Regulation of distribution businesses and distribution networks
Presentation by Nigel Barbour on 4 May 2006 to the ETNZ Conference

CONNECTING THE FUTURE

POWERCO

Introduction:

1. Thank you for the kind introduction and for inviting me here to present today. I will outline in a few minutes, in more detail, what my presentation will cover. However, in essence, my presentation will cover:

    a. why 'poor quality' regulation (as perceived by the 'regulated') keeps the Board and Executive Managers of Powerco and other companies (e.g. Unison Networks, Vector Networks) awake at night (figuratively speaking);

    b. the potential impacts of 'poor quality' regulation on trust owned electricity distributors and therefore why Trustees should be concerned about 'poor quality' regulation; and

    c. recommended improvements to the regulatory regime.

2. If you have any questions, just 'sing out' as I am only to pleased to answer them as we go. I would prefer to have a dialogue than a monologue from myself.

3. To be clear from the outset, neither Powerco or I, are arguing for no regulation. Rather we (i.e. Powerco and I) are arguing for quality regulation (e.g. stable and predictable, changes to established regulatory practice are done on a forward-looking basis only, merit review is introduced).

4. Fortunately or unfortunately (depending on your view point), Powerco has been at the forefront of recent regulatory decisions, for example, via gas pipelines and to that extent, has been 'witness' (a far too neutral term) to the development of the regulatory regime and in my and Powerco's opinion some 'poor quality' regulatory decisions. To this end, my presentation draws upon these experiences for the purposes of sharing with you today.

What this presentation covers:

5. This presentation covers:

    a. The 'looming wall of wire' facing electricity distributors and the significant (and continuing) increases in labour and material costs;

    b. Brief summary of the thresholds regime and what happens if an electricity distributor breaches the price path threshold;

c. The under valuation of the regulatory asset base problem and why this under valuation is “artificially” inflating returns. Regulatory asset base (or as it is known by is acronym RAB) means the assets and their value on which the firm is allowed to earn a return (or to use another term, interest);

d. Why, on the basis of recent ‘poor quality’ regulation and regulatory decisions, regulation keeps the Board and Executive Managers of Powerco awake at night;

e. The impact, facilitated by use of an example, of ‘poor quality’ regulation on trust owned electricity distributors and therefore why Trustees should be concerned about ‘poor quality’ regulation;

f. Why merit review is key to quality regulatory outcomes;

g. Recommended improvements to the regulatory regime; and

h. What Trustees should be doing about the regulatory regime.

6. By way of final introductory comments:

a. First, this presentation does not cover the choice of weighted average cost of capital (WACC) model or the estimation of model inputs (also known as parameters). However, I make the following comments:

i. I note the recent media articles written by or quoting Simon Botherway of Brook Asset Management and the submissions by Powerco and other parties on this subject, the substantial majority of which conclude that the Commerce Commission’s WACC estimate is too low;

ii. Powerco’s nominal post tax WACC estimate for gas pipelines is 9.7% at the 50th percentile, and 11.8% at the 75th percentile. These estimates are calculated using the same WACC and Capital Asset Pricing Model (CAPM) formulations as those applied by the Commerce Commission. The point is, that even using the same ‘model’ there are significantly divergences depending upon the inputs used. It is the old story, the ‘devil is in the detail’ and in this case the detail is in the inputs (also called parameters);

iii. Powerco and other companies (e.g. Orion) are arguing for a panel of experts to establish WACC estimates; and

iv. I note the recent paper entitled "Estimating the WACC in a Regulatory Setting An assessment of Dr Martin Lally's paper *The Weighted Average Cost of Capital for Electricity Lines Businesses* of 8 September 2005, which the New Zealand Commerce Commission released and posted on its website in September 2005" ("LINES") authored by Glenn Boyle, Lewis Evans and Graeme Guthrie. This paper contains a detailed analysis of the approach followed in LINES and provides an overview of what the authors consider to be the critical areas of concern and then discusses specific errors in detail;

b. Secondly, in schedule 2 of this presentation I have set out in more detail the regulatory regime applicable to electricity distributors; and

c. Thirdly, in schedule 3 of this presentation I have set out some (albeit highly summarised) information and my views on:

i. why investor confidence (such as institutional investors and infrastructure funds) in New Zealand has declined in recent times by, for example, retrospective changes to regulatory approach (e.g. calculation of regulatory tax allowance in gas pipelines and Unison Networks inquiries); and

ii. why the modelling approach taken by Commerce Commission in general and with respect to the calculation of one operating cost item, regulatory tax allowance, is (in my and Powerco's opinion) "artificially" inflating returns.

The 'looming wall of wire' facing electricity distributors and the significant (and continuing) increases in labour and material costs:

7. The 'looming wall or wire' is best explained by looking at the asset investment cycle for electricity distributors. Schedule 1 of this presentation illustrates the asset investment cycle for electricity distributors.

8. The asset investment cycle (see schedule 1) for electricity distributors shows there will be a significant and continuing increase/step change in renewal capex over the next 15 years.

9. This increase in renewal capex is in addition to the significant increase in development expenditure (e.g. network extensions to connect and reticulate new industrial parks and residential subdivisions) experienced in recent times.

10. This increase in capex requires electricity distributors to invest in electricity distribution assets and investment in electricity distribution assets depends on investors' expectations about how regulation (in particular price control) will be applied.

11. Turning to the second point, the significant (and continuing) increases in labour and material costs incurred by electricity distributors. By way of illustration:

    a. the producer price index (PPI) has increased by a cumulative 10% since 2003 (however price path threshold CPI has only increased by 5.4% over the same period); and

    b. the cost of zone substation transformers has, in recent years, increased by about 40%.

12. From an 'economic perspective' we are seeing the law of supply and demand in action, where supply is tight (i.e. there is a shortage) and demand has increased. Looking at materials for instance, NZ electricity distributors are competing with overseas distributors for the same materials (with a number of countries (e.g. Australia) being more or less at the same point of the asset investment cycle and consequently their demand has also increased). Further, the increased price of oil and other inputs into electrical works (e.g. the price of metals, metal being an input into cables and transformers) has increased the price of materials. The recent fall in the value of the NZ dollar has 'exacerbated' the upward trend in the cost of materials. With respect to labour, there is an international shortage of skilled workers and the market is driving up wages and salaries.

13. Why is this relevant? It is relevant because, going forward electricity distributors need to generate and/or have available more cash than they do presently to fund their forecast working capital, capital expenditure and debt servicing requirements and 'poor quality' regulation or regulatory decisions could result in electricity distributors not generating or having sufficient available cash.

Brief summary of the thresholds regime and if what happens if breach:

14. Subpart 1 of Part 4A of the Commerce Act 1986, establishes the regulatory regime for electricity distributors. The Commerce Commission is required to set thresholds (and has set two thresholds) and assess the performance of electricity distributors against those thresholds. The thresholds operate as a screening mechanism to identify businesses whose performance may require further examination and, if required, control by the Commission.

15. In gas pipelines and Unison Networks inquiries the Commerce Commission used building blocks analysis to construct efficient prices (the "factual") for the purpose of determining whether the firms were extracting excessive profits and control should be imposed. This involves determining:

    a. the efficient asset base (Regulatory Asset Base ("RAB")) required by the electricity distributor to provide lines services;

b. the efficient rate of return *on* capital (WACC);

c. the efficient rate of return *of* capital (depreciation); and

d. the efficient level of operating costs (including regulatory tax allowance).

16. The use of building blocks analysis in itself is a not a problem, the problem is the 'inputs' (another case of the devil is in the detail). If the inputs are inappropriately calculated, then (from the perspective of the regulated) the Commission will incorrectly calculate the electricity distributors allowable revenue leading to the flawed conclusion that the distributor is extracting excessive profits and control should be imposed.

17. By way of an example of an inappropriately calculated input, if an electricity distributor's properly valued RAB is $400 million but the ODV value is only $300 million, the firm is only allowed to earn a return (in effect interest) on 75% of the value of its investment. That is, for every dollar the firm invests it is only allowed to earn interest on 75 cents. In a similar vein, if the firm forecasts that it will spend $50 million reconductoring power lines over say 5 years; the firm will earn a return (in effect interest) on about 20% of the value of its investment, because the ODV 'uplift' is about 20%. This issue will be discussed in more detail later in this presentation.

18. On the basis of some 'back of the envelope analysis' I understand that has been undertaken by one of the big 4 CA firms, if the Commerce Commission were to construct the efficient prices for all 28 electricity distributors, using building blocks analysis and inputs consistent with those it used in gas pipelines and Unison Networks inquiries, the Commission would conclude that about 18 (of the 28 electricity distributors) are extracting excessive profits and control should be imposed on these firms.

19. As discussed later in this presentation and as set out in schedule 3 of this presentation, the modelling approach taken by the Commerce Commission in gas pipelines and Unison Networks inquiries is inappropriately calculating inputs to the building blocks analysis and, in my opinion, 'artificially' inflating returns.

"Artificially" inflating returns - RAB undervalued:

20. ODV methodology (for the reasons set out below) materially undervalues distributors RAB – 10 to 25% (best guess). By way of example, Powerco recently upgraded a 66kV line (replacing poles and cross arms). The cost was about $800,000 however the ODV value of the line only increased by $168,000 or 21% of the actual cost. This is analogous to investing $100 with a bank for term of one year at 7% and at the end of the year getting back $21 of your original investment plus interest of $1.47 (being 7% of $21).

21. Another good example, was presented to the Commerce Commission by Mr Ken Forrest of Marlborough Lines on the second day (18 November 2005) of the Commission's intention to declare control of Unison Networks conference. The example is as follows:

"Another example is if we take an 11 kV overhead line with light conductors on concrete poles . . . and we replace that line with a new medium conductor on new poles, the calculations show that the increased ODV value less disposals would be $19,670, this compares with the standard value of an 11 kV overhead medium conductor line of $28,000 per kilometre. We estimate the cost of building 1 kilometre of medium 11 kV line at $29,000 which is marginally more than the standard value. But that's if the line were to be constructed on a greenfields basis.

"However, constructing the line along the same route as an existing line, such as [the] example I gave before, using supply shut downs for a total of approximately 16 hours and including the cost of removal of the existing line is estimated to cost $34,800. If the line would be constructed using live line techniques for pole installations and one six hour supply shut down to run the new conductor the estimated costs, including removal, increases to $46,600.

"So it's apparent that on the basis of these estimates that the increased ODV value . . . would be between 42% and 56% of the estimated cost depending on where the supply was interrupted to consumers supplied by that line."

22. The "under valuation" problem has many causes. Some are:

    a. The use of generic as opposed to company specific costs;

    b. The regulatory asset base does not include all the assets that a new entrant would construct or acquire to operate its business;

    c. The regulatory asset base is not broken down into component parts (e.g. cross arms);

    d. The greenfields assumption; and

    e. There is no allowance for live line work.

23. In short, ODV is not fit for purpose (i.e. the purpose of estimating the RAB (i.e. the assets and there value on which the firm is allowed to earn a return) for price control purposes).

Why 'poor quality' regulation keeps the Board and Executive Managers of Powerco awake at night:

24. To start with a 'tru-ism', cash is king. Electricity distribution businesses are asset intensive businesses with long lived assets which require sufficient cash to fund their forecast working capital, capital expenditure and debt servicing requirements. Electricity distributors have (by way of brief summary) three providers or sources of cash: shareholders; debt holders; and customers. Economic regulation 'touches' (figuratively not literally) directly at the third of these or more particularly it regulates the stream of cash (i.e. revenue) from customers and as a consequence 'touches' indirectly at shareholders and debt holders.

25. Turning to answer the question, put simply there are three reasons: "further investment in the business and in the renewal and development of the network", "cash flows" and "value". To elaborate, "poor quality" regulation (and regulatory decisions) can have a material adverse effect on the cash flows and/or value of a electricity distribution business and adversely affect 'investor appetite' to invest further funds in the business or the business's own appetite to invest in, for example, expanding its networks or increasing the reliability of its network. For example, "poor quality" regulation (or regulatory decision) could result in Powerco generating and/or having available insufficient cash to fund its forecast working capital, capital expenditure and debt servicing requirements.

26. To further elaborate on the investment point, gas, unlike electricity, is (in Powerco's view) a discretionary fuel and competes with other sources of heat such as electricity and LPG. For example, when and if Powerco expands its gas distribution network to reticulate a new residential subdivision, unlike electricity, 100% of properties in the subdivision will not connect and use natural gas. The figure is, in general terms, about 50%. Therefore, investors 'take a punt' on the number of customers that will connect and use natural gas (known as penetration). Putting yourself in the shoes of an institutional investors or an infrastructure fund (such as Babcock and Brown Infrastructure Powerco's sole shareholder) would you invest further funds (from your pool of funds available for investment) when you could purchase a regulated gas distribution business in the United Kingdom or the United States where 'penetration rates' are higher (90% to 100%) and the regulator allowed you to earn what you considered a more commercially reasonable return than the regulator in New Zealand? I know how I would answer this question. Further, the attractiveness of New Zealand as an investment destination is also a function of the 'faith' (and I have chosen this term deliberately) in the regulatory regime. When investors sink funds into asset intensive businesses, they make certain assumptions about the regulatory regime - they are making a leap of faith. Investors will not make the leap, if the regime is of poor quality.

Example of impact of 'poor quality' regulation on trust owned electricity distributors:

27. Poor quality regulation and regulatory decisions which, for example, have a material adverse effect on cash flow (i.e. revenue) are a threat to:

    a. trust owned electricity distributors generating and/or having available sufficient cash to fund forecast (1) network renewal and development capital expenditure (2) working capital and (3) debt servicing requirements;

    b. the distributions that firms pay to their trust shareholder or to beneficiaries; and

    c. trust ownership of electricity distributors if it means that the firm has to reduce or not pay any distribution. Electricity distribution businesses are 'yield' not 'growth' investments. Therefore, I pose the question as to whether an investment in an electricity distributor who was not paying a dividend, or the dividend that was less than bank deposit interest rates, would satisfy trustees' legal duties to invest trust funds prudently.

28. Consider the following hypothetical example with respect to a trust owned electricity distributor:

    a. average rate of return (measured using ODV as the denominator and over period of 5 financial years) is 1% ;

    b. price path threshold X factor of 1% (meaning that average price can change by CPI + 1%);

    c. debt to total assets ratio is 40%;

    d. total revenue is sufficient to cover direct and indirect costs, interest, income tax, depreciation and amortization;

    e. renewal capex forecast to increase by up to 200% per annum over the next 20 to 25 years (see schedule 1) ; and

    f. total revenue and hence line charges need to increase by 25% to 'fund' this increase in renewal capex.

29. To 'fund' the increase in renewal capex via line charges, the electricity distributor would have to increase its average prices by more than CPI + 1% and thereby be in breach of its price path threshold. One problem with this option is the ODV under valuation of RAB problem, which is particularly 'acute' for renewal capex. As discussed earlier in this presentation, the ODV value uplift for renewal capex is significantly less than actual cost (approximately around 50 to 60%) and therefore the Commerce Commission's modelling approach will calculate that the firm can only earn a return on 50 to 60% of the actual cash spent by the firm on renewal capex.

30. As an alternative to breaching the price path threshold, the electricity distributor would need to:

    a. reduce its distributions by an amount equal to the 25% of total revenue. This option is not available for trust owned electricity distributors whose distributions are via discounted line charges; and/or

    b. increase its debt (assuming banks and other providers of debt are agreeable to lending further monies); and/or

    c. not invest in 'renewing' or 'developing' its network, which will result in a deteriorating service or no service (at the extreme).

31. Points to note from this example. First, the electricity distribution business is unable to generate sufficient cash from line charges (without breaching the price path threshold) to fund the distributors forecast working capital, capital expenditure and debt servicing requirements. Secondly, to avoid breaching its price path threshold, the electricity distributor has to reduce or not pay any distribution, 'gear up' and/or defer (or not invest) in renewing and developing its network.

Merit review:

32. Merit review is key to quality regulatory outcomes over time. It increases the accountability of regulators, clarifies and develops the general principles and intellectual framework, and reduces error. This is fundamental to creating an environment where investors can have confidence in the regulatory framework and commit to long-term investments.

33. Objections to merit review that focus on risks of delay and cost are exaggerated. The mistake so far has been the view that these concerns can only be addressed by ruling out merit review altogether.

34. Merit review is a flexible concept, and any balance that needs to be struck between quality control and perceived risks of cost and delay can be struck by considering whether an appeal should be de novo or on the evidence before the regulator, rules for introducing new evidence, whether the regulator's decision should stand in the meantime, and so on. New Zealand is in a minority in denying appeals on the merits altogether.

35. An example of an area where an appeal right has added considerable value is the mergers regime under the Commerce Act. A body of principle has developed that greatly assists the Commerce Commission (which has a robust framework to work to) and market participants (who have a greater degree of certainty).

Recommended improvements:

36. Recommended improvements (non exhaustive list):

a. Merit review is introduced;

b. Where regulatory practice changes (i.e. the regulator changes established regulatory practice), the regulator can do so on a forward-looking basis only (i.e. regulator cannot retrospectively remove the benefit of arrangements entered into in reliance on regulatory practice in force prior to the change in regulatory practice);

c. Use of benchmark asset values (e.g. ODRC) for calculation of the regulatory asset base **and** for the calculation of the regulatory tax allowance;

d. The standalone principle of regulatory practice (see the decision of the High Court in *Welgas Holdings Ltd v Commerce Commission* [1990] 1 NZLR 484) is recognised;

e. For building blocks modelling purposes distributors opening RAB (to ensure RAB accurately valued and complete for consistency with the hypothetical new entrant test):

   i. to be estimated using ODRC methodology and business specific costs (not standard and non component part costs);

   ii. to include all the assets that a hypothetical new entrant would construct and acquire to operate its network;

f. Convene a panel of experts to establish WACC estimates;

g. Use 75th to 90th percentile estimate of WACC as opposed to mid point estimate;

h. For additions and deletions to RAB (1) allow distributors to use historic cost or indexed historic cost or (2) allow an adjustment (either to WACC or cash flows) to accommodate the asymmetric risk of optimisation (distributors choice); and

i. The 'whether to control test' is NAB>0 and NPB≥ 0.

What Trustees should be doing about the regulatory regime:

37. In my view, Trustees via the companies they own and ETNZ, should be doing the following (non-exhaustive list):

    a. Lending their support and weight to the 'goal' of quality regulatory outcomes, starting with merit review (plus other improvements such as those set out above) that are a necessary prerequisite to this goal; and

    b. Start the process of dialogue with their beneficiaries and customers to explain that the looming 'wall of wire' facing electricity distributors and the significant (and continuing) increases in labour and material costs will mean line charges have to go up. Even if trust owned electricity distributors were run as 'not for profit' firms, line charges would more than likely still have to go up.

Conclusion:

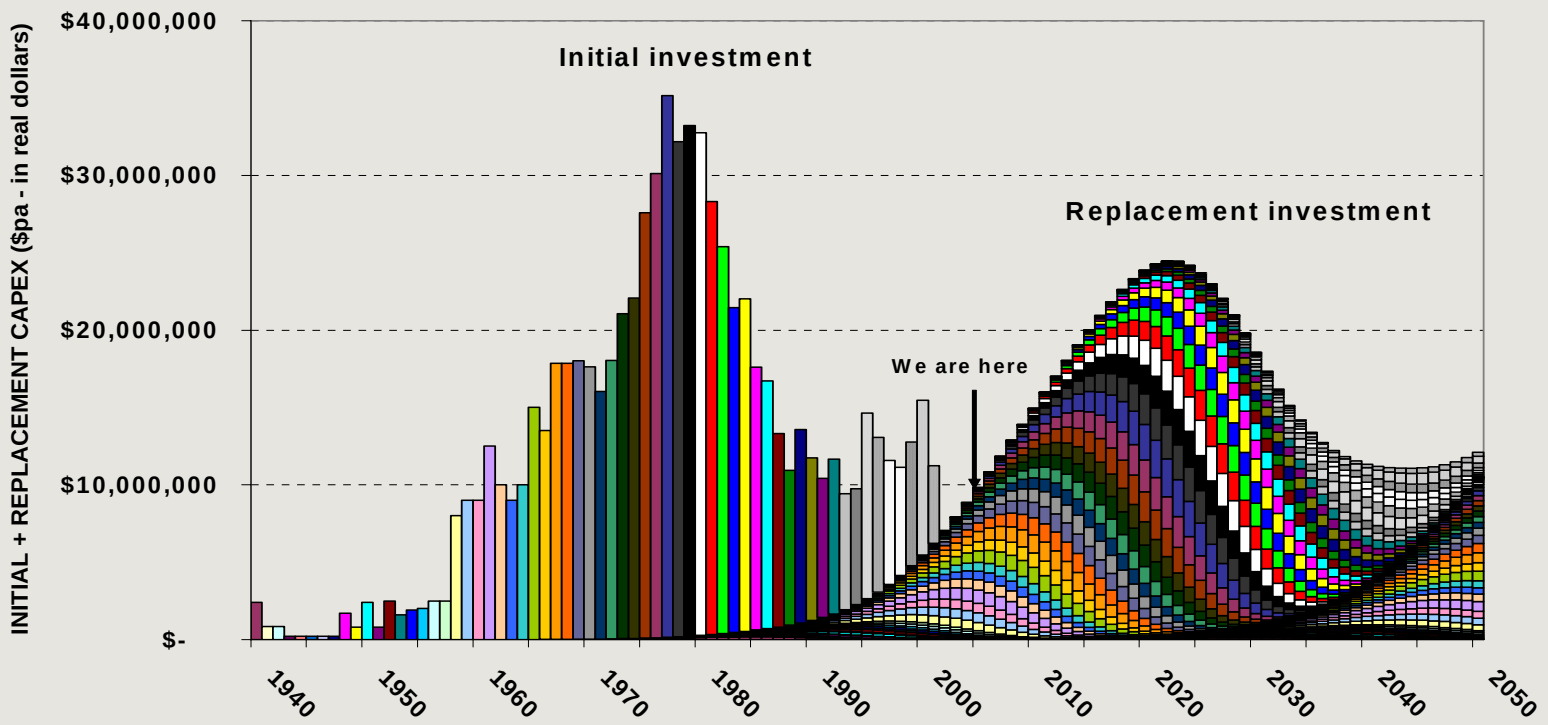
38. The asset investment cycle (see schedule 1) for electricity distributors shows there will be a significant and continuing increase/step change in renewal capex over the next 15 years. This increase in renewal capex is in addition to the significant increase in development expenditure experienced in recent times.

39. Investment in electricity distribution assets depends on investors' expectations now about how regulation will be applied over the decades that follow. Regulators need to make decisions in a manner which is consistent with stability and predictability in regulation, including placing a high weight upon consistency and seeking to preserve reasonably held expectations.

40. Certain recent decisions of the Commission are, in my view, failing to create a sufficiently stable and predictable regime. In both the electricity and gas context, for example, the Commission has adopted an approach to taxation and to cost allocation methodologies which is not only at odds with international best practice but also with the regulatory approach adopted previously. The effect of this approach is to remove the benefit of companies' reasonably held investment expectations retrospectively. Decisions like these undermine future investment decisions to the overall detriment of the New Zealand economy.

41. Merit review is key to quality regulatory outcomes over time and improvements. Further, the achievement of quality regulatory outcomes also requires improvements in addition to merit review, such as those set out above.

Schedule 1


INITIAL + REPLACEMENT CAPEX ($pa - in real dollars)
$40,000,000
$30,000,000
$20,000,000
$10,000,000
$-
Initial investment
Replacement investment
We are here
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
2040
2050

Schedule 2

Snapshot of current economic regulatory regime:

Targeted control regime: Price path and quality thresholds:

1. Subpart 1 of Part 4A of the Act, which came into force on 8 August 2001,requires the Commission to implement a targeted control regime for the regulation of large electricity lines businesses ("LELBs").

2. The Commission is required to:

   a. set thresholds for the declaration of control in relation to LELBs (section 57G);

   b. assess LELBs against those thresholds and identify any LELBs that breach the thresholds (section 57H); and

   c. determine whether or not to make a declaration of control in respect of any LELB that has breached the thresholds (section 57H). Before making a declaration of control, the Commission is required to publish a notice of its intention to make a declaration of control, and hear from interested parties (section 57I).

3. The Commission set two initial thresholds on 6 June 2003: a price path threshold and a quality threshold.

4. The initial price path threshold for the period to 31 March 2004 operated as follows:

   a. on the first assessment date (6 September 2003), each LELB's baseweighted notional annual revenue (“average price”) must not exceed its lowest average price at any time between 8 August 2001 and 6 June 2003;

   b. during the period 6 June 2003 to 6 September 2003, each LELB's average price must not exceed its average price at 6 June 2003; and

   c. during the period 6 September 2003 to the second assessment date (31 March 2004), each LELB's average price must not exceed its average price at 6 September 2003.

5. The initial quality threshold had two criteria, a reliability criterion requiring no material deterioration in reliability, measured in terms of SAIDI and SAIFI and a customer engagement criteria requiring meaningful engagement with consumers to determine their demand for service quality.

6. On 2 May 2003 the Commission announced that it would reset the price path threshold to apply from 1 April 2004 to distribution businesses.

7. On 23 December 2003, the Commission reset the price path threshold whereby, from the third assessment date (31 March 2004) onwards:

   a. at each assessment date, each LELB's average price must not exceed the allowable average price of the LELB at that assessment date fixed by reference to a Consumer Price Index ("CPI") - X price path; and

   b. during an assessment period, the LELB's average price must not exceed the greater of the LELB's average price at the assessment date on which the assessment period ends and the electricity lines business's average price at the previous assessment date.

8. The following extract is a good description of the Thresholds:

Rotorua Unison Networks
Commerce Commission Presentation 14 December 2005

DR GUNN: *Thanks very much, good morning everyone. I'll be talking about the performance thresholds that the Commission has set and what happens following a breach of those thresholds, and particularly where we're at with Unison currently. The Commission has set two performance thresholds for the electricity lines businesses, both of which apply to the businesses like Unison for a 5 year period beginning from 1st of April 2004.*

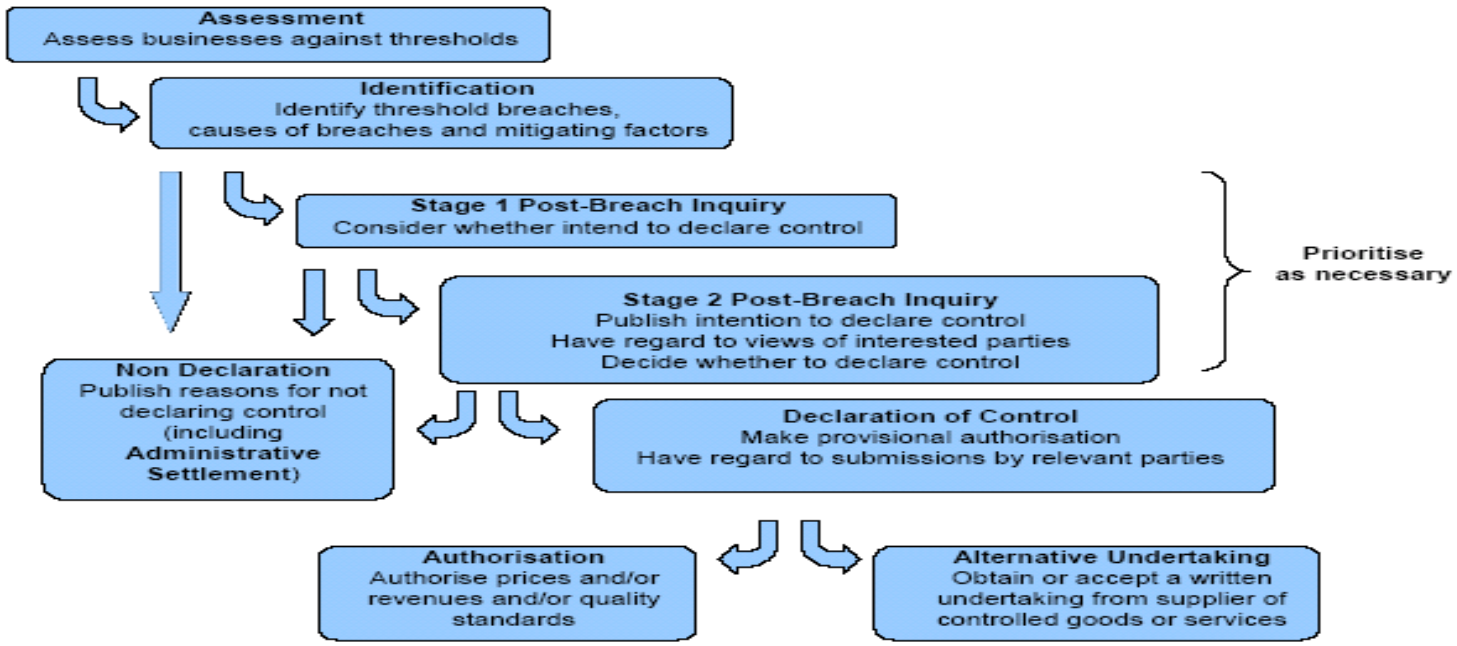
The first threshold is a price path threshold, representing the expected maximum annual change in average prices for businesses. Going forward, any lines business whose average price changes at an annual rate exceeding the change in the consumer price index, meaning inflation, less an annual change of X percent set by the Commission for that business, will breach the price path threshold. That X percent, which is an efficiency factor which we term an "X factor", has been assigned to the distribution businesses on the basis of their relative efficiency and their relative profitability. Of the 28 distribution businesses nine have an X factor of about 2 percent. Assuming inflation is, say, 2.5 percent, those businesses would be able to increase their average prices by about half a percent each year and still be able to comply with the Commission's price path threshold. Nine businesses have an X factor of 1 percent, seven businesses, including Unison, were assigned an X factor of 0 and the remaining three have an X factor of 1 percent.

The second threshold is a quality threshold which comprises two sets of criteria; reliability criteria and consumer engagement criteria. The reliability criteria require each year a lines business must demonstrate that there's been no material deterioration in its reliability of supply. The purpose of this criteria is to provide incentives for lines businesses to not allow their reliability to fall as a means of reducing costs in response to the price path threshold. The consumer engagement criteria capture a very key aspect of service quality, finding out what consumers actually want. At least every two years, each lines business must demonstrate to the Commission that it has meaningfully engaged with consumers to determine their demand for service quality. In particular, businesses are expected to properly advise their customers about the price quality trade-offs available to them.

In combination, these two thresholds, the price path and quality threshold, are simply a trigger for the Commission to identify those businesses whose performance may warrant further examination and only, if necessary, control.

9. The Commerce Commission's guidelines for post breach inquiries sets out the following steps:

Figure 1 – Targeted Control Process Steps



10. In gas pipelines and Unison Networks inquiries the Commerce Commission used building blocks analysis to construct efficient prices (the "factual"). This involves determining:

    a. the efficient asset base (Regulatory Asset Base "RAB")) required by the electricity distributor ("LELB") to provide lines services;

    b. the efficient rate of return *on* capital (WACC);

c. the efficient rate of return *of* capital (depreciation); and

d. the efficient level of operating costs (including regulatory tax allowance).

11. From The efficient factual revenue is then calculated using the following equation:

$R_f = A_f \times WACC + D_f + O_f + T_f - G_f$

where:

A_f	is the factual regulatory asset base;
WACC	is the post-tax nominal weighted average cost of capital;
D_f	is the factual depreciation of the regulatory asset base;
O_f	is the factual operating cost;
T_f	is the factual regulatory tax allowance (comprising tax payable plus the interest tax shield); and
G_f	is the revaluation gain

Information disclosure regime:

12. Electricity distributors are required to disclose detailed financial and performance information in accordance with the Disclosure Requirements determined by the Commerce Commission.

Electricity Commission work streams which affect electricity distributors:

13. The major work streams affect electricity distributors:

a. model distribution arrangements (i.e. 'quasi mandatory' use of system agreements);

b. terms and conditions for connection of distributed generation to distribution networks (and the pricing of the same);

c. distribution pricing methodologies;

d. transmission pricing (including transmission counterparty).

Other:

14. Other major regulations and work streams that affect electricity distributors:

a. low fixed charges to domestic customers using less than 8,000kWh per annum;

b. land complaints becoming part of Electricity and Gas Complaints Scheme.

Schedule 3

Further investment depends on regulatory regime:

1. Investor confidence (electricity distributors, onshore and offshore investors (such as institutional investors and infrastructure funds) in New Zealand has declined in recent times for the following reasons:

    a. The lack of a stable and predictable regulatory regime;

    b. The modelling approach taken by the Commerce Commission in gas pipelines and Unison Networks inquiries is "artificially" inflating returns;

    c. The over emphasis on profit assessment and the total transfer of 'so called' "excess returns" from shareholders to 'acquirers';

    d. The lack of 'merit review'.

2. Examples on the point of the lack of a stable and predictable regulatory regime are:

    a. Method of measuring the performance of distributors and in particular profit has changed materially since December 2003 (less than 2 years into a 5 year regulatory period);

    b. Approaches taken to airports, gas pipelines, Telecom and Unison Networks are not readily reconcilable. Material differences in important modelling issues; and

    c. Material changes from established regulatory practice. For example, in relation to calculation of "regulatory tax".

"Artificially" inflating returns – general:

3. The modelling approach taken by Commerce Commission in gas pipelines and Unison Networks inquiries is "artificially" inflating returns. For example:

   a. The departure from earlier decision (e.g. including a margin on WACC in the profit assessments of distributors that choose ODV as ex-ante compensation for optimization risk) and in the case of Unison Networks not including any margin;

   b. The departure from its experts' (Dr Lally) recommendations in a number of instances;

   c. The departure from established regulatory practice in relation to the calculation of regulatory tax (see schedule 3); and

   d. The under valuation of the Regulatory Asset Base (RAB).

"Artificially" inflating returns - Regulatory tax allowance:

4. The modelling approach taken by Commerce Commission uses different valuation methodologies to value the same assets for different purposes. This is illustrated in the following table, which compares the approach taken by the Commission with the regulatory practice adopted by the ACCC and ESC in Victoria, Australia:

Purpose	***Valuation Methodology used by Commerce Commission***	***ACCC/ESC regulatory practice Valuation Methodology***
Estimate of reasonable return	***ODV***	***Benchmark asset values (e.g. ODRC)***
Estimate of depreciation	***ODV***	***Benchmark asset values (e.g. ODRC)***
Estimate of tax depreciation cost base	***Acquisition cost***	***Benchmark asset values (e.g. ODRC)***

5. The modelling approach gives rise to some perverse outcomes and implications:

   a. The upfront capital cost of a business investing in capital goods (e.g. value of investment is $100 and the depreciated value of capital goods prior to the investment was $100) to reduce its operating costs (e.g. operating costs are

reduced from $50 to $25) is ignored in the calculation of profits and the business is required to pass on the gross costs savings to customers. This is analogous to IRD:

i. disallowing an increase in a company's depreciation cost base (i.e. disallowing the investment of $100) from an investment in capital goods (and therefore disallowing an increase in depreciation allowance); but only

ii. permitting the deduction of the post investment reduced operating costs (i.e. only permitting the deduction of the $25);

b. No investor would invest when they will undoubtedly lose money;

c. Creates a barrier to further sector rationalisation; and

d. Inconsistent with the Commission's own NPV=0 principle.

6. By way of further example of some perverse outcomes, consider the following. There are two distributors (A & B) located within the same region who are identical (e.g. identical cost structures and customer densities) except that A's depreciation cost base for tax purposes is lower than ODV whereas B's is higher than ODV (as the result of acquiring another ELB). Some perverse outcomes and implications are as follows:

a. A's prices should be higher than B's;

b. B would have to lower its prices because it pays less cash tax; and

c. if IRD disallowed B's tax position, the entire depreciation claw back can be recovered from customers in the year of the claw back (this creates 'price shocks').