Management, Major Shareholders, Related Party Transactions

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Names, backgrounds, affiliations, remuneration of directors	0	2	4	4	5	2.8	0.70	0.62
Names, functions, remuneration of executive management	1	3	3	3	5	2.5	0.63	0.62
Major owners of company's stock and number of shares owned	0	1	3	4	7	3.1	0.78	0.67
Number of shares owned by:								
Directors	0	2	5	2	6	2.8	0.70	
Management	0	3	5	4	3	2.5	0.62	
Employees	2	3	5	3	2	2.0	0.50	
Related party transactions	1	3	0	2	9	3.0	0.75	

Table 6.2 shows that 60% of the panel thought that information about directors is very important to extremely important. Other researchers have rated information about directors as 0.62 compared to the figure of 0.70 given by the panel.

A statement of management responsibilities has a positive value to users of annual reports so is considered a useful addition to the annual report. Information about management corresponded to the weightings given by other researchers: a normalised mean of 0.63 compared with 0.62 by other researchers.

"Major owners of company's stock and number of shares owned" was generally considered an extremely important item of information in this category. Table 6.2

shows that 73% rate this item as very important to extremely important. Comments on this item included:

> "The strategic direction will be influenced by the major shareholders, in particular those that may be influential in appointing directors. Therefore, their holdings should be disclosed" (employee).
>
> "The key is, who owns the shares (banker, financial reporter). We have only recently found as a result of a High Court case, that an undisclosed employee share scheme in Tower Corporation would enrich senior management by $50m more than a competitive proposal for demutualisation would" (financial reporter).

Firth (1978) rated information on the number of shares held by company officers as 0.67. Panel ratings of 0.70 for shares held by directors and 0.62 for shares held by management are similar. The consumer commented:

> "The number of shares held by management and employees is less important than major stock owners as it is unlikely to be a significant proportion of the total" (consumer).

The researcher agreed with this opinion so the items "Number of shares owned by management" and "Number of shares owned by employees" were deleted from the index. However, the item "Number of shares owned by directors" was retained.

"Disclosure of related party transactions" was generally considered extremely important (60% of the panel) particularly from a regulatory perspective.

> "The network industry is increasingly separating out major non-core activities such as the contracting functions into separate companies and then contracting back for maintenance and capital works on the network. This means they may be able to undercut other independent contractors or have preferential terms between the contracting business and networking business. Disclosure is considered important from a general financial disclosure perspective but we feel that it is even more important in the utility industries" (regulator).

Corporate Responsibility

Table 6.3 Corporate Responsibility

	Frequency						Normalised means	
Disclosure items	**0**	**1**	**2**	**3**	**4**	**Mean**	**Electricity Industry**	**Other Researchers**
Expenditure on the environment and the community	4	4	4	2	1	1.5	0.37	0.46

The panel gave "Expenditure on the environment and the community" a lower rating than all other disclosure items. It also received a low rating in the literature. Even the environmentalist considered it only as "quite important" on the basis that expenditure on the environment would be only a token amount so disclosure would be "no big deal".

Therefore, this item was omitted from the draft index.

Assets

Table 6.4 Assets

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Assets by segment: energy, contracting, network, generation	2	0	1	2	10	3.2	0.80	
Details of measurement basis of assets	0	0	0	2	13	3.9	0.97	
ODV valuation of network assets	0	0	1	4	10	3.6	0.90	0.61
Amount of asset revaluation each year	1	0	2	2	10	3.3	0.83	
Fixed assets purchased and sold in current year	3	1	3	1	7	2.5	0.63	0.80
Total fixed assets	0	1	1	1	12	3.6	0.90	
Long term investments	0	1	2	3	9	3.3	0.83	0.67
Investments purchased and sold in current year	2	1	2	2	8	2.9	0.72	
Capitalised interest	3	1	2	2	7	2.6	0.65	0.65
Asset management plan	5	0	1	4	5	2.3	0.57	
Location, nature, productive capacity of principal plant	3	0	6	1	5	2.3	0.58	0.57
% plant capacity utilized	4	0	3	2	6	2.4	0.60	0.73
Depreciation method	0	2	1	0	12	3.5	0.87	0.73
Capital expenditure planned	2	1	1	3	8	2.9	0.73	0.78
Current assets: debtors, inventories, cash	1	0	3	1	10	3.3	0.82	

Disclosure of information on all of the items in the Assets section was considered by the panel to be important with particular emphasis on segmentation of assets and disclosures related to asset valuation. Panelists were concerned to "to know where the major contributions are coming from" (industry consultant). Others considered the provision of segmental information a means of improving the efficiency of monitoring company activities.

MEUG considered that as 60-70% of line charges are asset driven, full details of assets are needed. In their opinion, segmentation should be by voltage category (33 kv, 11 kv and 220 kv) in respect of replacement cost, depreciated replacement cost, optimised replacement cost and optimised deprival value, and by discrete networks. Their concern is that where companies like United Networks own distribution companies in Auckland, Tauranga and Wellington an average may be taken rather than disclosure by network.

The valuation of assets was weighted much higher by the panel than by other researchers (0.90 compared to 0.61). The item was considered extremely important by 67% of the panel. This is probably because of the controversial nature of the ODV methodology and its effect on profitability ratios.

> "ODV has historically been the maximum a company could revalue its assets to but there may be justification in carrying assets at an amount above ODV as a number of companies have paid more than ODV for newly purchased networks" (auditor).

ODV has effectively become economic value.

> "Asset valuations are particularly important when the industry has been broken into one segment which is asset-rich (the lines business) and one segment whose main asset is customer goodwill. The methods used for asset valuation are critically important because if two companies start from different assumptions it may be almost impossible to make comparisons on return on investment" (employee).

Although the panel rated "Fixed assets purchased and sold" lower than the weighting given by Firth (1978) - 0.63 and 0.80 respectively – the item was considered important. This is also reflected in the importance of other asset information: "Capital expenditure planned" and "Asset management plans". Those who were aware of the complexity and size of utility company Asset Management Plans considered that it was not possible to provide this amount of detail in the annual report:

> "How you would actually provide an adequate description of the Asset Management Plan in the type of framework of the annual report beats me" (consumer).

However, the environmentalist had another view:

> "This is a biggie because a rural company might say my asset management plan is to let the lines fall over and then give them away to the farmers when we can't afford to fix them. If this is the implicit plan it should be made explicit" (environmentalist).

And the consumers' advocate stated:

> "Consumers need information about the effect of not maintaining assets, and the adequacy of service being provided" (consumers' advocate).

On balance, it was decided to retain this item in the draft index on the basis that a summary of the Asset Management Plan, with particular reference to network maintenance, should be included in the annual report. The two items "Long term investments" and "Investments purchased and sold in current year" were combined in the draft index as "Investments" and best practice disclosure for this item included details of movements in investments.

"Location, nature, productive capacity of principal plant" has a normalised mean of 0.57 given by other researchers compared to 0.58 given by the panel. This item was considered "not very important" by 60% of the panel. This lower level of importance probably relates to the type of industry being researched although it is likely that this item will become more important as takeovers continue throughout 1999 and companies obtain ownership of networks outside their normal areas of operation.

"Percentage of plant capacity utilized" (weighted 0.73 by other researchers and 0.60 by the panel) was considered to be important for network and generators because it impacts on return on investment as well as potential costs for plant expansion / replacement.

Information on the breakdown of current assets was considered to be extremely important by 67% of the panel. For retailers (without generation) this may be the largest tangible asset.

Overall, the entire category relating to disclosure of information about Assets was considered to be very important. Concerns were expressed about the sensitivity of information about "% of plant capacity utilised" or "productive capacity" but generally the panel thought all of the items in this section should be disclosed.

Debt

Table 6.5 Debt

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Total debt outstanding and debt repayment schedules	1	0	2	2	10	3.3	0.83	0.87
Current liabilities: creditors and provisions	1	0	2	3	9	3.3	0.82	
Interest rate on debt	3	0	3	4	5	2.5	0.63	

Details of "Debt outstanding and debt repayment schedules" were weighted similarly by other researchers and the panel (0.87 by the other researchers and 0.83 respectively). For trust-owned companies, debt is likely to be very low particularly after the cash injection from extra funds from the sale of retail customers. For companies where borrowing in relation to total equity is significant, information on long-term debt covenants limiting further borrowing, average interest rates, and repayment schedules were generally considered very important to extremely important. The item "interest rate on debt" was omitted as a separate disclosure item in the index and included as part of best practice reporting for "Debt outstanding".

Financial, Operating and Performance-Related Data

Table 6.6 Financial, Operating and Performance-Related Data

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Breakdown of sales revenue by segment	1	0	2	0	12	3.5	0.87	0.75
Sales volume by segment	2	0	2	2	9	3.1	0.77	0.73
Breakdown of expenses by segment	2	1	3	1	8	2.8	0.70	0.66
Profit for each segment as above	2	1	2	0	10	3.0	0.75	0.75
Other earnings	1	1	2	2	9	3.1	0.78	
Cost of electricity purchased, generated, distributed	3	0	1	1	10	3.0	0.75	
Major elements of costs: restructuring, redundancies, depreciation	0	0	2	2	11	3.6	0.90	0.76
Breakdown of expenses into fixed and variable	6	2	0	2	5	1.9	0.47	0.68
Details of unusual or non-recurring items	0	0	1	4	10	3.6	0.90	
Research and development expenditure for current year	1	1	3	2	8	3.0	0.75	0.70
Goodwill written off	0	1	1	3	10	3.5	0.87	0.69
Funding costs	3	2	0	2	8	2.7	0.67	0.71
Discussion of results for past year	1	0	1	3	10	3.4	0.85	0.78
Historical summary of operating and financial data (5 years)	3	1	3	2	6	2.5	0.62	0.80
Major industry trends	4	2	5	1	3	1.8	0.45	0.68

This section of the index deals with financial accountability which is the responsibility of managers to provide full and detailed information about past and present financial activities (Miah, 1988).

With the exception of three items in this category the disclosure was considered extremely important by the majority of the panel and more important than that indicated by other researchers.

The panel's higher weighting of segmental information (0.75 by other researchers, 0.87 by the panel) reflects the scope for cross-subsidisation between the various electricity business activities and the panel's desire for information by customer sector such as domestic, commercial and industrial or by voltage ratings. Firth (1979) found that the breakdown of sales and earnings by customer class/product line or geographic location was weighted as the most important item.

The panel expressed concern for segmental information that allows stakeholders to see how much profit and sales revenue is attributed to each consumer group for example:

> "By highlighting inefficiencies or high cost activities it may act to draw new players into the market, or redirect the activities of existing competitors (employee)".

Generally it was considered that electricity companies should disclose segmental information for each geographic and line of business segment. Consumers' Institute representatives were particularly concerned that electricity retailers disclose details of revenue they obtain from small, medium and large customers. However, it is likely that power companies will wish to protect this information on the grounds that it is "market sensitive".

The regulator considered segmented sales information essential in order to be able to analyse average price per KW conveyed or generated for supply to domestic customers compared to commercial and industrial customers. MEUG considered segmental information should be disclosed by voltage class rather than by domestic, commercial and industrial categories given the difficulty in defining industrial users versus commercial users. However, caution was expressed because of the difficulty in obtaining consistency in allocating costs and revenues by load group. On the other hand, some panelists took the contra view:

> "Taking an existing situation and cutting up a certain way does not provide economically relevant information. Economists are concerned with incremental cost of adding a new customer to the network" (trustee).

The separation of line and retail companies has removed the ability for cross-subsidy between monopoly and contestable parts of power companies. However, there is still scope for cross subsidy, for example, between the line and other businesses in which line companies may be involved. The panel considered financial, operating and performance information in respect of these other interests should be disclosed. In addition, a new kind of vertical integration has been created with the forming of generation and retail companies and the opportunity to shift revenues and costs between these businesses.

Assessments of segmental information have commonly been omitted from disclosure indices because of the difficulty in determining whether non-disclosure is because a firm is withholding information or whether it in fact operates in just one segment. From a management perspective, all the companies involved in this research operate in more than one segment (whether it be customer class or voltage category).

Some panel members (20%) did not consider information about the cost of electricity purchased, generated and distributed should be disclosed but the majority (67%) considered it essential information:

> "A key issue" (consumer).
>
> "Absolutely wonderful" (regulator).

Particular concern was expressed for reliable and transparent disclosure of the true costs of generation and for assessment of costs of supply to particular customer groups. Since profits are determined jointly by sales and costs, and changes in either will cause changes in profits, details of sales and costs should be disclosed (Robb, 1980).

The panel did not consider breaking expenses into fixed and variable as very important because the items are difficult to define. Therefore, this item has been omitted from the draft index.

The Jenkins Committee Report (1994)[12] noted that users do not believe that sufficient detail, about items labelled as unusual or non-recurring, is provided in financial statements to enable users to ascertain whether to exclude those items from recurring operations. All panel members considered this item should be disclosed and 67% considered it extremely important information.

Likewise the majority of the panel think disclosure of information on "Goodwill written off" is essential information. As ODV for a network business excludes any goodwill from the asset base, disclosure is important from the regulator's point of view for checking purposes. The financial consultant considered its disclosure "imperative" in order to allow calculation of EBITDA which requires stripping out of depreciation and amortisation.

In respect of "Discussion of results for the past year" the consumer generally expressed the views of others in respect of the essential nature of this item:

> "In New Zealand we seem to have a defensive attitude to achievements. We'll put a gloss upon whatever has taken place. In the United Kingdom it is quite typical for the Chairman to say it was a terrible year and we apologise to shareholders and this is what we are going to do about it. Full accountability is needed here" (consumer).

"Historical summary of operating and financial data" was given a lower rating by the panel: 0.62 compared to 0.80 by other researchers. Historical summaries of annual financial results provide information that can be used to analyse trends. The lower rating was probably given because comparisons are difficult to make given the significantly changed nature of the industry, and with network companies now being separated from retail companies. However, the information is still important in order to identify trends and to evaluate the success of the continuous reforms since 1987.

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[12] Improving Business Reporting – A Customer Focus. The Jenkins Committee was the "Special Committee on Financial Reporting of the American Institute of Certified Public Accountants (1994)".

In summary, the 15 potential items included in this part of the index were reduced to 12 with the elimination of "Breakdown of expenses into fixed and variable", "Research and development costs" and "Major industry trends". Although 53% weighted Research and Development information as extremely important, the researcher confirmed from the exploratory study that there was unlikely to be such expenditure incurred by the companies. The panel considered that "Major industry trends" were well-known by users and therefore not very important. It is appropriate to restate at this point, that this disclosure index is relevant at a particular point in time. The industry is currently a focus of public attention but this may not always be the case.

Forward-Looking Information

Table 6.7 Forward-Looking Information

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Forecast of next years profits/earnings	4	1	0	4	6	2.5	0.62	0.76
Cash projections 1-5 years	6	1	1	4	3	1.8	0.45	0.71
Discussion on major factors influencing next year	1	0	3	4	7	3.1	0.77	0.78
Comparison of actual business performance to previously disclosed information.	0	2	0	3	10	3.4	0.85	

Lev (1988) believed that from an equity perspective[13] of decreasing information asymmetries, disclosure of earnings forecasts in financial statements should be mandated. This "public interest" aspect ties into the public accountability criteria for disclosure choices used in this research and the high level of importance attached by the panel to the item "Discussion on major factors influencing next year".

Generally, the ratings given by other researchers and by the panel were similar for the whole of this category although there was a significant difference in the weighting for "Cash projections" (0.71 compared to 0.45). Generally, the panel did not consider this information to be very important because the information was too

[13] Lev (1988) defines equity (fairness) as "equal access to information relevant for asset valuation" (p.3).

uncertain or too sensitive. Therefore, "Cash flow projections" has been deleted from the index.

"Comparison of actual business performance to previously disclosed information" was weighted as extremely important by 67% of the panel. Typical comments included:

> "The following year's annual report should focus on comparing actual performance to the previously published forecast. This would be more useful than a comparison with prior years" (employee).

> "Cost forecasts including expectations of improvements in operating efficiency and cost of capital are an intrinsic part of the Asset Management plan. Target cost of capital should be disclosed and a stakeholder charter which sets out the key performance and pricing assumptions and targets should be publicly disclosed each year then comparisons drawn with actuals in the following year" (MEUG).

Measuring actual achievements against objectives and targets is specifically stated in the NZ Statement of Concepts (cl.3.5(b)) as an accountability requirement and as such is essential in assessing efficiency and effectiveness.

The following four tables detail responses for performance measures: financial performance, pricing, efficiency and market measures.

Financial Performance Measures

Table 6.8a Financial Performance Measures

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Debt to equity ratio	4	0	3	4	4	2.3	0.57	0.53
Funding cost cover (times interest covered)	4	0	3	4	4	2.3	0.57	
Net tangible assets per share	4	0	4	4	3	2.1	0.53	
EBIT/Average net funds employed	3	0	3	4	5	2.5	0.63	
Dividend per share (cents)	4	1	3	2	5	2.2	0.55	
Dividend yield (%)	4	0	4	2	5	2.3	0.57	0.44
Price earnings ratio (based on current year net profit after tax)	5	1	3	2	4	1.9	0.48	0.64
EPS (cents): on operating profit, net profit after tax	5	1	3	2	4	1.9	0.48	0.75
Return on total assets	2	0	3	2	8	2.9	0.73	0.57
Return on equity	2	0	3	2	8	2.9	0.73	
Accounting rate of profit	1	0	4	3	7	3.0	0.75	
Summary of share price and trading volume	4	1	4	3	3	2.0	0.50	0.46
Overhead costs per retail customer	5	0	2	2	6	2.3	0.57	

Performance measures are intended to indicate each electric power company's strategy for setting prices and providing commercial returns to investors. These disclosures are a key element of the light-handed regulatory information disclosure regime. Disclosure of these items in the annual report assists in discharging financial accountability. "Price earnings ratio" and "Earnings per share" are not regarded by the majority of the panel as very important. In fact, 33% considered they should not be disclosed as they could be calculated from other information provided. Therefore, these items were omitted from the draft index along with "Dividend yield". The item "Summary of share price and trading volume" was also omitted as the majority of the electricity companies are unlisted companies.

The panel rated "Return on total assets" higher than other researchers probably because of the significance of this calculation for regulatory purposes. Both return on assets and return on equity are regarded as a measure to ensure that profits are not excessive in non-competitive sectors of the industry as well as their use as a yardstick for investors.

Financial performance measures for regulatory disclosure requirements focus on the monopoly lines business rather than the retail sector but as the employee pointed out:

> "Overhead costs per retail customer will be a very important measure for determining the efficiency and profitability of energy retailers" (employee).

The MED is placing heavy reliance on competitive forces to "regulate" the retail/generation sector of the industry. Some panel members thought this view may prove to be optimistic. The following quote from the environmentalist on the panel sums up the reason for including both the retail and the distribution sectors of the electricity industry in the assessment of annual report disclosures:

> "The main mechanism in New Zealand for protecting consumers is the light-handed disclosure regulation through the Ministry of Commerce. That does not apply to competitive industries who government believes will be protected by competition. I disagree that the new retailers will compete in a way that protects consumers. I believe it has been proved through the behaviour of TransAlta in the hiking of power prices. The effective captiveness of consumers is being demonstrated. The company annual report is a vital adjunct to the Ministry of Commerce disclosure regime. The annual report disclosure is the only disclosure we have got for these so called competitive industries. Disclosure is all we have got in a difficult industry and we need all we can get" (environmentalist).

Pricing Measures

Table 6.8b Pricing Measures

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Index of electricity prices by market segment compared to CPI	5	1	0	1	8	2.4	0.60	
Average energy price per unit	3	2	0	2	8	2.7	0.67	
Average domestic power bill	5	2	0	3	5	2.1	0.52	
Pricing information	2	2	0	2	9	2.9	0.73	0.65

In general the population see electricity as an essential service that in the main is still delivered by quasi-Government bodies (Government-owned generators, Transpower, and trust-owned or council-owned lines companies). Publication of pricing data is therefore an important means for the community (as stakeholders) to monitor the performance of their representatives (politicians, trustees, and directors). Generally, "cheaper" power will be seen as a successful outcome from the restructuring process, while prices which rise faster than the CPI would be seen as evidence of failure. Increased return on investment in the industry is not generally viewed as a measure of increased efficiency, especially if it is accompanied by price increases. It is very important therefore, that price changes are measured and published over a relatively long period, say 5 to 10 years. This monitoring needs to be by market segment, so that any rebalancing of tariffs between large commercial users and the domestic market or between voltage classes is quite clear. In order to prevent repetition the first two items were included within the best practice criteria of the disclosure item "Pricing information".

"Average domestic power bill" was considered by some stakeholders to be a good yardstick to measure the economic effect of the reform process. However, attention was drawn to the need to adjust the raw numbers for different consumption patterns and for the effect of general price increases as measured by the CPI.

Generally the panel considered pricing information to be an essential addition to the annual report.

Efficiency Measures

Table 6.8c Efficiency Measures

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Total number of interruptions	1	1	1	4	8	3.1	0.78	
Average total duration of interruptions of supply per customer	2	0	0	4	9	3.2	0.80	
Average number of interruptions of supply per customer	2	0	1	4	8	3.1	0.77	
Number of faults per 100km of prescribed voltage line	2	0	0	4	9	3.2	0.80	
Direct line costs per kilometre	2	0	0	4	9	3.2	0.80	
Indirect line costs per customer	2	0	0	4	9	3.2	0.80	

All the items in this category were rated as very important and 84% of the panel considered disclosure of this information in the annual reports to be extremely important. In the electricity industry, customers pay for the product as well as for the security of uninterrupted power supply. There are industry-agreed standards for measuring faults and interruptions to supply and it was considered that these should be published as a measure of each line company's operating performance. However, some of the panel cautioned against making comparisons between companies as there are wide variations in topography and population density in New Zealand. They considered it unreasonable to assume that one company's performance is "better" simply because the average duration of interruptions per supply is less than for the neighbouring company. A sparsely populated rural area will inevitably have a less reliable network than a densely populated urban area, particularly if the latter network is underground. On the basis of this interview feedback, it was decided that it would be more informative for companies to show trends over a 5-10 year period for the same network. Even this method can produce distortions when violent storms cause significant damage to the network infrastructure. However, the use of comparisons over a long period will minimise these distortions which should be explained in the notes.

The regulator pointed out the difficulty in getting consistency in the split between direct and indirect costs. As a result, these items were replaced with "Total cost per km" and "Total cost per customer".

Market Measures

Table 6.8d Market Measures

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Average consumption kwh per customer (5 years)	4	1	0	5	5	2.4	0.60	
Number of customers by sector	2	1	1	5	6	2.8	0.70	
Change in market share in major areas of activity	4	0	2	1	8	2.6	0.65	

The panel did not rate this group of disclosures as highly as efficiency measures. Nevertheless over 60% considered their disclosure to at least be very important. One of the panel highlighted the importance of the market measure "Change in market share".

> "TransAlta started from a position in January 1999 where it had purchased 100% market share (except for a few large consumers) in the Auckland and Christchurch regions. Over a period of (say) 3 years one of the most critical measure will be how much of that market share is retained and what margin is being returned on it. The same measure applies to all other retailers who have often bought market share at considerable cost either by purchasing blocks of customers from lines companies or by extensive marketing campaigns. This investment is only productive if market share and margins are both maintained. Market share is irrelevant for line companies but the other measures are important" (employee).

MEUG was concerned that this information be disclosed by voltage class and by discrete network. In their opinion a customer, for example, a manufacturer in Lower Hutt, taking supply off United Networks 33kv system should be able to compare their line charges with a similar 33 kv direct supply customer in Orion's network.

Other Information

Table 6.9 Other Information

Disclosure items	Frequency						Normalised means	
	0	1	2	3	4	Mean	Electricity Industry	Other Researchers
Information on accounting methods used	0	0	0	1	14	3.9	0.98	0.78
Goodwill	2	1	1	3	8	2.9	0.73	
Details of reserves and movements in reserves.	2	1	2	1	9	2.9	0.73	
Contingent liabilities	2	1	0	4	8	3.0	0.75	0.65

"Information on accounting methods used" was rated as 0.98 by the panel compared to 0.78 by other researchers – 93% of the panel considered it essential information. This reflects the concern for methods used for valuation of assets.

Separate disclosure of goodwill is important from a regulatory perspective as it is required to be removed from total assets when calculating accounting rate of profit. This item was moved to the asset section of the index. "Details of reserves and movements in reserves" was omitted as a separate disclosure item and included as part of best practice criteria in respect of the disclosure item related to asset revaluation.

On the basis of feedback from panel members, three items were added to the index: "Forward contracts for committed purchases", "Disclosure of capital contributions by developers" and "Dividend distribution policy". Each of these was given a weighting of 2.5. Details of dividend distribution policy is considered to be especially relevant for trusts. A Trust may return any potential dividends back to the community by way of grants. Where funds are dispersed in this manner some of the panel considered it should be disclosed:

> "A trust-owned line company can charge higher line charges in order that the Trust can pass back that overcharging as a dividend or rebate (and perhaps distribute it inequitably to those who paid for it by way of higher line charges in the first place)" (MEUG).

Others considered it inappropriate to treat the capital contribution for an entire subdivision as revenue one year and then include that subdivision at full cost in the ODV and seek a return on it in future years. The amount and the accounting treatment should be disclosed. It was therefore decided that this item should be included in the disclosure index.

Summary

Some fine-tuning of the index items was needed to avoid duplication, provide some consolidation and reflect stakeholders' opinions. As a result of this refinement process the number of items in the index was reduced from 82 to 67. The following changes were made:

Deletions:

Names of dominant customers
Number of share owned by management and by employees
Expenditure on the environment
Details of expenses as fixed and variable
Research and Development expenditure for current year
Major industry trends
Cash projections 1-5 years

Dividend yield (%)
Price earnings ratio
Earnings per share
Summary of share price and trading volume
Average energy price per unit

Deleted as separate disclosure items and included as best practice criteria for related items:
Interest rate on debt
Index of electricity prices by market segment compared to CPI
Details of reserves and movements in reserves

Combined:
Managements' broad objectives for the company with managements' principal strategies to achieve objectives
Long term investments and Investments purchased and sold in the current year

Additions:
Forward contracts for committed purchases
Dividend distribution policy
Capital contributions by customers

Changed:
Goodwill moved to Asset section
Total fixed assets to Fixed asset details
Direct line costs per kilometre to Total costs per kilometre
Indirect line costs per customer to Total costs per customer

The resulting index of 67 items with the weighting for importance of each item is shown in table 6.10.

Table 6.10 Draft Index Disclosure Items and Their Weightings

1.0	**Background about the Company**	Weighting
1.1	Brief narrative history of the company.	1.90
1.2	Management's objectives and strategies	2.80
1.3	Description of principal activities.	2.50
1.4	Major contractual relationships.	3.10
1.5	General development of business.	3.10
2.0	**Information about Management, Major Shareholders, Related Party Transactions**	
2.1	Names, backgrounds, affiliations, remuneration of directors	2.80
2.2	Names, functions, remuneration of executive management	2.50
2.3	Major owners of company's stock and number of shares owned	3.10
2.4	Number of shares owned by directors	2.80
2.5	Related party transactions	3.00
3.0	**Assets:**	
3.1	Assets by segment: energy, contracting, network, generation	3.20
3.2	Details of measurement basis of assets	3.90
3.3	ODV valuation of network assets	3.60
3.4	Amount of asset revaluation each year	3.30
3.5	Fixed assets purchased and sold in current year	2.50
3.6	Fixed asset details	3.60
3.7	Investments	3.30
3.8	Goodwill	2.90
3.9	Capitalised interest	2.60
3.10	Location, nature, productive capacity of principal plant	2.30
3.11	% plant capacity utilized	2.30
3.12	Depreciation method	3.50
3.13	Capital expenditure planned	2.90
3.14	Current assets: debtors, inventories, cash	3.30
3.15	Asset Management Plan	2.30
4.0	**Debt:**	
4.1	Total debt outstanding and debt repayment schedules	3.30
4.2	Current liabilities: creditors and provisions	3.30
5.0	**Financial, Operating and Performance Related Data:**	
5.1	Breakdown of sales revenue by segment	3.50
5.2	Sales volume by segment	3.10
5.3	Breakdown of expenses by segment	2.80
5.4	Profit for each segment as above	3.00
5.5	Other earnings	3.10
5.6	Cost of electricity purchased, generated, distributed	3.00
5.7	Major elements of costs	3.60
5.8	Details of unusual or non-recurring items	3.60
5.9	Goodwill written off	3.50
5.10	Funding costs	2.70
5.11	Discussion of results for past year	3.40
5.12	Historical summary of operating and financial data (5 years)	2.50
6.0	**Forward-Looking Information:**	
6.1	Forecast of next years profits/earnings	2.50
6.2	Discussion on major factors influencing next year	3.10

6.3	Comparison of actual business performance to previously disclosed information.	3.40
7.0	**Performance Measures**	
	Financial Measures	
7.1	Debt to equity ratio	2.30
7.2	Funding cost cover (times interest covered)	2.30
7.3	Net tangible assets per share	2.10
7.4	EBIT/Average net funds employed	2.50
7.5	Dividend per share (cents)	2.20
7.6	Return on total assets	2.90
7.7	Return on equity	2.90
7.8	Accounting rate of profit	3.00
7.9	Overhead costs per retail customer	2.30
	Pricing Measures	
7.10	Average domestic power bill	2.10
7.11	Pricing information	2.90
	Efficiency Measures:	
7.12	Total number of interruptions	3.10
7.13	Average total duration of interruptions of supply per customer	3.20
7.14	Average number of interruptions of supply per customer:5-10yrs	3.10
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	3.20
7.16	Total Costs costs per kilometre	3.20
7.17	Total Costs per customer	3.20
	Market Measures:	
7.18	Average consumption kwh per customer (5 years)	2.40
7.19	Number of customers by sector	2.80
7.20	Change in market share in major areas of activity	2.60
8.0	**Other Information:**	
8.1	Information on accounting methods used	3.90
8.2	Contingent liabilities	2.90
8.3	Forward contracts for committed purchases	2.50
8.4	Capital contributions by customers	2.50
8.5	Dividend distribution policy	2.50

6.3.3.3 *Summary*

The draft index weightings have been validated by comparing weightings given by the panel with those given by other researchers. In order to facilitate this comparison a normalised mean was calculated for each of those groups. A study of the frequency of panel ratings for level of importance of each disclosure was also carried out. As a result of this process it is considered that the final weighting given for each item gives a sound indication of the importance of the item from the point of view of stakeholders. Despite the differing objectives of each of the stakeholder groups it appears that the mean weighting in many cases is comparable to that given by other researchers. Where there are significant differences then it is possible to justify these because of the unique nature of the industry. Adjustments were made to the weightings of two items (Major contractual relationships and General development of business) in order to reflect the strength of opinion of the majority of the panel on the essential nature of those items. A number of items are specific to the electricity industry and in each case the weightings are supported by the interview responses.

The next section describes the third step in preparing the disclosure index – measuring the quality of the disclosures.

6.3.4 Development of the draft index: quality criteria

Once the index items and their respective weightings had been decided upon, a further dimension was added to the scoring of the annual reports – assessing for quality of the disclosures. Botosan (1997) noted that disclosure quality was important but very difficult to assess. However, unless quality is assessed, it is difficult to distinguish between poor and excellent disclosures. Therefore, it was decided that the importance of measuring quality outweighed the difficulty of doing it. Wallace and Naser (1995) considered that the quality of disclosure would be expected to increase if more detail is given in respect of each item of information. They called this degree of detail "comprehensiveness". Comprehensiveness of disclosure involves assessing the depth of information provided in the annual reports. Wallace et al. (1994) gave credit for density (fullness) of information; for example, additional credit was given for qualitative information that improved understanding of the numbers in the financial statements. Botosan (1997) considered that the assumption held by researchers that quantity is related to quality seemed justified. Comprehensiveness is therefore considered to be a measurable component of quality.

In addition to Wallace et al. (1994) and Wallace and Naser (1995), other researchers have used disclosure indices to measure what is commonly referred to as "quality" in order to assess the usefulness of company annual reports (Copeland and Fredericks, 1968; Buzby, 1975; Barrett, 1977; Wiseman, 1982; Robbins and Austin, 1986; Wallace, 1988; Giroux, 1989; Tong et al., 1990; Tower et al., 1995; Carson and Simnett, 1997).

The methods used by other researchers were examined in order to determine the most appropriate method to use as a basis for developing the electricity industry quality of disclosure measure. The work of three researchers (Buzby, 1974; Robbins and Austin, 1986; Coy et al., 1993) was considered to be the most relevant. Buzby (1974) used a method which was essentially an extension of the weightings given to individual items. He identified items which could be expressed in terms of sub-elements of information and distributed the weighted score (relative importance score) amongst those so that partial credit could be given. The maximum score was the weighted score and this was given if all sub-elements of information were disclosed.

Buzby's (1974) method of identifying sub-elements of information formed a basis for determining components of each disclosure item for the electricity company disclosures. However, it was thought preferable to use a method that would retain intact the weightings for importance. It was therefore decided to give points for the comprehensiveness of disclosures quite separately from the weightings. The more complex model used by Robbins and Austin (1986) was then considered.

Robbins and Austin (1986) grouped items as dichotomous, qualitative or qualitative-quantitative. Each group was scored differently – in particular, qualitative items were scored according to the number of words contained in the disclosure. This method was more sophisticated than that used by Buzby (1974) but in respect of the electricity industry research, it was decided to avoid judging quality on the basis of a simple word count. Copeland and Fredericks (1968) noted this as a possible approach, but the apparent objectivity is outweighed by the non-discriminatory nature of the approach. Because repeated words do not necessarily constitute quality disclosure, this can be a rather ambiguous measure. Therefore, the method used by Coy et al. (1993) was carefully evaluated.

Coy et al. (1993) identified criteria for each level of quality: poor disclosure, satisfactory disclosure, excellent disclosure. Scores were then allocated ranging from 1 (poor disclosure) to 3 (excellent disclosure). This method retains the scores given for importance of the disclosure and combines them with the quality scores, unlike Buzby's method, which allocates the weightings for extent of disclosure between sub-elements. In addition the method has the benefit of being more specific than that used by Robbins and Austin (1986). With these advantages in mind, it was decided that this was the preferred method on which to base the development of a model for measuring quality of disclosures. In this respect, later research by Coy (1995) which sought to assess levels of quality on an interval basis, was also important.

Coy (1995) refined his earlier work and defined criteria which represented "standard" disclosure for each item. Individual items were then scored in relation to this anchor item on the basis of whether the item was perceived to be better or worse than the standard criteria. A score of 5 was allocated if the information provided was equal to the standard disclosure. If disclosure was 20% better than the standard criteria then a score of 6 was allocated.

Based on the above discussion it was decided to use a modified form of the approach used by Coy (1995) to measure quality / comprehensiveness in the annual reports of electricity industry companies because this approach has a number of advantages. It provides a reasonable measure for comprehensiveness of disclosure, and the clearly defined benchmark criteria assist the researcher in striving for consistency in scoring. The 5 point scale provides sufficient range to allow the scorer to differentiate between varying degrees of detail in the disclosures. In addition, it has advantages over an ordinal scale in that all the judgements are made relative to the "anchor" item. Thus, the "individual respondent can gauge a response to a particular item relative to an established criterion" (Ingram and Robbins, 1992, p.43). Because items are anchored to a known benchmark, allowance can be made for variations in disclosure detail without being tied to set and possibly ambiguous criteria associated with each numerical value on a scale. Instead, direct comparisons can be made and items scored on a "relative" basis.

It is acknowledged that the selection of the anchor criteria and the score ascribed to each item are subjective decisions of the researcher (Ingram and Robbins, 1992). To reduce this subjectivity, the annual reports were assessed and scored independently by two researchers: initially the writer and an associate professor experienced in the use of disclosure indices to measure extent and quality of annual report disclosures; and then by the writer and a qualified accountant. An "arbitration" process followed in which differences of opinion were discussed and a consensus or compromise was eventually reached. Marston and Shrives (1991) supported using replication by another researcher as a means of ensuring reliable results.

The scale used by Coy (1995) was open-ended in that scores greater than 5 ("standard" disclosure) could be awarded. As some items in the electricity industry disclosure index may not be applicable to all companies, for example goodwill, it is important that companies are not penalised for non-disclosure of such items. Therefore, it was decided to identify "best practice" criteria and award a score of 5 if all elements of stated best practice for each item were included in the annual report. Other scores were allocated in relation to this benchmark so that 20% less disclosure received a score of 4, 40% less disclosure received a score of 3 and so on. Therefore, quality of disclosure was scored on an interval basis from 1-5. Non-disclosure of relevant items scored 0. The appropriateness of this allocation was assessed in a pilot test and is discussed later in this chapter.

The next step was to identify criteria for "best practice" disclosure. Quality criteria were developed for each item in the disclosure index from the following sources:

- KPMG Model Annual Report 1999;
- Electricity Information Disclosure Handbook, March 1999;
- Recommendations of the AICPA Special Committee on Financial Reporting and the Association for Investment Management and Research, published by the Financial Accounting Standards Board, 1996. This publication incorporates "Improving Business Reporting – A Customer Focus: A Comprehensive Report of the Special Committee on Financial Reporting";
- Office of Electricity Regulation (OFFER), United Kingdom, Regulatory Accounts Consultation Paper 1998;
- An Annual Review of Corporate Reporting Practices 1995-1996 prepared by the AIMR. This publication reports on the awards for excellence in corporate

reporting and identifies criteria for evaluating the quality of financial communications;

- Submissions to the Ministry of Commerce on Proposed Amendments to the Electricity (Information Disclosure) Regulations 1994, October 1998;

- Reporting Financial Performance: Current Developments and Future Directions, 1998. This publication explains the views on what performance reporting should be like in the future as expressed by a G4+1 working group. The G4+1 is made up of representatives from Australia, New Zealand, United Kingdom, USA and the International Accounting Standards Committee; and

- The researcher's knowledge of best reporting practice developed partly from extant reporting practice by the electricity industry.

The following section details the resulting criteria used to assess the quality of disclosure for each item in the previously established disclosure index. These disclosures are indicative of "best practice" for each item in the index and score the maximum of 5 on the accountability index. Some adjustments were made to the disclosure index as a result of work done developing the criteria to measure the quality of the disclosures. For example, it became evident that items like "interest rate on debt" are better described as a quality factor of "total debt outstanding and repayment schedules" rather than as a separate disclosure item. As stated earlier, the intention was not to identify levels of quality for each disclosure item but rather to use benchmark criteria and then to allocate scores relative to the benchmark. Some examples of application of this judgement are included in the following descriptions.

Annual Reporting Model: Quality criteria for each item in the disclosure index.

Category 1: Background about the Company

The criteria related to the first category **"Background about the Company"** are as follows:

1. Background about the Company
Brief narrative history of the company: General description of the business and the competitive environment. Covers broad spectrum of activities and achievements set in the context of the social, political and economic environment. **Management's objectives and strategies**: A separate statement of management's broad objectives for the company including quantified measures and principal strategies to achieve the objectives. Should include factors or conditions that management believes must be present to meet the broad objectives. Should be in specific terms and items should be quantitative/measurable and the time frame given. **Description of principal activities:** Details of industry sector(s) in which the company operates. Description of principal activities and market segments. Also regulatory changes that management believes could have a significant impact on the business. **Major contractual relationships:** Description of major contractual relationships between the business and its customers and suppliers – retail contracts and wholesale supply contracts. Analysis of risks/benefits related to those. **General development of business**: Identify major events within past five years such as impact of industry reforms, mergers, disposition of assets, changes in mode of conducting business, frequency of price changes, number of customers, changes in number of customers.

The aim of the above disclosures is to ensure that stakeholders are informed about the background to company operations, and have a clear idea about management's focus and plans for the company. Scores are allocated on an interval basis. For example, for the item "General development of business" a score of 4 is given if details of customer numbers and changes are omitted or if a discussion on price changes is omitted. If both these areas are omitted then a score of 3 is allocated.

Category 2: Information about Management, Major Shareholders, Related Party Transactions

Category 2 deals with accountability issues in respect of the people involved with the company. The "best practice" criteria are as follows:

2. Information about Management, Major Shareholders, Related Party Transactions

Information about directors:
Names, backgrounds, affiliations, remuneration of directors.

Information about management:
Names, functions, remuneration of executive management including principal personnel changes.

Major owners of company's stock and number of shares owned:
Shareholding details and significant changes in ownership over 5 years. Public companies to disclose 20 largest shareholders.

Number of shares held by Directors
Number of shares held by each director and details of directors' share dealings including consideration paid or received.

Related party transactions:
Disclose the identity of each entity and the nature of the relationship between the entities involved in related party transactions that are material, a description of the service provided by each entity in those transactions, details of the transaction in dollar terms and any outstanding balances.

Companies who give only the **names** of directors receive a score of 1. Companies who give substantial detail in all aspects of this item except information on directors' affiliations receive a score of 4. Likewise if remuneration for executive management is shown in bands but no other details are given a score of 1 is given for the item relating to details about executive management. A number of companies give details of "Related party transactions" but omit $ values. A score of 4 is given for this level of disclosure.

Category 3: Assets

It is important for stakeholders to have detailed information about the assets in which the company has invested. Category 3 therefore assesses quality of disclosure of those assets in terms of valuation, movements, depreciation and utilisation. Inclusion of a summary of the Asset Management Plan is particularly important for the electricity industry where maintenance of assets is of prime importance. The criteria for best practice disclosure of **"Assets"** are as follows:

3. Assets

Fixed Assets by segment:
Separate schedule showing assets related to segments: supply, contracting, network, generation, other. Network assets should be shown by discrete networks or voltage categories including description and values e.g. 33kv network, 156 kilometres, $6.1m; 11kv network, 149 kilometres, $8.1m.

Details of measurement basis of assets:
A separate statement that describes the method of valuing each category of asset. An explanation of the various methods e.g. optimised deprival value.

ODV valuation of network assets:
A schedule showing for **each discrete network**: cost, lives used, the amount of depreciation charged, the depreciated replacement cost of the network, the optimised deprival value, over a five year period.

Amount of asset revaluation each year:
Show details for each revalued asset: networks by discrete network. Explain reason for revaluation: recoverable amount, impairment, longer lives, regulatory requirement.

Fixed assets purchased and sold in current year:
Description of individual assets and $ values. Gain/loss on sale.

Fixed Asset details:
Show the following separately: system fixed assets e.g. substations, lines, switchgear, transformers; motor vehicles, office equipment, land and buildings, total fixed assets. Disclosure to include cost, valuation, accumulated depreciation and useful lives of each asset category.

Investments:
Separate schedule showing all holdings and movements (sales, purchases, revaluations), valuations at cost and current market value.

Capitalised interest:
The amount of interest capitalised to fixed assets and the capitalisation rate used to determine the amount of borrowing costs capitalised.

Goodwill:
Show separately the balance at the beginning of the year, goodwill acquired, amortisation policy or useful life, accumulated amortisation at the beginning and end of the period, and balance at end of year.

Location, nature, productive capacity of principal plant:
Breakdown of network assets by discrete networks. Details of generation plants and productive capacity.

Percentage of plant capacity utilized:
Details of capacity used as a proportion of available capacity.

Depreciation method:
Comprehensive disclosure of depreciation of all assets in use. Depreciation policy and amounts analysed by asset type.

Capital expenditure planned:
A summary of works represented by capital expenditure and the reasons for any significant difference between actual capital expenditure and published plans for the year. Some indication of expected expenditure in future years.
For networks only: Description of planned capital expenditure that includes specific items and quantitative amounts and a time frame.

Current assets:
Show the following separately: bank, cash, short-term investments, trade debtors, other debtors, prepayments, receivables from related parties, total of current assets.

Asset Management Plan: A statement that the maintenance and replacement required by the plan during the current year has been done (if not, state implications for security of supply). A list of any deferred maintenance or deferred capital replacements from previous years, expected costs and implications of deferral for security of supply.

Allocation of scores in this category is illustrated by three of the above items: "ODV valuation of network assets", "Depreciation method", and "Investments". Amalgamation of networks has meant that areas that previously reported ODV separately will no longer do so. United Networks now owns distribution assets in Taupo, Waitemata, Tauranga/Rotorua, Hutt Valley, and Wellington. Powerco owns networks in Taranaki, South Taranaki, Wanganui, and Wairarapa. Therefore, "best practice" disclosure requires ODV by discrete network. In respect of ODV details: a score of 4 is given if all best practice criteria are shown but for only one year; a score of 3 is given if only one year's information is given and depreciated replacement cost is omitted; a score of 2 is given if depreciation details are omitted; and a score of 1 is given if the only information is the ODV for the current year. Scores are given for the item "Depreciation Method" in a similar way. For example, a score of 4 is allocated if all "best practice" information is included except for details of the years of useful life of the assets. Similarly for the item "Investments" a score of 3 is given if all holdings and their valuation are given but movements (sales and purchases of investments) are omitted.

Information about asset management is considered to be very important. The establishment of the criteria for this item took into account a comment from the Institute of Chartered Accountants (ICANZ) in their 1998 submission to the Ministry of Commerce, Proposed Amendments to the Electricity (Information Disclosure) Regulations 1994. ICANZ suggested that the audited financial report should include a number of assurance statements with respect to asset management. If there are areas where assurance cannot be given, then such exceptions should be disclosed.

Category 4: Debt

Prior to the reforms, Electric Power Boards had little or no debt (Hooks, 1995). As a result of the merger and acquisition process required by the Electricity Reform Act

1998, borrowings have increased to significant amounts in a number of cases. Therefore, category 4 requires the following disclosures in respect of **"Debt"** in order for a company to score the maximum score of 5:

4. Debt

Total debt outstanding and debt repayment schedules:
Disclosure of amounts owing with repayment schedules that show the age of the debt and the interest rate.

Current Liabilities:
Show separately: accounts payable, accrued payroll, dividend provision, total of current liabilities. If a provision for restructuring is shown this should be accompanied by an explanation.

A company that includes detailed repayment schedules and the relevant interest rate in the annual report scores the maximum of 5. A company that includes only the total of debt outstanding without accompanying details receives a score of 1. In respect of the item "Current Liabilities", a company which itemizes current liabilities but fails to disclose provisions such as dividends and restructuring scores a 3.

Category 5: Financial, Operating and Performance-Related Data

Information related to **"Financial, Operating and Performance-Related Data"** comprises category 5. The emphasis in this category is on detailed segmental information. This was particularly important when electricity companies were involved in both distribution and retail supply of electricity as it enabled financial statement users to identify profits related to each sector of the business. Now that companies are either electricity distributors or retailer/generators the segments have changed but the focus is the same. Segmented data for energy retailers will show the split of company results and assets between generation and retail activities and additional services. Ideally the results will also be segmented by customer class. Distribution companies (line companies) are also involved in other activities and should provide segmented information in respect of line/access charges and contracting/maintenance. The amalgamation of networks provides opportunity for excessive returns in one network to be hidden by poor returns in another network (cross subsidisation). Therefore, line companies are also expected to provide segmented data by discrete network.

As part of best reporting practice, management are expected to discuss and analyse the year's performance, and this information should be supported by an historical summary of operating and financial data. "Best disclosure" practice in respect of category 5 is as follows:

5. Financial, Operating and Performance Related Data

The following four items of segmental data should be shown by separate schedule:

Breakdown of sales revenue by segment:
Before the companies were split: Retail, Generation, Network, Contracting, Other.
After companies were split:
Lines companies: Access charges, Contracting/maintenance, Other
Retail Companies (Supply): Retail broken down by customer class, Generation, Additional Services, Other.

Sales volume by segment:
As above.

Breakdown of expenses by segment:
Separate disclosure of Cost of Goods Sold i.e. cost of electricity purchased, generated, distributed.
Note disclosure: average cost per kwh per year and trends.

Profit for each segment:
As for Sales Revenue.

Other earnings:
Revenue from interest, gain on electricity hedges, customer contributions.

Cost of electricity purchased, generated, distributed:
Note disclosure: average cost per kWh per year and trends

Major elements of costs:
Separate disclosure of: asset maintenance costs (lines cos), employee salaries, redundancy costs, depreciation expense on system fixed assets (lines cos) , depreciation expense on other assets, marketing/advertising expense (retail cos), takeover defense expenses, merger and acquisition expenses, electricity hedges (retail cos), restructuring costs, losses on electricity price hedges.

Details of unusual or non-recurring items:
Separate identification of items such as merger and acquisition costs that are not expected to occur in the next financial year. Results from discontinued activities.

Goodwill written off:
Separate disclosure of the amount of goodwill written off during the year and the amortisation period.

Funding costs:
Separate disclosure of interest, fees.

Discussion of results for past year:
Separate statement containing a discussion and analysis of performance during the year and the material factors underlying the results and financial position. It should emphasise trends and identify significant events and transactions during the year. Discussion should include at least five points e.g. change in sales, change in operating income, change in cost of electricity, change in interest expense or interest income, change in accounts receivable, change in market share.

Historical summary of operating and financial data:
Summary should include at least 3 financial performance measures and at least 3 efficiency measures. Details should included 4 year trends and comparatives. Possibly illustrations.

Failure to disclose the required "best practice" details of items such as "Major elements of costs" results in a reduced score. If asset maintenance costs (line companies) are omitted as well as employee salaries/wages, then a score of 3 is allocated. Similarly, if details of contributions by customers are omitted from "Other earnings" a score of 4 is allocated. If, in addition, disclosure of interest revenue and gain on electricity price hedges (where applicable) is omitted, a score of 2 is given.

Category 6: Forward-Looking Information

Forward-looking information is related to decision-making rather than accountability but the link between these two objectives of reporting is discussed in chapter four "Accountability". Accordingly disclosures related to **"Forward-Looking Information"** should include:

6. Forward-Looking Information

Forecast of next years profits/earnings:
Discussion related to forecast market share, profit forecast, sales forecast plus quantitative estimates linked to leading performance indicators. Disclosure of target efficiency gains and target WACC. Disclosure of underlying plans and assumptions.

Discussion on major factors influencing next year:
Discussion of the issues that are significant and are leading indicators of the company's future. An indications of any important events that have occurred since the end of the financial year and the likely future development of those undertakings as a whole.

Comparison of actual business performance to previously disclosed information:
Schedules showing targets and actuals relating to asset performance, asset efficiency and effectiveness. Includes comparison of objectives and targets for at least five performance measures.

In order to score a 5 for "Comparison of actual business performance to previously disclosed information", comparative figures for five performance measures must be given. Scores were therefore allocated according to the number of comparative measures given, that is, 4 measures receive a score of 4.

Category 7: Performance Measures

Category 7 has a strong accountability focus and deals with four areas of performance: financial performance, pricing measures, efficiency measures and market measures. Most of these are specific to the electricity industry. "Best practice" disclosure for **"Performance Measures"** is as follows:

7. Performance Measures: Financial

Debt to equity ratio:
A five year trend statement showing debt as a percentage of equity.

Funding cost cover:
A five year trends statement showing the number of times operating profit covers total interest cost.

Net tangible assets per share:
A five year trend statement.

EBIT/Average net funds employed:
A five year trend statement showing EBIT/Average Net Funds Employed.

Dividend per share (cents):
A five year trend statement of dividends per share stated in cents.

Return on total assets:
A trend statement showing the return on total assets for the company as a whole over a five year period.

Return on equity:
A trend statement showing the return on equity for the company as a whole over a five year period.

Accounting rate of profit:
A trend statement showing the accounting rate of profit for the company as a whole over a five year period.

Overhead costs per retail customer:
5 year trend.

Performance Measures: Pricing

Pricing Information:
Average energy price per unit by market segment, CPI adjusted, for 5 years: divided into generation, line, retail.

Average domestic power bill:
CPI adjusted, 5 year trends: divided into generation, line, retail.

Performance Measures: Efficiency

Total number of interruptions:
The number of interruptions which occurred in the financial year over a five year period.

Average total duration of interruptions of supply per customer:
Show in minutes the average total duration of interruptions of supply that a customer experienced during the financial year over a five year period.

Average number of interruptions of supply per customer:
Show the average number of interruptions of supply that a customer experiences during the financial year over a 5 year period.

Number of faults per 100 km of prescribed voltage line:
5 year trend.

Total costs per kilometre:
Line companies only. 5 year trend.

Total costs per customer:
5 year trend.

Performance Measures: Market

Average consumption kwh per customer:
5 year trend.

Number of customers by sector:
Show the number of customers in each customer category: domestic, commercial, industrial and in each voltage class over 5 years.

Change in market share in major areas of activity:
Show % change in number of customers, generation, distribution, preferably by graph presentation.

Each of the above performance measures requires disclosure of five year trends and scores are allocated accordingly. Disclosure of the required performance measure over a four year period receives a score of 4; disclosure for one year only receives a score of 1.

Category 8: Other Information

Finally, category 8 covers disclosures related to five sundry items. Of these, two in particular deal with aspects specific to the electricity industry: electricity price hedges and capital contributions made by customers. The basis upon which electricity is purchased and on-sold to customers results in some companies having exposure to electricity market price risk. These companies enter into hedge contracts to manage exposure to market price risk. "Best practice" disclosure requires details related to these financial instruments. Criteria for quality of disclosure in respect of this category **"Other Information"** are as follows:

8. Other Information

Information on accounting methods used:
Separate section with at least 5 issues explained. If no changes then state this fully. If changes, state the reason, detailed explanation and quantitative impact.

Contingent Liabilities:
If no contingencies then a clear statement to this effect.
If there are contingencies then a separate statement disclosing individual items with financial impact.
A statement that all items have been disclosed.

Forward contracts for committed purchases:
Valuation method and $ value. Statement of credit risk. If none, a statement to this effect.

Capital contributions by customers:
Disclosure of the amounts received as capital contributions by customers and the treatment of these – capitalised or treated as revenue.

Dividend distribution policy:
Details of dividends paid and provided and the underlying distribution policy. In the case of trust-owned companies show details of discounts given to customers.

Once again, scores are allocated for this category in proportion to degree of disclosure in comparison to the "best practice" criteria. If details are given of "Contingent liabilities" but no $ value is included then a score of 4 is given. Failure to discuss the credit risk associated with "Forward contracts for committed purchases" or to include a fair value (or a statement explaining why fair value was not appropriate) scores a 4 if one of those aspects is omitted, or a score of 3 if both are omitted.

In summary, the aim of developing a system to measure quality of disclosure was to add a further dimension to the assessment of usefulness of the annual report disclosures and to be more discriminatory in this assessment. Coy et al. (1993) point out that a simple index that measures only extent of disclosure and ignores quality or degree of detail of those disclosures can be misleading. In their opinion a report which disclosed all items in a way considered to be "poor" would receive 100% in a simple index but only 33% if a quality dimension was included. It is believed that adapting the scoring method used by Coy et al. may give better information about the quality of disclosure than a simple system that records only the presence or absence of an item.

The draft index is now complete. Each disclosure item in the index has been assigned a weighting to indicate its relative importance and criteria have been established for assessing the quality of those disclosures. The final step involved testing the draft index with a view to establishing the final disclosure index – an annual reporting model. The process is outlined in the next section.

6.3.5 Development of the final index

This section describes three parts of the process of developing the draft index into the final index: the pilot test, the scoring of the annual reports, and the fine-tuning of the index following feedback from the stakeholder panel.

6.3.5.1 *The pilot test*

In order to assess the ability of the disclosure index to distinguish between various levels of reporting, the disclosure index was tested on the 1999 annual reports of six companies:

UnitedNetworks (line company)
Central Power (line company
Horowhenua Energy (line company)
Waitaki Power (line company)
Counties Power (line company)
TransAlta (retail company)

Five companies were chosen at random from the annual reports that had been received by the researcher by mid-July. TransAlta was specifically chosen in order to test the index on the annual report of a retail company.

A detailed scoring sheet was drawn up in order to ensure consistency of scoring between companies and between the two scorers.

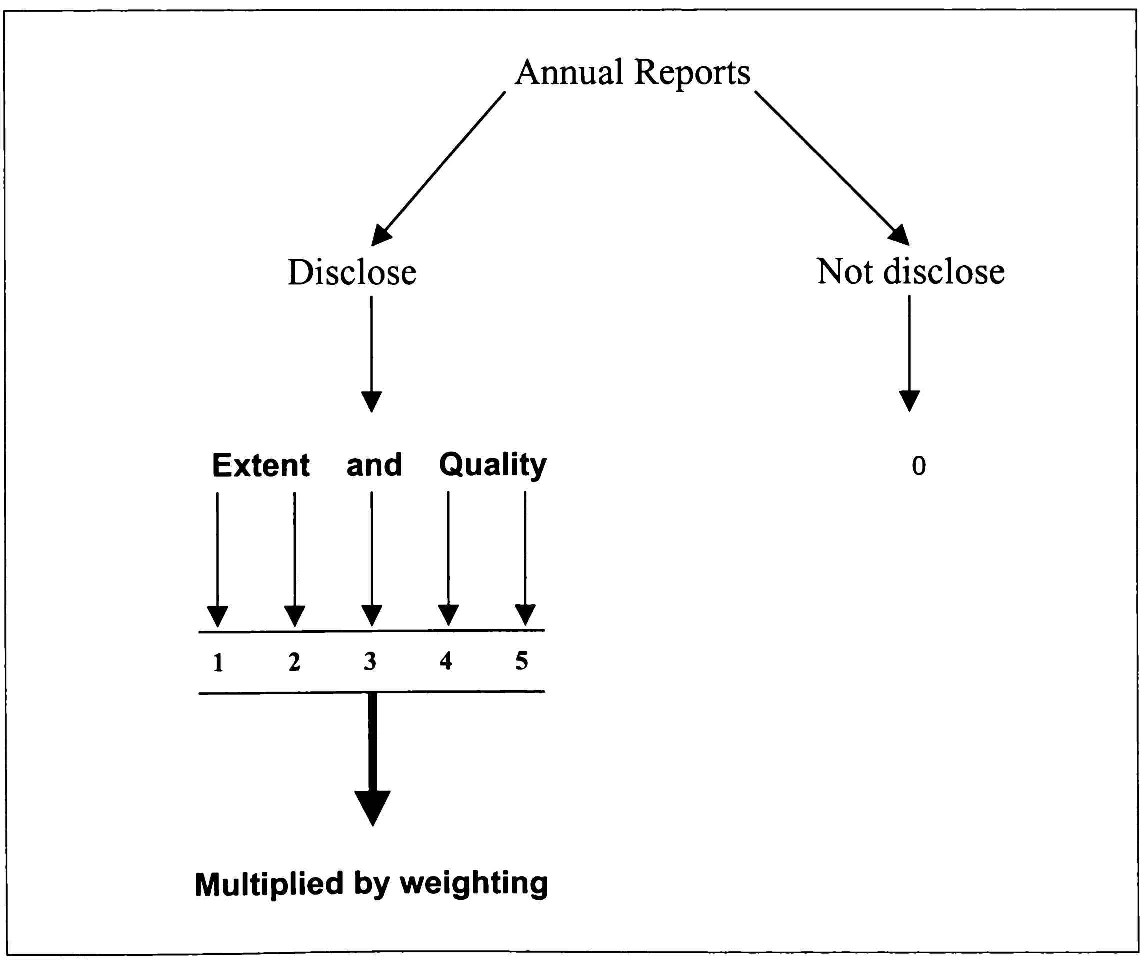
The researcher scored each item and then the reports were scored by an associate professor experienced in scoring annual report disclosures. The appropriateness and robustness of the index was then discussed.

6.3.5.2 *Scoring of annual reports*

A score was given for each item in the index on a scale of 1 to 5 depending on the degree of detail given for each item. The quality criteria previously established were used for this purpose. This score was multiplied by the weighting for importance of the particular item to obtain a weighted score. If an item was not applicable to a company then N/A was recorded and the item was not included when calculating the total possible score. If a company had not disclosed an item that was applicable to the company, a score of 0 was recorded. The following diagram summarises the process:

Figure 6.3

The Scoring Process



A number of summary scores were calculated to assist with the index assessment process:

- An unweighted percentage score for each of the 8 categories;
- A weighted percentage score for each of the 8 categories;
- An unweighted percentage score for the annual report as a whole;
- A weighted percentage score for the annual report as a whole.

The assessment process identified little difference between the weighted and the unweighted scores (see Appendix F). It was decided to use only the weighted scores for the final analysis in anticipation that highlighting the importance levels of various items might encourage some firms to increase disclosure of the most important items and because conceptually a weighted index has the strength of acknowledging that some items are more important than others. In addition, a weighting for the importance of each item enables the researcher to compare resulting scores with the weighting to see if there is an information gap between the level of disclosure and the stakeholders' expectations.

6.3.5.3 *Feedback from the stakeholder panel*

Once this testing process was complete the researcher felt confident that the index was capable of distinguishing between different levels of disclosure in the annual report in a fair and consistent manner. Details of the process to date were then sent to the 15 members of the stakeholder panel and feedback was requested. This information included:

- A covering letter explaining the process and the accompanying material;
- A spreadsheet showing each disclosure item and the scoring for the annual report of one company (unnamed) - the unweighted mark and the weighted mark for each disclosure item and each of the summary scores as outlined above (as shown in Appendix F);
- A copy of the "best practice" criteria for assessing quality of the disclosures.

It was felt that most of the panel would be too busy to carefully evaluate the draft index so that any feedback would be a bonus. Their feedback, whilst of interest, was not considered to be essential as the final validation of the annual report scores was to be obtained from the Chief Financial Officers of each company. Some panel members sought clarification of matters like the scoring of N/A. One suggested an alternative method of scoring: 0 for nondisclosure, 1 for partial disclosure and 2 for full disclosure. However, it was felt that the value assigned to the anchor ("best practice" disclosure) had to be sufficiently large to permit the researcher to assign values of lesser amounts for various levels of disclosure (Ingram and Robbins, 1992). Another panel member thought that assigning specific criteria to each scale number would give a more consistent response. When the benchmark method was explained and it was pointed out that the annual reports would be scored by two people and discussions held until a consensus was reached for each item, the panel member agreed that this was a sufficiently reliable method.

After feedback from the panel had been considered it was decided that the index had been stringently validated and was now ready for use.

6.4 SUMMARY AND CONCLUSION

The aim of this chapter was to describe the development of a compound index to assess both extent and quality (degree of detail) in the corporate annual reports of electricity retail and distribution companies. The intention was to overcome the limitation of using the researcher's personal perspective. The list of potential items for the index was drawn from the literature rather than the researcher's judgement. A questionnaire incorporating the potential items was sent to 15 purposively selected panel members who were asked to weight each item on the basis of its perceived importance to being disclosed in the annual report. The scale was carefully defined so that individual respondents could make valid distinctions between concepts such as "very important" and "of intermediate importance". However, the weightings for individual items and the scores for comprehensiveness of disclosure are necessarily subjective because they represent the attitudes, beliefs, knowledge and interests of each panel member and the researcher. This was not considered to be a negative aspect as it was felt that the empirically-derived index was enriched by the experiences and knowledge of the panel of stakeholders. In all cases the judgements were made within the framework of accountability in which the research is set.

As the research was not limited to one user group, there were differing opinions about what should be disclosed for the company to be properly accountable, and these were reflected in the weightings allocated to the disclosure items by the stakeholder panel. However, Sutcliffe (1985) concluded that even though opinions may be diverse, there is likely to be some overlap as all participants are interested in "confirming that resources have been used economically, efficiently and effectively…" (p.16-17).

The criteria for determining quality of disclosure were carefully defined with the intention of enabling the allocation of scores to be validated by another researcher to ensure the scores were allocated consistently and without bias. The testing of the model and feedback from the stakeholder panel ensured that the process was sufficiently credible to provide a model for the comparative assessment of extent and quality of disclosures in the annual reports of electricity retail and distribution companies.

As indicated in the early parts of this chapter, a number of researchers have used a disclosure index as a means of measuring levels of disclosure. It is anticipated that a study of the extent and quality of disclosure in the annual reports of NZ electricity companies from an accountability perspective may result in more transparent reporting of company activities and performance.

CHAPTER SEVEN

RESULTS AND DISCUSSION

7.1 INTRODUCTION

The previous chapter described the development and trial application of a disclosure index to measure extent and quality of disclosure in the 1998/99 annual reports of 33 New Zealand electricity retail and distribution companies. This chapter presents and discusses the results obtained from applying the disclosure index to evaluate and score those annual reports for the 1998/99 financial year. The chapter is organised as follows:

- 7.2 Final validation of the scores for 1998/99 annual reports
- 7.3 Final scores: The extent and quality of disclosure
  - Item-by-item scores
  - Discussion and conclusion
- 7.4 Final scores: Category score and annual report final scores for each company arranged:
  - highest to lowest scores
  - public companies compared to trust and council owned companies
  - large companies compared to other electricity companies
- 7.5 Why some companies disclose more information than others
- 7.6 Summary and Conclusion

In order to ensure that the allocated scores were fair and reasonable, each company representative was asked to critically assess the scores allocated to the company's annual report. Section 7.2 describes the final validation check on the assessment.

Section 7.3 compares the importance of each disclosure item with its mean score for extent and quality of disclosure. The **importance** of an item has been ranked previously by the stakeholder panel, in accordance with the rating scale:

Point value	Importance scale
0	Should not be disclosed
1	Should be disclosed but is of minor importance
2	Disclosure is of intermediate importance
3	Disclosure of the item is very important
4	Disclosure of the item is essential

The **score** for extent and quality of disclosure of each item is the mean of all scores for that item recorded for the 33 electric power companies.

Section 7.4 includes tables showing the scores for each category in the disclosure index, for each company, together with final scores which provide a measure of the extent and quality of the disclosure of items in each annual report as a whole. This section also includes a discussion of the strengths and weaknesses of the highest and lowest scoring annual reports. In addition a comparison is made of the scores for each item in respect of public companies and trust or council-owned companies; as well as large companies and the rest of the companies in the study. Section 7.5 considers why some companies disclose more information than others. A summary and conclusion end the chapter.

7.2 FINAL VALIDATION

The scores allocated to each disclosure item, resulted from an "arbitration process" between the researcher and another accountant as described in Chapter 3 (3.3.2). These scores were sent to the Chief Financial Officer (CFO) of each company for validation. The result sheet included scores for the particular company and for electricity retail and distribution companies as a whole, and was presented as follows:

- the mark awarded to the company for each evaluated disclosure item in the annual report;
- the mean score, for all companies, for each item;
- the range of the scores for all companies for each item.

The best practice criteria were also included so that CFOs could see the benchmarks against which their annual report disclosures had been judged. Examples of the covering letter and the result sheet are included in Appendix G and H respectively. The covering letter explained the scoring process and asked CFOs to review the scoring of their annual report and advise whether they considered it to be fair and reasonable. A follow-up letter was sent to those who did not respond in the first instance. Thirteen of the 33 companies eventually responded and 11 of those were supportive of the research. The covering letter stated that a non-response would be regarded as an indication that the company was satisfied that the evaluation of the annual report was fair and reasonable and therefore it is assumed that those 20 companies who did not reply after receiving the follow-up letter were satisfied with the scores allocated. The following summarises the feedback received. The researcher's comments to the respondents are noted in italics.

- Companies confirmed or advised that they had no debt or no goodwill.
- Some companies queried whether segmental reporting should be required in this industry. *Best practice disclosure requires that companies report results according to the manner in which the business is organised. This would require line companies to give segmental results for access charges, contracting/maintenance, and other services. Where discrete networks are owned then results should be reported for each discrete network. Retail/generation companies should report results for the retail segment and the generation segment.*
- A trust-held company requested that their Statement of Corporate Intent be included as part of the evaluation process (Waipa Power Ltd). *This research evaluates disclosure in the annual report only. However, it acknowledges that there are other forms of accountability.*
- Two trust-held companies (The Lines Co. and King Country Energy Ltd) requested that the researcher score a more detailed report that was prepared for trustees only and not available to the public. These requests were accompanied by a statement that the material was confidential and was provided on the basis that it would be used for research purposes only. In one case the researcher had to sign a declaration to this effect.
- One trust-held company responded that the scores were not fair and reasonable. In their opinion the information was prepared for the trustees only and its adequacy was a matter for discussion between the five trustees and the directors, no-one else.
- The company scoring the lowest score, Counties Power Ltd, outlined the company philosophy of providing only summarised information to parties other than trustees. Laser printed financial statements are available to some parties on request. The philosophy is partly cost driven but also is based on a belief that a summarised report is at a more appropriate level of understanding for most users. Counties Power considered the results were fair. They intended to produce a full annual report for the next financial year.

- Some companies responded that performance and efficiency measures are publicly available through the gazetted Electricity Information Disclosure requirements and therefore are not included in the annual report. *The focus of the research is on obtaining sufficient information to fulfil accountability requirements within one comprehensive document – the corporate annual report.*
- The largest line company in New Zealand (UnitedNetworks Ltd) responded that the evaluation was fair and highlighted some areas in which the company would make improvements in the next financial year. Central Electric and Network Tasman, the two companies with the highest scores for their annual reports, also positively confirmed the model and the results.
- Companies were anxious to obtain better scores. A number of responses were specific to the particular company and requested that the researcher reconsider some scores. For example, the amount paid in excess of ODV for a line business has, in some cases, been classified as an Identifiable Intangible Asset. The purpose of this is to enable the company to write this intangible off over a longer period than that required for goodwill. In one case, since this amount ($33m) included goodwill from a previous acquisition, considerable discussion took place between the CFO and the researcher on the allocation of a score for the disclosure item Goodwill. As the statement of accounting policies described the treatment of this item, a score of 2 out of 5 was agreed upon. Failure to identify the previous goodwill component separately or the movements in this asset value prevented a higher score being awarded. In another case a company argued that the disclosure of the item Long Term Investments should have earned the maximum, 5 points. However, the footnote related to this $25m item did not give details of the investments. On further investigation it was found that the amount represented the company's investment in gas exploration but this was not evident from the annual report disclosure. The footnote stated that the investments were carried at valuation but there was no indication of cost. The score of 2 out of 5 was considered reasonable.

Discussions by email were held with each respondent and in some cases the scores were adjusted. All queries and all responses were acknowledged and companies were sent written advice of final decisions.

7.3 FINAL SCORES: The extent and quality of disclosure

The robustness of the disclosure index and the scoring system were assessed as part of the pilot study. Therefore, once the scores had been validated by the Chief Financial Officers they were considered to give a fair and reasonable indicator of the level of disclosure in the annual reports of electricity retail and distribution companies. The scores were then analysed in detail. These results are presented in tables 7.1 to 7.8 which give an item-by-item indication of the current level of disclosure in the industry. A table is included for each category of the disclosure index. The table shows the mean score for extent and quality of disclosure of each item of information. This is the total of the scores allocated to all companies for that item divided by the number of applicable scores (if a company scored N/A, this is not included as an applicable score). The scores range between 0 and 5. The weighting for the relative importance of each item is also included. This is the mean of the weightings given by the panel of stakeholders as described in Chapter 6, and takes into consideration the fact that some items of information are relatively more important than others. It represents the information needs of the stakeholder panel. The discussion that follows each table focuses on those items where disclosure is inadequate and includes comments on the frequency of scores awarded for the extent and quality of disclosure of each item.

A complete summary of results is included in Appendix I, which shows the following for each disclosure item: mean score, highest score, lowest score, frequency of scores, percentage of companies with each score.

A full set of results for one company as described in Chapter 6.3.5.2 is presented in Appendix F. A score sheet such as this was prepared for each company. For the purposes of the following analysis, only the mean scores for each item for all 33 companies are included.

7.3.1 Item-by-item scores

The following tables compare the mean score for extent and quality of disclosure of each information item with its relative importance as rated by the stakeholder panel. Where there is a significant gap between the mean score for an information item and the level of importance of its disclosure, the item is highlighted in red.

7.3.1.1 *Background about the Company*

Table 7.1

Background about the Company

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
1.0	**Background about the Company**		
1.1	Brief narrative history of the company.	4.5	**Intermediate**
1.2	Management's objectives and strategies	2.5	**Very important**
1.3	Description of principal activities.	4.8	**Intermediate**
1.4	Major contractual relationships.	0.8	**Very important**
1.5	General development of business.	4.4	**Very important**

There appears to be a reluctance to disclose details of "Management's objectives and strategies" with only two companies achieving best practice standard for this item. 48% had hardly any reference to the item at all. "Major contractual relationships" were considered by the stakeholder panel to be very important and yet 55% of the companies gave no information at all and a further 27% were awarded one mark for an indirect reference to a relationship.

Overall, for this category, narrative about company history and development of the company scored well but information about planning aspects and major contracts was under-disclosed.

7.3.1.2 *Information about Management*

Table 7.2

Information about Management, Major Shareholders, Related Party Transactions

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
2.0	**Information about Management, Major Shareholders, Related Party Transactions**		
2.1	Names, backgrounds, affiliations, remuneration of directors	4.1	Very important
2.2	Names, functions, remuneration of executive management	3.6	Intermediate
2.3	Major owners of company's stock and number of shares owned	4.4	Very important
2.4	Number of shares owned by directors	4.7	Very important
2.5	Related party transactions	4.4	Very important

Information of the sort listed in this category is generally not considered to be commercially sensitive or expensive to provide. Ten companies failed to give details of the names and functions of their executive management. Two trust-held companies did not disclose directors' remuneration and 8 trust-held companies did not disclose employee remuneration above $100,000. The Companies Act S211(3) permits non-disclosure of information about directors' and employees' remuneration if all shareholders agree that the annual report need not disclose this information. In the case of trust-held companies, the trustees were the shareholders and they had unanimously agreed not to disclose this information.

7.3.1.3 *Assets*

Table 7.3

Assets

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
3.0	**Assets:**		
3.1	Assets by segment: energy, contracting, network, generation	1.1	Very important
3.2	Details of measurement basis of assets	4.7	Essential
3.3	ODV valuation of network assets	1.9	Essential
3.4	Amount of asset revaluation each year	3.9	Very important
3.5	Fixed assets purchased and sold in current year	3.7	Intermediate
3.6	Fixed asset details	3.6	Essential
3.7	Investments	4.3	Very important
3.8	Goodwill	2.7	Very important
3.9	Capitalised interest	2.3	Very important
3.10	Location, nature, productive capacity of principal plant	2.2	Intermediate
3.11	% plant capacity utilized	1.7	Intermediate
3.12	Depreciation method	4.0	Essential
3.13	Capital expenditure planned	1.6	Very important
3.14	Current assets: debtors, inventories, cash	4.8	Very important
3.15	Asset Management Plan	1.9	Intermediate

The stakeholder panel rated segmental information about assets as very important - essential. However, 73% of companies failed to disclose any information of this type. The year ended 1999 is the last reporting year when companies had integrated energy, generation and network businesses. In subsequent years they will be either generation and retail companies, or lines (network) companies. In future a breakdown between contracting, network (gas and electricity) and other businesses (for lines companies) or between generation and energy (for retail companies) will be important. Traditionally segmental reporting requires the reporting of operations which are in different industries or alternatively in a different country. In this research, it is contended that best practice disclosure would require segmentation that relates to the way in which the business is organised. Some companies own discrete networks and separate disclosure of the value of each of these is important for accountability purposes. None of the companies with discrete networks showed these as segments.

The stakeholder panel rated "Details of the measurement basis of assets" as the most important disclosure item and 82% of companies met this expectation. However, other disclosures related to "Assets" fell short of the benchmark. Optimised Deprival Value details were limited and none of the companies met best practice disclosure requirements. In most cases, current ODV was given but any previous ODV figures were omitted making it impossible to study changes in valuations. A mean score of 1.9 was allocated to this item which is rated by the stakeholder panel as "essential" information. Obviously there is a significant gap between stakeholder' expectations and the amount of information actually being provided for this item. This shortcoming is reflected in asset revaluation details which were difficult to find. A clear statement of the opening balance of the Asset Revaluation Reserve, current revaluations and a closing balance was given by only 53% of the companies. Sometimes asset revaluations were included in the company accounts; sometimes they were not. As a result of the 1998/99 asset revaluations, network asset values increased significantly, (for example, Eastland Energy by 115.7%; Westpower 54%; Counties Power and Otago Power 38%.)[1] There is no consistent reporting of this change. Eastland Energy's annual report shows the distribution system at cost. The

[1] Report to the Minister of Energy, Inquiry into the Electricity Industry, June 2000 p.15-16.

Chief Executive's report refers to the $32m increase in value based on the ODV of network assets but this information is not disclosed as a footnote to the financial statements. Westpower recognises the $15.3m increase in value and reports it in the Statement of Movements in Equity. Counties Power gives no value at all for the distribution system and Otago Power reports the distribution system at cost and there is no mention of ODV.

Details of "Fixed assets purchased and sold" were generally limited to totals in the Statement of Cash Flows with disclosure of a total gain or loss on sales shown in the Statement of Financial Performance. The best-practice benchmark required details of individual sales or purchases but only one company provided this information. However, as the stakeholder panel regarded this item as of only intermediate importance the score of 3.7 meets this expectation. As the related item "Capital expenditure planned" is weighted as "very important", a score of 1.6 indicates that it is under-disclosed. Very little information was given on capital expenditure planned for the year compared to actual capital expenditure. Most of the marks given for this item were for capital commitments for the next financial year.

Further disclosure relating to fixed assets was required under the item "Fixed asset details". Best practice disclosure required the reporting of asset cost, amount at valuation, accumulated depreciation and details of the useful lives of the assets, but companies generally failed to include the historical cost of assets that had been revalued or to disclose the estimated life of assets. This latter aspect is particularly important in the case of distribution assets (networks) as it is possible to extend the useful life in order to reduce the depreciation allocation. As this item is weighted as "essential", the mean score of 3.6 indicates that it is under-disclosed. Only 12% of companies received a 5 for this item. As would be expected, "Depreciation methods" were described in the Statement of Accounting Policies but many companies reported depreciation over a wide range of years, (for example, 10-80 years). This was not considered adequate for best disclosure practice. Since stakeholders rated this item as "essential", it is important that more specific details of estimated lives are given.

Other long term asset disclosures were also assessed. "Goodwill" and "Capitalised interest" were not applicable to a number of companies. However, it would appear that some companies have these items but fail to disclose them at all or goodwill is subsumed into a separate item, Identifiable Intangible Assets. In terms of the benchmark, "Goodwill" was required to be shown separately at cost less accumulated amortisation. Where goodwill was disposed of on the sale of part of the company, the opening balance should have been stated, less the amount related to the sale of part of the company, less amortisation. The stakeholder panel considered both these items to be very important and their disclosure level (scores of 2.7 and 2.3) indicates inadequate information in both respects.

The next two items are descriptive and can be illustrated narratively or diagrammatically. "Location, nature and productive capacity of plant" has become more important as companies diversify and own networks or generation plants in various parts of the country. Two companies gave clear maps to show the location of their plant/networks. Most companies did not disclose information about the "Percentage of plant capacity utilized" (66%). Some companies commented that this was sensitive information. However, 28% showed this information clearly in graph form. These two items are regarded as only of intermediate importance but they assist in establishing an overall view of the company and its operations.

"Asset Management Plan" details were very scarce with 55% having either very little or no information related to the maintenance of assets, particularly network assets. This is a key aspect of the Electricity (Information Disclosure) Regulations 1999 but the information provided for that forum is detailed, complex, extremely lengthy, and difficult to understand. Companies are therefore encouraged to provide a one page summary in their annual report of the detailed plan submitted to the MED. This should include a statement that asset management plans which meet the guidelines developed by the Ministry are in place for every one of the company's significant systems; a statement that the maintenance and replacement required by these plans during the current year has been completed; and a list of any deferred maintenance or deferred capital replacements (Institute of Chartered Accountants, New Zealand, 1998).

In summary, there are considerable shortcomings in the disclosure of narrative information related to location, nature, percentage of plant capacity utilised and asset management plans. In addition, insufficient information is provided on fixed assets with respect to cost, revaluation, useful lives, the allocation to business segments, separate disclosure of discrete networks, and details of planned and actual capital expenditure.

7.3.1.4 *Debt*

Table 7.4
Debt

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
4.0	**Debt:**		
4.1	Total debt outstanding and debt repayment schedules	4.6	**Very important**
4.2	Current liabilities: creditors and provisions	4.7	**Very important**

Both items in this category were well-disclosed and clearly met stakeholder expectations.

7.3.1.5 *Financial, Operating and Performance-Related Data*

Table 7.5
Financial, Operating and Performance-Related Data

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
5.0	**Financial, Operating and Performance Related Data:**		
5.1	Breakdown of sales revenue by segment	2.5	Essential
5.2	Sales volume by segment	1.2	Very important
5.3	Breakdown of expenses by segment	1.3	Very important
5.4	Profit for each segment as above	1.4	Very important
5.5	Other earnings	4.6	**Very important**
5.6	Cost of electricity purchased, generated, distributed	1.1	Very important
5.7	Major elements of costs	3.3	Essential
5.8	Details of unusual or non-recurring items	4.4	**Essential**
5.9	Goodwill written off	3.7	**Essential**
5.10	Funding costs	4.7	**Very important**
5.11	Discussion of results for past year	3.7	**Very important**
5.12	Historical summary of operating and financial data (5 years)	2.7	**Intermediate**

The aim of this section was to evaluate the transparency of performance reporting. A significant part of this category relates to segmental information with best practice disclosure requiring segmentation according to the way in which the firm is organised and managed. The segments to be reported are based on organisational units for which financial records are already maintained for management purposes. Although this is not currently GAAP in New Zealand, it is considered best practice (AIMR, 1997). In addition, S44 (5)(d) of the Energy Companies Act 1992 requires consolidated financial statements to include an operating statement in respect of each significant activity. This information must be available to shareholders. This means that the information is not generally publicly available as the reporting requirement for trust-owned companies is to the trustees.

Although retail and lines businesses are now separated, companies may operate both natural monopoly (lines) activities and any other competitive activities other than electricity retailing or generation for example, communication networks. Segmental information therefore is required to assist in identifying whether the natural monopoly component of lines businesses has excessive costs or profits.

The majority of companies stated that they operated in only one industry. However, some operate discrete networks in different regions of New Zealand. Companies also have network (in some cases electricity and gas) and contracting businesses, or retail and generation businesses.

There was very little segmentation of sales revenue, sales volume, expenses and profit in the electricity company annual reports. These items were considered "very important-essential" by the stakeholder panel, especially the breakdown of sales revenue by segment. The low mean scores of 1.2 to 2.5 for these items indicate that they are inadequately disclosed. Only 5 of the 32 companies gave a full segmental breakdown, 12 had no breakdown of sales revenue and 20 did not disclose breakdown of expenses by segment.

"Cost of electricity purchased or generated" was generally not disclosed (79%) and had a mean score of 1.1. Thus annual report users are unable to calculate gross margin, an essential item for accountability purposes and considered "very important" by the stakeholder panel.

Few companies received the maximum score of 5 for "Major elements of costs" due to their failure to disclose marketing costs, salaries, restructuring, and asset maintenance costs. With the exception of restructuring costs, these are required by the Electricity (Information Disclosure) Regulations 1999 so their inclusion in the annual report is appropriate for best-practice reporting and is considered "essential" by the stakeholder panel.

The standard of "Discussion of results for the past year" was quite good and 36% met best practice disclosure requirements. However, 48% received a score of 3 marks or less, indicating room for improvement in this area. The related item, "Historical summary of operating and financial data" was not as well reported and only seven companies met best practice disclosure. Some companies provided no summary at all (21%). The stakeholder panel rated this item as of only intermediate importance. However, the inclusion of a statement of trends in annual reports is considered important in terms of best practice disclosure.[2]

It is acknowledged that most of the best practice criteria used as a benchmark for this category relate to voluntary disclosures. However, as noted by Olsson (1980), legislative requirements of annual reporting represent only a part of the informational needs of stakeholders.

Significant areas for improvement of disclosure in respect of this category relate to:

- Segmental information which reflects the organisational structure of the company e.g. networks (split gas and electricity) contracting, other;
- Cost of electricity purchased/distributed;
- Costs of salaries, asset maintenance, marketing, and restructuring;
- 5 year historical summary of operating and financial data including financial and efficiency measures.

[2] KPMG Model Annual Report 1999; AIMR Annual Review of Corporate Reporting Practices (1996).

7.3.1.6 *Forward-Looking Information*

Table 7.6
Forward-Looking Information

	Extent and Quality of Disclosure 1999		
		Mean score 0-5	Level of Importance
6.0	**Forward-Looking Information:**		
6.1	Forecast of next years profits/earnings	0.5	**Intermediate**
6.2	Discussion on major factors influencing next year	2.3	**Very important**
6.3	Comparison of actual business performance to previously Disclosed information.	3.1	**Very important**

Information related to the future is necessarily speculatory. Opinions differ on the relevance of disclosing this information. However, one of the elements identified within the accountability framework is equity (fairness). Lev (1988) was concerned about reducing information asymmetry in order to achieve equity. In his opinion disclosure of earnings' forecasts should be mandated. The New Zealand Statement of Concepts (cl. 3.8) supports the disclosure of predictive results for operations, financial position and cash flows. Only one company included a "Forecast of next year's profits/earnings" and few companies included any worthwhile discussion on "Major factors influencing next year". Most companies did not even make a general comment on the expected direction of change for the coming year's earnings, changes in legislation or market conditions. However, Y2K checks and concerns were often carefully described. It is contended that information about probable future development that is based on well-founded expectations is a significant component of an accountability regime.

For accountability to be effective, the actual performance of the organisation needs to be compared with its objectives and the variance between the two needs to be communicated to stakeholders. The New Zealand Statement of Concepts (cl.3.5) states that accountability requires that reports identify financial or non-financial objectives and targets and measure actual achievements against those objectives and targets. In addition, the Energy Companies Act 1992 (S39(2)(e)) requires the Board to report, in a Statement of Corporate Intent, the performance targets and other measures by which performance has been judged in relation to the objectives. Therefore, this information should be available for incorporation into the more comprehensive document, the corporate annual report. Only 48% of the companies compared actual results to targets according to best practice disclosure. However, 24% gave no information in this respect at all. All companies should include information about long-term financial goals. These should also be included as part of the highlighted key ratios.

7.3.1.7 *Performance Measures*

Table 7.7

Performance Measures

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
7.0	**Performance Measures**		
	Financial Measures		
7.1	Debt to equity ratio	1.2	**Intermediate**
7.2	Funding cost cover (times interest covered)	0.1	**Intermediate**
7.3	Net tangible assets per share	0.8	**Intermediate**
7.4	EBIT/Average net funds employed	0.6	**Intermediate**
7.5	Dividend per share (cents)	1.5	**Intermediate**
7.6	Return on total assets	0.5	Very important
7.7	Return on equity	1.2	Very important
7.8	Accounting rate of profit	0.4	Very important
7.9	Overhead costs per retail customer	0.0	Intermediate
	Pricing Measures		
7.10	Average domestic power bill	1.3	**Intermediate**
7.11	Pricing information	0.0	Very important
	Efficiency Measures:		
7.12	Total number of interruptions	0.7	Very important
7.13	Average total duration of interruptions of supply per customer	2.5	**Very important**
7.14	Average number of interruptions of supply per customer:5-10yrs	1.5	Very important
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	0.4	Very important
7.16	Total Costs costs per kilometre	0.4	Very important
7.17	Total Costs per customer	1.3	Very important
	Market Measures:		
7.18	Average consumption kwh per customer (5 years)	0.0	Intermediate
7.19	Number of customers by sector	0.3	Very important
7.20	Change in market share in major areas of activity	1.0	Very important

The 1999 annual report evaluation showed that disclosure of almost all performance measures was very poor. A few companies disclosed common measures such as Debt to equity ratio, Dividends per share, Return on equity, but these were seldom given for a five year period to enable readers to examine trends. It was possible for report users to calculate some of the measures themselves, at least for the current year, but this should not be necessary. The stakeholder panel considered all of the items in this category to be either of intermediate importance or very important but 17 out of the 20 items scored between 0 and 1.3.

Consumers are interested to know how much electricity costs, how often the power goes off and how quickly supply is restored. "Pricing measures" and "Change in market share" are now applicable to retail companies only. These measures are significant as part of a total accountability package for this "competitive" sector of the industry, which is largely exempt from the accountability requirements of the Electricity (Information Disclosure) Regulations 1999. The two pricing measures: "Average domestic power bill" and "Pricing information" were considered by the panel to be of intermediate importance, and very important, respectively. All lines company efficiency measures were regarded as very important. Some line companies provided best practice levels of disclosure about "Average total duration of interruptions of supply" or "Average number of interruptions of supply per customer" but other efficiency measures or market measures were not provided.

Performance measures on their own mean very little. To have meaning they must be compared with performance measures of other firms in the industry or with the same firm over time. This is currently not possible from the information disclosed in the annual reports of the electricity retail and distribution companies.

7.3.1.8 *Other Information*

Table 7.8
Other Information

Extent and Quality of Disclosure 1999			
		Mean score 0-5	Level of Importance
8.0	**Other Information:**		
8.1	Information on accounting methods used	4.8	**Essential**
8.2	Contingent liabilities	4.4	**Very important**
8.3	Forward contracts for committed purchases	4.8	**Intermediate**
8.4	Capital contributions by customers	2.3	**Intermediate**
8.5	Dividend distribution policy	4.0	**Intermediate**

"Capital contributions by customers" was generally treated as income but not disclosed separately hence the low scores for this item. Most companies failed to state an accounting policy for this item. As accounting practice can differ from inclusion of capital contributions as part of income to a deduction from the asset to which the contribution relates, disclosure of the accounting policy is important.

7.3.1.9 *Discussion and Conclusion*

Annual report disclosures are an important means of communication between a company and stakeholders, particularly in respect of fulfilling accountability requirements where the emphasis is on information that enables those to whom the entity is accountable (stakeholders) to monitor the firm.

Cooke (1993) noted that the supply of information in the corporate annual report is determined by regulatory authorities who specify minimum levels of disclosure, auditors who decide whether the report shows a fair presentation and by the company itself in determining appropriate levels of disclosure. This electricity industry research uses the term stakeholder to encompass those three parties as well as others such as employees, banks, customers and the general public. Their information needs have been considered in this chapter.

Tables 7.1-7.8 show that many items of information which stakeholders believe to be important are not being adequately disclosed. Many of the annual reports presented limited amounts of information. There is therefore an opportunity for expanding the extent and the quality of disclosure in the annual reports of electricity retail and distribution companies. Below are the main areas where companies should focus their attention in order to improve the quality of their disclosures in line with best practice reporting and the needs of stakeholders:

- Management objectives and strategies (very important)
- Major contractual relationships (very important)
- Segmental information: assets, revenue, expenses, profit (very important / essential)
- Optimised Deprival Value of assets (essential)
- Capital expenditure planned (actual v budget) (very important)
- Capitalised interest (very important)
- Cost of electricity purchased/generated (retail companies) (very important)
- Major elements of costs: marketing, salaries, restructuring, asset maintenance (essential)
- Forecast of next years profits/earnings (intermediate)
- Discussion on major factors influencing next year (very important)
- All performance measures: financial, pricing, efficiency, market (intermediate/very important).

Radebaugh and Gray (1997) noted the increased interest in corporate accountability and considered that it reflects a demand by a wide audience, including the general public, for information. Tornqvist (1999) identified this increased demand as related in part to forward-looking information and segmental reporting. These two aspects as well as the others listed above go the core of accountability.

The disclosure index was developed by an iterative process and the annual reports were carefully evaluated and scored. At this point it is useful to reflect on the appropriateness of the index. In doing so the researcher finds that there are very few changes that could be made in order to refine the index for further research. There are six areas where some adjustment to the information items in the index is appropriate:

- The two items "Brief narrative history of the company" and "General development of business" cover essentially the same information so would be better stated as one information item to avoid repetition in the scoring.
- In later discussions with company Chief Financial Officers, the researcher came to the conclusion that although the stakeholder panel rated the item "Major contractual relationships" as very important, it is unrealistic to expect companies to disclose such competitive information. In hindsight this item would be deleted from the disclosure index. Accordingly, it will not be recommended as an item for improved disclosure by electricity companies.
- It does not seem necessary to score the disclosure of Current Assets and Current Liabilities. These mandatory disclosures are well detailed by companies.
- The requirement for companies to disclose depreciated replacement cost as well as Optimised Deprival Value is too extensive. Similarly footnote disclosure of the average cost per kWh per year of electricity purchased/generated is inappropriate.
- The item "Historical summary of operating and financial data" is covered by the reporting of performance measures showing five year trends. This item could be deleted.
- The number of performance measures included in the index could be reduced by deleting the following measures:
    - Net tangible assets per share (there are sufficient other financial measures);

- Change in market share in major areas of activity (too sensitive);
- Pricing information (now included on the website of the Consumers' Institute);
- Number of faults per 100 km of prescribed voltage line (other performance measures in the index capture sufficient information on reliability).

Serious consideration would also be given to scoring the quality of disclosures on a scale of 0-3 rather than 0-5. It was difficult for the researcher and the other accountant who scored each annual report to reach a consensus with such a wide range. A three point scale: 1 for poor disclosure, 2 for intermediate quality and 3 for best practice disclosure may be more appropriate.

However, the index, as used in the research for evaluating extent and quality of annual report disclosure, was a useful measurement tool and the final results included in the following section are considered to be fair and reasonable.

7.4 FINAL SCORES: category score and annual report score

The following tables 7.10 to 7.12 show the score for each category for each company. The final score for each company's annual report as a whole is also given.

The category score is obtained as follows:

> The allocated score (raw mark) for each item is multiplied by the weighting for the importance of the item. This gives a weighted score. The category score, which is expressed as a percentage, is the sum of these scores divided by the possible total for all applicable items in that category for that company.

The final score is calculated as follows:

> The final score is a percentage of the total possible weighted score for all applicable information items.

The results for one company, TransAlta New Zealand Ltd, are shown in Table 7.9 to demonstrate the calculation of the scores described above and used in the summarising tables 7.10-7.12.

Table 7.9
Annual Reporting Model: Results 1999

			TransAlta				
		Weighting	**Raw mark**		**Weighted**		
			Mark	Max	Mark	Max	%
1.0	**Background about the Company**						
1.1	Brief narrative history of the company.	1.90	5	5	9.5	9.5	100%
1.2	Management's objectives and strategies	2.80	1	5	2.8	14	20%
1.3	Description of principal activities.	2.50	5	5	12.5	12.5	100%
1.4	Major contractual relationships.	3.10	4	5	12.4	15.5	80%
1.5	General development of business.	3.10	5	5	15.5	15.5	100%
	Category score		**20**	**25**	**52.7**	**67**	**79%**
2.0	**Information about Management, Major Shareholders, Related Party Transactions**						
2.1	Names, backgrounds, affiliations, remuneration of directors	2.80	5	5	14	14	100%
2.2	Names, functions, remuneration of executive management	2.50	5	5	12.5	12.5	100%
2.3	Major owners of company's stock and number of shares owned	3.10	4	5	12.4	15.5	80%
2.4	Number of shares owned by directors	2.80	5	5	14	14	100%
2.5	Related party transactions	3.00	5	5	15	15	100%
	Category score		**24**	**25**	**67.9**	**71**	**96%**
3.0	**Assets:**						
3.1	Assets by segment: energy, contracting, network, generation	3.20	5	5	16	16	100%
3.2	Details of measurement basis of assets	3.90	5	5	19.5	19.5	100%
3.3	ODV valuation of network assets	3.60	N/A	0	0	0	
3.4	Amount of asset revaluation each year	3.30	5	5	16.5	16.5	100%
3.5	Fixed assets purchased and sold in current year	2.50	5	5	12.5	12.5	100%
3.6	Fixed asset details	3.60	4	5	14.4	18	80%
3.7	Investments	3.30	4	5	13.2	16.5	80%
3.8	Goodwill	2.90	4	5	11.6	14.5	80%
3.9	Capitalised interest	2.60	4	5	10.4	13	80%
3.10	Location, nature, productive capacity of principal plant	2.30	5	5	11.5	11.5	100%
3.11	% plant capacity utilized	2.30	5	5	11.5	11.5	100%
3.12	Depreciation method	3.50	5	5	17.5	17.5	100%
3.13	Capital expenditure planned	2.90	2	5	5.8	14.5	40%
3.14	Current assets: debtors, inventories, cash	3.30	5	5	16.5	16.5	100%
3.15	Asset Management Plan	2.30	N/A	0	0	0	
	Category score		**58**	**65**	**176.9**	**198**	**89%**
4.0	**Debt:**						
4.1	Total debt outstanding and debt repayment schedules	3.30	5	5	16.5	16.5	100%
4.2	Current liabilities: creditors and provisions	3.30	4	5	13.2	16.5	80%
	Category score		**9**	**10**	**29.7**	**33**	**90%**
5.0	**Financial, Operating and Performance Related Data:**						
5.1	Breakdown of sales revenue by segment	3.50	5	5	17.5	17.5	100%
5.2	Sales volume by segment	3.10	1	5	3.1	15.5	20%
5.3	Breakdown of expenses by segment	2.80	5	5	14	14	100%
5.4	Profit for each segment as above	3.00	5	5	15	15	100%
5.5	Other earnings	3.10	5	5	15.5	15.5	100%
5.6	Cost of electricity purchased, generated, distributed	3.00	5	5	15	15	100%
5.7	Major elements of costs	3.60	5	5	18	18	100%
5.8	Details of unusual or non-recurring items	3.60	5	5	18	18	100%
5.9	Goodwill written off	3.50	5	5	17.5	17.5	100%
5.10	Funding costs	2.70	5	5	13.5	13.5	100%
5.11	Discussion of results for past year	3.40	5	5	17	17	100%
5.12	Historical summary of operating and financial data (5 years)	2.50	2	5	5	12.5	40%
	Category score		**53**	**60**	**169.1**	**189**	**89%**
6.0	**Forward Looking Information:**						
6.1	Forecast of next years profits/earnings	2.50	0	5	0	12.5	0%
6.2	Discussion on major factors influencing next year	3.10	2	5	6.2	15.5	40%
6.3	Comparison of actual business performance to previously disclosed information.	3.40	0	5	0	17	0%
	Category score		**2**	**15**	**6.2**	**45**	**14%**
7.0	**Performance Measures: Financial**						
7.1	Debt to equity ratio	2.30	1	5	2.3	11.5	20%
7.2	Funding cost cover (times interest covered)	2.30	0	5	0	11.5	0%
7.3	Net tangible assets per share	2.10	2	5	4.2	10.5	40%
7.4	EBIT/Average net funds employed	2.50	0	5	0	12.5	0%
7.5	Dividend per share (cents)	2.20	2	5	4.4	11	40%
7.6	Return on total assets	2.90	2	5	5.8	14.5	40%
7.7	Return on equity	2.90	2	5	5.8	14.5	40%
7.8	Accounting rate of profit	3.00	N/A	0	0	0	
7.9	Overhead costs per retail customer	2.30	0	5	0	11.5	0%
	Category score		**9**	**40**	**22.5**	**97.5**	**23%**
	Pricing Measures						
7.10	Average domestic power bill	2.10	0	5	0	10.5	0%
7.11	Pricing information	2.90	0	5	0	14.5	0%
	Category score		**0**	**10**	**0**	**25**	**0%**
	Efficiency Measures:						
7.12	Total number of interruptions	3.10	N/A	0	0	0	
7.13	Average total duration of interruptions of supply per customer	3.20	N/A	0	0	0	
7.14	Average number of interruptions of supply per customer:5-10yrs	3.10	N/A	0	0	0	
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	3.20	N/A	0	0	0	
7.16	Total Costs costs per kilometre	3.20	N/A	0	0	0	
7.17	Total Costs per customer	3.20	0	5	0	16	0%
	Category score		**0**	**5**	**0**	**16**	**0%**
	Market Measures:						
7.18	Average consumption kwh per customer (5 years)	2.40	0	5	0	12	0%
7.19	Number of customers by sector	2.80	1	5	2.8	14	20%
7.20	Change in market share in major areas of activity	2.60	3	5	7.8	13	60%
	Category score		**4**	**15**	**10.6**	**39**	**27%**
8.0	**Other Information:**						
8.1	Information on accounting methods used	3.90	5	5	19.5	19.5	100%
8.2	Contingent liabilities	2.90	5	5	14.5	14.5	100%
8.3	Forward contracts for committed purchases	2.50	5	5	12.5	12.5	100%
8.4	Capital contributions by customers	2.50	4	5	10	12.5	80%
8.5	Dividend distribution policy	2.50	5	5	12.5	12.5	100%
	Category score		**24**	**25**	**69**	**71.5**	**97%**
	FINAL SCORE		**203**	**295**	**604.6**	**852**	**71%**

Using item 1.1 "Brief narrative history of the company" as an example, the mark allocated to TransAlta for disclosure of this item is the maximum mark of 5. This mark is multiplied by the weighting for the importance of the item (1.9) to give a weighted mark of 9.5 which is 100% of the possible mark. The score for the first category "Background about the company" is 79% and this is the score shown in the following tables. The final score for TransAlta's annual report as a whole is shown in the last line of Table 7.9.

The presentation of the final results is arranged in three formats as follows:

> Table 7.10 presents the results in order of the highest to the lowest scoring company. This is followed by a discussion of these results.
>
> Table 7.11 shows the results for public companies separately from trust-held and council-owned companies.
>
> Table 7.12 presents the same information but compares the results for nine large companies - the seven largest distribution companies as identified in the Controlled (Goods or Services) Amendment Bill 1999 No.295-2, Sec.54D, and the two largest retail companies (total assets, total revenue) - with the results for the "other" electricity companies.
>
> Each table is followed by a discussion and the section ends with a consideration of why some companies disclose more information than others.

7.4.1 Final scores – descending order

The following table shows the final scores for each company listed in order of highest to lowest score.

Table 7.10

Final Scores 1999: Highest score to lowest score

	Background about the Company	Information about Management, Shareholders, Related Parties	Assets	Debt	Financial, Operating, Performance Related Data	Forward-Looking Information	Financial Performance Measures	Pricing Measures	Efficiency Measures	Market Measures	Other Information	Final Score for Annual Report
	%	%	%	%	%	%	%	%	%	%	%	%
Central Electric Ltd	69	78	83	100	92	71	10	0	40	0	93	72
TransAlta Ltd	79	96	89	90	89	14	23	0	0	27	97	71
Network Tasman	91	100	63	100	75	94	51	100	28	0	82	71
Orion NZ Ltd	69	100	65	100	82	51	53	0	16	0	87	67
Marlborough Electric Ltd	73	100	74	100	80	52	38	0	4	0	88	67
Buller Electricity Ltd	91	95	61	100	59	100	14	0	59	0	96	66
Scanpower Ltd	77	56	66	100	73	70	26	0	59	0	84	65
Horowhenua Energy Ltd	70	90	72	100	45	7	27	0	100	0	74	63
King Country Energy Ltd	69	100	70	100	79	45	13	0	40	0	97	63
Waitaki Power Ltd	61	95	63	100	69	36	19	0	41	0	97	62
The Lines Co Ltd	60	56	66	100	85	76	10	0	32	0	100	61
The Power Co Ltd	61	100	76	100	79	52	8	0	8	0	66	60
Powerco Ltd	73	100	59	100	52	39	7	0	59	0	79	58
UnitedNetworks Ltd	69	92	70	100	55	26	33	0	0	0	79	58
Central Power Ltd	69	86	73	100	51	39	16	0	12	0	100	58
TrustPower Ltd	69	96	82	90	55	28	7	0	0	0	96	57
Alpine Energy Ltd	64	90	60	100	59	38	11	0	40	0	95	57
Ashburton Electricity Ltd	56	90	67	100	74	28	0	0	0	0	97	56
Vector Ltd	78	100	69	100	54	12	14	0	20	0	65	55
Eastland Network Ltd	70	68	71	100	52	72	6	0	20	0	75	55
Top Energy Ltd	67	82	59	90	55	52	13	0	16	0	92	54
CHB Power Ltd	64	90	69	100	48	52	6	0	8	0	86	53
Dunedin Electricity Ltd	63	87	54	100	48	45	15	0	20	0	79	51
Hawkes Bay Power Ltd	69	71	59	90	45	52	11	0	16	0	66	49
Otago Power Ltd	41	48	47	100	74	30	36	0	0	0	75	49
WEL Energy Ltd	56	84	59	100	63	28	0	0	0	0	75	48
Bay of Plenty Electricity Ltd	60	100	58	100	36	14	4	0	4	0	86	47
Northpower Ltd	60	75	53	100	47	29	7	0	20	0	75	47
Westpower Ltd	50	79	53	100	49	22	10	0	0	0	92	46
Electricity Invercargill Ltd	66	82	47	80	37	57	11	0	8	0	75	44
Waipa Networks Ltd	47	73	54	50	37	52	6	0	16	0	82	44
Mainpower Ltd	64	74	50	100	41	18	0	0	0	0	70	41
Counties Power Ltd	27	14	4	0	15	37	18	0	24	0	8	15
MEAN	65.2	83.2	62.6	93.6	59.2	43.6	15.8	3.0	21.5	0.8	82.1	55.5
HIGHEST SCORE	91	100	89	100	92	100	53	100	100	27	100	72
LOWEST SCORE	27	14	4	0	15	7	0	0	0	0	8	15

Note: The Lines Co, King Country Energy and Counties Power do not provide a full annual report to the public. On receiving the results of the scoring process the first two companies requested that their full annual report be scored but at the same time made it clear that the annual report was being provided for research purposes only. The Lines Co score for the annual report that is available to the public was 13.6% compared to 61% on the full annual report. King Country Energy's score was 42% on their summarised annual report compared to 63% on the one finally made available for the research.

The strengths and weaknesses of the three highest scoring annual reports and the three lowest scoring are outlined in the following discussion. These relate particularly to the provision of voluntary information included in the best-practice criteria.

Highest scoring companies:

Central Electric's annual report includes an outline of the history of the company, the effects of the Electricity Industry Reform Act 1998 on the business and a detailed discussion of the general development of the company. There is a clear statement that the company is totally trust-owned and that the shares are held by the Otago Central Electric Power Trust. Information about the Directors includes detailed profiles.

Fixed asset information includes the historical cost of each asset group as well as the Optimised Deprival Value of the network over a 2-year period. In addition, asset totals are shown by segment: General, Lines, Electricity Retailing, Corporate. A section on "Network and Generation Facts" includes useful details such as:

- The location of assets;
- Kilometres of distribution lines;
- Generation capacity and electricity generated;
- Number of customers; and
- Gigawatt hours sold.

"Financial Operating and Performance" data includes a detailed statement of segmented information. This analyzes income in respect of electricity sales, generated electricity, transmission income, and line charges. The amount received from capital contributions is disclosed along with a description of the accounting treatment. The cost of electricity is also disclosed allowing an interested party to calculate Gross Margin. Details of other costs include the total cost of restructuring.

These disclosures are complemented by a comprehensive discussion of results for the past year and a listing of performance targets compared to actual results.

Disclosure weaknesses are mainly in respect of performance measures. Two financial performance measures are given but only for a two year period. Two efficiency measures are provided for a five year period. Other applicable performance measures such as Debt to equity ratio, Return on total assets, Total number of interruptions, Number of faults per 100 km of prescribed voltage line, and Average consumption kwh per customer have not been disclosed. In addition salaries and asset maintenance costs have not been included as part of operating information and there are no details of asset lives. This latter disclosure is particularly important for network assets where an extension of asset life considerably reduces annual asset write-down. There is insufficient detail in respect of "Management objectives and strategies", "Names, functions and remuneration of executive management", the "Asset Management Plan", and "Capital expenditure". In the next financial year, Central Electric, having sold its network and retail businesses, will be a small generation company renamed Pioneer Generation Ltd and it will no longer set the standard for the industry.

The annual report of **TransAlta Ltd** has all the strengths of Central Electric's report. In addition operating information includes personnel and administrative costs as well as repairs and maintenance. The weaknesses of this annual report are also similar to those of Central Electric Ltd. Additional weaknesses include an "Historical summary of operating and financial information" which covers only two years and the lack of a comparative table of actual and planned performance. Disclosure of performance measures is also below the best-practice criteria although some financial and market performance measures are given but only for a two year period.

The other company in the top group of three, **Network Tasman Ltd**, gives more detail about "Management objectives and strategies" than the other two companies. In addition, historical summaries of operating and financial data cover a five year period, and some "Forward-looking information" is included as well as detailed comparisons of actual versus planned performance. On the other hand, the segmental information lacks the detail given by the other two companies. The cost of electricity purchased is not disclosed and information related to "Fixed assets" is below the best practice criteria. Land, buildings and the distribution system are shown at valuation but historical cost figures are not included. Little information is given in respect of the Optimised Deprival Value of the network and estimated useful lives of assets are not disclosed. Once again there is a lack of disclosure of performance measures over a five year period although three financial and one efficiency measure are included with five year trends, as well as trends for domestic and commercial power bills over a ten year period.

The strengths and weaknesses of the 1998/99 annual reports of these three companies - one retailer which is a public company, and two trust-owned electricity distribution companies - cover essentially the same areas and can be summarised as follows:

Strengths:
- Background about the company;
- Segmental reporting of assets, sales, expenses and profits;
- Discussion of results;
- Major elements of costs;
- Comparison of actual and planned performance.

It should be noted that a number of other items achieved best-practice disclosure but the strengths listed above relate to areas in which the disclosures of these three companies are better than those of most other companies.

Weaknesses:
- Management objectives and strategies;
- Historical cost of assets;
- Capital expenditure (actual and planned);
- Historical summary of operating and financial data (5 years);
- Forward-looking information;
- Performance measures showing five year trends.

The annual report of Network Tasman consists of only 24 pages which indicates that information that meets stakeholder needs can be provided cost effectively in a concise document.

Lowest scoring companies:

As the score of 15% indicates, the annual report of **Counties Power Ltd** provides little of the information that has been identified in the accountability model. Some information is provided in respect of the history of the company and general development of the business and a "Statement of Financial Highlights" provides a summary of operating and financial data for a five year period. There is also a comparison of actual and target business performance which includes two financial performance measures and two efficiency measures. However, apart from a total for each of Current Assets, and Fixed Assets, there is no other asset information. "Revenue" and "Costs" are also single line items. In fact there is no Statement of Financial Performance, Financial Position, Cash Flows or notes to the accounts nor an Auditor's Report. The company considers that summarised reports are more appropriate in communicating information to unsophisticated users and this is the reason for the low level of disclosure in their 1998/99 annual report.

On receipt of the scores for the 1998/99 annual report, the Company Secretary of **Waipa Power Ltd** (now Waipa Networks Ltd) wrote to the researcher pointing out that their annual report was not a public document. In their opinion their accountability to stakeholders is driven by the Energy Companies Act 1992, which requires a Statement of Corporate Intent to be made available to the public, and by the information disclosure regime administered by the Ministry of Economic Development in respect of financial and performance reporting for electricity lines companies. Waipa Networks objected to the annual report being used in isolation as part of the study and suggested instead that the Statement of Corporate Intent (SCI) be used as well or on its own. As stated earlier, the emphasis in this research is on the Annual Report as a comprehensive document, and a significant form of communication with stakeholders especially in respect of fulfilling the defined accountability requirements. The SCI has a different purpose. It is a forward-looking document required under the Energy Companies Act 1992 (S.39-41) which states that "the directorate shall, not later than 1 month after the completed Statement of Corporate Intent is delivered to shareholders,...make that Statement...available to the public" (S.41). The SCI includes three year forecasts of performance targets and other measures by which the performance of the company can be judged in relation to its stated three-year objectives. The accountability disclosures of the SCI do not apply to all electricity companies. Some companies are exempt "...where the establishment plan...does not provide for a controlling interest in that energy company to be held by any local authority...or any approved person...(S.42). The scope of the SCI is effectively limited to trust and council-owned companies.

Waipa Power Ltd and **MainPower NZ Ltd** received the same score for their annual report as a whole. There are several disclosure items for which both companies provide little or no information. Significant areas of inadequate disclosure include:

- Management objectives and strategies;
- Information about executive management;
- Segmental reporting of assets and operating performance;
- Location and nature of network assets;
- Capital expenditure planned and actual;
- Asset management plans;
- Cost of electricity purchased;
- Historical summary of operating and financial data;
- Forward-looking information; and
- Performance measures showing five year trends.

The research has identified a decision on the part of some trust-held companies to limit the amount of information available to beneficiaries and the public, in contrast to that available to shareholders. It is therefore useful to determine if there is any significant difference between the disclosure levels of trust and council-owned companies on the one hand, and public companies on the other. It is also useful to compare the disclosure levels of large electricity companies with those of other electricity companies. Therefore, in order to provide a quantitative analysis of these firm characteristics and annual report disclosure levels, tables 7.11 and 7.12 and the related discussion examine the relationship between disclosure levels and two variables: ownership structure and company size. This analysis is not intended to establish any cause and effect relationships and in fact merely "scratches the surface" of a complex topic that could be more thoroughly investigated in research beyond this thesis.

7.4.2 Public companies compared to trust and council-owned companies

Table 7.11 shows the results for public companies and compares these to other ownership structures, namely, trusts and council-owned companies. The aim is to determine if there is any significant difference between the extent and quality of reporting for these two groups.

Table 7.11

Final Scores 1999: Public companies and Trust-held/council-owned companies

	Background about the Company	Information about Management, Shareholders, Related Parties	Assets	Debt	Financial, Operating, Performance Related Data	Forward-Looking Information	Financial Performance Measures	Pricing Measures	Efficiency Measures	Market Measures	Other Information	Final Score for Annual Report
	%	%	%	%	%	%	%	%	%	%	%	%
Public companies												
Bay of Plenty Electricity Ltd	60	100	58	100	36	14	4	0	4	0	86	47
Central Power Ltd	69	86	73	100	51	39	16	0	12	0	100	58
Powerco Ltd	73	100	59	100	52	39	7	0	59	0	79	58
TransAlta Ltd	79	96	89	90	89	14	23	0	0	27	97	71
TrustPower Ltd	69	96	82	90	55	28	7	0	0	0	96	57
UnitedNetworks Ltd	69	92	70	100	55	26	33	0	0	0	79	58
WEL Energy Ltd	56	84	59	100	63	28	0	0	0	0	75	48
MEAN	67.9	93.4	70.0	97.1	57.3	26.9	12.9	0.0	10.7	3.9	87.4	56.7
Trust-held/council-owned companies												
Alpine Energy Ltd	64	90	60	100	59	38	11	0	40	0	95	57
Ashburton Electricity Ltd	56	90	67	100	74	28	0	0	0	0	97	56
Buller Electricity Ltd	91	95	61	100	59	100	14	0	59	0	96	66
Central Electric Ltd	69	78	83	100	92	71	10	0	40	0	93	72
CHB Power Ltd	64	90	69	100	48	52	6	0	8	0	86	53
Counties Power Ltd	27	14	4	0	15	37	18	0	24	0	8	15
Dunedin Electricity Ltd	63	87	54	100	48	45	15	0	20	0	79	51
Eastland Network Ltd	70	68	71	100	52	72	6	0	20	0	75	55
Electricity Invercargill Ltd	66	82	47	80	37	57	11	0	8	0	75	44
Hawkes Bay Power Ltd	69	71	59	90	45	52	11	0	16	0	66	49
Horowhenua Energy Ltd	70	90	72	100	45	7	27	0	100	0	74	63
King Country Energy Ltd	69	100	70	100	79	45	13	0	40	0	97	63
Mainpower Ltd	64	74	50	100	41	18	0	0	0	0	70	41
Marlborough Electric Ltd	73	100	74	100	80	52	38	0	4	0	88	67
Network Tasman	91	100	63	100	75	94	51	100	28	0	82	71
Northpower Ltd	60	75	53	100	47	29	7	0	20	0	75	47
Orion NZ Ltd	69	100	65	100	82	51	53	0	16	0	87	67
Otago Power Ltd	41	48	47	100	74	30	36	0	0	0	75	49
Scanpower Ltd	77	56	66	100	73	70	26	0	59	0	84	65
The Lines Co Ltd	60	56	66	100	85	76	10	0	32	0	100	61
The Power Co Ltd	61	100	76	100	79	52	8	0	8	0	66	60
Top Energy Ltd	67	82	59	90	55	52	13	0	16	0	92	54
Vector Ltd	78	100	69	100	54	12	14	0	20	0	65	55
Waipa Networks Ltd	47	73	54	50	37	52	6	0	16	0	82	44
Waitaki Power Ltd	61	95	63	100	69	36	19	0	41	0	97	62
Westpower Ltd	50	79	53	100	49	22	10	0	0	0	92	46
MEAN	64.5	80.5	60.6	92.7	59.7	48.1	16.7	3.8	24.4	0.0	80.6	55.1
HIGHEST SCORE	91	100	89	100	92	100	53	100	100	27	100	72
LOWEST SCORE	27	14	4	0	15	7	0	0	0	0	8	15

Note: Bay of Plenty Electricity Ltd is now 77% trust-owned and WEL Energy Ltd is now 100% trust-owned.

Previous research related to company structure is mostly concerned with the association of annual report disclosure levels and listing status (Singhvi and Desai, 1971; Buzby, 1975; Firth, 1979; Cooke, 1989; Malone et al., 1993; Meek et al., 1995). These studies involve comparisons of the extent of annual report disclosure of companies listed on a stock exchange, (for example, New York Stock Exchange), compared to those companies where shares are traded over the counter. The research indicates that it is reasonable to believe that listed companies will have more extensive disclosure compared to unlisted companies. In respect of recent research related to the energy industry, Craswell and Taylor (1992) found no significant association between ownership structure and voluntary disclosure of reserves in the Australian oil and gas industry. On the other hand McKinnon and Dalimunthe (1993) found a significant association between ownership structure in diversified Australian companies and voluntary segmental disclosure. However, the comparison of ownership structure used in these two studies - spread of shareholding (Craswell and Taylor) and minority interest in subsidiaries compared to no minority interest (McKinnon and Dalimunthe) - varies from that used in this research which compares public companies with trust or council-owned companies. Raffournier (1995) noted that studies on annual report disclosures have not tested the relationship between extent of disclosure and "ownership diffusion" (p.264). The following analysis seeks to test that relationship.

Significance Tests:

The purpose of the following analysis is to examine any significant difference in the information scores of public companies and trust/council owned companies. Analysis of the data identified two scores, "Pricing measures" and "Market measures" in which all but one company had a score of zero. Therefore, it is obviously not appropriate to include these two scores in the analysis because they exhibit so little variability.

Use of the common t-test assumes a normal distribution for each group with the same variance in the population. As all the scores rejected either one or both of these assumptions the non-parametric Kruskal-Wallis test which does not require the assumption of normality was used for testing for significant difference between the groups (see Appendix J and K).

The overall mean scores for public companies (56.7) and trusts (55.1) were much the same as confirmed by the Kruskal-Wallis test that showed a p-value of 0.843 indicating no significant difference between the two data sets.

There was some evidence of a significant difference in the scores of public companies and trust / council-owned companies for the first information category, "Information about management etc" (p=0.083). Public companies disclosed significantly more information related to this category. There was strong evidence of a significant difference in the scores of public companies and trust / council-owned companies for the categories "Forward looking information" (p=0.017) and "Efficiency measures" (p=0.039). Trust/council-owned companies disclosed significantly more information related to these two categories than public companies. There was no significant difference in the scores for the other information categories or for the score for the annual report as a whole.

Because trust-held companies do not have to make their annual report available to the public, it seems reasonable to expect that disclosure levels for these unlisted companies will be less than for public companies. In addition, shareholders are able to vote against disclosure of items required by the Companies Act 1993, such as disclosure of employee remuneration details, and it is expected that closely-held companies such as trust-held companies are more likely to take advantage of this exemption. The finding that there is no significant difference between the two groups for most categories may support the contention that the disclosure levels of both groups are inadequate for accountability purposes.

7.4.3 Large electricity companies compared to other electricity companies

In order to test the company size and disclosure level relationship in the annual reports of the electricity retail and distribution sectors, Table 7.12 presents the scores of large companies followed by the scores of "other" companies. The aim is to determine if there is any significant difference in the extent and quality of disclosure for these two groups. In previous research related to corporate annual report disclosures, the most commonly used proxy for company size was total assets (Singhvi and Desai, 1971; Buzby, 1975; McNally et al., 1982; Tong et al., 1990; Malone et al., 1993; McKinnon and Dalimunthe, 1993; Hossain et al., 1995). However, there are difficulties in using this measure in the New Zealand electricity industry because of inconsistent revaluation effects. Therefore, large distribution companies have been identified in accordance with those defined as "large" in the Commerce (Controlled Goods or Services) Amendment Bill 1999 (No. 295-2, Section 54D). In addition, two large retail companies (assets and revenue) have been included as "large" companies.

Table 7.12

Final Scores 1999: Large electricity companies and other electricity companies

	Background about the Company	Information about Management, Shareholders, Related Parties	Assets	Debt	Financial, Operating, Performance Related Data	Forward-Looking Information	Financial Performance Measures	Pricing Measures	Efficiency Measures	Market Measures	Other Information	Final Score for Annual Report
	%	%	%	%	%	%	%	%	%	%	%	%
Large electricity companies												
Dunedin Electricity Ltd	63	87	54	100	48	45	15	0	20	0	79	51
Hawkes Bay Power Ltd	69	71	59	90	45	52	11	0	16	0	66	49
Orion NZ Ltd	69	100	65	100	82	51	53	0	16	0	87	67
Powerco Ltd	73	100	59	100	52	39	7	0	59	0	79	58
TransAlta Ltd	79	96	89	90	89	14	23	0	0	27	97	71
TrustPower Ltd	69	96	82	90	55	28	7	0	0	0	96	57
UnitedNetworks Ltd	69	92	70	100	55	26	33	0	0	0	79	58
Vector Ltd	78	100	69	100	54	12	14	0	20	0	65	55
WEL Energy Ltd	56	84	59	100	63	28	0	0	0	0	75	48
MEAN	69.4	91.8	67.3	96.7	60.3	32.8	18.1	0.0	14.6	3.0	80.3	57.1
Other electricity companies												
Alpine Energy Ltd	64	90	60	100	59	38	11	0	40	0	95	57
Ashburton Electricity Ltd	56	90	67	100	74	28	0	0	0	0	97	56
Bay of Plenty Electricity Ltd	60	100	58	100	36	14	4	0	4	0	86	47
Buller Electricity Ltd	91	95	61	100	59	100	14	0	59	0	96	66
Central Electric Ltd	69	78	83	100	92	71	10	0	40	0	93	72
Central Power Ltd	69	86	73	100	51	39	16	0	12	0	100	58
CHB Power Ltd	64	90	69	100	48	52	6	0	8	0	86	53
Counties Power Ltd	27	14	4	0	15	37	18	0	24	0	8	15
Eastland Network Ltd	70	68	71	100	52	72	6	0	20	0	75	55
Electricity Invercargill Ltd	66	82	47	80	37	57	11	0	8	0	75	44
Horowhenua Energy Ltd	70	90	72	100	45	7	27	0	100	0	74	63
King Country Energy Ltd	69	100	70	100	79	45	13	0	40	0	97	63
Mainpower Ltd	64	74	50	100	41	18	0	0	0	0	70	41
Marlborough Electric Ltd	73	100	74	100	80	52	38	0	4	0	88	67
Network Tasman	91	100	63	100	75	94	51	100	28	0	82	71
Northpower Ltd	60	75	53	100	47	29	7	0	20	0	75	47
Otago Power Ltd	41	48	47	100	74	30	36	0	0	0	75	49
Scanpower Ltd	77	56	66	100	73	70	26	0	59	0	84	65
The Lines Co Ltd	60	56	66	100	85	76	10	0	32	0	100	61
The Power Co Ltd	61	100	76	100	79	52	8	0	8	0	66	60
Top Energy Ltd	67	82	59	90	55	52	13	0	16	0	92	54
Waipa Networks Ltd	47	73	54	50	37	52	6	0	16	0	82	44
Waitaki Power Ltd	61	95	63	100	69	36	19	0	41	0	97	62
Westpower Ltd	50	79	53	100	49	22	10	0	0	0	92	46
MEAN	63.6	80.0	60.8	92.5	58.8	47.6	15.0	4.2	24.1	0.0	82.7	54.8
HIGHEST SCORE	91	100	89	100	92	100	53	100	100	27	100	72
LOWEST SCORE	27	14	4	0	15	7	0	0	0	0	8	15

The following analysis tested for significant difference in the scores of large companies and the other electricity companies for each information category.

Significance tests:
The Kruskal-Wallis test revealed no significant difference in the overall results which show means of 57.1 and 54.8 respectively. The test identified two information categories with a P-value of less than 0.10:

- Information about management, shareholders, related parties; and
- Forward-looking information.

There is, therefore, some evidence of a significant difference in the scores of large companies and the rest for these two information categories. Large companies are disclosing significantly more information about management, shareholders and related parties (p=0.091) and the "other" companies are disclosing significantly more forward-looking information (p=0.074). There is no significant difference in the scores for the other information categories. Five of the nine large companies are public companies so it is not surprising that the two analyses - public companies compared to trust/council held companies and large companies compared to other electricity companies - produce similar results.

A number of researchers have found a positive relationship between firm size and the amount of information disclosed in the corporate annual report (Cerf, 1961; Singhvi and Desai, 1971; Buzby, 1975; Firth, 1979; McNally et al., 1982; Chow and Wong-Boren, 1987; Cooke, 1989, 1991; Tong et al., 1990; Bradbury, 1992; Lang and Lundholm, 1993; McKinnon and Dalimunthe, 1993; Hossain et al., 1995; Wallace and Naser, 1995; Meek et al., 1995; Hossain and Adams, 1995; Zarzeski, 1996; Carson and Simnett, 1997; Craig and Diga, 1998). However, Malone et al. (1993) reported no association between asset size and extent of disclosure in the United States oil and gas industry.

It is difficult to draw any conclusions as to why the electricity industry results differ from the above-cited findings. This research includes all New Zealand electricity retail and distribution companies for the financial year 1998/99 but nevertheless the total number of companies is comparatively small. In addition the analysis is limited to one industry and the "large" companies are not all listed companies. Two are owned by local councils, two are trust-owned and five are listed companies. If large companies are also listed companies, then annual mandatory disclosure requirements are possibly more stringent in the countries used in previous studies (mainly the United States). Hickey and Westwood (2000) commented that in some jurisdictions regulatory authorities impose requirements to report specific management discussion and analysis information in corporate annual reports. As an example they noted that the Securities and Exchange Commission requires management discussion on liquidity, capital resources and the results of operations, and that Canadian regulations require forward-looking information to be included as part of management discussion and analysis. In contrast, New Zealand's FRS-2 "Presentation of Financial Reports" simply states that a statement of the intended future directions of an entity's activities could help users of the financial reports to assess the company's future performance (cl.12.2), and that an understanding of financial reports may be assisted by management discussion and analysis explaining the information given in the financial reports, and by a discussion of the significance of that information (cl.12.11). This lack of detailed regulatory requirements in New Zealand may, in part, account for the finding that generally, disclosure levels of large electricity companies are not significantly different from those of "other" electricity companies.

7.5 WHY SOME COMPANIES DISCLOSE MORE INFORMATION THAN OTHERS

Nagarajan and Sridhar (1996) noted that a multitude of factors can influence disclosure decisions. Therefore, it is useful at this point to consider why some companies disclose more information than others. A company's attitude to disclosure probably depends on how it perceives the costs and benefits of disclosing information. Research indicates that firms may reduce information asymmetry (the directors know more than the shareholders) by voluntarily disclosing information to the public (Lev, 1988; Diamond and Verrechia, 1991; Lang and Lundholm, 1993, 1996; Carson and Simnett, 1997). This reduces "information risk" (Gray et al., 1995, p.43) and may enhance the ability to obtain public financing at low cost (Choi, 1973; Verrechia, 1983; Diamond and Verrechia, 1991; Cheng, 1992; Botosan, 1997; Seppanen, 2000). Incentives that influence disclosure levels are commonly linked to agency theory. Agency theory is based on the control of conflicts of interest between shareholders, debtholders and managers, and predicts that the level of information disclosure given by a firm is a function of contractual relationships between these parties (agents) (Jensen and Meckling, 1976; Watts and Zimmerman, 1986, 1990). Carson and Simnett (1997) suggested that increased disclosure assists in monitoring the agents thereby reducing conflict and agency costs. Therefore, the benefits of voluntary disclosure are likely to increase as agency costs increase (Bradbury, 1992). Creditors may place restrictions on company borrowing by means of debt covenants in order to reduce management's ability to transfer wealth between debtholders and shareholders (Daley and Vigeland, 1983). Craig and Diga (1998) considered that such wealth transfers are likely to increase as leverage increases and therefore so should disclosure.[3]

Apart from the benefit of reducing information asymmetry between contracting parties, researchers have also identified a number of other benefits associated with improved disclosure practice. These are also related to capital markets and include a greater analyst following which generates more investor interest (Lang and Lundholm, 1996; Eng and Teo, 2000), increased stock performance and liquidity (Healy, Hutton and Palepu, 1999), more accurate analysts' earnings forecasts, and less information asymmetry between analysts (Eng and Teo, 2000). As twenty-six of the thirty-three electricity retail and distribution companies were unlisted companies at the time of the analysis, it is not appropriate to associate these benefits with the industry as a whole. Since a number of the companies are trust-held, it could be expected that disclosure levels are related to ownership structure. When regulatory lines of accountability are to shareholders (trustees) and not to beneficiaries or to the community whom the trustees represent, then disclosure levels in the corporate annual report could be less than that provided by other companies. However, as reported in section 7.4.2, it was found that there was no significant difference for most disclosure categories.

Previous research (see section 7.4.3) indicates that differences in levels of annual

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[3] Note a contra view: Zarzeski (1996) postulated that companies with higher leverage share more information with their creditors and consequently have lower levels of annual report disclosure.

report disclosure may be related to company size: large firms can be expected to disclose more items of information and that information may be of better quality. Buzby (1975) suggested that large firms disclose more information than small firms because:

- Large companies are aware of potential benefits of good disclosure as investor confidence is more important to them;
- Large companies are more able to afford the costs of information accumulation and dissemination;
- Large companies are closely watched by government agencies.

Each of these suggestions is examined with respect to the electricity industry.

Investor confidence

Buzby (1975) suggested that a reliance by large companies on capital market financing may encourage them to disclose more information in their annual reports. As only five of the nine "large" companies in this electricity industry research are public companies this may not be particularly relevant in respect of a factor influencing levels of disclosure between large and small companies in this research. However, it is possible that smaller firms who do not raise funds in the securities markets may not realize the benefits of better disclosure (Singhvi and Desai, 1971).

In similar vein, Wallace and Naser (1995) and Craig and Diga (1998) suggested a relationship between size, growth and information disclosure. They noted that a large firm attracts a large following of suppliers, customers, and analysts. Therefore there is greater demand for information about its operations. As the company grows in size there is a need for external capital and consequently a need for more comprehensive information. Raffournier (1995) suggested that more comprehensive information gives confidence to investors and facilitates better financing conditions. It is not possible to apply this scenario to the electricity companies as at the time of corporatisation they had little or no debt (Hooks, 1995) and they were able to obtain additional financing through borrowing rather than by issuing additional shares.

Costs

Some companies may disclose less information than others because the costs of processing and disseminating the information are perceived to be less than the benefits. Both Buzby (1975) and Firth (1979) noted that smaller firms may lack sufficient resources to collect and present an extensive amount of information and Meek et al. (1995) postulated that larger firms have lower information production costs. This point is not particularly relevant to the New Zealand electricity companies who have extensive reporting requirements under the Electricity (Information Disclosure) Regulations 1999. In addition, forward-looking information (2 years forward) in respect of performance targets and other measures (Energy Companies Act 1992, Sec.39) must be provided to shareholders within one month of the end of each financial year. The additional collection costs in terms of providing this information in one comprehensive document, the corporate annual report, are minimal; however, dissemination costs will be a significant factor.

Government attention

As well as Buzby (1975), other researchers (Firth, 1979; Lang and Lundholm, 1993) considered that large firms are more likely to be the subject of scrutiny by government agencies (regulatory bodies), the media and financial analysts. This is certainly the case in New Zealand where the seven largest electricity distribution companies were identified by the Ministry of Commerce in 1999 for the purposes of being the first to be constrained by a price control regime. Media attention also focuses on this group. A number of researchers (Firth, 1979; Lim and McKinnon, 1993; Raffournier, 1995; Craig and Diga, 1998) have suggested that firms that are more in the "public eye" are likely to voluntarily disclose more information in order to allay public criticism or to discourage government intervention in their activities.

Craig and Diga (1998) found that ASEAN utilities were one of the industry groups with the lowest levels of disclosure. They conjectured that highly regulated companies disclose less in general purpose financial reports because they use alternative channels for communicating financial and non-financial information. It is possible that such an industry effect could be found in New Zealand where electricity line companies have extensive reporting requirements to the Ministry of Economic Development under the Electricity (Information Disclosure) Regulations. Such regulatory disclosure may influence the level of disclosure in company annual reports. Some Chief Financial Officers have in fact stated that disclosure of performance measures to the Ministry eliminates the need to include such information in the annual report.

Disclosure choices are also influenced by a company's perception of the value of its information to competitors. Tong et al. (1990), McKinnon and Dalimunthe (1993) and Meek et al. (1995) considered that large companies may feel less threatened by competitors than smaller companies and therefore could be less likely to feel that full disclosure puts them at a competitive disadvantage with other companies in their industry. Other researchers (Firth, 1979; Dye, 1985; Craswell and Taylor, 1992) found that such proprietary costs are inversely related to firm size. The reluctance of some small trust-owned electricity distribution companies to disclose information to the public supports this finding. The chief executive of one trust-held company is reported as responding to a question about the direction of the company: "I don't regard that as being anyone else's business"[4] and another company requested that the researcher sign a confidentiality statement before a full annual report was released. This concern for not disclosing information that is perceived as useful to competitors was also expressed in an interview with a representative from the largest electricity retail company. This interview is reported in chapter 8.

This discussion tends to lead to the conclusion that there is no definitive answer to the question: Why do some companies disclose more information than others? Therefore, researchers can only theorise on possible cause and effect relationships. In respect of this research, it is likely that the most applicable cause is a failure by some companies to acknowledge their accountability to a wide range of stakeholders and the role of the corporate annual report in discharging that accountability. In this respect, some companies may disclose less than others simply because they are ignorant of the importance attached to various items by users (Wallace, 1988) or indifferent to the needs of stakeholders.[5] This results in a gap between actual disclosure and desirable disclosure as perceived by stakeholders. McNally et al.

[4] NZ Herald, August 30, 1999 p.D2

[5] See Section 7.2 of this chapter which demonstrates a considerable difference between the level of disclosure practised by companies and the level of disclosure desired by stakeholders. It appears that many items of information which stakeholders believe to be important are not being adequately disclosed.

(1982) identified this as "a lag between the rapidly changing needs of users for data and the slower evolution of corporate practices" (p.16).

Gray et al. (1995) extended the contracting relationship between shareholders / debtholders / managers to encompass a relationship between the firm and society. In doing so they acknowledged the traditional stewardship role of corporate information that is the foundation of the accountability role of the corporate annual report as emphasised in this research. Within this framework, firms may provide varying amounts of information in their annual report depending on the way in which they perceive the need to be accountable.

7.6 SUMMARY AND CONCLUSION

This chapter has reported and discussed the results obtained from a comprehensive analysis of the 1998/99 annual reports of New Zealand electricity retail and distribution companies. Once these results had been validated by company Chief Financial Officers, they were analysed item-by-item in order to compare the mean scores allocated for the extent and quality of information with the mean level of importance as perceived by the stakeholder panel. This analysis highlighted a possible information gap between stakeholder expectations and corporate annual report disclosures in respect of the following from the disclosure index of 67 items:

<u>Information items regarded as "essential" by stakeholders</u>
Optimised Deprival Value of network assets
Major elements of costs: asset maintenance, restructuring, salaries, marketing

<u>Information items regarded as "very important/essential" by stakeholders</u>
Segmental information: assets and operating performance

<u>Information items regarded as "very important" by stakeholders</u>
Management's objectives and strategies
Major contractual relationships
Capital expenditure planned
Capitalised interest
Cost of electricity purchased
Performance measures: efficiency

<u>Information items regarded as "intermediate/very important" by stakeholders</u>
Forward-looking information
Performance measures: financial, pricing, market.

Further analysis identified the top three annual reports in respect of meeting the best-practice disclosure requirements included in the disclosure index. These were: Central Electric (trust-owned), TransAlta (public company), and Network Tasman (trust-owned). The scores were 72%, 71% and 71% respectively. The three lowest scoring reports, all from trust-held companies, were: Counties Power (15%), Mainpower (41%) and Waipa Networks (44%).

It was found that public companies disclosed significantly more information about management, shareholders and related parties and trust/council-owned companies disclosed significantly more forward-looking information and efficiency measures. There was some evidence of a significant difference in the scores of large companies and the other electricity companies for two information categories. The results indicate that large companies disclosed significantly more information about management, shareholders and related parties and the "other" companies disclosed significantly more forward-looking information. There was no significant difference in scores for the other information categories or for the annual report as a whole.

Overall, company structure and size appeared to have little influence on the extent and quality of disclosure for the electricity retail and distribution companies for this particular time period.

Benefits of disclosure are complex to quantify so that it is difficult to determine why some companies disclose more information than others. Research based on agency theory seeks to explain the variations in disclosure practice among firms. The cited advantages of lower cost of capital, greater analyst following, reduced agency costs, and increased stock performance and liquidity, probably have little influence in an industry where the majority of the companies are not public companies and have little or no debt. Disclosure practice is more likely to be influenced by the fact that as the companies are of strategic importance they are subject to public and media scrutiny. Regardless of the factors that influence the extent and quality of corporate annual report disclosures, this research has identified a gap between what stakeholders consider should be disclosed and what is actually disclosed. Improved disclosure to meet best-practice levels would contribute significantly to the effective information sharing between companies and stakeholder groups thus improving the accountability of each entity.

CHAPTER EIGHT

REVIEW OF FINDINGS WITH STAKEHOLDERS AND REPORT PREPARERS

8.1 INTRODUCTION

The evaluation of the 1998/99 annual reports of electricity retail and distribution companies, reported in chapter seven, identified a number of areas where there was a gap between stakeholders' expectations of information that should be disclosed from an accountability perspective, and the information actually being provided. The research seeks not only to draw attention to the information gap but also to effect change in the extent and quality of annual reporting for electricity companies. It was felt that if such change was to be achieved, some key aspects needed to be identified and discussed with relevant parties. With this in mind, the following areas of concern were chosen for further consideration:

- Reporting of segmental information;
- Reporting of performance measures; and
- The transparency of trust-held companies.

The research is based on Laughlin's middle-range theory which incorporates both quantitative and qualitative research methods. This theory implies that quantitative results "cannot stand on their own but need empirical 'flesh' to make them meaningful and complete" (Laughlin, 1995, p.83). Input and feedback has been sought from a stakeholder panel at various stages of the research. The panelists initially responded to a questionnaire requiring them to consider what should be disclosed in the annual reports of electricity retail and distribution companies. Additional feedback was obtained by follow-up interviews. Further stakeholder input was requested once the disclosure index was finalised and a pilot test on six annual reports was completed. Panelists were asked for feedback on the index and the scoring system. Chief Financial Officers (CFOs) have also had input into the research. When the scoring process was complete each CFO was sent a copy of the index and the scores received by the relevant company. CFOs were asked for feedback on the validity of the scores. It is appropriate therefore that the research project conclude with closing interviews with stakeholders and CFOs in order to add "empirical flesh" to the results obtained from evaluating the annual reports.

The intention of the closing interviews was to review and discuss the three key concerns, stated at the beginning of the chapter, with two relevant groups:

- Members of the stakeholder panel; and
- Chief Financial Officers from a representative group of electricity companies.

This chapter reports those discussions and is organised as follows:

8.2 Interviews with the Stakeholder Panel
8.3 Interviews with Chief Financial Officers
8.4 Summary and Conclusion

Section 8.2 includes feedback from the stakeholder panel firstly in respect of the reporting of segmental information and performance measures, and secondly in respect of stakeholder perspectives on the transparency of trust-held electricity companies. Section 8.3 reports the discussions held with six Chief Financial Officers. The chapter ends with a summary and conclusion.

8.2 INTERVIEWS WITH THE STAKEHOLDER PANEL

8.2.1 Preparatory steps

A letter was sent to six members of the stakeholder panel: employee, academic, auditor, regulator, consumers' advocate, and major electricity user group representative. These particular stakeholders were chosen because of their exceptional interest in the research and because of an earlier indication that they would be willing to be further involved in the study. It was also felt that the selection was a fair representation of the stakeholder panel.

A letter requesting a closing interview was sent to each of the selected stakeholders (Appendix L). This outlined the intention to discuss the three significant issues stated above. A summary of those issues was attached to the letter. The relevant section of this summary is included at the commencement of the discussion of each issue in order to provide a foundation for the reporting of the interviews.

A week after the posting of the letter requesting an interview, a phone call was made to each of the six stakeholders and an interview was arranged. A list of questions that were to form the basis of the discussion was sent to each stakeholder before the interview (Appendix M). The interviews were semi-structured. The list of questions provided the focus and structure for each interview but there was also opportunity for open discussion on other matters related to the industry and to the research. The interviews were recorded and transcribed. A summary of those discussions, preceded by the information sent to the stakeholders, is presented in the following section.

8.2.2. Interview Feedback

Segmental Information

Annual reporting - Key area of concern, number one

Segmental Information:

Separation of line and retail companies (Electricity Reform Act, 1998) has removed the ability for cross-subsidy between monopoly and contestable parts of electricity companies. However a new kind of vertical integration has been created with the forming of generation and retail companies and the opportunity to shift revenues and costs between these businesses. Similarly, electricity lines companies may be involved with other significant activities such as contracting businesses and/or gas networks.

Traditionally segmental reporting requires the reporting of operations which are in different industries or in a different country. However best practice disclosure (Association of Investment Management & Research, 1997) would require segmentation that relates to the way in which the business is organised and managed. Although this is not currently GAAP in New Zealand it is considered best reporting practice. In addition S44 (5) (d) of the Energy Companies Act 1992 requires consolidated financial statements to include an operating statement in respect of each significant activity. This information must be provided to shareholders. This means that the information is not generally publicly available as the reporting requirement for trust-owned companies is to the trustees (shareholders).

During interviews with the stakeholder representatives, concern was expressed for segmental information that allows stakeholders to see how much profit and sales revenue is attributed to each consumer group. This would require a segmental split by customer type such as: domestic, commercial, industrial. Alternatively, because of the difficulty in defining industrial versus commercial users, a segmental split according to voltage class might be more appropriate, for example, 11 kv, 33 kv, 220 kv. This information would be in addition to a split between electricity and gas activities or between retail and generation activities.

Analysis of the 1998/99 annual reports shows that only five of the 33 companies give segmental information in respect of sales revenue, expenses, and profit. TransAlta is included in this group. However there is no segmentation at all in their next annual report - year ended December 1999, despite the two distinct activities of retail sales and generation. In respect of segmentation of assets, 73% of the companies failed to disclose any information of this type and none of the companies with discrete networks showed these as segments.

The stakeholders generally felt that segmentation is more important in monopolistic electricity line companies than for other competitive industries but were confident that the reporting requirements of the Electricity (Information Disclosure) Regulations were sufficient in this respect. These regulations require lines companies to report separately on the performance of their lines business and of their "other" business (two segments). The auditor believed that the statutory accounts (annual report) should be read in conjunction with the Ministry of Economic Development (MED) reporting requirements[1] and that from his point of view segmentation should be limited to "purely what the Ministry tells me I should have". It was noted that at the time the research project began electricity companies were integrated retail and distribution companies. Because of the corporate separation of distribution from retailing required by the Electricity Reform Act 1998, segmentation may now be less important. However companies may have both retail and generation activities. This then leads to consideration of whether the integrated retail and generation companies should be reporting these two activities as separate segments. Opinions of the stakeholders differed. Most considered that segmental reporting in respect of retail and generation activities was important for these companies. The auditor considered retail to be a different business from generation which would provide a case for segmentation, but he raised the problem of transfer pricing between the two businesses: "It gets very murky in relation to what part of the business is actually into profit". Three other stakeholders also considered that the two activities were quite distinct operations and should be reported as separate segments. The employee advised that this sector of the industry also has some monopolistic characteristics which were highlighted by recent controversy over the commissioning of the new tailrace tunnel at Manapouri. Electricity generated at Manapouri is largely used to power the aluminium smelter at Bluff. It is impractical to generate electricity elsewhere in the country for the smelter because constraints in the transmission network make it impossible to supply the load required. Thus the operator at Manapouri (a retail/generation company) is in a monopoly situation. The employee considered that the vertical integration of generation/wholesale/retail makes it important to report each segment separately, especially since retail electricity companies are exempt from MED disclosure regulations. However the regulator considered that:

> "There is a good argument that the two are a homogeneous product that is highly competitive and therefore there is no real need to disclose segments....The perceived wisdom is that there isn't

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[1] Disclosures required under the Electricity (Information Disclosure) Regulations 1994/1999.

> any need for generation to be shown separately from retail. Others would argue that there is" (regulator).

It appears therefore that there is stakeholder support for segmenting retail and generation activities. Whether the retail business itself should be segmented was also discussed. The regulator stated:

> "People say we should have segmentation by customer class - industrial, commercial, domestic. Those sorts of people seem to think that if domestics are paying a higher price for electricity they are cross-subsidising the industrial and commercials but that is not necessarily the case by any stretch of the imagination. More data could provide unnecessary problems" (regulator).

However the consumers' advocate held the contra view and stated that segmentation by customer class at the retail level would address the tariff rebalancing issue and enable interested parties to see whether the domestic sector was being disadvantaged. However he expressed concern at the "enormous amount of information that is being produced, most of which no-one understands and nobody uses". Four of the stakeholders supported segmentation of the retail business by customer class.

There was more concern for segmentation in the lines business than in the retail sector which is considered to be competitive. The major electricity users group representative restated his earlier concern for disclosure by discrete networks using UnitedNetworks, which owns regional networks in Wellington, Tauranga, and the North Shore of Auckland, as an example. These three regions are geographically separate and therefore have different cost structures. In his opinion this breakdown should be provided in both the MED reports and in the annual report. However, he believed that a further breakdown should be provided in the MED reports:

> "A discrete region may have some particular assets which are dedicated to an end user, for example, a large freezing works so that, say, 10% of the network assets and costs might be dedicated to supplying that particular customer. Such large dedicated assets should be disclosed in the regulatory accounts. Regional segmentation should be further broken down by voltage class because the voltage is quite a large driver of the costs and of line losses. Another breakdown would be to show separately the performance of uneconomic assets at risk of bypass" (MEUG).

Therefore his proposal is for segmentation by discrete network in the first instance then a further breakdown by voltage class, dedicated assets, and uneconomic assets. In his opinion only segmentation by discrete network disclosure is applicable to the annual report. The regulator supported disclosure by discrete network on the basis that different geographic segments of the networks have quite different operating, maintenance, and capital requirements. He pointed out that the networks are often designed in different ways. For example, Orion is a merger of two networks, one from a Municipal Electricity Department and one from the local power board. The engineering aspects of the two are quite different, as are their customer density and profiles.

Some lines companies operate contracting activities. These are included within the reporting of "other" businesses in respect of MED reports. They are therefore not regarded as a lines business activity, and they are not subject to defacto rate of return control. The researcher posed the question of whether this component should be shown separately from management and operation of the distribution network. The employee considered that if the contracting arm of a lines company earns most of its income from construction and maintenance of the company's lines network, then there is little point in defining contracting as a separate activity. The academic was of the same opinion. The regulator noted that:

> "There is an incentive for companies to claim that their contracting division offers its goods and services to the network on an arms length transaction basis. However this is only an illusion that there is a true competitive tendering process going on. Competitive tendering is not actually undertaken or when it is no unrelated tenderer ever has a fair chance of winning the contract, or if they do it is only for minor amounts to save face. In that regard the companies could actually skim a bit of cream in profits by effectively overcharging the network for contracting" (regulator).

It is possible that segmental reporting may be even more relevant if a lines company expands into non-traditional areas such as ownership of a gas network. Such hybrid businesses could combine distribution of electricity with the management of gas, water or telecommunications networks. The employee considered that it is important for each network to be treated as a discrete activity and that segmented financial results should be presented for each activity. He noted that many lines companies have significant cash holdings from the sale of their retail businesses. It is possible that investment activities could exceed the 10% threshold stated for segmentation in the New Zealand Financial Reporting Standard (SSAP 23) and therefore the results of this activity should be reported as a separate segment. The academic also considered that where electricity lines companies expand into other areas such as gas networks then these activities should be segmented. The regulator raised an issue which he described as "hilarious". He talked about the common pool of costs that such a multi-utility would have. Under a regulatory regime that includes a substantial rate of return component and avoidable cost methodology[2], common costs can be allocated to the electricity business and they can also be allocated to the gas business. Both businesses appear reasonably profitable without attracting regulatory attention but the combined entity is making a super profit by the amount of common costs that are double counted. All other stakeholders considered that segmentation was essential in such a situation. The major electricity users group representative based his opinion on the possibility of different risk profiles for the different businesses and therefore a need for company results to be segmented.

The last concern in respect of segmentation relates to transfer pricing between generation businesses and retail businesses of the same company. The consumers advocate considered that there is competition in both these sectors that should keep prices to a minimum. The major electricity users group representative was of the same opinion. The academic had an expectation that the prices would be at arm's length but the employee was more sceptical. He considered that transfer pricing could become as big an issue as valuation of the network infrastructure:

> "If one electricity company has significant generation plant close to a major user, or to a block of customers which it acquired as part of the ownership separation, then it will have an economic advantage over potential competitors. For example, assume that Mighty River Power runs hydro stations on the Waikato River which are fairly evenly matched with demand in Auckland where customers are serviced by its three subsidiaries - Energy Auckland, First Electric and Mercury Energy. If this was the case then the generator would have very little surplus generation to bid into the open market. If there was such a scarcity then the price would rise in response unless a competing generator had a surplus. However competitors may be at a geographic disadvantage. This may make it difficult for other electricity retailers to be price-competitive" (employee).

The regulator added that transfer pricing was an issue but wasn't sure if it was a problem yet.

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[2] Avoidable cost allocation methodology defines the line business as the "stand alone" business and makes an assessment of the expenses, revenues, assets and liabilities that would be avoided by the line owner if it did not operate its "other" business. The components of the items that would not be avoided are allocated to the line business, and the components that would be avoided are allocated to the "other" business (Electricity Information Disclosure Handbook, Ministry of Commerce, March 1999).

In summary, the majority of the panel expressed support for the following:

Segmentation of retail and generation activities;

Segmentation of retail operations by customer class: industrial, commercial, domestic;

Segmentation of line company operations by discrete network;

Segmentation of line company activities such as electricity, gas, telecommunications; and

Segmentation of significant investment operations.

There was little support for contracting activities to be shown separately and opinions on whether transfer pricing posed an accountability concern were inconclusive. However concern was expressed for loss of information if companies contract out the management of their network.

Performance Measures

Annual Reporting - Key area of concern, number 2
Performance Measures:

A significant part of accountability involves the ability to assess the efficiency and effectiveness of the organisation. To this end the following performance measures were included in the disclosure index:

Performance Measures
Financial:
Debt to equity ratio
Funding cost cover (times interest covered)
Net tangible assets per share
EBIT/Average net funds employed
Dividend per share (cents)
Return on total assets
Return on equity
Overhead costs per retail customer
Pricing Measures:
Average domestic power bill
Pricing information
Efficiency Measures:
Total number of interruptions
Average total duration of interruptions of supply per customer
Average number of interruptions of supply per customer:5-10yrs
Number of faults per 100km of prescribed voltage line:5-10yrs
Total Costs costs per kilometre
Total Costs per customer
Market Measures:
Average consumption kwh per customer (5 years)
Number of customers by sector
Change in market share in major areas of activity

These items acknowledge the holistic nature of performance reporting in that no single measure can give an adequate picture of company performance. In addition, the aim is to include performance measures which can be useful to a broad range of users.

The analysis of the 1998/99 annual reports found that a few companies disclosed common measures such as debt to equity, dividends per share, return on equity but these were seldom given for a five year period to enable readers to examine trends. In addition to financial measures, consumers are interested to know how much electricity costs, how often the power goes off and how quickly supply is restored. Some of these measures are submitted to the Ministry of Economic Development (Ministry of Commerce) as part of the disclosure requirements of the Electricity (Information Disclosure) Regulations 1994 and 1999. These regulations do not apply to retail companies. The stakeholder representatives considered that inclusion of the above performance measures in the annual report was either of intermediate importance or very important. Of the 20 performance measures, 19 were generally not disclosed. The best 1998-99 report in this context was that of Network Tasman which disclosed 46% of the performance measures identified by the stakeholder panel and applicable to line companies.

The stakeholders were asked to consider whether they thought it was valid for companies to exclude performance measures from the annual report provided that they were included in the disclosure documents required by the MED. A comment in a MED newsletter that the information provided under the disclosure regulations is "almost, without exception, highly unsatisfactory"[3] was brought to their attention. The employee thought that although some of the performance measures are required to be disclosed to the MED, they should also be disclosed in the annual report. In his opinion five year trends were important particularly for lines company performance measures. However, he doubted that the annual report was the best place for disclosing pricing information. He thought that there should be mandatory notification of pricing changes and other variations of customer contracts to an independent body, at least for domestic/small commercial customers. This body should also survey customers to validate that actual prices on customer accounts match the charging regime that has been notified. Pricing tables could then be published to allow comparison over time and between companies operating in the same region.

The auditor noted that the disclosure index included some performance measures for the annual report that were different from those provided for regulatory purposes. He agreed that this was appropriate given the different audience for the annual report. He supported the best practice requirement for five year trends and considered that the cost factor of providing this information was not a concern. In his opinion, putting this information into the annual report makes it more user friendly and brings the data into the public domain.

The cost of providing the information was not an issue for the other stakeholders either as, in a number of cases, the measures are prepared for the MED. The consumers' advocate considered it was:

> "Absolutely valid to ensure that these performance measures are in the annual report. The MED information is almost without exception highly unsatisfactory. The stuff needs to be all in one place" (consumers' advocate).

The major electricity users group member thought it would be better if all the performance measures were disclosed in the annual report so that there was one publication for stakeholders to access. In his opinion annual reports should be inclusive of regulatory accounts. The academic also expressed a desire to have all the measures in one document, the annual report, rather than having to access the Gazette or the Information Disclosure publications on the MED web site. In his

[3] Electricity (Information Disclosure) Regulations newsletter, December 1999, p.1.

opinion five year trends are important. The regulator also thought five year trends are important but that there should also be forward-looking performance targets. This would provide incentives for networks to perform. He considered that forward-looking information puts a greater degree of accountability on the network management which he thought was important:

> "As they are in a very privileged position of facing effectively no competition...of course the figures are so intangible...a network that has stability and predictability should be able to project five years out" (regulator).

He noted that the performance measures presented to the MED can be quite different from those presented in the annual report and therefore saw the need for a reconciliation. His concluding comment in this respect provides an appropriate summary for this area of reporting:

> "Seeing the stuff in the annual report is good because it gets a wider audience" (regulator).

The stakeholders were asked to rate the relative importance of the performance measures included in the disclosure index. A five point rating scale was used to rate the items in the same way as stakeholders previously rated the items when they completed the initial questionnaire, although this time performance measures for line and retail companies were rated separately. The frequency of the responses is shown in Appendix N.

Table 8.1 details the performance measures which the panelists consider are essential disclosures in the annual report.

Table 8.1 Essential Performance Measures

Stakeholders	Financial measures	Pricing measures	Efficiency measures	Market measures
Academic	Debt to equity ratio EBIT/Avg net funds Return on total assets Return on equity Acctg rate of profit	Pricing information	Total interruptions Average duration of interruptions Average number of interruptions Number of faults Total costs per km Total costs per customer	
Auditor	Acctg rate of profit Overhead cost per retail customer		Total interruptions Average duration of interruptions Average number of interruptions Number of faults Total costs per km Total costs per customer	
MEUG	Acctg rate of profit		Total interruptions Average duration of interruptions Average number of interruptions Number of faults Total costs per km	
Employee	Debt to equity ratio Funding cost cover NTA per share EBIT/Avg net funds Dividend per share Return on total assets Return on equity Acctg rate of profit		Average duration of interruptions Average number of interruptions Total costs per km	Number of customers by sector
Consumers advocate	Return on total assets Return on equity Acctg rate of profit	Average domestic power bill Pricing information	Total interruptions Average duration of interruptions Average number of interruptions Number of faults Total costs per customer	Number of customers by sector Change in market share
Regulator	Debt to equity Funding cost cover EBIT/Avg net funds Return on total assets Return on equity Acctg rate of profit		Total interruptions Average duration of interruptions Average number of interruptions Number of faults Total costs per km	

Colour code
Black = line and retail companies
Red = applicable to line companies only
Blue = applicable to retail companies only

In summary, all stakeholders agreed that disclosure of Accounting Rate of Profit (ARP), Average total duration of interruptions of supply per customer, and Average number of interruptions was essential for line companies. The majority of stakeholders rated disclosure of Return on Total Assets (ROTA) and Return on Equity (ROE), Number of faults per 100 km of prescribed voltage line, and Total costs per kilometre as essential disclosures. Half the stakeholders considered disclosure of ROTA, ROE, and Total costs per customer was essential for retail companies, Debt to Equity ratio was essential for both company types and EBIT/Average net funds employed was essential for line companies. Only two stakeholders considered that Pricing information and Number of customers by sector should be disclosed.

There are 15 performance measures that relate to line companies included in the disclosure index and 14 that relate to retail companies. Stakeholders confirm that line and retail companies should provide five year trends for at least the following in their annual reports:

Line companies:
Debt to equity
Return on Total Assets
Return on Equity
EBIT/Average net funds employed
Accounting Rate of Profit
Total number of interruptions
Average total duration of interruptions of supply per customer
Average number of interruptions of supply per customer
Number of faults per 100 km of prescribed voltage line
Total costs per kilometre

Retail companies:
Debt to equity
Return on Total Assets
Return on Equity
Total costs per customer
Number of customers by sector

A comparison with the ratings given to the individual performance measures in the initial questionnaire completed by the stakeholders at the commencement of the research showed general consistency in the ratings on the two occasions. The only significant difference was an acknowledgment by the academic that annual report disclosure of key financial performance measures - Debt to Equity, EBIT/Average net funds employed, ROTA, ROE, and ARP - was essential. The consumers advocate had also decided that disclosure of ROTA, ROE and ARP was essential. In addition the regulator thought that funding cost cover was now essential for retail companies.

Trust Transparency

Annual Reporting - Key area of concern, number 3
Trust transparency:

The research has identified a lack of transparency on behalf of some trust-held companies. For example, Waipa Power (now Waipa Networks) wrote to the researcher pointing out that their annual report was not a public document. In their opinion their accountability to stakeholders is driven by the Energy Companies Act 1992 which requires a Statement of Corporate Intent to be made available to the public. This is a forward-looking document which includes a statement of objectives and three year forecasts of performance indicators and financial statements. Its purpose is quite different from the accountability role of the annual report.

Three other trust-held companies do not make a full annual report available to the public. An abbreviated form with summarised financial statements, no notes to the accounts, no audit report is available on request. In one case I was required to sign a confidentiality statement before receiving the full annual report. TopEnergy advised that their business was not akin to a local body activity; the annual report was for shareholders only. Trust ownership of electricity companies is synonymous with "public" or "community" ownership. Such companies, if they wished, could remain non-accountable to parties other than shareholders simply by deciding to withhold public distribution of their annual reports.

As the research progressed, there was an emerging concern over the availability to the general public of information about the performance and activities of trusts. This concern was expressed to the stakeholders. Stakeholders generally confirmed that the level of accountability should be the same regardless of whether the electricity company is a publicly listed company with a wide distribution of shareholding, a company where the majority of shares are hold by a local council, or a company where all the shares are held by a community trust. One stakeholder thought that trust beneficiaries should be treated like public company shareholders for reporting purposes. Two stakeholders thought that trust-owned companies should report more fully than public companies because the ultimate beneficiaries are generally the customers or ratepayers of the district served by the company. As a result the community has a double-edged interest in the company's activities - as owners, and as users of the services provided. One stakeholder noted that shareholders of publicly listed companies tend to be more knowledgeable than beneficiaries of a community trust and so can make better use of more limited data or limited disclosure. He considered that "it is beholden on the trustees to be more forthcoming with accountability than a publicly listed company". The academic pointed out that public companies are accountable in terms of their share price which is an indicator of performance. In his opinion, companies which do not have this monitoring device are less accountable.

The auditor considered that trust-held line companies had sufficient accountability through their MED requirements, and that whether or not they provide their statutory accounts to the public was irrelevant. If the companies are not involved in monopoly activities, then he believed they were no different from other private companies. Two stakeholders suggested that some form of abridged annual report, which should include the performance measures stated in the disclosure index, could be appropriate for distribution to beneficiaries.

Both the regulator and the major electricity users group representative expressed concern for the accountability of trusts generally and for their level of efficiency. They wondered why some of the small trust-owned companies still exist as separate networks and if local body politics can result in poor decisions being made. In addition they thought that a reluctance to disclose information could be related to the personal fear of trustees of being discredited or not re-elected.

The Ministerial Inquiry (June 2000) into the electricity industry also expressed concern at the transparency of trusts. The report stated that trust-owned companies should be required to publish a Statement of Corporate Intent (SCI) using that published by the Government-owned Transpower (national grid) as a model. In addition distribution companies that are majority-owned by trusts should be subject to the Local Government Official Information Act (which provides an opportunity to receive further information or explanation about the company's operations under a public interest test), the Public Finance Act (which provided for oversight by the

Audit Office) and the Ombudsman Act.[4] This would bring trust owned companies under the same controls as companies owned by local bodies.

All stakeholders expressed concern about the accountability of the Trust itself in terms of its reporting requirements but thought this was a wider issue applicable to all Trusts not just electricity company trusts.

It seems fair to conclude that all trust-held companies should report not only to trustees but also to beneficiaries. In this respect some form of abbreviated annual report could be appropriate. However such a report should include segmental information (where appropriate) and the performance measures identified by stakeholders as essential disclosures.

The final part of the interview involved a discussion on whether the accountability requirements of line companies were met by the disclosures made to the MED. This was a matter raised by CFOs when they were sent the final results from the scoring of their annual report. The stakeholders were asked for their views on this. The regulator considered that the accountability resulting from the MED disclosures was minimal:

> "Disclosure regulations are basically designed as an economic instrument and accountability is arguably more a social responsibility....The disclosure regulations are indifferent to considerations of equity and justice" (regulator).

The employee expressed the same opinion. He noted that the disclosure regulations appear to be open to various interpretations and have changed and evolved. As a result, comparability from year to year may be difficult:

> "They lack the rigour of annual reports and can therefore only augment the requirement of accountability through the annual report, not replace it" (employee).

This view was also expressed by the other stakeholders who acknowledged the importance of a comprehensive annual report in discharging accountability requirements.

Table 8.2 summarises the stakeholders' responses to concerns raised by the researcher in respect of three key areas: segmental reporting, reporting of

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[4] Inquiry into the Electricity Industry, Report to the Minister of Energy, June 2000 S.188 - 190.

performance measures, and the transparency of trusts. Stakeholders identified the following information as essential disclosures in the annual reports of electricity line and retail companies.

Table 8.2
Summary of Stakeholder Feedback on Key Disclosure Issues

Disclosure Issues	Essential Disclosures for Line companies	Essential Disclosures for Retail companies
Segmental Information: Assets, revenue, expenses, operating profit	Electricity, gas, telecommunications, significant investment operations Discrete networks	Retail and generation Retail by customer class: Domestic, commercial, industrial
Performance measures: Financial measures	Debt to Equity Return on Total Assets Return on Equity EBIT/Average net funds Accounting Rate of Profit (ROI)	Debt to Equity Return on Total Assets Return on Equity
Performance measures: Efficiency and reliability Measures	Total number of interruptions Average total duration of interruptions of supply per customer Average number of interruptions of supply per customer Number of faults per 100 km of prescribed voltage line Total costs per kilometre	Total costs per customer Number of customers by sector
Trust transparency	Level of accountability should be the same for all companies regardless of whether the shares are held by the public, local council, or community trust. Trust beneficiaries should receive an abbreviated annual report that includes segmental information (where appropriate) and performance measures. The full annual report should be available to beneficiaries on request.	

8.3 INTERVIEWS WITH CHIEF FINANCIAL OFFICERS

8.3.1 Preparatory Steps

The research findings were discussed with Chief Financial Officers from a representative group of companies:

- The highest scoring lines company (Network Tasman)[5]
- The highest scoring retail company (TransAlta);
- The largest lines company (UnitedNetworks);
- The largest retail company (TransAlta);
- A trust-held company (MainPower);
- A council-owned company (Orion); and
- The lowest scoring company (Counties Power).

The CFO of each of the above companies was contacted by telephone and an interview appointment was made. A follow-up letter confirmed the appointment time and advised that relevant information would be sent before the interview date. A second letter outlined the development of the disclosure index and the scoring process (Appendix O). Although the scores obtained for the company's annual report and a copy of the best practice disclosure criteria had been sent to each company previously (ten months previously), these were included with the second letter. In addition each company was sent feedback about the strengths of their annual report and suggested areas for improvement. This information formed the basis of the interview. The interviews were semi-structured. The researcher had a list of questions which guided the interview but CFOs were able to talk about any issue related to their annual reporting. The interview concentrated on four aspects of accountability:

- The motivation for the level of disclosure in the company's annual report;
- The disclosure of performance measures;
- Segmentation of information; and
- Suggestions for improvement.

[5] The highest scoring company was Central Electric but as this company is no longer a lines business the second highest scoring company was interviewed.

The interviews were recorded and transcribed. A summary of the discussion is presented in the following sections.

8.3.2 Interview Feedback

Motivation for disclosure

Network Tasman supports an accountability focus. They consider they are accountable to the general public and are therefore required to provide relevant information. In their opinion, part of that accountability is through the disclosures made to the MED. However, the CFO agreed that the MED information was not readily available to the public:

> "That accountability is not coming through to the general public. We would be happy to improve our accountability in the Annual Report by improving our disclosure of key financial and non-financial information, particularly non-financial information such as number of customer complaints and number of faults" (Network Tasman).

Network Tasman's desire to be fully accountable is contrasted with that of TransAlta who acknowledge the need for accountability but are concerned to avoid disclosing what they consider to be commercially sensitive information. In the 1998/99 financial year the company was comfortable with disclosing segmental information and likely returns from each part of their integrated business. They now consider that the environment is more competitive and therefore the company, as a retail-focused organisation, no longer discloses gross margins, customer numbers, or costs of energy:

> "It is one of those commercial decisions which you have to trade off between informing the readers of your reports versus ensuring that you have maintained competitive advantage in areas such as costs per customer, average unit price of electricity etc. That is sensitive information that we don't want to disclose" (TransAlta).

Counties Power had a different reason for limiting their disclosure levels. Their decisions were based on a desire to provide information in a simple, user-friendly manner so it could be understood by those without a financial or accounting background. The CFO considered that detailed disclosure was inappropriate when most consumers or employees would not understand it. More detailed information is available on request but the company is selective in what extra information is provided. A full set of laser printed financial statements would be the maximum amount of information provided. The summarised annual report that received a low score was a result of the company wanting to try something different. A full annual report is being produced for the 1999/2000 financial year.

MainPower's disclosure levels are cost-driven. As a company with rebate shareholders they are required to deliver 23,000 annual reports to consumers. The CFO estimates a cost of $2,000 per page so that, despite acknowledgment by the company of the need to be accountable, disclosure is limited. The CFO compared the 1998/99 annual report with that of 1991/92 and noted that disclosure levels were considerably higher in the 1992 financial year. In addition, he pointed out that the 1999/2000 annual report was ready to be posted and that, during the next week, he expected to receive 20-30 calls per day from angry consumers who think the company is wasting money that could be paid out as a rebate. Interested parties can access information when required as the company has an open door policy:

> "Anyone can walk into our office and discuss anything they wish to know providing it is not commercially sensitive" (Mainpower).

Orion Ltd considers it has an obligation to the public to be accountable. The CFO stated that the company has a culture of accountability, openness and transparency. As the local newspaper also has a keen interest in the activities of Orion, the company considers it is better to be proactive in releasing information rather than being forced into a reactive position. As a large borrower the company also uses the annual report as a marketing document to financial institutions. Copies of the annual report are available to the public on request.

The largest line company, UnitedNetworks Ltd, is concerned to meet the information needs of shareholders and customers.

Performance Measures

It was suggested that companies should include the performance measures identified in Table 8.2, in the annual report. This matter was discussed with the company CFOs.

TransAlta agreed that disclosure of financial performance measures: Debt to equity, ROTA, and ROE, was appropriate but were concerned at the sensitivity of "Costs per customer" and the difficulty of ensuring all companies used the same definition of "costs". It was thought that this was a good indicator of a company's performance and of its ability to service customers well, but that a meaningful figure was difficult to obtain in an integrated company. Commercial sensitivity was also a factor in disclosure of "Number of customers by sector" and the company considered that, whilst it was useful information for annual report readers, the information could also be useful to competitors. However the CFO agreed to consider disclosure of this item in the future. It was agreed that disclosure of trends in performance measures was important and that the company would consider publishing three year trends in their next annual report. Five year trends are not appropriate as the company has not existed in its current form for five years. The CFO pointed out the need for the disclosure of amounts paid by retail companies for their customer base. In TransAlta's case this was $230m or $600 per customer.

Network Tasman was concerned about disclosing the suggested financial performance measures in the annual report because of possible conflict with those disclosed to the MED which relate to the lines business of the company only. The company has other activities such as rental property, and a treasury function, so that the performance measures reported in the annual report would be different from those provided to the MED. This could cause the public to be confused as to the true result. The company considered that reliability and efficiency measures were just as important as the financial measures and that the company should improve its reporting of those:

> "We recognise that we need to be a bit more accountable and we should show information that actually does have an impact on the customer" (Network Tasman).

The company thought that five year trends were difficult to provide in an industry that has been through so much change, but thought that they could be provided for measures such as "Number of interruptions".

Counties Power considered that most consumers and employees would not understand the suggested financial performance measures and that other interested parties could obtain the information from the MED disclosures. The CFO noted that the company's 1999/2000 annual report included some performance measures but expressed disappointment that "for a variety of reasons we don't have five year trends".

The CFO of MainPower agrees that the performance measures identified by the stakeholder panel in the closing interviews should be disclosed. The company plans to employ another accountant so that disclosure information can have greater priority. Financial and some efficiency measures will be in the annual report for year ended 2001.

Orion Ltd currently discloses five year trends for three performance measures. They would not consider disclosing ROTA as the CFO believes the asset base to be an unreliable figure for inter-company comparisons. The company sees "no reason why we couldn't disclose five year trends for reliability/efficiency measures".

UnitedNetworks Ltd reports five year trends for Debt to equity and Net tangible assets per share even though the company structure has changed considerably over that period. The company is open to disclosing additional measures such as ROTA and ROE as well as some efficiency measures. Efficiency measures used to be included in the annual report but were removed when new networks were acquired by the company and historical data became meaningless. The CFO noted the difficulty with the company having a December balance date and MED disclosure regulations requiring information for year ended 31 March. This had a substantial effect on compliance costs.

Segmentation

The CFOs were asked whether segmentation of results was appropriate for their company. TransAlta, a retail/generation company considered that they operate in one segment - retail. In their opinion, retail encompasses generation and supply to customers, that is, one segment. The information is too commercially sensitive to be disclosed as separate segments.

Network Tasman owns one lines network and so is considered to be "purely a lines function service".

Counties Power has a construction business that operates as a separate business unit. They compete with external contractors for work and also do work for external customers. Although this business represents a little more than the 10% of the revenue of the company, it is not disclosed as a separate segment. The CFO considered that interested parties could obtain this information from the MED disclosures which include information about the lines business only. Interested parties could compare this information with the annual report disclosures for the business as a whole, and work out the results of the other businesses.

Orion also has a contracting business but considers it to be too small to require segmented disclosure. The same applies to MainPower Ltd. The CFO commented that the company was conscious of the commercial sensitivity of information related to this business and its activities.

In the next financial year, UnitedNetworks Ltd intends to show segmental information for electricity, gas, telecommunications and maybe contracting activities as well. Concern was expressed for the difficulty in comparing this information with MED disclosures when there may be inconsistency in the method used to allocate corporate costs. UnitedNetworks owns a number of discrete networks but the CFO considered that segemented information in this respect would be commercially sensitive and difficult to produce. Revenue is recorded by load group or network type but costs are not recorded separately for each network.

Suggestions for improvement

A list of areas where disclosure might be improved was sent to each company before the interview. These were discussed with the CFOs. TransAlta agreed that the reports of the Chairman and Chief Executive Officer lacked specific detail in respect of strategy. The CFO noted that the company's balance date has been constantly changing with ownership changes. They had moved from a March 1999 year end to a December 1999 year end, done a due diligence audit in respect of a takeover and now had a June financial year end. Specifying strategy had not been of major importance in a constant scramble to meet deadlines. Details of "Planned capital expenditure" was considered useful but concern was again expressed for the competitive nature of such information. The provision of forward-looking information such as major factors influencing next year would be considered in order to "signal things that need to be considered and addressed". A comparison of actual business performance to previously set targets was considered to be an "interesting concept" but generally the company was reluctant to signal target information.

Network Tasman again expressed their support for the annual reporting model used in the research and stated that they were more than happy with their scores. Suggested improvements for the annual reporting of this company related to:

Historical cost of land, buildings, and distribution system;
Useful lives of non-current assets; and
Capital expenditure planned.

The CFO considered that in reality historical cost for this type of industry is totally irrelevant. In his opinion, ODV needs more fine-tuning but it is more relevant than the historical cost of distribution assets. Some of the power poles have been in the ground for 60 years and would be seriously undervalued using an historical cost approach. The cost to replace the network was the most important consideration. The company held the view that disclosure of useful lives of non-current assets was irrelevant. Depreciation rates range from 1.5% to 10% with probably 40 or 50 depreciation rates related to distribution assets. These rates reflect the usage of the assets and are based on the independent valuer's assessment of useful life. Disclosure of planned capital expenditure was thought to be a "valid point". The CFO noted that the information was not difficult to source and he would note it for inclusion in the next annual report.

Counties Power received the lowest score for their annual report and the list of suggested improvements included 13 information items. The CFO fully agreed with eleven of the suggestions: Management objectives and strategies, General development of business, Background and names of directors, Names and functions of executive management, Major owners of the company, ODV of the network, Fixed asset details in accordance with the best practice criteria, Planned capital expenditure, Discussion of results for the past year, Factors influencing next year, and Comparison of actual business performance to targets. However he was not keen on disclosing transmission costs or major elements of costs such as salaries, marketing or maintenance on the basis that there may not be consistency in calculating these costs. This would make inter-company comparisons difficult and misleading. In accepting the suggestions for improvement, the CFO stated that he would refer to the list when he prepared the next annual report.

The annual report of MainPower received one of the lowest scores so that there were a number of areas for suggested improvement. The CFO stated that management objectives and strategies are included in the Statement of Corporate Intent and "there just isn't room in the annual report to go into any detail". He agreed that the information should be in the annual report but considered that average customers (and the trustees) were not interested. He also agreed that "Information about directors" and "Names and functions of executive management" were appropriate disclosures. They were included in the 1992 annual report but had since been removed due to the negative response from the rebate shareholders. Other suggestions: Planned capital expenditure, Historical summary, Major costs such as salaries, marketing, maintenance, Comparison of actual business performance to previously disclosed targets, and Performance measures were also considered important disclosures but omitted from the annual report because of cost and negative feedback from shareholders. The CFO summed up the disclosure philosophy:

> "If I was preparing a set of accounts that I was to be marked on then I would certainly include all of those things....We rebate something like 90% of our profit each year. This is a tax free rebate. The rebate shareholders (consumers) don't want money wasted on detailed annual reports" (MainPower).

Orion Ltd considered that historical cost of assets was irrelevant. Assets are revalued every three years. The company reports $25m of Long Term Investments without any accompanying footnote. The CFO agreed that more detail should be given about this information item, which is an investment in gas exploration. The company has difficulty with the suggestion of disclosure of forward-looking information in the annual report. This information is provided in the SCI. The information in the SCI is changed throughout the year as targets are renegotiated with the shareholders. The CFO considered it was inappropriate to include such dynamic information in a static document such as the annual report. The same argument applies to the information item "Management objectives and strategies". The company would not consider disclosing major costs such as salaries, marketing and asset maintenance costs.

UnitedNetworks was supportive of the research and open to suggestions for improved information disclosure in their annual report. The CFO asked for ideas on appropriate presentation of forward-looking information based on the way in which competitors are reporting this information. He pointed out that, as a public company, they were "feeding more and more information to the market in separate publications stating company objectives and targets". The company would be interested in including this information in their next annual report - maybe in the form of a Statement of Corporate Intent. The CFO considered costs such as asset maintenance and marketing could be disclosed in the future. Disclosure levels had been driven by GAAP requirements rather than by any concern that the information was commercially sensitive. He also agreed that it was appropriate for the accounting policy for "Capital contributions by customers" to be disclosed, adding that this has been a sensitive area from a tax point of view.

The feedback from company CFOs in respect of the identified issues is summarised in Table 8.3.

Table 8.3
Feedback from Chief Financial Officers

Company name	Network Tasman Ltd	TransAlta Ltd	UnitedNetworks Ltd	MainPower Ltd	Orion Ltd	Counties Power Ltd
Motivation for deciding on current disclosure levels						
Public accountability						
Accountability to shareholders						
Accountability to customers						
Commercial sensitivity						
Cost						
Simplicity						
Response to suggestion for more detailed segmental information						
Separation into retail, generation						
Separation by customer class						
Separation into electricity, gas, telecommunications businesses						
Separation into discrete networks						
Separation of contracting / construction business						
Response to suggestion for improved disclosure measures (financial)						
Debt to equity						
ROTA						
ROE						
EBIT / Avg net funds						
ARP (ROI)						
Total costs per customer						
Response to suggestion for improved disclosure measures (efficiency measures)						
Average duration of interrupts per customer						
Average number of interrupts per customer						
Number of faults per 100 km						
Response to suggestion for additional information						
Management objectives and strategies						
Forward-looking information						
General development of business						
Ownership (major owners of company stock)						
Background of directors						
Names and functions of executives						
ODV details						
Fixed asset details						
Planned capital expenditure						
Summary of Asset Management Plan						
Historical summary of operating and financial data						
Major elements of costs						
Comparison of actual performance to target						
Capital contributions by customers						

Colour code:
Blue = would consider disclosing this item in future.
Red = would not consider disclosing this item in future.
Green = No commitment on this disclosure
Yellow = Not applicable to this company
If cell left blank it indicates that disclosure for this item by this company was already adequate.

8.4 SUMMARY AND CONCLUSION

This chapter has reported closing interviews with six stakeholders and six electricity company CFOs. The intention was to add a layer of qualitative feedback to complete the research process. This feedback is summarised in Tables 8.2 and 8.3. The stakeholders considered that companies with both retail and generation businesses should show segmented results. However the CFO of the largest retail company, TransAlta, stated that "retail" encompasses generation and supply to customers and that the company therefore operates in **one** segment. This opinion stems from a concern for the commercial sensitivity of the information. In the 1998/99 financial year the company disclosed a breakdown of sales by customer class:industrial, commercial, and domestic. This information is now considered to be commercially sensitive and will no longer be disclosed.

The stakeholders expressed support for segmentation of line company activities by discrete network and by company activities such as electricity, gas, and telecommunications. Only one company (UnitedNetworks) has more than one network. UnitedNetworks intends to disclose segmental information for its different business activities in the next financial year but will not segment information by discrete network.

All of the line companies interviewed had contracting activities the results of which are not shown separately. With the exception of UnitedNetworks, CFOs expressed reluctance to identify this activity separately and the stakeholders generally thought that contracting did not need to be identified as a separate activity given that most of the income earned was from construction and maintenance of the network. Only one company stated that they had a separate Treasury function but that this was not a significant part of their business activities.

CFOs generally supported disclosure of five year trends for the performance measures identified by the stakeholder panel. However, TransAlta was reluctant to report on "Number of customers by sector" or "Total costs per customer" stating that this information was commercially sensitive. Network Tasman and UnitedNetworks expressed concern at disclosing performance measures that were calculated on a different basis from those provided to the MED which relate to the performance of the lines business only. However, the companies intend to improve their disclosure of reliability and performance measures in the future. It is expected that the company representatives who were interviewed will include some of the suggested financial and efficiency/reliability measures in their next annual report.

The three trust-held companies who were interviewed were concerned to provide appropriate information to beneficiaries. Two of the companies provide a coloured brochure of "Annual Highlights". More information is available on request although Counties Power is protective of information other than that contained in the statutory financial statements. MainPower is required by statute to provide a "full" annual report to beneficiaries who are rebate shareholders. This is the only company structured in this way. The "full" annual report has limited disclosure on account of the cost of such wide distribution. The stakeholders expressed the opinion that trust-owned companies should be as accountable as other public companies and that copies of the annual report in its entirety should be available to interested parties on request.

The CFOs were also asked to consider improving the quality of reporting in specifically identified areas for each company. These suggestions were generally well received although MainPower feels constrained by the cost of publishing the information in what it perceives as a negative environment.

Stakeholders supported the need for improved disclosure in accordance with an accountability perspective. The CFOs who were interviewed accepted the challenge to increase levels of disclosure in specific areas.

CHAPTER NINE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

9.1 INTRODUCTION

This chapter provides a review of the thesis. It summarises the research objectives, the way in which they were achieved, and makes recommendations for improving the quality of annual report disclosure in the retail and distribution sectors of the New Zealand electricity industry. This is followed by an assessment of the importance of the research and consideration of opportunities for further research.

9.2 REVIEW

Since the mid-1980s, the New Zealand electricity industry has undergone extensive restructuring including the corporatisation of locally-owned and operated retail and distribution companies. This restructuring was intended to make the industry more efficient by introducing a competitive environment. However, competition was slow to develop due in part to the ability of the integrated companies to cross-subsidise the potentially competitive retail business with profits from the monopoly line business. The potential to confuse the extent of monopoly line business profits was an instigating factor for this research, which has the key objective of evaluating the transparency of electricity company activities as disclosed in the corporate annual report. During the early stages of the research the Electricity Reform Act 1998 was passed and the integrated companies were dis-established. Companies were required to choose between being line or retail/generation businesses. This ownership split was intended to prevent cross-subsidisation. However, it did not eliminate the need for accountability.

Electricity is an essential product in people's everyday lives. In spite of the removal of specific franchise areas, distribution companies essentially remain monopolies. The potential for abuse of monopoly power imposes a high level of accountability on the industry. This accountability can be partly discharged by disclosure of relevant information in the corporate annual report. Much of the empirical research on annual report disclosure levels has been limited to studies of shareholder usage of accounting reports and emphasises the decision-making role of information. The electricity industry research is set within a framework of public accountability which acknowledges the responsibility of managers to give an account, not just to shareholders, but to all those who are interested in or affected by the activities of the organisation, including groups with a non-economic relationship with the company. It is claimed that because of the essential nature of the electricity product, accountability is due to a range of stakeholders: lenders, shareholders, employees, consumers, suppliers, government, regulatory authorities, communities, and the public generally. The research therefore promotes the "public interest" concept of accountability. Although the electricity companies are no longer local bodies they remain public interest companies and there is considerable scrutiny of, and interest in, their activities (Kilpatrick and Lapsley, 1996).

The research contends that the responsibility to report to stakeholders is "broader than the legal obligation and arises from the role played in the community by the reporting entity" (NZ Statement of Concepts, cl.2.2). The research therefore suggests that the reporting requirements developed from a decision-making perspective and encompassed in the Financial Reporting Act 1993 and the Companies Act 1993 are inadequate for meeting accountability obligations. Reporting from an accountability perspective involves the provision of a range of information, both financial and non-financial. Accountability can be discharged in many ways including press releases and conferences, meetings with employees and analysts, the corporate annual report, and website information. The corporate annual report is the most comprehensive of these communication channels and has the potential to make information easily and routinely available in one document.

In order to satisfy the accountability function, attention should be given not only to the quantity but also the quality of the information provided to users. It is expected that the information disclosed in the corporate annual report will encompass the qualitative characteristics of reliability, relevance, understandability and comparability. This research also includes accessibility and distribution of the annual report as important qualities in a public accountability environment, a concept suggested by Perks (1993) and Coy et al. (2000). Accountability then involves not just quality of disclosure but appropriate dissemination of useful information on company performance. This is particularly important for trust-owned electricity companies which are primarily accountable to their shareholders, the trustees. The research identified three instances where the full annual report was not made available to electricity consumers within the community (beneficiaries of the trust).

In order to be publicly accountable, companies must provide information about the **efficiency** and **economy** of operations and report on **effectiveness** in achieving stated objectives. Information should also be provided to assist users in understanding the **future** prospects of the company. Public accountability requires that this information be **equally available** to all stakeholders. In addition there are statutory **compliance** requirements. These informational aspects of reporting are referred to as the tenets of accountability and form the framework of accountability theory. This research, which assesses the comprehensiveness of information disclosure, is couched in these tenets.

Over the last ten years a regulatory framework has been developed for the electricity industry to allow for the more diverse structure with a greater level of private ownership. The cornerstone of this regulatory framework is the Electricity (Information Disclosure) Regulations 1999 which require lines companies to disclose specific information to the Ministry of Economic Development on an annual basis. The Ministry reported that the performance of line owners (and auditors) in meeting the information disclosure requirements for the 1999 year had been, almost without exception, highly unsatisfactory (Ministry of Commerce Newsletter, No. 16, December 1999). There is therefore a continuing demand for information on electricity company activities in order to discharge accountability requirements. The goal of this research is to make the operations of electricity companies and their activities more transparent by their provision of sufficient, understandable and easily accessible financial and non-financial information to stakeholders, thus allowing them to fairly assess performance. The prime way of achieving this is through comprehensive reporting in the corporate annual report. The intention of this research is to enhance the usefulness of the annual report as a vehicle for discharging accountability obligations and as a mechanism for communicating information to users, and to ensure that the quality of information provided does not differ significantly across electricity companies.

In its methodology and method, the research embodies elements of both scientific and naturalistic approaches. It draws on the complementary nature of these approaches and includes both quantitative and qualitative aspects. In referring to these two dominant ways of thinking, Tomkins and Groves (1983b) urged accountants to "keep both sides of the bridge clearly in view in designing their research" (p.414). Laughlin's (1995) middle-range theory allows the researcher to take this position by effectively standing in the middle of the bridge. The research therefore was not limited by the quantifiable, technical, cause and effect perspective of a scientific approach but adopted a more relevant paradigm which provided the researcher with the freedom to complement and enrich the quantitative data with additional empirical detail. Interaction with stakeholders and report preparers provided contextual information which facilitated interpretation, illustration and validation of the research data and findings. Middle-range theory thus enabled flexibility in the process of discovering "what is" and "what ought to be" disclosed in electricity company annual reports. It also allowed for the possibility that change in the status quo may be required. Such an approach is in keeping with the broad societal viewpoint adopted in the research. This viewpoint positions annual reports within the context of the social, political and economic environment and recognises the public interest aspect of reporting (Cooper and Sherer, 1984). Stakeholder expectations of annual report disclosures were therefore understood in the context of the organisation and the industry itself, and acknowledged the dominant position of the sectors of the industry that have monopoly characteristics.

9.3 RESEARCH OBJECTIVES

The overall aim of the research was to develop and apply a model of best-practice reporting for the annual reports of electricity retail and distribution companies in New Zealand. To achieve this the research had the following objectives:

- To develop a disclosure index, from an accountability perspective, for assessing extent and quality of annual report disclosures of New Zealand electricity retail and distribution companies, and to incorporate within the disclosure index a model of best-practice reporting;

- To apply the index to the 1999 annual reports of electricity retail and distribution companies in order to identify the extent and quality of information currently disclosed;
- To review and discuss the findings with stakeholder panel members and report preparers; and
- To make recommendations about annual reporting by the New Zealand electricity industry in the light of the investigative findings.

The way in which each of these objectives was achieved is addressed in the following section.

9.3.1 Development of a disclosure index

For almost 40 years researchers have used disclosure indices as a research tool to quantify the amount of information disclosed in corporate annual reports. This continuing use provides support for the importance of disclosure indices as a means of scoring levels of information disclosure. Most of the research over this period has been concerned with identifying relationships between levels of voluntary disclosure and company characteristics such as size. The choice of voluntary disclosure items for these indices has mostly been influenced by the information needs of shareholders and has been grounded in a decision-making rather than an accountability perspective. A principle of the electricity industry index is that the annual report should disclose information that meets the needs of all stakeholders. Therefore, the index was developed with input from an expert panel which consisted of a representative from 15 stakeholder groups: an auditor, lender, preparer, employee, financial reporter, consumer, regulator, academic, environmentalist, industry consultant, consumers' advocate, director, energy trust member, financial analyst, and major electricity users' group member. Each of these people had several years' experience in their particular field. For example, the auditor had 26 years' experience and was an audit partner in a large firm, the environmentalist had been an energy campaigner for 25 years, and the Director had 34 years' experience as an executive and consultant in the electricity industry.

A prime value of reporting lies in its usefulness to interested parties; therefore the use of a stakeholder panel acknowledged the interests of a range of annual report users as important factors influencing disclosure practices. Such an approach extends disclosure beyond that required by regulation. However, selection of items for the disclosure index was constrained by a balance between the cost and benefit of disclosures as accountability reporting could be virtually without limits (Coy et al., 2000). The index acknowledged the relative importance of the information items by including weightings assigned by the stakeholders. Items considered of greater importance in respect of the accountability objective were awarded higher weights. The index therefore reflected stakeholder opinions about disclosure. A questionnaire and follow-up interview process were efficient and effective methods for collecting those opinions.

Most previous research involving disclosure indices has concentrated on the extent of disclosure - dichotomously recording the presence or absence of each index item. The disclosure index for the electricity industry is framed within an accountability paradigm and therefore is concerned not just with the number of information items disclosed but the degree of detail (quality) in respect of each information item. Quality of disclosure is an essential part of accountability. The index demonstrates disclosure in the form of a best practice model grounded in accountability requirements. This model was developed from a number of sources including the KPMG Model Annual Report, 1999 and recommendations for corporate reporting practices as defined by the Association for Investment Management and Research. The best practice criteria formed a benchmark for judging the relative quality of the disclosures. If a disclosure item met the best-practice criteria, a score of five points was awarded. Disclosures of lesser quality received lower scores relative to the extent to which they met the criteria. This relative measure of disclosure was weighted by the assessed importance of each item in the index.

In order to evaluate the effectiveness of the index, a pilot test was carried out on six annual reports. The results and details of the index and the scoring process were sent to the stakeholder panel for validation. By this means it was confirmed that the index was an appropriate and robust research tool for conducting a systematic enquiry into the contents of electricity company annual reports and quantifying the levels of information disclosure.

The strengths of the index lay in its comprehensive nature. It provided the ability to distinguish between the relative importance of disclosure items on the basis of weightings assigned by the stakeholder panel, and the ability to assess both extent and quality of disclosure. In addition the index posited a best practice model for reporting by electricity retail and distribution companies.

As with all disclosure indices, development and application of the index involved subjective judgement. The use of "middle-range theory" acknowledges the reality of subjective research input and findings. The opinions, traditions and knowledge of the researcher and the participants enriched and contextualised the research. However it was important that the final results be considered a fair and reasonable assessment of the quality of annual reporting. Therefore, the researcher sought to ensure that validation checks were imposed by comparing the importance weightings assigned by the stakeholders with those used by other researchers, having two independent evaluations of each annual report, and by obtaining feedback from stakeholders and CFOs.

9.3.2 Identifying extent and quality of disclosure

Following the evaluation and scoring of each of the 33 annual reports, a mean score was calculated for each information item. This was compared with the degree of importance of the item as identified by the stakeholder panel. In some cases there were significant gaps between the allocated score and the stakeholder panel's assessment of the importance of the item. The following items were rated as **essential** disclosures by the panel but were inadequately disclosed:

- Optimised Deprival Value of network assets;
- Breakdown of sales revenue by segment; and
- Major elements of costs.

Optimised Deprival Value (ODV)

This is the mandated valuation methodology for network assets and is calculated by individual lines companies according to rules set by the Ministry of Economic

Development. Best practice disclosure, as identified for this research, enables stakeholders to compare the cost and the ODV of the network as well as reporting changes in ODV over a five year period. The valuation of the asset base upon which performance measures are calculated was rated by the stakeholder panel as an essential information item. However the mean score for disclosure of this item was 1.9 out of a possible score of 5. The way in which ODV is reported varies between the companies. In some cases the value is mentioned in the Chief Executive's report and is not included in the notes to the financial statements. Some companies have written network assets up to the ODV and the revaluation is shown in the Asset Revaluation Reserve. Some companies do not mention ODV at all. This inconsistent reporting makes it difficult to make inter-company comparisons and produces a gap between actual disclosure level of this item and stakeholders' indications of its importance.

Breakdown of sales revenue by segment

Ideally, retail companies will segment retail and generation activities and also disclose retail revenue by customer class; line companies will disclose revenue from electricity operations separately from revenue from other business activities such as gas distribution. Segmentation of sales revenue was inadequately disclosed given its high level of importance as rated by the stakeholder panel.

Major elements of costs

Best practice criteria for major elements of costs includes disclosure items related to maintaining the reliability of electricity supply. Network maintenance costs and depreciation of network assets are considered essential disclosures in this respect. Few companies disclosed maintenance costs. Details of redundancy costs, employee salaries, and marketing/advertising costs were also omitted.

An information gap was also identified for other items in the index which were rated as **very important** disclosures. The amount of information provided in the corporate annual reports did not meet stakeholders' expectations for the following items:

- Management objectives and strategies;
- Major contractual relationships;
- Segmental information: assets, expenses, profit;

- Capital expenditure (actual and planned);
- Cost of electricity purchased/generated;
- Forward-looking information; and
- Performance measures: financial, pricing, efficiency, market.

Disclosure of management objectives and strategies provides interested parties with information about the intended direction of the company and may alert consumers to the possibility of any impact on future prices. This item is related to two other "very important" disclosures: forward-looking information, and planned capital expenditure. Disclosure of forward-looking information, including discussion of major factors influencing the next year, was inadequate. Best practice disclosure includes not only an indication of expected future capital expenditure but an explanation of any significant difference between actual capital expenditure and published plans for the year. Most companies did not disclose information of this kind. Similarly, few companies disclosed cost of electricity purchased/generated or details of major contractual relationships. Although some report preparers responded that this information was commercially sensitive, stakeholders considered its disclosure to be very important for accountability purposes.

The most significant gaps between stakeholder expectations and actual disclosure levels related to performance measures. Generally companies have not provided this information in their annual reports, and if they have, it is usually for just one year rather than for the suggested best practice requirement of indicating five year trends.

The strengths and weaknesses of the three top scoring companies and the three lowest scoring companies were identified. The top company had better disclosure than most other companies for the following items:

- Background about the company;
- Segmental reporting;
- Discussion of results for the past year;
- Cost of electricity purchased; and
- Comparison of actual business performance to previously disclosed information.

A comprehensive description of the general development of the company over the period of the electricity industry reforms was provided. This included discussion of the impact of those reforms on the company. Segmental information was reported for assets, revenue, expenses and profits according to the way in which the business was organised: lines, retail, and generation. Details of expenses included cost of electricity purchased and restructuring costs, and tables were included showing key performance targets - financial, efficiency and reliability measures - compared to actual results. Results for the past year were discussed in detail.

An analysis of the scores identified considerable variation in the quality of information disclosed by the 33 retail and distribution companies. The Kruskal-Wallis test was applied to determine the significance of this variation in respect of company size and company ownership. There was no significant difference between the scores for the annual report as a whole for large companies compared to the other companies, or between public companies and trust- or council-owned companies.

9.3.3 Review and discussion of findings

The evaluation of the annual reports highlighted three key areas of concern: segmentation of results, disclosure of performance measures, and the transparency of trust-held companies. These concerns were discussed with members of the stakeholder panel and with CFOs of a representative group of companies. During initial interviews to obtain stakeholder opinions on what should be disclosed in electricity company annual reports from an accountability perspective, members of the stakeholder panel noted the importance of segmental information The annual report evaluation process identified a lack of segmental information.

The Electricity Reform Act 1998, required complete ownership separation between line (distribution) and retail (supply) businesses. Since then a new kind of vertical integration has been created with the forming of generation and retail companies. In addition some electricity lines companies have diversified into gas networks and/or telecommunications. Others may have significant contracting and/or investment businesses. The reporting of segmental information for these activities was discussed with members of the stakeholder panel. Stakeholders reiterated the importance of segmental information in these instances and supported further segmentation of retail operations by customer class and of line operations by discrete network.

The stakeholder panel also rated a number of performance measures as very important disclosures. It was found that few electricity companies disclosed these performance measures in the corporate annual report. During the review interviews the stakeholder representatives again confirmed the importance of this information and identified some key financial, efficiency, and reliability measures as essential disclosures. These are summarised in section 9.4 of this chapter.

The researcher's concern for the availability of full annual reports of trust-held companies was also discussed. Stakeholders stated that the level of accountability should be the same for all electricity companies regardless of the ownership structure. This concern was also expressed by Hooks (2000). It is interesting to note that transparency of trust-held electricity companies has recently become a public concern. As a result of the Ministerial Inquiry into the Electricity Industry, the Minister of Energy has reported that amendments will be made to the Energy Companies Act 1992 to require electricity distribution and retail/generation trusts to produce annual financial statements which are to be publicly available and audited by the Audit Office. The trust-held companies are also to develop a Code of Practice to give beneficiaries access to information and meetings (Government Policy Statement, October, 2000).

Following the review and discussion of these issues with members of the stakeholder panel, discussions were held with electricity company CFOs. This provided an opportunity for the researcher to highlight suggestions for improvement in the annual reporting of specific companies. The discussions also confirmed the importance of the research and its ability to motivate change. CFOs generally welcomed the feedback and agreed to consider the recommendations for improving the quality of their annual report disclosures, particularly in respect of performance measures. In the light of this positive feedback from CFOs, it seems very likely that one outcome of this research will be more comprehensive annual reporting by the electricity retail and distribution companies in 2000 and thereafter.

9.4 RECOMMENDATIONS

As discussed earlier in this chapter, there are a number of information items where there is a gap between stakeholders' information needs and actual disclosure levels.

The most significant gaps relate to four items which were identified by the stakeholder panel as essential or very important disclosures: segmental information, performance measures, ODV information, and cost of electricity purchased/ generated. It is recommended that the following be disclosed for these items in order to provide information that meets the needs of stakeholders:

1. **Segmental Information**

   Electricity lines companies:

   Segmentation of assets, revenues, expenses and operating results by:

   (a) Discrete network;
   (b) Company activities such as electricity, gas, and telecommunications;
   (c) Significant investment operations.

   Retail companies:

   (a) Retail and generation activities;
   (b) Retail operations by customer class: industrial, commercial, domestic.

2. **Performance Measures**

   Disclosure of trend information (desirably for five years) for the following performance measures:

   Line companies: *financial measures*
   Return on Total Assets
   Return on Equity
   Accounting Rate of Profit (ROI)

   Line companies: *efficiency measures*
   Average number of interruptions of supply per customer
   Number of faults per 100 km of prescribed voltage line
   Total Costs per kilometre

   Retail companies: *financial measures*
   Debt to equity
   Return on Total Assets
   Return on Equity

   Retail companies: *efficiency measures*
   Total costs per customer

   Retail companies: *market measures*
   Number of customers by sector

3. **ODV of network assets**

   A schedule showing for each discrete network: cost, depreciation charged for current year, accumulated depreciation, lives used in the depreciation calculation, the optimised deprival value. This schedule should cover a five year period.

4. **Cost of electricity purchased/ generated**

   Now that the companies are no longer integrated line and retail companies this disclosure requirement is applicable to electricity retail companies only.

Best practice disclosure in terms of accountability is relevant within the current reporting environment. This research has evaluated the quality of disclosure in the annual reports of electricity retail and distribution companies at one point in time. User perceptions of what is important at a particular point in time may change. As annual reporting is a dynamic process, the above recommendations are relevant to the 1998-99 period. These recommendations for improvement in the annual reporting of electricity companies would focus accountability requirements in one document, the corporate annual report. By meeting the standards imposed in the best-practice reporting model, annual report disclosures would meet the information needs of a range of stakeholders.

The tenets of accountability as defined in this research include equal access to information by all stakeholders. It is recommended that all electricity companies make their full annual report available to all stakeholders on request.

9.5 IMPORTANCE OF THE RESEARCH

There are many potential benefits arising from the evaluation of electricity retail and distribution company annual reports.

1. Stakeholders and report preparers receive independent feedback which enables both parties to identify the quality of reporting by the industry as a whole and the individual organisations within it.
2. The analysis provides preparers with clear indications of the parts of their reports which need attention if they wish to improve the quality of their reporting. The weighting indicates the strength of stakeholder interest in disclosure. The greater

the strength of stakeholder interest the greater the incentive for the entity to disclose the information.

3. The index provides a method for monitoring the quality of future reports so that the public as a whole may readily discern those organisations which are improving their annual reporting and by how much. Publication of the Index results on a routine basis in professional journals and among industry observers may itself provide an incentive for preparers to improve the quality of future reporting.

The test of the validity and importance of an area of research is its acceptance by interested parties and its ability to instigate change. Feedback from CFOs indicates that the index has been accepted by companies in the electricity industry as providing a fair and reasonable assessment of the quality of their annual reporting and a model for reference in the preparation of subsequent annual reports. The following comment from Counties Power Ltd (the lowest rated report) is indicative of this acceptance:

> "As I read through your disclosure list again I got little shocks of panic that we had still left some of the items out of the next annual report....I will keep your list beside me when I prepare the next annual report" *(Counties Power Ltd).*

The CFOs of the three highest scoring companies confirmed the fairness of the scores as did other companies in the middle range such as New Zealand's largest network company, UnitedNetworks Ltd who added:

> "We haven't included forecasts in the past....I will follow this up as I think we would be interested in including this next time. In terms of performance measures, historically we have put in Debt to equity and Net tangible assets per share. We are open to putting in others" *(UnitedNetworks Ltd).*

Other CFOs have indicated their intention to improve disclosure, particularly of performance measures, in their next annual report. For example, a letter was received from Electricity Invercargill Ltd asking for assessment and comments on their 2000 Annual Report.

The most important test of the usefulness of the research will be the adoption of the findings and suggestions and will be reflected in the quality of reporting in subsequent annual reports, and the use of this information by stakeholders, thus assisting in the development of a more efficient, effective and accountable electricity industry in the future.

9.6 OPPORTUNITIES FOR FURTHER RESEARCH

Raffournier (1995) noted that studies on annual report disclosure have not tested the relationship between extent of disclosure and ownership diffusion. There is an opportunity to further explore the relationship between different company structures (public, trust-owned, and council-owned companies) and the level of disclosure. The research did not identify any significant difference between the scores for the annual report as a whole but indicated strong evidence of a significant difference in the scores of public companies and trust/council-owned companies for the categories "Forward-looking information" and "Efficiency measures". It would be useful to adapt the current disclosure index to include only voluntary disclosure items and to apply this to the annual reports for the financial year 1999/2000. This analysis would include the new state-owned retail companies. The relationship between disclosure levels and ownership structures could then be tested.

Watts and Zimmerman (1986) suggested that higher potential political costs in regulated industries may result in more voluntary disclosure in these industries. On the other hand, Craig and Diga (1998) suggested that highly regulated companies may disclose less in general purpose financial reports because they use alternative channels for communicating financial and non-financial information. The New Zealand electricity industry is possibly more politically sensitive than some other New Zealand industries and is certainly more regulated. It is debatable whether these two aspects encourage higher or lower levels of disclosure. The disclosure index used in the research could be adapted to facilitate comparison of the electricity industry scores with those of non-regulated industries or with another infrastructure industry such as telecommunications. This would involve a study of the agency cost explanations for voluntary disclosure.

A further research opportunity is to document the change in regulation over a number of years and to compare this with the change in information disclosure over that period.

9.7 CONCLUSION

The corporate annual report is the most comprehensive accountability document available to the public and as such is the best instrument for meeting accountability requirements and expectations. By this means, information that enables users to assess and compare performance is available on a routine basis in a single document. Feedback from the stakeholder panel confirms that the disclosure requirements of the Financial Reporting Act 1993 and the Companies Act 1993 which focus on the decision making needs of shareholders, do not adequately meet their accountability expectations of electricity retail and distribution companies. Improved disclosure on the lines advocated in this thesis would contribute to the effective information sharing between companies and stakeholder groups - thus improving the accountability of each entity.

The Ministerial Inquiry into the Electricity Industry (June, 2000) argued that, despite the disclosure regime which has been in place since 1994, the information that is available on the performance of distribution companies is poor. This reinforces the significance of the annual report in the overall disclosure process. Through the interactions with Chief Financial Officers in the preparation of this thesis, each electricity company is now aware of the importance stakeholders attach to the information contained in annual reports. Even more significantly, they are cognisant of the shortcomings of their particular annual report. The challenge now lies with managers and organisations to respond.

Appendix A

A Comprehensive List of Disclosure Index Items and Their Weightings for Importance

SUMMARY OF DISCLOSURE INDICES	Singhvi & Desai	Baker & Haslam	Buzby	Barrett	Benjamin Stanga	Firth	Firth	McNally et al	Firer & Meth	Robbins & Austin	Chow & Wong-Boren	Tong, et al	Adhikari & Tondkar	Meek, et al	Carson & Simnett	TOTAL
	1971	1973	1975	1977	1977	1978	1979	1982	1986	1986	1987	1990	1992	1995	1997	
	1-4	1-5	0-4	0-4	0-4	1-5	1-5	1-5	1-5	anchor 10	1-7	1-5	1-5	unweighted	unweighted	
DEBT																
Total debt outstanding										22.97	7.00		4.50			34.47
Breakdown of borrowings (lend inst, date, security						3.97							4.50			8.47
Long term debt by currency														1.00		1.00
Short term debt by currency														1.00		1.00
Off Balance Sheet information														1.00		1.00
GENERAL INFORMATION ABOUT CO																
Brief narrative history of firm				4.00	2.19	3.93	3.95	2.34	2.67				3.13	1.00		23.21
Quality of management		4.13														4.13
Financial strength of co.		3.81														3.81
Reputation of co		3.76														3.76
Size of co		2.31														2.31
Statement of strategy and objectives/div policy	2.00		2.72			3.70	4.21	3.20			5.00	4.29	3.62	1.00		29.74
Impact of strategy on current results														1.00		1.00
Impact of strategy on future results														1.00		1.00
Corp Governance:															1.00	1.00
Exec and non exec directors															1.00	1.00
Procedures in place for bd nominations & to																0.00
review performance															1.00	1.00
Apptmt and retirement policy - non exec dirs															1.00	1.00
Co policy re directors seeking indep advice															1.00	1.00
Auditors and audit committees															1.00	1.00
Bd approach to risk and risk management															1.00	1.00
Co policy on ethical standards															1.00	1.00
EMPLOYEES																
Labour contracts	2.00				2.86											4.86
Geographical distribution of employees														1.00		1.00
Line of business distribution of employees														1.00		1.00
Categories of employees by gender														1.00		1.00
No. of employees	1.00		2.82			3.41	3.69		2.76				2.73			16.41
Historical summary of no of employees					2.26			2.44						1.00		5.70
Reasons for changes in employee nos														1.00		1.00
Number and categories of employees trained														1.00		1.00
Labour turnover, absenteeism(morale)			1.58			3.27	3.55	2.92	3.10			3.11				17.53
Expenditure on human resources - training					1.50	2.96	3.01	2.17	2.65					1.00		13.29
Description of employee benefits													2.73			2.73
Data on accidents														1.00		1.00
Cost of safety measures														1.00		1.00
Redundancy information														1.00		1.00
Equal opportunity policy														1.00		1.00
Recruitment problems and related policy														1.00		1.00
Acc.unpaid employee benefits for vac & sick										7.97						7.97
EXPENSE INFORMATION																
Breakdown of operating exes						3.97		3.28								7.25
COGS						4.21	4.71	3.70	3.57							16.19
Index of raw material prices	1.00					3.70	4.20		3.09							11.99
Advertising exes current year	2.00					3.61	4.01	2.14	2.47							14.23
Breakdown of exes into fixed and variable					2.52	4.01	4.63	3.03	3.62			3.46				21.27
Overall financing cost											5.00					5.00
Maintenance and repair expenditure			2.37													2.37
Allowance for doubtful debts			3.09			3.47	3.98	3.33	3.53							17.40
More breakdown of exes than Cos Act							4.69		3.38							8.07
Charitable donations														1.00		1.00

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A Comprehensive List of Disclosure Index Items and Their Weightings for Importance

	Singhvi &	Baker &	Buzby	Barrett	Benjamin	Firth	Firth	McNally	Firer &	Robbins &	Chow &	Tong,	Adhikari &	Meek,	Carson &	TOTAL
SUMMARY OF DISCLOSURE INDICES	Desai	Haslam			Stanga			et al	Meth	Austin	Wong-Boren	et al	Tondkar	et al	Simnett	
	1971	1973	1975	1977	1977	1978	1979	1982	1986	1986	1987	1990	1992	1995	1997	
	1-4	1-5	0-4	0-4	0-4	1-5	1-5	1-5	1-5	anchor 10	1-7	1-5	1-5	unweighted	unweighted	
Goodwill/intangibles written off						3.91		3.64								7.55
Research/Dev exp current year	3.00	3.03	3.28		2.96	4.29	4.46		3.55		4.00			1.00		29.57
Advertising info.- qualitative and quantitative														1.00		1.00
FIXED ASSETS																
Deprecn method	3.00		3.71	3.50		4.12	4.21		3.71		4.00					26.25
Deprecn life				3.00												3.00
Cost, accum deprecn, current deprecn			3.57			4.37										7.94
Cap exp $ for current year(incl. narrative)	3.00		3.80	4.00		4.37	4.51	4.03			5.00		3.85			32.56
Description of planned capital expenditure	3.00		3.50	3.50	2.87	4.37	4.51	3.82		14.79	5.00	4.03	3.85			53.24
Information on leased assets			3.40			2.91										6.31
Statement of gross and net prop. a/cs	2.00															2.00
Description of principal plants, props (location,functi	2.00		2.09		2.38	2.97	3.27	2.64	3.07		6.00	3.06	3.13			30.61
Breakdown of P & E into major categories					2.18											2.18
Summary of changes in PP&E						4.19				7.38						11.57
Reasons for acquisitions														1.00		1.00
Reasons for disposals														1.00		1.00
Current resale value of assets (P & E)					1.86	3.47	3.87				5.00					14.20
Current replacement cost of fixed assets										7.56						7.56
Fixed asset composition			3.19	3.00						8.00						14.19
Geographical location of firms assets						3.98								1.00		4.98
Capitalized interest during year											5.00					5.00
Ease with which co can sell assets if fail		2.23														2.23
Breakdown of tangible and intangible assets						4.41										4.41
Disclosure of intangible valuations (not gwill.brands														1.00		1.00
Market value of marketable securities			2.62	2.50	2.54					11.94						19.60
Cost and mkt value of investments						3.87										3.87
Inv in firms other than subs (as above)			3.49													3.49
Info relating to inv (names, % ownership)						4.19							3.44			7.63
FOREIGN CURRENCY INFORMATION																
Currency translation method				3.50												3.50
Foreign exchange gains and losses				3.00												3.00
Major exchange rates used in the accounts														1.00		1.00
F/E currency exposure management descrip														1.00		1.00
Statement of transactions in foreign currency						3.01	3.99									7.00
Effects of FC fluctuations on current ops								3.34						1.00		4.34
INFORMATION RELATED TO THE FUTURE																
Forecast next years profits/earnings					2.56	3.69	3.67				6.00	4.54	4.33	1.00		25.79
Qualitiative forecast of profits														1.00		1.00
Cash projections 1 - 5years						3.64	3.87	3.38			6.00	3.83		1.00		21.72
Qualitative forecast of cash flows														1.00		1.00
Planned advertising exp next fiscal year					2.11				2.47							4.58
Projected sales next fiscal year		3.93			2.61			4.08				3.94		1.00		15.56
Qualitative forecast of sales														1.00		1.00
Future economic outlook of co		4.34	3.23									4.71				12.28
Future economic outlook of industry		4.05	3.23									4.57				11.85
Expected future longterm int rates on corp bonds		2.48														2.48
Assumptions underlying the forecasts														1.00		1.00
Effects of interest rates on future ops														1.00		1.00
Effect of F.C. fluctuations on future ops - qual														1.00		1.00
Discussion on major factors influencing nextyr	2.00						3.96	3.94					4.20			14.10
Management expect. of future as shown in budgets												3.91				3.91
INVENTORY INFORMATION																
Method of inv. valuation	1.00		3.64			4.06					5.00					13.70

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	Singhvi &	Baker &	Buzby	Barrett	Benjamin	Firth	Firth	McNally	Firer &	Robbins &	Chow &	Tong,	Adhikari &	Meek,	Carson &	TOTAL
SUMMARY OF DISCLOSURE INDICES	Desai	Haslam			Stanga			et al	Meth	Austin	Wong-Boren	et al	Tondkar	et al	Simnett	
	1971	1973	1975	1977	1977	1978	1979	1982	1986	1986	1987	1990	1992	1995	1997	
	1-4	1-5	0-4	0-4	0-4	1-5	1-5	1-5	1-5	anchor 10	1-7	1-5	1-5	unweighted	unweighted	
Market value of inventory					2.36	3.71	4.01		3.67							13.75
Inventory breakdown	2.00		3.03	3.00	2.46	4.11										14.60
INFLATION INFORMATION																
Inflation adjusted a/cs - supplementary						3.81	4.16		3.27							11.24
Price level adjusted statements			2.90	3.00				3.02		5.06						13.98
Effects of inflation on future operations - qual														1.00		1.00
Effects of inflation on results - qual. & quant.						3.92	3.92		3.40			3.74		1.00		15.98
Effects of inflation on assets - qual. & quant.														1.00		1.00
Effects of interest rates on results														1.00		1.00
MANAGEMENT INFORMATION																
Description of management	1.00															1.00
Responsibilites, experience of corp exec/senman			3.23			2.82			2.79		5.00			1.00		14.84
Info on directors, names, salaries, major affiliations	1.00		2.93		1.94	3.38	4.01		2.93		5.00	3.77	3.17			28.13
Information on sig trans of dirs & princ sec.holders													3.33			3.33
Age of directors														1.00		1.00
Educational qualifications of directors								3.31						1.00		4.31
Commercial experience of directors								3.31						1.00		4.31
Other directorships held by directors						3.38		3.31						1.00		7.69
Identification of senior management and functions						3.38		3.17				3.66		1.00		11.21
Name and salaries of sen. management			3.23			2.56	4.42		2.28				3.16			15.65
Info on policy to ensure continuity of management					2.35											2.35
List of principal officials resp. for fin. affairs										8.17						8.17
No of shares held by co. officers						3.67										3.67
OTHER INFORMATION																
Information on R & D - current and planned					2.85	4.29	4.46	3.14	3.55		4.00	3.74		1.00		27.03
Discussion of new product development	1.00												3.66			4.66
Contingent liabilities	2.00				3.28	4.04							4.13			13.45
Summary of age of debtors					2.25	3.26	3.27	2.59	3.45							14.82
Auditors report										19.82			4.56			24.38
Audited by independent acctg firm										19.77						19.77
Interfund receivables and payables										16.48						16.48
Comparison of budget v actual op results										14.34						14.34
Overall financing plan												3.85				3.85
Segregation of current assets and liabilities										13.70						13.70
Method of acctg for encumbrances										12.39						12.39
Exports						3.99										3.99
Imports						3.62										3.62
Statement of money exchanges with govt						2.60	3.21									5.81
PENSION FUND																
Amount of past pension fund liability						2.30					3.00					5.30
Information on pension plan			2.88		3.15	1.47						2.49				9.99
Actuarial PV of vested acc.pension plan benefits										13.67						13.67
Rate of return in calc. PV of pension plans										10.94						10.94
Acctg and funding policies for pension plans										13.49						13.49
Actuarial PV of nonvested acc pen.plans										13.01						13.01
Pension expense and prov for funding for period										12.92						12.92
Net assets of pension plan available for benefits										12.82						12.82
Statement that pension plan exists/emp groups										11.68						11.68
PERFORMANCE MEASURES																
EPS								3.98								3.98
Explanation of calculation of EPS			3.58			4.21										7.79
Growth in eps for past 5 years		3.56			2.48											6.04
Stability of eps		3.29														3.29

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	Singhvi &	Baker &	Buzby	Barrett	Benjamin	Firth	Firth	McNally	Firer &	Robbins &	Chow &	Tong,	Adhikari &	Meek,	Carson &	TOTAL
SUMMARY OF DISCLOSURE INDICES	Desai	Haslam			Stanga			et al	Meth	Austin	Wong-Boren	et al	Tondkar	et al	Simnett	
	1971	1973	1975	1977	1977	1978	1979	1982	1986	1986	1987	1990	1992	1995	1997	
	1-4	1-5	0-4	0-4	0-4	1-5	1-5	1-5	1-5	anchor 10	1-7	1-5	1-5	unweighted	unweighted	
Expected growth in eps		3.78														
Rate of return on assets		3.27														3.27
Expected % growth in divs		2.96						4.20								7.16
Current % return from divs		2.76														2.76
Past % return from divs (yield)		2.66														2.66
Expected % return from divs (yield)		2.91														2.91
Past % growth of divs per share		2.77														2.77
% of earnings used for reinvestment		2.84														2.84
Portion of cos annual earnings pd as div		2.61														2.61
Activity of stock in terms of trading volume		2.88														2.88
Value added ratios														1.00		1.00
Profitablility ratios														1.00		1.00
Cash flow ratios														1.00		1.00
Liquidity ratios														1.00		1.00
Gearing ratios		3.11												1.00		4.11
% of plant capacity utilized			3.11			3.97	4.26	3.34								14.68
Rate of return required on projects						2.94	4.01	3.69								10.64
Relationship of cos bus with key econ. indicators		3.67			2.53	3.72										9.92
POLICIES																
Nature and $ effects of major acctg changes			3.87		3.70											7.57
Info on acctg methods used when alternatives					3.40	4.01	4.40			14.78			3.69			30.28
Info on consolidation method, goodwill treatment			3.40													3.40
CORPORATE RESPONSIBILITY																
Corp. social responsibility - exp env. & community					1.75	3.46	3.48	1.98	2.56		4.00		2.75	1.00		20.98
Safety of products														1.00		1.00
Public safety, welfare expenditures										11.05						11.05
INFORMATION ABOUT COS CAPITAL																
Classes of stock, issued and outstanding stock													3.86			3.86
Changes in share cap in past yrs and planned													3.72			3.72
Rights, prefs, priorities of diff classes of stock													3.79			3.79
Names, partics of parties seeking substan interest													3.98			3.98
Details of outstanding stock issues	1.00				3.19											4.19
Detail of outstanding stock options, conv rights					3.05								3.83			6.88
No of stockholders	1.00		2.11			2.47	2.51	2.86	2.88		4.00		3.00			20.83
Major shareholders and size of sh/hdg								3.70					3.59	1.00		8.29
Stability of market price of stock		3.15														3.15
Ease with which stock can be sold		3.12														3.12
Info on details of conv. securities o/s					3.40											3.40
Risk of losing money on the stock		3.62														3.62
Current P/E of stock		3.56														3.56
Book value of share of stock		2.55														2.55
Market capitalization at year end														1.00		1.00
Market capitalization trend														1.00		1.00
Terms of share option plans and no shares involved						3.06										3.06
SALES INFORMATION																
Sales breakdown by division	3.00															3.00
Breakdown of sales revenue by major product/																0.00
customer class/geog location	2.00		3.67		2.90	4.36	4.82	3.28				4.11	3.63			28.77
Breakdown of earnings as above			3.75		2.87	4.51	4.82	3.12			4.00		3.74			26.81
Index of selling prices	1.00					3.84	4.25		3.08		4.00					16.17
Index of quantity sales						3.97	4.41		3.33							11.71
Summary of major products sold	1.00		3.37		3.12	3.47	4.01	3.38			6.00	3.74	3.58			31.67
Sources of other earnings	1.00															1.00

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	1-4	1-5	0-4	0-4	0-4	1-5	1-5	1-5	1-5	anchor 10	1-7	1-5	1-5	unweighted	unweighted	
Backlogs and projections	1.00		3.33		3.20	3.61	4.20	3.44						1.00		19.78
Description of marketing network						1.98	2.48		2.85		5.00					12.31
Approx share of mkt for ea major product sold					3.01							4.26				7.27
Discusssion on results of past year						4.31	4.27				6.00		3.83			18.41
Sales and gross margin				3.00												3.00
Current period trading results - qual & quant.														1.00		1.00
Geographical production - quant														1.00		1.00
Line of business production - quan														1.00		1.00
Competitor analysis - quant and qual.														1.00		1.00
Identification of revenue from services v grants etc										15.09						15.09
Sales revenue and net income from foreign ops			3.77			4.10										7.87
Share of market in major areas of activity						3.28	4.46	3.63					3.89	1.00		16.26
Dependence on major customers						3.01	4.08	3.73					3.68			14.50
Segment reporting: product				4.00												4.00
Segment reporting: geographical area				4.00												4.00
FINANCIAL STATEMENTS																
Comparative Income Statement - 2 yrs	4.00					3.82										7.82
Comparative Balance Sheet - 2 years	4.00															4.00
Statement of reconciliation of earned surplus	3.00															3.00
Statement of cash flow	3.00															3.00
Statement of value added/wealth created						3.98	4.04		3.24					1.00		12.26
Retained Earnings Statement				3.50												3.50
Statement of sources and uses of funds			3.69	3.50		4.16	4.58	3.86					4.03			23.82
SUMMARIES AND STATISTICS																
Summary of important financial statistics 4-10yrs	3.00													1.00		4.00
Historical summary of share price & trad vol (ord shares)		3.58			2.54	2.06	1.79	2.84	2.43		4.00		3.19			22.43
Summary of significant fin. statistics for industry					2.62											2.62
Comparative statement of R/E for last 2 years					3.30											3.30
Historical summary long term debt - 5 yrs					3.46											3.46
Historical summary net sales - 5 years					3.62											3.62
Historical summary capital exp - 5 years					3.40											3.40
Historical summary eps - 5 years					3.60											3.60
Historical summary divs per share - 5 yrs					3.36								3.97			7.33
Historical summary op and fin data			3.77	4.00		4.11	4.39	4.06				4.34	3.53			28.20
Major industry trends	1.00				2.95	3.27		3.75					3.89			14.86
INFORMATION RELATING TO SUBSIDIARIES																
Amount of each subs earnings past year and																0.00
parent cos share					3.02	4.11										7.13
Names and addresses major subs																0.00
Info relating to subs (names, addresses, % own)					2.05	4.20										6.25
Consol and unconsol subs - % ownership			3.71										4.09			7.80
TAX INFORMATION																
Tax info and pending tax claims/def tax	1.00		3.42	2.50				3.73								10.65
Statement of Tax, GST,PAYE									3.06							3.06
Identification of key taxpayers										15.21						15.21

Similar items with slightly different wording have been amalgamated. In most cases the items were listed in order of perceived importance. I have grouped the items into classifications. I have used the number '1' to indicate the presence of an item in the index of Meek et al in order to include the item in the total

Appendix B

List of Highest Scoring Items (from a comprehensive list of disclosure index items)

	DISCLOSURE INDEX HIGHEST SCORING ITEMS	SCORE WITH ROBBINS & AUSTIN 1986	SCORE WITHOUT ROBBINS & AUSTIN 1986	NO. OF RESEARCHERS WITH THIS ITEM
	DEBT			
*	Total debt outstanding	34.47	22.97	2
	GENERAL INFORMATION			
*	Brief narative history of firm	23.21	23.21	8
*	Statement of strategy/objectives	29.74	29.74	10
	EMPLOYEES			
*	Number of employees	16.41	16.41	6
*	Labour turnover	17.53	17.53	6
*	Expenditure on human resources	13.29	13.29	6
	EXPENSE INFORMATION			
*	COGS	16.19	16.19	4
	Index of raw material prices	11.99	11.99	4
*	Advertising exes current year	14.23	14.23	5
*	Breakdown of exes fixed & variable	21.27	21.27	6
	Allowance for doubtful debts	17.40	17.40	5
*	R & D for current year	29.57	29.57	9
	FIXED ASSETS			
*	Depreciation method	26.25	26.25	7
*	Capital expenditure current year	32.56	32.56	8
*	Planned capital expenditure	53.24	53.24	11
*	Principal plant, props (location etc)	30.61	30.61	10
*	Changes in plant and props etc	11.57	4.19	2
	Current resale value of P & P	14.20	14.20	4
*	Fixed Asset composition	14.19	6.19	3
	Market value of marketable securities	19.60	7.66	3
	INFORMATION RELATED TO FUTURE			
*	Forecast next yrs profits/earnings	25.79	25.79	7
*	Cash projections 1 - 5 years	21.72	21.72	6
	Projected sales next fiscal year	15.56	15.56	5
	Future economic outlook of coy	12.28	12.28	3
	Future economic outlook of industry	11.85	11.85	3
*	Discussion of major factors influencing next year	14.10	14.10	4
	INVENTORY			
	Method of inventory valuation	13.70	13.70	4
	Market value	13.75	13.75	4
	Inventory breakdown	14.60	14.60	5
	INFLATION			
	Inflation adjusted accounts (supplement)	11.24	11.24	3
	Price level adjusted statements	13.98	8.92	4
	Effects of inflation on results (qual & quan)	15.98	15.98	5
	MANAGEMENT INFORMATION			
*	Respons.experience corp exec/sen man	14.84	14.84	5
*	Info on directors, names, sals, affiliations	28.13	28.13	9
*	Indentification of senior man & functions	11.21	11.21	3
*	Names & salaries management	15.65	15.65	5
	OTHER			
*	Contingent liabilities	13.45	13.45	4
	Summary of age of debtors	14.82	14.82	5
	Auditors report	24.38	4.56	2
	Audit by independent accounting firm	19.77	0	1
	Interfund Receivables and Payables	16.48	0	1

Appendix B

List of Highest Scoring Items (from a comprehensive list of disclosure index items)

	DISCLOSURE INDEX HIGHEST SCORING ITEMS	SCORE WITH ROBBINS & AUSTIN 1986	SCORE WITHOUT ROBBINS & AUSTIN 1986	NO. OF RESEARCHERS WITH THIS ITEM
*	Segregation of CA and CL	13.70	0	1
	Method of accounting for encumbrances	12.39	0	1
*	Comparison budget v actual op results	14.34	0	1
	PENSION FUND			
	Actual PV of vested acc pen fund benefits	13.67	0	1
	Rate of return in calc PV of pension plans	10.94	0	1
	Acctg and funding policies of pension plan	13.49	0	1
	Actuarial PV of nonvested acc pen plans	13.01	0	1
	Pension expense and prov for funding	12.92	0	1
	Net assets of pension plan available for ben.	12.82	0	1
	Statement that pension plan exists	11.68	0	1
	PERFORMANCE MEASURES			
*	% of plant capacity utilized	14.68	14.68	4
	Rate of return required on projects	10.64	10.64	3
	POLICIES			
*	Information on accounting methods used	30.28	15.50	5
	CORPORATE RESPONSIBILITY			
*	Corp resp -expenditure on env. and comm.	20.98	20.98	8
	Public safety, welfare expenditure	11.05	0	1
	INFO ABOUT COS CAPITAL			
*	No of stockholders	20.83	20.83	8
	SALES			
*	Breakdown of sales rev by major product / cust class / geog location	28.77	28.77	8
*	Breakdown of earnings as above	26.81	26.81	7
	Index of selling prices	16.17	16.17	4
	Index of quantity of sales	11.71	11.71	3
	Summary major products sold	31.67	31.67	9
	Backlogs in order book	19.78	19.78	6
	Description marketing network	12.31	12.31	4
*	Discussion results past year	18.41	18.41	4
	Identification of rev from services v grants	15.09	0	1
*	Share of market in major areas of activity	16.26	16.26	5
	FINANCIAL STATEMENTS			
	Statement of value added / wealth created	12.26	12.26	4
	Statement of sources & uses of funds	23.82	23.82	6
	SUMMARIES & STATISTICS			
*	Hist. summary of share price & trade vol.	22.43	22.43	8
*	Historic summary of operating & fin. Data	28.20	28.20	7
*	Major industry trends	14.86	14.86	5
	TAX			
	Tax info & pending tax claims / def tax	10.65	10.65	4
	Identification of key taxpayers	15.21	0.0	1

Appendix C
Questionnaire

ACCOUNTABILITY IN THE NZ ELECTRICITY DISTRIBUTION AND RETAIL INDUSTRY

INSTRUCTIONS:

Objectives of the study:

i) Identify what should be disclosed in electricity industry (distribution and retail) annual reports from a public accountability perspective, and

ii) Obtain stakeholders' opinions on the relative importance of the items that should be disclosed.

The attached beige sheets give a list of items identified from the current literature on the use of disclosure indexes. Disclosure indexes are used to assess quality and extent of reporting in the annual reports of companies.

Please review these suggested items and indicate which ones you think should be disclosed by placing a number 1-4 in the right hand column. If you think an item should not be disclosed, place a 0 in the right hand column.

The scale is as follows:

0	1	2	3	4
Should **not** be disclosed	Should be disclosed but is of **minor importance**	Intermediate importance	Should be disclosed and item is **very important**	It is **essential** to disclose this item

If you think that the cost of reporting an item exceeds the benefit to stakeholders of having it, then exclude the item by placing a 0 in the right hand column and writing C/B.

If there is any other information that you think should be disclosed in electricity company annual reports, write it in the blank spaces provided and indicate its importance on the scale, 1 to 4.

ACCOUNTABILITY IN THE NZ ELECTRICITY DISTRIBUTION AND RETAIL INDUSTRY: ANNUAL REPORT FRAMEWORK

EXPLANATION OF SUGGESTED DISCLOSURE ITEMS

1.5 **Major contractual relationships** refers to contractual relationships between the business and its customers and suppliers e.g. forward contracts for energy purchases.

1.6 **General development of business** e.g. acquisitions and divestments, disposition of assets, changes in mode of business.

2.5 **Related party transactions** refers to transactions and relationships among major shareholders, directors, management, suppliers, customers, and the company.

4.3 **ODV of network assets** is the minimum of the Optimised Depreciated Replacement Cost and Economic Value. ODV is essentially the loss of value to the company if deprived of the assets. It is the valuation methodology required to be used by line businesses in accordance with the Electricity (Information Disclosure) Regulations 1994.

6.1 **Breakdown of sales revenue** e.g. by customer class (domestic and commercial), by business type e.g. energy distribution, contracting, network, generation.

8.11 **Accounting Rate of Profit** is the after tax return on the average total funds employed in a business. The ARP required under the Electricity (Information Disclosure) Regulations 1994, allows for revaluations and is designed to be comparable with the post-tax Weighted Average Cost of Capital.

8.17 **Pricing information (line charge separated)** refers to pricing information per customer type segregated into energy price and line charges per kwh delivered.

8.18 **Total no of interruptions** refers to the number of interruptions which occurred in the financial year

8.21 **No of faults per 100 km of prescribed voltage line** is a measure of the number of faults in relation to the total length of the network.

8.22 **Direct line costs per kilometre** refers to expenditure directly related to operating or maintaining the lines system, divided by the system length.

8.23 **Indirect line costs per customer** refers to indirect costs such as administration expenses divided by the total number of customers.

ACCOUNTABILITY IN THE NZ ELECTRICITY DISTRIBUTION AND RETAIL INDUSTRY: ANNUAL REPORTING MODEL

Review the items on these pages and place a tick in the appropriate column to indicate your view on the need for disclosure on the following scale:

0 = should not be disclosed; 1 = minor importance, 2 = quite important, 3 = very important, 4 = extremely important, disclosure is essential.

If you think the cost of the information is greater than the benefit then write "0 C/B".

Write any other items of information that you think should be disclosed into the blank spaces and indicate importance on the scale 1 to 4.

1. BACKGROUND ABOUT THE COMPANY:

		Your rating 0-4
1.1	Brief narrative history of the company.	
1.2	Management's broad objectives for the company.	
1.3	Management's principal strategies to achieve objectives.	
1.4	Description of principal activities.	
1.5	Major contractual relationships (see notes).	
1.6	General development of business (see notes).	
1.7	Names of dominant customers.	
	Other items: please specify:	

2. INFORMATION ABOUT MANAGEMENT, MAJOR SHAREHOLDERS, RELATED PARTY TRANSACTIONS:

2.1	Names, backgrounds, affiliations, remuneration of directors.	
2.2	Names, functions, remuneration of executive management.	
2.3	Major owners of company's stock and number of shares owned.	
2.4	Number of shares owned by:	
	Directors	
	Management	
	Employees.	
2.5	Related party transactions (see notes)	
	Other items: please specifiy:	

3. CORPORATE RESPONSIBILITY:

Your rating 0-4

3.1	Expenditure on the environment and the community.	
	Other items: please specify:	

4. ASSETS:

4.1	Assets by segment: energy, contracting, network, generation	
4.2	Details of measurement basis of assets.	
4.3	ODV valuation of network assets (see notes)	
4.4	Amount of asset revaluation each year	
4.5	Fixed assets purchased and sold in current year	
4.6	Total fixed assets	
4.7	Long term investments	
4.8	Investments purchased and sold in current year	
4.9	Capitalised interest	
4.10	Asset management plan.	
4.11	Location, nature, productive capacity of principal plant.	
4.12	% plant capacity utilized.	
4.13	Depreciation method.	
4.14	Capital expenditure planned.	
4.15	Current assets: debtors, inventories, cash	
	Other items: please specify:	

5. DEBT:

5.1	Total debt outstanding and debt repayment schedules	
5.2	Current liabilities: creditors and provisions	
5.3	Interest rate on debt	
	Other items: please specify:	

6. FINANCIAL, OPERATING AND PERFORMANCE RELATED DATA:

		Your rating 0-4
6.1	Breakdown of sales **revenue** by segment (see notes)	
6.2	Sales **volume** by segment	
6.3	Breakdown of expenses by segment	
6.4	Profit for each segment as above	
6.5	Other earnings	
6.6	Cost of electricity purchased, generated, distributed.	
6.7	Major elements of costs: restructuring, redundancies, depreciation	
6.8	Breakdown of expenses into fixed and variable.	
6.9	Details of unusual or non-recurring items.	
6.10	Research and development expenditure for current year.	
6.11	Goodwill written off	
6.12	Funding costs	
6.13	Discussion of results for past year	
6.14	Historical summary of operating and financial data (5 years)	
6.15	Major industry trends	
	Other items: please specify:	

7. FORWARD-LOOKING INFORMATION:

7.1	Forecast of next years profits/earnings.	
7.2	Cash projections 1-5 years.	
7.3	Discussion on major factors influencing next year.	
7.4	Comparison of actual business performance to previously disclosed information.	
	Other items: please specify:	

8. PERFORMANCE MEASURES:

Your rating 0-4

Financial measures:

8.1	Debt to equity ratio.	
8.2	Funding cost cover (times interest covered)	
8.3	Net tangible assets per share	
8.4	EBIT/Average net funds employed	
8.5	Dividend per share (cents)	
8.6	Dividend yield (%)	
8.7	Price earnings ratio (based on current yr net profit after tax)	
8.8	EPS (cents): on operating profit, net profit after tax	
8.9	Return on total assets*	
8.10	Return on equity*	
8.11	Accounting rate of profit (see notes)*	
8.12	Summary of share price and trading volume	
8.13	Overhead costs per retail customer	
	Other items: please specify:	

Pricing Measures:

8.14	Index of electricity prices by market segment compared to CPI	
8.15	Average energy price per unit	
8.16	Average domestic power bill	
8.17	Pricing information (see notes)	

Efficiency Measures:

8.18	Total number of interruptions (see notes)*	
8.19	Average total duration of interruption of supply per customer*	
8.20	Average number of interruptions of supply per customer*	
8.21	Number of faults per 100km of prescribed voltage line (see notes)*	
8.22	Direct line costs per kilometre (see notes)*	
8.23	Indirect line costs per customer (see notes)*	

*Items disclosed to Ministry of Commerce under Electricity (Information Disclosure) Regulations 1994.

Market Measures:

		Your rating 0-4
8.24	Ave consumption kwh per customer (5 years)	
8.25	Number of customers by sector	
8.26	Change in market share in major areas of activity.	
	Other items: please specify:	

9. OTHER INFORMATION:

9.1	Information on accounting methods used	
9.2	Goodwill	
9.3	Details of reserves and movements in reserves.	
9.4	Contingent liabilities	
	Other items: please specify:	

THANK YOU FOR YOUR TIME.

Appendix D

Annual Reporting Model

Ratings for level of importance of disclosure allocated by stakeholders

	INDEX ITEMS	STAKEHOLDERS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Mean
1.0	**Background about the Company**	Ratings for importance 0 - 4																
1.1	Brief Narrative history of the company.	1	1	1	1	3	3	1	4	4	0	1	1	4	1	2	28	1.9
1.2	Management's broad objectives for the company.	2	2	1	3	0	4	3	4	4	4	1	3	4	4	3	42	2.8
1.3	Management's principal strategies to achieve objectives.	2	3	2	3	0	0	3	4	4	4	1	3	4	4	0	37	2.5
1.4	Description of principal activities.	2	1	2	3	3	2	2	4	4	0	1	3	4	3	3	37	2.5
1.5	Major contractual relationships.	3	2	4	4	1	0	4	4	4	4	3	4	4	3	0	44	2.9
1.6	General development of business.	3	1	4	4	2	3	2	4	4	0	4	4	3	2	3	43	2.9
1.7	Names of dominant customers.	3	0	3	4	1	0	3	4	4	0	1	2	3	2	0	30	2.0
	Average score in this group	2.3	1.4	2.4	3.1	1.4	1.7	2.6	4.0	4.0	1.7	1.7	2.9	3.7	2.7	1.6	37.3	2.5
2.0	**Information about Management, Major Shareholders, Related Party Transactions**																	
2.1	Names, backgrounds, affiliations, remuneration of directors	2	2	4	2	2	4	4	1	4	3	1	4	3	3	3	42	2.8
2.2	Names, functions, remuneration of executive management	2	0	4	2	2	1	4	1	4	3	1	4	4	3	3	38	2.5
2.3	Major owners of company's stock and number of shares owned	3	2	4	3	3	3	4	4	4	2	1	4	4	2	4	47	3.1
2.4	Number of shares owned by:																0	0.0
	Directors	2	1	4	3	2	4	4	2	3	4	1	4	2	2	4	42	2.8
	Management	2	1	4	3	2	2	4	2	3	3	1	3	2	1	4	37	2.5
	Employees	2	1	3	3	2	0	4	2	3	0	1	2	2	1	4	30	2.0
2.5	Related party transactions	3	4	4	4	1	0	4	4	4	4	1	4	1	3	4	45	3.0
	Average score in this group	2.3	1.6	3.9	2.9	2.0	2.0	4.0	2.3	3.6	2.7	1.0	3.6	2.6	2.1	3.7	35.1	2.3
3.0	**Corporate Responsibility:**																	
3.1	Expenditure on the environment and the community	1	0	1	2	2	0	1	2	3	4	0 C/B	1	3	2	0	22	1.5
	Average score in this group	1.0	0.0	1.0	2.0	2.0	0.0	1.0	2.0	3.0	4.0	0.0	1.0	3.0	2.0	0.0	22.0	1.5
4.0	**Assets:**																	
4.1	Assets by segment: energy, contracting, network, generation	3	4	4	2	3	0	4	4	4	4	4	4	4	4	0	48	3.2
4.2	Details of measurement basis of assets	3	4	4	4	3	4	4	4	4	4	4	4	4	4	4	58	3.9
4.3	ODV valuation of network assets	2	4	4	3	3	4	4	4	3	4	4	4	4	3	4	54	3.6
4.4	Amount of asset revaluation each year	2	4	4	2	3	4	4	4	4	4	4	4	4	3	0	50	3.3
4.5	Fixed assets purchased and sold in current year	2	4	4	2	1	0	4	4	4	4	4	0	3	2	0	38	2.5
4.6	Total fixed assets	3	4	4	2	1	4	4	4	4	4	4	4	4	4	4	54	3.6
4.7	Long term investments	3	4	4	2	1	2	3	4	4	4	4	4	4	3	4	50	3.3
4.8	Investments purchased and sold in current year	3	4	4	2	1	0	4	4	4	4	4	4	3	2	0	43	2.9
4.9	Capitalised interest	1	4	4	2	0	0	3	4	4	4	4	4	3	2	0	39	2.6
4.10	Asset management plan	0 C/B	4	2	4	0	0	3	4	3	4	3	0	3	4	0	34	2.3
4.11	Location, nature, productive capacity of principal plant	2	2	4	3	0	2	2	4	4	4	2	0	4	2	0	35	2.3
4.12	% plant capacity utilized	2	4	4		0	0	3	4	4	4	2	0	3	4	0	34	2.3
4.13	Depreciation method	1	4	4	4	1	4	4	4	4	4	4	4	4	2	4	52	3.5
4.14	Capital expenditure planned	3	4	4	3	1	2	4	4	4	4	4	0	3	4	0	44	2.9
4.15	Current assets: debtors, inventories, cash	3	4	4	2	0	2	4	4	4	4	4	4	4	2	4	49	3.3
	Average score in this group	2.4	3.9	3.9	2.6	1.2	1.9	3.6	4.0	3.9	4.0	3.7	2.7	3.6	3.0	1.6	45.5	3.0
5.0	**Debt:**																	
5.1	Total debt outstanding and debt repayment schedules	3	4	4	2	2	3	4	4	4	0	4	4	4	4	4	50	3.3
5.2	Current liabilities: creditors and provisions	3	4	4	2	3	3	4	4	4	0	4	4	4	2	4	49	3.3
5.3	Interest rate on debt	3	2	3	2	0	0	4	4	4	0	3	4	2	3	4	38	2.5
	Average score in this group	3.0	3.3	3.7	2.0	1.7	2.0	4.0	4.0	4.0	0.0	3.7	4.0	3.3	3.0	4.0	45.7	3.0

Appendix D

Annual Reporting Model

Ratings for level of importance of disclosure allocated by stakeholders

	INDEX ITEMS	STAKEHOLDERS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Mean
6.0	Financial, Operating and Performance Related Data:																	
6.1	Breakdown of sales revenue by segment	2	4	4	4	2	0	4	4	4	4	4	4	4	4	4	52	3.5
6.2	Sales volume by segment	2	4	4	4	2	0	4	4	4	4	3	0	4	3	4	46	3.1
6.3	Breakdown of expenses by segment	2	1	2	4	2	0	4	4	4	4	4	4	4	3	0	42	2.8
6.4	Profit for each segment as above	2	1	4	4	2	0	4	4	4	4	4	4	4	4	0	45	3.0
6.5	Other earnings	2	4	1	4	2	0	3	4	4	4	4	4	4	3	4	47	3.1
6.6	Cost of electricity purchased, generated, distributed	2	4	4	4	4	0	4	4	4	4	3	0	4	4	0	45	3.0
6.7	Major elements of costs: restructuring, redundancies, depreciation	2	4	4	4	2	3	4	4	4	4	4	4	3	4	4	54	3.6
6.8	Breakdown of expenses into fixed and variable	1	0	0 C/B	4	1	0	4	4	3	4	0 C/B	0	4	3	0	28	1.9
6.9	Details of unusual or non-recurring items	3	4	4	4	2	3	4	4	4	4	4	4	3	3	4	54	3.6
6.10	Research and development expenditure for current year	2	1	4	4	2	0	3	4	4	4	4	4	3	2	4	45	3.0
6.11	Goodwill written off	3	4	4	4	1	2	4	4	4	4	4	4	3	3	4	52	3.5
6.12	Funding costs	3	1	4	4	1	0	4	4	4	0	4	4	4	3	0	40	2.7
6.13	Discussion of results for past year	3	4	4	4	2	3	4	4	4	0	3	4	4	4	4	51	3.4
6.14	Historical summary of operating and financial data (5 years)	2	4	1	4	3	0	3	4	4	0	2	2	4	4	0	37	2.5
6.15	Major industry trends	1	2	1	4	2	0	3	4	2	0	2	0	4	2	0	27	1.8
	Average score in this group	2.1	2.8	3.2	4.0	2.0	0.7	3.7	4.0	3.8	2.9	3.5	2.8	3.7	3.3	2.1	44.3	3.0
7.0	Forward-Looking Information:																	
7.1	Forecast of next years profits/earnings	0	3	4	3	1	3	4	0	4	4	3	0	4	4	0	37	2.5
7.2	Cash projections 1-5 years	0	3	0 C/B	3	1	0	4	0	3	4	3	0	4	2	0	27	1.8
7.3	Discussion on major factors influencing next year	2	3	4	3	2	2	4	4	4	4	3	0	4	4	3	46	3.1
7.4	Comparison of actual business performance to previously disclosed information.	1	3	4	3	1	4	4	4	4	4	3	4	4	4	4	51	3.4
	Average score in this group	0.8	3.0	4.0	3.0	1.3	2.3	4.0	2.0	3.8	4.0	3.0	1.0	4.0	3.5	1.8	40.3	2.7
8.0	Performance Measures:																	
8.1	Debt to equity ratio	3	0	0	2	2	3	4	4	4	0	2	0	3	3	4	34	2.3
8.2	Funding cost cover (times interest covered)	3	0	0	2	2	3	4	4	4	0	2	0	3	3	4	34	2.3
8.3	Net tangible assets per share	3	0	0	2	2	3	3	4	4	0	2	0	3	2	4	32	2.1
8.4	EBIT/Average net funds employed	3	4	0	2	2	3	4	4	4	0	2	0	3	3	4	38	2.5
8.5	Dividend per share (cents)	3	0	0	2	2	4	4	4	4	0	2	0	1	3	4	33	2.2
8.6	Dividend yield (%)	3	0	0	2	2	4	4	4	4	0	2	0	3	2	4	34	2.3
8.7	Price earnings ratio (based on current year net profit after tax)	3	0	0	2	2	0	4	4	4	0	1	0	3	2	4	29	1.9
8.8	EPS (cents): on operating profit, net profit after tax	3	0	0	2	2	0	4	4	4	0	2	0	1	3	4	29	1.9
8.9	Return on total assets*	3	4	0	2	2	4	4	4	4	0	2	4	3	4	4	44	2.9
8.10	Return on equity*	3	4	0	2	2	4	4	4	4	0	2	4	3	4	4	44	2.9
8.11	Accounting rate of profit*	0	4	3	2	2	2	4	4	4	4	2	4	3	3	4	45	3.0
8.12	Summary of share price and trading volume	2	0	2	2	2	0	3	4	4	0	1	0	3	3	4	30	2.0
8.13	Overhead costs per retail customer	0	4	4	4	2	0	3	4	4	4	0 C/B	0	2	3	0	34	2.3
	Average score in this group	2.5	1.5	0.7	2.2	2.0	2.3	3.8	4.0	4.0	0.6	1.8	0.9	2.6	2.9	3.7	35.4	2.4
	Pricing Measures:																	
8.14	Index of electricity prices by market segment compared to CPI	1	0 C/B	4	4	4	0	3	4	4	0	0	0	4	4	4	36	2.4
8.15	Average energy price per unit	1	4	4	4	4	0	3	4	4	0	1	4	4	3	0	40	2.7
8.16	Average domestic power bill	1	3	4	0	4	0	3	4	4	0	1	0	4	3	0	31	2.1
8.17	Pricing information	1	3	4	4	4	0	3	4	4	0	1	4	4	4	4	44	2.9
	Average score in this group	1.0	3.3	4.0	3.0	4.0	0.0	3.0	4.0	4.0	0.0	0.8	2.0	4.0	3.5	2.0	37.8	2.5

Appendix D

Annual Reporting Model

Ratings for level of importance of disclosure allocated by stakeholders

	INDEX ITEMS	STAKEHOLDERS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Mean
	Efficiency Measures:																	
8.18	Total number of interruptions*	3	4	4	3	4	0	3	4	4	4	1	4	3	2	4	47	3.1
8.19	Average total duration of interruptions of supply per customer*	3	4	4	3	4	0	3	4	4	4	0 C/B	4	3	4	4	48	3.2
8.20	Average number of interruptions of supply per customer*	3	4	4	3	4	0	3	4	4	4	0 C/B	4	3	2	4	46	3.1
8.21	Number of faults per 100km of prescribed voltage line*	3	4	4	3	4	0	3	4	4	4	0 C/B	4	3	4	4	48	3.2
8.22	Direct line costs per kilometre*	3	4	4	3	4	0	4	4	4	4	0 C/B	4	3	3	4	48	3.2
8.23	Indirect line costs per customer*	3	4	4	3	4	0	4	4	4	4	0 C/B	4	3	3	4	48	3.2
	Average score in this group	3.0	4.0	4.0	3.0	4.0	0.0	3.3	4.0	4.0	4.0	1.0	4.0	3.0	3.0	4.0	47.5	3.2
	* Items disclosed to Ministry of Commerce under Electricity (Information Disclosure) Regulations 1994.																	
	Market Measures:																	
8.24	Average consumption kwh per customer (5 years)	1	3	4	3	4	0	3	4	4	0	0	4	3	3	0	36	2.4
8.25	Number of customers by sector	1	3	4	3	4	0	3	4	4	4	3	4	3	2	0	42	2.8
8.26	Change in market share in major areas of activity	2	0	4	4	4	0	3	4	4	0	2	4	4	4	0	39	2.6
	Average score in this group	1.3	2.0	4.0	3.3	4.0	0.0	3.0	4.0	4.0	1.3	1.7	4.0	3.3	3.0	0.0	39.0	2.6
9.0	**Other Information:**																	
9.1	Information on accounting methods used	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	59	3.9
9.2	Goodwill	3	4	4	3	1	3	4	4	4	0	4	4	4	2	0	44	2.9
9.3	Details of reserves and movements in reserves.	2	4	4	3	1	4	4	4	4	0	4	4	4	2	0	44	2.9
9.4	Contingent liabilities	3	4	4	3	1	4	4	4	4	0	4	4	3	3	0	45	3.0
	Average score in this group	2.8	4.0	4.0	3.3	1.8	3.8	4.0	4.0	4.0	1.0	4.0	4.0	3.8	2.8	1.0	48.0	3.2

Ratings:

0 Should not be disclosed
1 Minor importance
2 Intermediate importance
3 Very important
4 Extremely important, disclosure essential
C/B Cost is greater than benefit

Key to stakeholder number

1 Preparer
2 Regulator
3 Academic
4 Trustee/Environmentalist
5 Consumers Institute
6 Energy Trusts New Zealand
7 Financial Reporter
8 Lender
9 Financial Analyst
10 Major Electricity Users Group
11 Bankers Trust
12 Auditor
13 Consumer
14 Employee
15 Director

Appendix E

Weightings of Individual Items in Disclosure Indices

INDEX ITEMS	Normalised weighting											Overall normalised mean	Electricity industry normalised mean
	Baker & Haslam 1973	Buzby 1975	Benjamin & Stanga 1977	Firth 1978	Firth 1979	McNally et al 1982	Firer & Meth 1986	Chow & Wong-Boren 1987	Tong, et al. 1990	Adhikari Tondkar 1992	Zarzeski 1996		
BACKGROUND ABOUT THE COMPANY													
1.1 Brief narrative history of firm			0.55	0.73	0.74	0.34	0.42			0.53		0.55	0.47
1.2, 1.3 Statement of strategy and objectives		0.68		0.68	0.80	0.55		0.69	0.82	0.66	0.74	0.70	0.66
1.7 Dependence on major customers				0.50	0.77	0.68				0.67		0.66	0.50
MANAGEMENT INFORMATION													
2.1 Info on directors, names, salaries, affiliations		0.73	0.49	0.60	0.75	0.58	0.48	0.58	0.69	0.54	0.68	0.61	0.70
2.1 Commercial experience of directors						0.58					0.68	0.63	0.70
2.1 Other directorships held by directors				0.60		0.58					0.68	0.62	0.70
2.2 Responsibilites, experience of senior management		0.81		0.46		0.54	0.45	0.70			0.68	0.60	0.63
2.2 Identification of senior management and functions				0.60		0.54			0.67		0.68	0.62	0.63
2.2 Name and salaries of senior management		0.81		0.39	0.86		0.32			0.54	0.68	0.60	0.63
2.3 No of shares held by co. officers				0.67								0.67	0.66
CORPORATE RESPONSIBILITY													
3.1 Corp. social responsibility expenditure			0.44	0.62	0.62	0.25	0.39	0.48		0.44		0.46	0.37
ASSETS													
4.3 Current resale value of plant & equipment			0.47	0.62	0.72			0.63				0.61	0.90
4.5 Capital expenditurefor current year		0.95		0.84	0.88	0.76		0.70		0.71	0.79	0.80	0.63
4.5 Summary of changes in fixed assets				0.80								0.80	0.63
4.7 Cost and market value of investments				0.72							0.63	0.67	0.83
4.9 Capitalized interest during year								0.65				0.65	0.65
4.11 Description of principal plants, properties		0.52	0.60	0.49	0.57	0.41	0.52	0.76	0.52	0.53	0.75	0.57	0.58
4.11 Geographical location of firms assets				0.75								0.75	0.58
4.12 % of plant capacity utilized		0.78		0.74	0.82	0.59					0.75	0.73	0.60
4.13 Depreciation method		0.93		0.78	0.80		0.68	0.48				0.73	0.87
4.14 Description of planned capital expenditure		0.88	0.72	0.84	0.88	0.71		0.70	0.76	0.71	0.79	0.78	0.73
DEBT													
5.1 Total debt outstanding								0.87		0.88		0.87	0.83
FINANCIAL, OPERATING, PERFORMANCE													
6.1 Breakdown of sales revenue by product/customer		0.92	0.73	0.84	0.96	0.57		0.53	0.78	0.66	0.76	0.75	0.87
6.1-6.4 Segment reporting: product								0.53				0.53	0.77
6.1-6.4 Segment reporting: geographical area								0.53			0.76	0.65	0.77
6.2 Index of quantity sales				0.74	0.85		0.58					0.73	0.77
6.3 Breakdown of operating exes				0.74		0.57						0.66	0.70
6.7 More breakdown of exes than Cos Act					0.92		0.60					0.76	0.90
6.8 Breakdown of exes into fixed and variable			0.63	0.75	0.91	0.51	0.66		0.62			0.68	0.47
6.10 Research/Development expenditure current year	0.51	0.82	0.74	0.82	0.87		0.64	0.53				0.70	0.75

Appendix E

Weightings of Individual Items in Disclosure Indices

INDEX ITEMS	Normalised weighting											Overall normalised mean	Electricity industry normalised mean
	Baker & Haslam 1973	**Buzby 1975**	**Benjamin & Stanga 1977**	**Firth 1978**	**Firth 1979**	**McNally et al 1982**	**Firer & Meth 1986**	**Chow & Wong-Boren 1987**	**Tong, et al. 1990**	**Adhikari Tondkar 1992**	**Zarzeski 1996**		
6.10 Information on R & D - current and planned			0.71	0.82	0.87	0.54	0.64	0.53	0.69		0.88	0.71	0.75
6.11 Goodwill/intangibles written off				0.73		0.66						0.69	0.87
6.12 Overall financing cost								0.71				0.71	0.67
6.13 Discussion of results for past year				0.83	0.82			0.76		0.71	0.78	0.78	0.85
6.14 Historical summary op and fin data		0.94		0.78	0.85	0.77			0.84	0.63		0.80	0.62
6.15 Major industry trends			0.74	0.57		0.69				0.72		0.68	0.45
FORWARD LOOKING INFORMATION													
7.1 Forecast next years profits/earnings			0.64	0.67	0.67			0.78	0.89	0.83	0.85	0.76	0.62
7.2 Cash projections 1 - 5years				0.66	0.72	0.60		0.77	0.71		0.83	0.71	0.45
7.3 Discussion on major factors influencing nextyr					0.74	0.74				0.80	0.85	0.78	0.77
PERFORMANCE MEASURES													
8.1 Gearing ratios	0.53											0.53	0.57
8.6 Current % return from divs	0.44											0.44	0.57
8.7 Current P/E of stock	0.64											0.64	0.48
8.8 EPS						0.75						0.75	0.48
8.9 Rate of return on assets	0.57											0.57	0.73
8.12 Historical summary of share price & trad vol (ord s	0.65		0.64	0.27	0.20	0.46	0.36	0.38		0.55	0.68	0.46	0.50
8.17 Index of selling prices				0.71	0.81		0.52	0.54				0.65	0.73
OTHER INFORMATION													
9.1 Information on accounting methods used			0.85	0.75	0.85					0.67	0.75	0.78	0.98
9.4 Contingent liabilities			0.82	0.76						0.78	0.25	0.65	0.75

Some of the terms are not the exact words used in the disclosure index for this thesis but are close matches.

Note: Resarchers have used a variety of weighting scales (eg) 0-4, 1-7. These have all been converted to a normalised weighting between 0-1.

Appendix F

Annual Reporting Model: Results 1999

Company X

		Weighting	Unweighted			Weighted		
			Mark	Max	%	Mark	Max	%
1.0	Background about the Company							
1.1	Brief narrative history of the company.	1.90	5	5	100%	9.5	9.5	100%
1.2	Management's objectives and strategies	2.80	1	5	20%	2.8	14	20%
1.3	Description of principal activities.	2.50	5	5	100%	12.5	12.5	100%
1.4	Major contractual relationships.	3.10	4	5	80%	12.4	15.5	80%
1.5	General development of business.	3.10	5	5	100%	15.5	15.5	100%
	Total		**20**	**25**	**80%**	**52.7**	**67**	**79%**
2.0	Information about Management, Major Shareholders, Related Party Transactions							
2.1	Names, backgrounds, affiliations, remuneration of directors	2.80	5	5	100%	14	14	100%
2.2	Names, functions, remuneration of executive management	2.50	5	5	100%	12.5	12.5	100%
2.3	Major owners of company's stock and number of shares owne	3.10	4	5	80%	12.4	15.5	80%
2.4	Number of shares owned by directors	2.80	5	5	100%	14	14	100%
2.5	Related party transactions	3.00	5	5	100%	15	15	100%
	Total		**24**	**25**	**96%**	**67.9**	**71**	**96%**
3.0	Assets:							
3.1	Assets by segment: energy, contracting, network, generation	3.20	5	5	100%	16	16	100%
3.2	Details of measurement basis of assets	3.90	5	5	100%	19.5	19.5	100%
3.3	ODV valuation of network assets	3.60	N/A	0		0	0	
3.4	Amount of asset revaluation each year	3.30	5	5	100%	16.5	16.5	100%
3.5	Fixed assets purchased and sold in current year	2.50	5	5	100%	12.5	12.5	100%
3.6	Fixed asset details	3.60	4	5	80%	14.4	18	80%
3.7	Investments	3.30	4	5	80%	13.2	16.5	80%
3.8	Goodwill	2.90	4	5	80%	11.6	14.5	80%
3.9	Capitalised interest	2.60	4	5	80%	10.4	13	80%
3.10	Location, nature, productive capacity of principal plant	2.30	5	5	100%	11.5	11.5	100%
3.11	% plant capacity utilized	2.30	5	5	100%	11.5	11.5	100%
3.12	Depreciation method	3.50	5	5	100%	17.5	17.5	100%
3.13	Capital expenditure planned	2.90	2	5	40%	5.8	14.5	40%
3.14	Current assets: debtors, inventories, cash	3.30	5	5	100%	16.5	16.5	100%
3.15	Asset Management Plan	2.30	N/A	0		0	0	
	Total		**58**	**65**	**89%**	**176.9**	**198**	**89%**
4.0	Debt:							
4.1	Total debt outstanding and debt repayment schedules	3.30	5	5	100%	16.5	16.5	100%
4.2	Current liabilities: creditors and provisions	3.30	4	5	80%	13.2	16.5	80%
	Total		**9**	**10**	**90%**	**29.7**	**33**	**90%**
5.0	Financial, Operating and Performance Related Data:							
5.1	Breakdown of sales revenue by segment	3.50	5	5	100%	17.5	17.5	100%
5.2	Sales volume by segment	3.10	1	5	20%	3.1	15.5	20%
5.3	Breakdown of expenses by segment	2.80	5	5	100%	14	14	100%
5.4	Profit for each segment as above	3.00	5	5	100%	15	15	100%
5.5	Other earnings	3.10	5	5	100%	15.5	15.5	100%
5.6	Cost of electricity purchased, generated, distributed	3.00	5	5	100%	15	15	100%
5.7	Major elements of costs	3.60	5	5	100%	18	18	100%
5.8	Details of unusual or non-recurring items	3.60	5	5	100%	18	18	100%
5.9	Goodwill written off	3.50	5	5	100%	17.5	17.5	100%
5.10	Funding costs	2.70	5	5	100%	13.5	13.5	100%
5.11	Discussion of results for past year	3.40	5	5	100%	17	17	100%
5.12	Historical summary of operating and financial data (5 years)	2.50	2	5	40%	5	12.5	40%
	Total		**53**	**60**	**88%**	**169.1**	**189**	**89%**
6.0	Forward-Looking Information:							
6.1	Forecast of next years profits/earnings	2.50	0	5	0%	0	12.5	0%
6.2	Discussion on major factors influencing next year	3.10	2	5	40%	6.2	15.5	40%
6.3	Comparison of actual business performance to previously disclosed information.	3.40	0	5	0%	0	17	0%
	Total		**2**	**15**	**13%**	**6.2**	**45**	**14%**
7.0	Performance Measures: Financial							
7.1	Debt to equity ratio	2.30	1	5	20%	2.3	11.5	20%
7.2	Funding cost cover (times interest covered)	2.30	0	5	0%	0	11.5	0%
7.3	Net tangible assets per share	2.10	2	5	40%	4.2	10.5	40%
7.4	EBIT/Average net funds employed	2.50	0	5	0%	0	12.5	0%
7.5	Dividend per share (cents)	2.20	2	5	40%	4.4	11	40%
7.6	Return on total assets	2.90	2	5	40%	5.8	14.5	40%
7.7	Return on equity	2.90	2	5	40%	5.8	14.5	40%

Appendix F

Annual Reporting Model: Results 1999

Company X

		Weighting	Unweighted			Weighted		
			Mark	Max	%	Mark	Max	%
7.8	Accounting rate of profit	3.00	N/A	0		0	0	
7.9	Overhead costs per retail customer	2.30	0	5	0%	0	11.5	0%
	Total		**9**	**40**	**23%**	**22.5**	**97.5**	**23%**
	Pricing Measures							
7.10	Average domestic power bill	2.10	0	5	0%	0	10.5	0%
7.11	Pricing information	2.90	0	5	0%	0	14.5	0%
	Total		**0**	**10**	**0%**	**0**	**25**	**0%**
	Efficiency Measures:							
7.12	Total number of interruptions	3.10	N/A	0		0	0	
7.13	Average total duration of interruptions of supply per customer	3.20	N/A	0		0	0	
7.14	Average number of interruptions of supply per customer:5-10yr	3.10	N/A	0		0	0	
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	3.20	N/A	0		0	0	
7.16	Total Costs costs per kilometre	3.20	N/A	0		0	0	
7.17	Total Costs per customer	3.20	0	5	0%	0	16	0%
	Total		**0**	**5**	**0%**	**0**	**16**	**0%**
	Market Measures:							
7.18	Average consumption kwh per customer (5 years)	2.40	0	5	0%	0	12	0%
7.19	Number of customers by sector	2.80	1	5	20%	2.8	14	20%
7.20	Change in market share in major areas of activity	2.60	3	5	60%	7.8	13	60%
	Total		**4**	**15**	**27%**	**10.6**	**39**	**27%**
8.0	**Other Information:**							
8.1	Information on accounting methods used	3.90	5	5	100%	19.5	19.5	100%
8.2	Contingent liabilities	2.90	5	5	100%	14.5	14.5	100%
8.3	Forward contracts for committed purchases	2.50	5	5	100%	12.5	12.5	100%
8.4	Capital contributions by customers	2.50	4	5	80%	10	12.5	80%
8.5	Dividend distribution policy	2.50	5	5	100%	12.5	12.5	100%
	Total		**24**	**25**	**96%**	**69**	**71.5**	**97%**
GRAND TOTAL			**203**	**295**	**69%**	**604.6**	**852**	**71%**

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19 October 1999

The Chief Financial Officer
TransAlta New Zealand Ltd
Private Bag 31908
Lower Hutt 6320

Dear Sir/Madam

I am currently undertaking a doctoral thesis entitled "Accountability in the New Zealand Electricity Retail and Distribution Industries". Part of the research has involved developing an Accountability Index and scoring each company annual report for the 1998-99 financial year. The annual report disclosures have been evaluated for the quality of information disclosed in respect of each index item.

In order to do this 'best practice' disclosure criteria have been identified for the selected items. A copy of these criteria is enclosed.

If a disclosure met the stated criteria then a score of 5 was allocated for that item. Lower scores of 1-4 were allocated in accordance with this benchmark. If it was thought that an item was relevant to the particular company but it had not been disclosed a score of 0 was awarded.

The annual report for each company has been scored by me and independently by another accountant. Where there were differences in our scores arbitration occurred to reach a consensus.

I have enclosed a copy of the scores allocated to your company's latest annual report, along with the average, highest and lowest scoring reports. I would be grateful if you could review the scoring of your report and advise me whether you think this is fair and reasonable. If the scorers thought an item was not relevant to a company then N/A (not applicable) was recorded rather than a score of 0. Could you please check and advise whether scores of 0 or N/A have been appropriately assigned to your company e.g. Goodwill.

Your feedback would be much appreciated and can be sent **by email** to:
j.j.hooks@massey.ac.nz

Covering letter to CFO

or by letter to:
Mrs J. Hooks
Commerce Department
Massey University
Private Bag 102 904
North Shore Mail Centre
Auckland

Or by phoning: 09 473 9799 ext. 9458 (work) or 09 478.6991 (home)

Or by Fax: 09 441.8177

Your feedback is an essential part of the validation process for this research. If I have not heard from you by 8 November, I will assume you are satisfied that this evaluation of your annual report is fair and reasonable.

I look forward to hearing from you.

Yours sincerely

Jill Hooks
Lecturer in Accounting

Appendix H

Annual Reporting Model: Results 1999

		Mark WEL	Mean score	Highest score	Lowest score
1.0	**Background about the Company**				
1.1	Brief narrative history of the company.	5	4.5	5	2
1.2	Management's objectives and strategies	3	2.5	5	1
1.3	Description of principal activities.	3	4.8	5	1
1.4	Major contractual relationships.	0	0.8	4	0
1.5	General development of business.	4	4.4	5	2
2.0	**Information about Management, Major Shareholders, Related Party Transactions**				
2.1	Names, backgrounds, affiliations, remuneration of directors	5	4.1	5	1
2.2	Names, functions, remuneration of executive management	5	3.6	5	0
2.3	Major owners of company's stock and number of shares owned	5	4.4	5	0
2.4	Number of shares owned by directors	N/A	4.7	5	3
2.5	Related party transactions	2	4.4	5	0
3.0	**Assets:**				
3.1	Assets by segment: energy, contracting, network, generation	0	1.1	5	0
3.2	Details of measurement basis of assets	5	4.7	5	0
3.3	ODV valuation of network assets	0	1.9	4	0
3.4	Amount of asset revaluation each year	4	3.9	5	0
3.5	Fixed assets purchased and sold in current year	4	3.7	5	0
3.6	Fixed asset details	4	3.6	5	0
3.7	Investments	5	4.3	5	1
3.8	Goodwill	N/A	2.7	5	0
3.9	Capitalised interest	N/A	2.3	5	0
3.10	Location, nature, productive capacity of principal plant	0	2.2	5	0
3.11	% plant capacity utilized	0	1.7	5	0
3.12	Depreciation method	5	4.0	5	0
3.13	Capital expenditure planned	1	1.6	5	0
3.14	Current assets: debtors, inventories, cash	5	4.8	5	0
3.15	Asset Management Plan	3	1.9	4	0
4.0	**Debt:**				
4.1	Total debt outstanding and debt repayment schedules	N/A	4.6	5	0
4.2	Current liabilities: creditors and provisions	5	4.7	5	0
5.0	**Financial, Operating and Performance Related Data:**				
5.1	Breakdown of sales revenue by segment	4	2.5	5	0
5.2	Sales volume by segment	N/A	1.2	5	0
5.3	Breakdown of expenses by segment	2	1.3	5	0
5.4	Profit for each segment as above	0	1.4	5	0
5.5	Other earnings	4	4.6	5	0
5.6	Cost of electricity purchased, generated, distributed	5	1.1	5	0
5.7	Major elements of costs	4	3.3	5	1
5.8	Details of unusual or non-recurring items	5	4.4	5	0
5.9	Goodwill written off	N/A	3.7	5	0
5.10	Funding costs	N/A	4.7	5	0
5.11	Discussion of results for past year	3	3.7	5	1
5.12	Historical summary of operating and financial data (5 years)	0	2.7	5	0
6.0	**Forward-Looking Information:**				
6.1	Forecast of next years profits/earnings	0	0.5	4	0
6.2	Discussion on major factors influencing next year	3	2.3	5	0
6.3	Comparison of actual business performance to previously disclosed information.	1	3.1	5	0
7.0	**Performance Measures: Financial**				
7.1	Debt to equity ratio	0	1.2	5	0
7.2	Funding cost cover (times interest covered)	N/A	0.1	2	0
7.3	Net tangible assets per share	0	0.8	5	0

Appendix H

Annual Reporting Model: Results 1999

		Mark WEL	Mean score	Highest score	Lowest score
7.4	EBIT/Average net funds employed	0	0.6	3	0
7.5	Dividend per share (cents)	0	1.5	5	0
7.6	Return on total assets	0	0.5	5	0
7.7	Return on equity	0	1.2	5	0
7.8	Accounting rate of profit	0	0.4	5	0
7.9	Overhead costs per retail customer	N/A	0.0	0	0
	Pricing Measures				
7.10	Average domestic power bill	N/A	1.3	5	0
7.11	Pricing information	N/A	0.0	0	0
	Efficiency Measures:				
7.12	Total number of interruptions	0	0.7	5	0
7.13	Average total duration of interruptions of supply per customer	0	2.5	5	0
7.14	Average number of interruptions of supply per customer:5-10yrs	0	1.5	5	0
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	0	0.4	5	0
7.16	Total Costs costs per kilometre	0	0.4	5	0
7.17	Total Costs per customer	N/A	1.3	5	0
	Market Measures:				
7.18	Average consumption kwh per customer (5 years)	N/A	0.0	0	0
7.19	Number of customers by sector	N/A	0.3	1	0
7.20	Change in market share in major areas of activity	N/A	1.0	3	0
8.0	**Other Information:**				
8.1	Information on accounting methods used	5	4.8	5	0
8.2	Contingent liabilities	5	4.4	5	0
8.3	Forward contracts for committed purchases	N/A	4.8	5	3
8.4	Capital contributions by customers	0	2.3	5	0
8.5	Dividend distribution policy	4	4.0	5	2

Appendix I

Annual Reporting Model: Results 1999

		Mean score	Highest score	Lowest score	Frequency of scores								% of companies with each score (excluding N/A answers)						
		All companies			0	1	2	3	4	5	N/A	TOTAL	0	1	2	3	4	5	TOTAL
1.0	**Background about the Company**																		
1.1	Brief narrative history of the company.	4.5	5	2	0	0	2	3	6	22	0	33	0%	0%	6%	9%	18%	67%	100%
1.2	Management's objectives and strategies	2.5	5	1	0	7	9	13	2	2	0	33	0%	21%	27%	39%	6%	6%	100%
1.3	Description of principal activities.	4.8	5	1	0	1	0	1	0	31	0	33	0%	3%	0%	3%	0%	94%	100%
1.4	Major contractual relationships.	0.8	4	0	18	9	2	3	1	0	0	33	55%	27%	6%	9%	3%	0%	100%
1.5	General development of business.	4.4	5	2	0	0	1	1	14	17	0	33	0%	0%	3%	3%	42%	52%	100%
2.0	**Information about Management, Major Shareholders, Related Party Transactions**																		
2.1	Names, backgrounds, affiliations, remuneration of directors	4.1	5	1	0	1	2	4	11	15	0	33	0%	3%	6%	12%	33%	45%	100%
2.2	Names, functions, remuneration of executive management	3.6	5	0	2	3	7	1	0	20	0	33	6%	9%	21%	3%	0%	61%	100%
2.3	Major owners of company's stock and number of shares owned	4.4	5	0	1	1	0	5	2	24	0	33	3%	3%	0%	15%	6%	73%	100%
2.4	Number of shares owned by directors	4.7	5	3	0	0	0	1	1	7	24	33	0%	0%	0%	11%	11%	78%	100%
2.5	Related party transactions	4.4	5	0	2	0	1	2	2	26	0	33	6%	0%	3%	6%	6%	79%	100%
3.0	**Assets:**																		
3.1	Assets by segment: energy, contracting, network, generation	1.1	5	0	24	1	0	1	3	4	0	33	73%	3%	0%	3%	9%	12%	100%
3.2	Details of measurement basis of assets	4.7	5	0	1	0	0	0	5	27	0	33	3%	0%	0%	0%	15%	82%	100%
3.3	ODV valuation of network assets	1.9	4	0	5	6	10	7	3	0	2	33	16%	19%	32%	23%	10%	0%	100%
3.4	Amount of asset revaluation each year	3.9	5	0	1	2	1	6	4	16	3	33	3%	7%	3%	20%	13%	53%	100%
3.5	Fixed assets purchased and sold in current year	3.7	5	0	1	0	1	5	25	1	0	33	3%	0%	3%	15%	76%	3%	100%
3.6	Fixed asset details	3.6	5	0	1	0	1	11	16	4	0	33	3%	0%	3%	33%	48%	12%	100%
3.7	Investments	4.3	5	1	0	3	1	1	3	22	3	33	0%	10%	3%	3%	10%	73%	100%
3.8	Goodwill	2.7	5	0	3	1	2	1	3	3	20	33	23%	8%	15%	8%	23%	23%	100%
3.9	Capitalised interest	2.3	5	0	3	0	0	0	1	2	27	33	50%	0%	0%	0%	17%	33%	100%
3.10	Location, nature, productive capacity of principal plant	2.2	5	0	5	7	6	8	4	3	0	33	15%	21%	18%	24%	12%	9%	100%
3.11	% plant capacity utilized	1.7	5	0	17	4	1	1	0	9	1	33	53%	13%	3%	3%	0%	28%	100%
3.12	Depreciation method	4.0	5	0	1	0	0	11	6	15	0	33	3%	0%	0%	33%	18%	45%	100%
3.13	Capital expenditure planned	1.6	5	0	6	8	14	3	1	1	0	33	18%	24%	42%	9%	3%	3%	100%
3.14	Current assets: debtors, inventories, cash	4.8	5	0	1	0	0	0	2	30	0	33	3%	0%	0%	0%	6%	91%	100%
3.15	Asset Management Plan	1.9	4	0	8	5	4	9	5	0	2	33	26%	16%	13%	29%	16%	0%	100%
4.0	**Debt:**																		
4.1	Total debt outstanding and debt repayment schedules	4.6	5	0	2	0	0	0	0	24	7	33	8%	0%	0%	0%	0%	92%	100%
4.2	Current liabilities: creditors and provisions	4.7	5	0	1	0	0	0	5	27	0	33	3%	0%	0%	0%	15%	82%	100%
5.0	**Financial, Operating and Performance Related Data:**																		
5.1	Breakdown of sales revenue by segment	2.5	5	0	12	1	3	2	5	10	0	33	36%	3%	9%	6%	15%	30%	100%
5.2	Sales volume by segment	1.2	5	0	3	1	0	0	0	1	28	33	60%	20%	0%	0%	0%	20%	100%
5.3	Breakdown of expenses by segment	1.3	5	0	20	2	4	1	1	5	0	33	61%	6%	12%	3%	3%	15%	100%
5.4	Profit for each segment as above	1.4	5	0	23	0	0	1	3	6	0	33	70%	0%	0%	3%	9%	18%	100%
5.5	Other earnings	4.6	5	0	1	0	0	1	7	24	0	33	3%	0%	0%	3%	21%	73%	100%
5.6	Cost of electricity purchased, generated, distributed	1.1	5	0	25	1	0	0	0	7	0	33	76%	3%	0%	0%	0%	21%	100%
5.7	Major elements of costs	3.3	5	1	0	1	2	19	9	2	0	33	0%	3%	6%	58%	27%	6%	100%
5.8	Details of unusual or non-recurring items	4.4	5	0	3	0	0	2	1	26	1	33	9%	0%	0%	6%	3%	81%	100%

Appendix I

Annual Reporting Model: Results 1999

		Mean score	Highest score	Lowest score	Frequency of scores								% of companies with each score (excluding N/A answers)						
		All companies			0	1	2	3	4	5	N/A	TOTAL	0	1	2	3	4	5	TOTAL
5.9	Goodwill written off	3.7	5	0	1	1	2	0	1	7	21	33	8%	8%	17%	0%	8%	58%	100%
5.10	Funding costs	4.7	5	0	1	0	0	1	1	26	4	33	3%	0%	0%	3%	3%	90%	100%
5.11	Discussion of results for past year	3.7	5	1	0	2	3	11	5	12	0	33	0%	6%	9%	33%	15%	36%	100%
5.12	Historical summary of operating and financial data (5 years)	2.7	5	0	7	3	3	8	5	7	0	33	21%	9%	9%	24%	15%	21%	100%
6.0	Forward-Looking Information:																		
6.1	Forecast of next years profits/earnings	0.5	4	0	22	3	5	0	1	0	2	33	71%	10%	16%	0%	3%	0%	100%
6.2	Discussion on major factors influencing next year	2.3	5	0	1	9	11	5	4	3	0	33	3%	27%	33%	15%	12%	9%	100%
6.3	Comparison of actual business performance to previously disclosed information.	3.1	5	0	8	3	2	2	2	16	0	33	24%	9%	6%	6%	6%	48%	100%
7.0	Performance Measures: Financial																		
7.1	Debt to equity ratio	1.2	5	0	16	6	6	2	1	2	0	33	48%	18%	18%	6%	3%	6%	100%
7.2	Funding cost cover (times interest covered)	0.1	2	0	22	0	1	0	0	0	10	33	96%	0%	4%	0%	0%	0%	100%
7.3	Net tangible assets per share	0.8	5	0	26	1	2	0	0	4	0	33	79%	3%	6%	0%	0%	12%	100%
7.4	EBIT/Average net funds employed	0.6	3	0	21	5	6	1	0	0	0	33	64%	15%	18%	3%	0%	0%	100%
7.5	Dividend per share (cents)	1.5	5	0	15	5	4	1	1	5	2	33	48%	16%	13%	3%	3%	16%	100%
7.6	Return on total assets	0.5	5	0	28	0	2	0	1	2	0	33	85%	0%	6%	0%	3%	6%	100%
7.7	Return on equity	1.2	5	0	12	10	7	1	1	2	0	33	36%	30%	21%	3%	3%	6%	100%
7.8	Accounting rate of profit	0.4	5	0	26	1	1	0	0	2	3	33	87%	3%	3%	0%	0%	7%	100%
7.9	Overhead costs per retail customer	0.0	0	0	3	0	0	0	0	0	30	33	100%	0%	0%	0%	0%	0%	100%
	Pricing Measures																		
7.10	Average domestic power bill	1.3	5	0	3	0	0	0	0	1	29	33	75%	0%	0%	0%	0%	25%	100%
7.11	Pricing information	0.0	0	0	3	0	0	0	0	0	30	33	100%	0%	0%	0%	0%	0%	100%
	Efficiency Measures:																		
7.12	Total number of interruptions	0.7	5	0	25	1	0	0	0	4	3	33	83%	3%	0%	0%	0%	13%	100%
7.13	Average total duration of interruptions of supply per customer	2.5	5	0	7	6	4	2	1	11	2	33	23%	19%	13%	6%	3%	35%	100%
7.14	Average number of interruptions of supply per customer:5-10yrs	1.5	5	0	15	3	5	1	0	6	3	33	50%	10%	17%	3%	0%	20%	100%
7.15	Number of faults per 100km of prescribed voltage line:5-10yrs	0.4	5	0	24	2	3	0	0	1	3	33	80%	7%	10%	0%	0%	3%	100%
7.16	Total Costs costs per kilometre	0.4	5	0	26	1	1	0	0	2	3	33	87%	3%	3%	0%	0%	7%	100%
7.17	Total Costs per customer	1.3	5	0	3	0	0	0	0	1	29	33	75%	0%	0%	0%	0%	25%	100%
	Market Measures:																		
7.18	Average consumption kwh per customer (5 years)	0.0	0	0	3	0	0	0	0	0	30	33	100%	0%	0%	0%	0%	0%	100%
7.19	Number of customers by sector	0.3	1	0	2	1	0	0	0	0	30	33	67%	33%	0%	0%	0%	0%	100%
7.20	Change in market share in major areas of activity	1.0	3	0	2	0	0	1	0	0	30	33	67%	0%	0%	33%	0%	0%	100%
8.0	Other Information:																		
8.1	Information on accounting methods used	4.8	5	0	1	0	0	0	0	32	0	33	3%	0%	0%	0%	0%	97%	100%
8.2	Contingent liabilities	4.4	5	0	1	0	0	5	4	22	1	33	3%	0%	0%	16%	13%	69%	100%
8.3	Forward contracts for committed purchases	4.8	5	3	0	0	0	1	0	8	24	33	0%	0%	0%	11%	0%	89%	100%
8.4	Capital contributions by customers	2.3	5	0	14	0	1	1	2	10	5	33	50%	0%	4%	4%	7%	36%	100%
8.5	Dividend distribution policy	4.0	5	2	0	0	4	1	19	9	0	33	0%	0%	12%	3%	58%	27%	100%

Appendix J

Anderson-Darling Normality Test

Information Categories	**Large Company**	**Small Company**	**Satisfy Normality Assumption**	**Public Company**	**Trust-held Company**	**Satisfy Normality Assumption**
Background about the Company	**0.252**	0.053	No	**0.371**	0.044	No
Information about Management etc	**0.102**	0.009	No	**0.313**	0.009	No
Assets	**0.202**	0.009	No	**0.301**	0.005	No
Debt	0.000	0.000	No	0.000	0.000	No
Financial, Operating, Performance Related Data	0.034	**0.318**	No	**0.113**	**0.174**	**Yes**
Forward-Looking Information	0.058	**0.561**	No	**0.242**	**0.423**	**Yes**
Performance Measures:						
Financial	**0.155**	0.003	No	0.386	0.000	No
Pricing	N/A	N/A	N/A	N/A	N/A	N/A
Efficiency	0.013	0.015	No	0.001	0.010	No
Market	N/A	N/A	N/A	N/A	N/A	N/A
Other Information	**0.403**	0.000	No	**0.231**	0.001	No
Final Score for Annual Report	**0.377**	**0.153**	**Yes**	**0.098**	**0.174**	**Yes**

Appendix K

Comparison of Scores

Information Categories	**Based on the Type of Company Kruskal-Wallis Test P-value**	**Based on the size of Company Kruskal-Wallis Test P-value**
Background about the Company	0.479	0.132
Information about Management etc	**0.083**	**0.091**
Assets	0.193	0.466
Debt	0.734	0.445
Financial, Operating, Performance Related Data	0.843	0.731
Forward-Looking Information	**0.017**	**0.074**
Performance Measures:		
Financial	0.453	0.585
Pricing	N/A	N/A
Efficiency	**0.039**	0.221
Market	N/A	N/A
Other Information	0.310	0.341
Final Score for Annual Report	0.843	0.731

Significance levels:
Highly significant ($p<0.01$)
Significant ($p<0.05$)
Moderately significant ($p<0.10$)

Appendix L
Letter to stakeholders re interview

Massey University
COLLEGE OF BUSINESS

School of Accountancy
Private Bag 102 904
North Shore Mail Centre
Auckland
New Zealand
Telephone: 64 9 441 8176
Facsimile: 64 9 441 8177

2 June 2000

Mr
Consumers' Institute
Private Bag 6996
Wellington

Dear

It is over a year since I first made contact with you in respect of my research "Accountability in the NZ retail and distribution sectors of the electricity industry". You may remember that the focus of the research is the disclosure of information in the annual reports of electricity companies. The intention has been to assess the extent and quality of the information in the annual reports from an accountability perspective. In order to do this a model of best reporting practice was developed from your feedback and that of other stakeholders and from the relevant literature. Application of that model to the 1998/99 annual reports of electricity retail and distribution companies identified some significant gaps between the quality of information being disclosed and stakeholder needs.

I have chosen three areas on which to focus attention for improvement:
Segmental reporting;
Performance measures;
Transparency of trust-held companies.

I have attached two pages which outline the issues in respect of these areas.

I would appreciate having an opportunity to discuss these three matters with you. I will phone you next week to see if you would be available for me to either meet with you or else to talk with you on the phone. Alternatively you may prefer a written response.

I am conscious of the time you have already given to this project but would appreciate your thoughts at this final stage. A book voucher is attached as a token of thanks and a form of bribery.

Yours sincerely

Jill Hooks

Appendix M

Stakeholder Interview Questions

Segmental information

1. Companies are required to segment for significant segments i.e. profit, assets, revenue greater than 10%. Do you think that segmentation is more important in electricity line companies (monopoly) and retail/generation (developing competition) than for other industries. Why?

2. What sort of segmentation would you suggest?

3. Is it important that lines companies disclose results of contracting activities separately from management and operation of the distribution network?

4. Is segmental reporting more relevant if a lines company expands into non-traditional areas e.g. ownership of a gas network; contracting to other network companies; ownership of joint ventures in non-reticulation businesses.

5. Do you consider that there are any issues with transfer pricing for companies which operate significant generation plant, and also supply power to retail customers?

Performance measures

1. In the light of the reforms in the electricity industry, please rate the performance measures from 0 -4 as per the attached rating schedule for:

    1. Electricity retailers
    2. Electricity lines companies

2. Should five year trends be shown?

3. In your opinion do the costs of providing any of these measures exceed the value in having them included in the annual report.

4. Is it valid to avoid including these performance measures in the annual report if they are included in the disclosure documents required by the Ministry of Economic Development? The Ministry of Economic Development has stated that the information provided under the disclosure regulations is "almost, without exception, highly unsatisfactory". (December 1999 Electricity (Information Disclosure) Regulations newsletter).

Trust transparency

1. Do you think that there should be different levels of accountability for
    - Public listed electricity companies, where there is a wide distribution of shareholding.
    - Electricity companies where all shares are held by a community trust
    - Electricity companies where all or the majority of shares are held by council(s).

2. To what extent do you believe that the requirement of accountability can be provided by the disclosure regulations?

3. To what extent should the trust itself be accountable?

4. Is it fair to be concerned about the information being disclosed by trust-held electricity companies? Should they have to issue a full annual report to beneficiaries? (Some do not make their annual report available to anyone but trustees (shareholders) although most Trust Deeds state that financial statements are available for viewing at trust and/or company offices).

The scale is as follows:

0	1	2	3	4
Should **not** be disclosed	Should be disclosed but is of **minor importance**	Intermediate importance	Should be disclosed and item is **very important**	It is **essential** to disclose this item

Appendix N

Stakeholder rating of performance measures

Performance Measure Ratings: Line companies

	Frequency				
Performance measures	4	3	2	1	0
Debt to equity ratio	3	0	3	0	0
Funding cost cover (times interest covered)	1	0	3	1	1
Net tangible assets per share	1	0	1	3	1
EBIT/Average net funds employed	3	0	1	2	0
Dividend per share	1	0	1	2	2
Return on total assets	4	0	1	0	1
Return on equity	4	0	1	0	1
Accounting rate of profit	6	0	0	0	0
Total number of interruptions	5	0	0	1	0
Average total duration of interruptions of supply per customer	6	0	0	0	0
Average number of interruptions of supply per customer: 5-10 years	6	0	0	0	0
Number of faults per 100 km of prescribed voltage line:5-10yrs	5	1	0	0	0
Total costs per kilometre	5	1	0	0	0
Average consumption kwh per customer (5 years)	0	2	2	0	2
Number of customers by sector	1	2	2	0	1
0 should not be disclosed 1 Minor importance 2 Quite important 3 Very important 4 Extremely important, disclosure is essential					

Performance Measure Ratings: Retail companies

	Frequency				
Performance measures	4	3	2	1	0
Debt to equity ratio	3	0	3	0	0
Funding cost cover (times interest covered)	2	0	3	0	1
Net tangible assets per share	1	0	1	3	1
EBIT/Average net funds employed	2	0	1	3	0
Dividend per share	1	0	1	2	2
Return on total assets	3	0	1	1	1
Return on equity	3	0	1	1	1
Overhead costs per retail customer	1	0	2	2	1
Average domestic power bill	1	1	1	2	1
Pricing information	2	0	2	1	1
Total costs per customer	3	0	0	0	3
Average consumption kwh per customer (5 years)	0	1	2	0	3
Number of customers by sector	1	2	2	0	1
Change in market share in major areas of activity	1	1	1	0	3
0 should not be disclosed 1 Minor importance 2 Quite important 3 Very important 4 Extremely important, disclosure is essential					

CFO letter re interview

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7 August 2000

Mr
TransAlta
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Dear

As promised I am enclosing some information as background to my discussion with you on 8 August at 2 pm.

My doctorate is entitled "Accountability in the Retail and Distribution Sectors of the NZ Electricity Industry". Part of the research has involved developing a disclosure index to measure the extent and quality of information disclosed in the corporate annual report. The index was developed from extant literature and from interviews with a panel of 15 stakeholders. Each annual report was then scored by me and independently by another accountant. An arbitration process followed until a consensus was reached for the score for each item. The scores for each company were then sent to the Chief Financial Officers for validation. CFOs used this opportunity to discuss some of the scores. TransAlta did not respond at this stage.

I have attached the scores obtained for TransAlta's annual report for the 1998/99 financial year together with the criteria used to assess the quality of each disclosure.

The following page outlines the issues that I would like to discuss with you.

I am very appreciative of you giving time for an interview and look forward to meeting with you.

Yours sincerely

Jill Hooks

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