



Review of Asset Valuation Methodologies

**Submission on the Commerce
Commission's Discussion Paper on
Electricity Lines Businesses' System
Fixed Assets from Powerco**

11 November 2002

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Executive Summary

Powerco supports the integration of the Commission's processes for consultation on thresholds and control with those for the selection of a valuation methodology for lines business system fixed assets.

Valuation methodology is part of the overall regulatory system

For the first time since the commencement of Part 4A of the Commerce Act ("the Act"), the valuation Discussion Paper considers the statutory use to which the valuation methodology is to be put:

- Information Disclosure;
- Thresholds; and
- Declaration of Control.

Under the objectives and purpose of the Act, the Commission's key criterion for evaluating a valuation methodology is the dynamic efficiency of outcomes under it. To this end a competitive standard applies:

The key criterion for evaluating a valuation methodology is dynamic efficiency

- The value of relevant businesses to be set at the market price in an arm's length transaction. This is consistent with both economic theory and current accounting practice

In Powerco's view, an independent quantification of the fixed asset value for electricity lines businesses therefore requires:

- System fixed assets to be valued at ODRC for regulatory purposes;
- A comprehensive review and amendment of the current ODV Handbook for it to be used in this way; and
- Redetermination of the ODRC of lines businesses' system fixed assets (based on a future version of the ODV Handbook modified in this way) for regulatory purposes.

We note too that "system fixed assets" are a subset of the assets used by a regulated electricity lines business to deliver "lines function services". This means that lines businesses are not earning excessive profits if the ratio of net revenue to regulated asset value is greater than an industry WACC provided that:

It is not straightforward to determine company profit levels from a regulated valuation

- revenue is net of peer-group comparable operating costs;
- regulated asset value makes allowance for both intangible assets (such as easements) and the corporate infrastructure (such as IT and office buildings and fixtures) necessary to deliver service from the system fixed assets; and
- WACC adequately compensates investors for both systematic risk and undiversifiable risk.

The complexity involved in carrying out this normalisation and the large number of New Zealand lines businesses would make the use of a regulatory valuation methodology to determine excess profits too costly to be of any net benefit to the economy.



On the basis of the foregoing two paragraphs it would be dynamically inefficient and therefore contrary to the purpose of the Act (i.e. the promotion of competition in markets for the long term benefits of consumers) to use a valuation methodology for thresholds assessments and the price control regime. Such thresholds must relate to outputs only if they are to support dynamically efficient outcomes.

Powerco acknowledges the possible use of a regulatory valuation methodology that has been derived independently of market value in the declaration of control. Where this is the case, the legislation requires such declarations to be 'targeted' and 'for the long-term benefit of consumers' which implies that the cost of determining regulated revenues in this way must be less than the benefit that will result from doing so.

It would be contrary to the Act to use a valuation methodology for thresholds assessments

Unless the Commission can demonstrate that the cost of using a regulated valuation in the determination of thresholds does not outweigh the benefits of doing so, this use of a regulated valuation methodology will not be legal.



Use of a Regulatory Valuation Methodology

Legislation does not prescribe how the regulated valuation methodology is to be used, yet the evaluation of the methodology can only be judged in such a context.

The Commission's Discussion Paper on its 'Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets' ("the Discussion Paper") was released with an announcement that

alongside the paper announcing the results of the review of asset valuation methodologies, the Commission intends to release a high-level paper outlining the Commission's final decisions on the form of the threshold¹

Powerco welcomes the Commission's acknowledgement that it will not be possible to select a regulatory valuation methodology without specifying the uses to which it is to be put. The Discussion Paper proposes using the valuation methodology for at least three purposes²:

- Information disclosure
- Thresholds and
- Declaration of Control.

We note, as the Commission does³, that sub part 4 of Part 4A of the Act provides no explicit purpose statement for the review of asset valuation methodologies. Indeed the establishment of a thresholds regime is distinct and separate from the review of valuation methodologies. If the Thresholds regime involves the use of a valuation methodology then decisions under the scope of the Thresholds consultation will affect the choice of valuation methodology under this review.

Thresholds and valuation are distinct and separate

In sub part 4 of Part 4A of the Act, the scope of the asset valuation methodology is restricted to "system fixed assets" as defined in the information disclosure regulations, which exclude easements 'obtained and registered against a land title after 1993'⁴.

The asset value thus derived is therefore less than the total asset value of the regulated business covered by the scope of other regulations (particularly governing the thresholds regime), which includes all easements, rights of access, land and property.

¹ Commerce Commission Media Release - Wednesday 2 October 2002

² Discussion Paper Paragraph 4.4, 4.49 and 10.89

³ Paragraph 1.12

⁴ Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses, 4th Edition, Ministry of Economic Development, October 2000. B.29



Powerco has repeatedly cautioned the Commission against the use of inputs such as a regulated valuation in the administration of its thresholds regime on the grounds that this would:

- Remove incentives for innovation. Where thresholds are set with a prior view of what constitutes an acceptable cost/performance trade-off, assumptions used for setting the threshold may become self-fulfilling if companies receive no reward for exceeding it;
- Increase systematic risk in the sector and so also increase the cost of capital for companies operating in it;
- Deter investors from committing further capital to the sector for fear of regulatory expropriation⁵;
- Be costly when applied across 29 distribution businesses; and
- Therefore goes against the Purpose of the legislation – which is for long-term consumer benefit through: dynamic efficiency.

There remains a risk that the Commission will select a regulatory valuation methodology as a result of the current consultation and subsequently put it to uses under the Thresholds regime, which are not precisely disclosed during this consultation. This uncertainty increases the asymmetric (undiversifiable) risk faced by asset owners in the industry and so increases their cost of capital. In support of this, the Commission notes that in a regulated requirement asset owners' compensation must consist of:

*a regulated return on capital (i.e. risk-adjusted weighted cost of capital (WACC) plus an allowance for asymmetric risks that are not ordinarily provided for in the WACC).*⁶

Furthermore, the systematic risk borne by New Zealand electricity distributors is not directly comparable with that faced by other electricity lines businesses in New Zealand (i.e. Transpower) or regulatory regimes overseas. In particular:

- New Zealand electricity distribution business customers (be they retailers, "direct connects" or end consumers) are not required by legislation to enter into contracts (as is the case in some states in Australia);
- Nor are they required by legislation to pay charges (as is the case with Transpower's customers). For example, one retailer is using Powerco's network without having signed a use of system agreement.;

Yet line function services remain, to all intents and purposes, a Public Good to which end it would be politically untenable to disconnect end consumers where the distribution business's customer did not pay for services received.

The Commission should not use input-based thresholds

Using the valuation methodology in a way that is not specified in the consultation will increase undiversifiable risk ..

.. even though the systematic risk of New Zealand distributors is greater than overseas comparators

⁵ As the Commission notes, Discussion Paper paragraph 10.86

⁶ Discussion Paper paragraph 4.10



Further;

- Final decisions on the form of the thresholds for the declaration of targeted control proposed by Part 4A of sub part 4 of the Act will not be announced until the Commission announces the results of this review of asset valuation methodologies;
- New Zealand lines businesses do not (unlike those in most other regulated jurisdictions) have exclusive territories and do not obtain the construction or ownership rights to new connections or network extension by statutory right; and
- Under section 62 (Continuance of Supply) of the Electricity Act 1992 lines business must (subject to section 62(3)) provide lines services to all points of supply that existed as at 1 April 1993 until 31 March 2013- notwithstanding that many of these points of connection are or will become uneconomic.

These local considerations affect the relevant cost of capital for New Zealand distribution businesses. It would be dynamically inefficient and therefore contrary to the purpose of the Act (i.e. the promotion competition in markets for the long term benefits of consumers) if the Commission did not take these (and any other risks) into account and build them into any calculation it performs when assessing a distribution business is earning excessive profits.

Evaluation Criteria and the Commission's Statutory Purpose

The Commission effectively proposes five evaluation criteria, yet to do so may lead it to select a valuation methodology that is not consistent with the fundamental objective of the Act.

Part 4A is part of the Commerce Act (1986) and as such should be interpreted consistently just like any other section. In this regard we draw the Commission's attention to the overall standard against which sections are to be interpreted in Section 1A:

The purpose of this Act is to promote competition in markets for the long-term benefit of consumers within New Zealand.

In our Thresholds submission on matters raised during the oral hearings 17-24 July, we observe that:

the use of a purpose (or objects) provision in a statute is a relatively recent phenomenon but one which is increasingly used. Apart from three sections in Part IV A (Sections 57H(c), 57K(2) and 57M) there is no specific direction as to the role of Section 57E. The Commission has characterised its test as "must have regard to" (paragraphs 4.17, 4.18 and 4.30) and it has also used "consistent with" (paragraph 10.12).

Either of these characterisations of the provision's role is appropriate. This interpretation is consistent with case law on the role of such provisions: Ashburton Acclimatisation Society v Federated Farmers [1988] 1 NZLR 78, 88; Air New Zealand v Kippenberger [1999] 1 ERNZ 390, 398.

However, Section 57E does not have a role beyond that of assisting interpretation of this part of the Act. It is not a substantive provision in its own right (as to which, see the discussion of the Employment Court in PSA v Designpower [1992] 1 ERNZ 669, 681). Consequently, Section 57E exists to assist interpretation of all of the provisions in Part IV A. It is not intended to provide a mechanistic checklist in the setting of thresholds.

Moreover, to rely explicitly upon subclauses (a) to (c) is to misunderstand their role in Section 57E. Section 57E is intended to be a statement of the competitive market standard (Discussion Paper, paragraph 4.28). But a market in which there is workable or effective competition is not delineated simply by reference to those three factors. Such a market involves the interaction of conflicting interests with market dynamics regulating the inter-relationship of those interests. External regulation is intended to mimic these effects in the absence of workable or effective competition.

But to take each of the three factors in a mechanistic way as a discrete threshold inevitably leads to an examination of individual components out of context. The appropriate, and only benchmark, is that of the competitive market standard incorporated within "... the efficient operation of markets ...

Part 4A must be interpreted consistent with the overall competitive market standard in Section 1A

Just as Section 57E is not intended to provide a mechanistic checklist in the setting of thresholds ..



through targeted control for the long-term benefit of consumers ... ”.⁷

The interpretation of section 57ZD is no different and to isolate three distinct evaluation criteria (as the Commission does on pp. 22-28 of the Discussion Paper) is to risk the same misinterpretation of the fundamental objective of the Act as set out both generally in Section 1A and particularly in Part 4A.

The Commission provides no relative weighting of its evaluation criteria and implies that all three carry equal weight – and that within the first, productive, allocative and dynamic efficiency are to be judged equally important. This is not the case.

The relevant evaluation criterion specified by the Act is that of the competitive market. If the Commission prefers two methodologies equally measured against different criteria, dynamic efficiency should prevail. In particular, the Act ranks a methodology that promotes dynamically efficient outcomes more highly than one which is useful in “the identification of excess profits”.

.. the Commission identifies 5 independent and equally ranked evaluation criteria which is equally inappropriate

⁷ *Regulation of Electricity Lines Businesses - Powerco’s submission on matters raised during the oral hearings 17-24 July, 9 August 2002. pp. 4-5 (Emphasis added).*

Choice of Valuation Methodology

The legislation requires the Commission to identify a valuation methodology for the system fixed assets of electricity lines businesses in the context of Part 4A of the Act.

The scope of this consultation is therefore:

- Valuation of system fixed assets (not businesses); and
- Relevant to other provisions of Part 4A.

**Updated ODV variant
as starting value**

With this scope and under the evaluation criteria that the Commission must apply to selecting one, the only option for arriving at a starting value is ODV or some component of it, recalculated from an updated handbook and revised asset registers.

New Zealand electricity lines businesses do not have construction cost data that is either complete or accurate. To attempt to rebuild proxy historic cost data for the industry would be arbitrary and expensive. We agree with the Commission that valuation is linked to the competitive market standard. In the absence of a market price, an asset valuation must be subject to economic rationale; otherwise underpriced assets will lead to wastage and regulatory uncertainty, which will deter investment.

For additions to the network, replacement cost is the only consistent valuation methodology. To apply historic cost to network additions when sunk assets are valued at a form of replacement cost (such as ODV or ODRC) would be to incur all the costs of a replacement cost valuation methodology without the benefit of determining an asset value that is economically efficient.

**Replacement cost for
additions**

We acknowledge the need to ensure that capital investment is disciplined but suggest that a systematic ex-post optimisation may only serve to deter asset owners from investing in their networks. A self-administered ex-ante capital efficiency review that is subject to agreement with the regulator would achieve the same benefit with no risk of this dynamically inefficient underinvestment.

The currently prescribed ODV valuation methodology is well understood but imperfect as a regulatory asset value. The handbook must be updated and values recalculated to ensure that values do not reflect its current shortcomings, which are that:

**Current ODVs must be
redetermined**

- Standard values are out of date⁸;
- Standard costs reflect the scale economies obtained in large construction projects but are unrealistically low for smaller projects, maintenance and renewal activity;
- The scope of assets covered by the handbook is not a complete description of the system fixed assets of a lines business;

⁸ As the Commission too notes – Discussion Paper paragraph 8.2



- The scope of assets covered by the handbook does not include all intangible assets necessary to render a “bare bones” asset construction useable – particularly with respect to property easements and rights of access; and
- The scope of assets covered by the handbook does not include the corporate and non-specialised assets necessary to deliver line function services (especially corporate assets and IT).

The latter 2 omissions are pragmatic but must be accounted for in valuing the business providing line function services if it is to be used in the evaluation of profit levels or revenue control.

For pricing purposes, line services should relate to the market value of their specialised assets including rights of access and easements. This value is generally lower than the ODRC when the assets are bought as a part of a business in an arms-length transaction. Once exercised by, for example, the placement of a pipeline or distribution line on the land, the statutory right creates a "corporeal hereditament" which is a form of interest in land. Such interests are capable of valuation.

In *The Valuer General v Auckland Gas Co Limited* [1923] NZLR 187, the Court held that the "hereditament" once created by the placing of assets on or under the land, does have a capital value, which consists of the value of the exercised right and assets on the land, and in that sense is valued as the space (subsoil or airspace) exclusively occupied by the assets.

Rights of access have economic value

This case formed the precedent for *Telecom Auckland Limited v Auckland City Council* in the High Court [1995] 3 NZLR 489 and the Court of Appeal [1999] 1 NZLR 427.

There is no economic rationale prescribed for the exclusion of the value of certain property rights in the current ODV Handbook. To build an optimised modern equivalent asset today, an investor would need to purchase the property rights (presumably by way of easements unless constructed along the side of roads). The purchase of the required property rights could exceed the “bare bones” replacement cost of the asset described by the current ODV Handbook. Recent transaction values for lines businesses in some way reflect the value of these property rights but the total businesses have consistently been traded below their replacement cost.

Powerco believes that profit levels measured on a regulated business that includes the assets necessary to deliver service but missing from a system fixed asset valuation would show conclusively that power companies were not earning excessive profits.

We do not, however, advocate this “building block” approach to determining the regulatory asset base in practice.

Powerco contends that as a ready market for distribution businesses exists then such a valuation can readily be obtained by applying the requirements of FRS-3 under New Zealand GAAP to derive a market value.

Answers to the Commission’s detailed questions from the Discussion Paper follow.

Purpose of the Review

1.	<p><i>Should the same valuation methodology necessarily be used for thresholds assessments and for control?</i></p>	<p>Yes. To use a different valuation methodology would be contrary to the scheme of Sub part 1 of Part 4A of the Commerce Act 1986 (the “Act”). Under section 57H, the “Commission must . . . assess large electricity lines businesses (“lines businesses”) against the thresholds set under” sub part 1 of Part 4A of the Act. Asset valuations are an integral component of three of the proposed thresholds (profit, efficiency and sharing). If the Commission used a different valuation methodology for making a decision on control under section 57H, it would (in affect) be applying a different threshold from the thresholds set under section 57G.</p> <p>In relation to Part 4A of the Act, the use of different methodologies at the thresholds and declaration stages may result in companies breaching threshold without control ultimately being declared. This result would be costly, to no benefit and create additional uncertainties on the sector.</p>
2.	<p><i>What factors should be considered in deciding whether a consistent or different approach is desirable?</i></p>	<p>None. As set out in our response to question 1, a different valuation methodology is not permitted under the Act.</p> <p>It may nonetheless be possible to identify a simplified version of a valuation methodology adequate to set revenue or price control to be used for general information disclosure and thresholds purposes. Control is to be targeted under the Act, yet deriving a valuation suitable for use in a declaration of control would be costly. In this case, variants should be distinguished by:</p> <ul style="list-style-type: none"> • Simplicity, fit for the purpose they are to be used for; and • Predictability. <p><i>Simplicity</i></p> <p>If the approach applied for general use is simple it may be appropriate for a more sophisticated model to be used when a threshold is breached. The simplicity would minimise the company’s internal compliance costs and the precision would avoid unnecessary investigations by the Commission, which would lower both internal and external compliance costs.</p> <p><i>Predictability</i></p> <p>The relationship between variants would have to be determinable to avoid investor uncertainty.</p>

<p>3.</p>	<p><i>What level of detail regarding asset values should be publicly disclosed? How should asset valuation requirements be prescribed in practice (e.g. a handbook)?</i></p>	<p>It would be confusing and hence counterproductive to disclose the full level detail required to derive an asset value for the determination of regulated revenues and better to disclose simple valuation data to allow the normalisation of company performance statistics along the lines of what is in Lines Business valuation reports at present.</p> <p>Powerco's preference is that the valuation requirements be prescribed in a Handbook followed by an audit process for compliance rather than extensive information disclosure administration.</p>
<p>4.</p>	<p><i>To what extent should there be any different approach to asset valuations (than for thresholds and control) used for disclosure purposes?</i></p>	<p>None. It would be illogical to use a different valuation methodology for disclosure purposes from that used for thresholds assessments and the price control regime. In addition, it would impose further costs on to lines businesses.</p> <p>Where a simplification of a valuation methodology is used for disclosure purposes (as it is at present), it is possible to compare relative profitability between companies. In this case the absolute profitability levels are meaningless absent the detailed analysis necessary to establish a declaration of control consistent with the Act.</p> <p>For effectiveness in information disclosure, the valuation approach should be simple and easy to use. The current approach to asset valuations could be made a lot simpler.</p>

Evaluation Criteria

<p>5.</p>	<p><i>Are the proposed evaluation criteria of efficiency, excessive profits and cost effectiveness for assessing the valuation methodologies appropriate given the regulatory context in which asset valuations may be used?</i></p>	<p>Section 57T(1) does not envisage a mechanistic checklist in the evaluation of valuation methodologies. The Commission’s proposed criteria are all dimensions of efficiency.</p> <p>As discussed in detail in Powerco’s submission on the Thresholds discussion paper, the materiality of dynamic efficiency effects far outweighs all other considerations from a policy perspective. Where these evaluation criteria, conflict, dynamic efficiency should prevail.</p> <p>The key objective for the valuation methodology under the Act is dynamic efficiency. By identifying a standalone evaluation criterion relating to the determination of excess profits, the Commission risks potential distortions in using a valuation methodology. The benchmark risk-adjusted WACC is itself a function of the uncertainties and risks represented by the valuation methodology used to derive a profit figure. Thus the outcome of a test of profit identifies a function of the administration and design of the test itself – and is not an objective, as the Commission requires it to be.</p> <p>Powerco nonetheless welcomes the Commission’s proposal that the choice of valuation methodology must be demonstrated to be net-efficient in that it would safeguard against the unintended consequences of such distortionary outcomes.</p>
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<p>6.</p>	<p><i>What other evaluation criteria, if any, should the Commission consider?</i></p>	<p>Part 4A is part of the Commerce Act (1986) and as such should be interpreted consistently just like any other subsection. In this regard we draw the Commission’s attention to the overall standard against which sub parts are to be interpreted in Section 1A:</p> <p style="text-align: center;"><i>The purpose of this Act is to promote competition in markets for the long-term benefit of consumers within New Zealand.</i></p> <p>In addition to the Commission’s proposed criteria, we suggest further tests of a valuation methodology’s dynamic efficiency to be:</p> <p><i>Practicality</i></p> <p>Practicality is implied by cost effectiveness, but we observe that the sheer cost and difficulty of implementing some (such as historic cost for sunk assets) may make using them inefficient.</p> <p><i>Long Term Sustainability</i></p> <p>Stability of the outcomes that the valuation methodology supports. Unless the valuation methodology supports the sustainability of the service from lines businesses, it will not achieve the Purpose Statement of Part 4A of the Act – <i>for the long-term benefit of consumers.</i></p> <p><i>Consumer Preferences</i></p> <p>The evaluation criteria should be consistent with consumer preferences. In Powerco’s first submission, we highlight the fact that overseas regulators have misrepresented consumer needs to deliver service outcomes that are inconsistent with them. For consistency with the Purpose Statement of Part 4A of the Act – <i>for the long-term benefit of consumers,</i> consumers’ needs and wants should determine what price and quality they receive.</p>
<p>7.</p>	<p><i>In assessing asset valuation methodologies for system fixed assets, how important is allocative efficiency?</i></p>	<p>It is in our view that the costs of verifying allocative efficiency would outweigh the potential benefits and the Commission should concentrate on the much more important issue of dynamic efficiency. A valuation methodology that is dynamically efficient will be allocatively efficient in the long term. The converse is not necessarily true.</p>

<p>8.</p>	<p><i>How are the level, structure and profile of prices over time affected by the choice of valuation methodology?</i></p>	<p>As the Commission notes, allocative efficiency is largely a matter of pricing rather than valuation and beyond the scope of this review.</p> <p>Lines businesses are required to disclose their pricing methodologies under information disclosure, and it is our understanding that most companies have continued to model their cost allocation and pricing on the Ministry of Commerce Guidelines that were introduced for the separation of lines and energy charges in 1993.</p> <p>Powerco uses this approach to allocate total costs (not just asset related costs) to consumer groups on the basis of asset use. The asset valuation methodology will affect the quantum of costs to be allocated but not the pricing methodology used to recover those costs. It is the latter of these elements that can generate cross subsidies and determine the level of allocative efficiency and not the asset valuation methodology in itself.</p> <p>As noted above, allocative efficiency is subordinate to dynamic efficiency under the purpose of the Act.</p>
<p>9.</p>	<p><i>How does the choice of valuation methodology affect service quality and the ability for electricity lines businesses to provide services of a quality that reflects consumer demands?</i></p>	<p>A valuation methodology has a direct effect on service quality because it tends to freeze-in the level of services delivered by assets already sunk.</p> <p>Powerco's experience is that consumer expectations, particularly in the rural communities, for power quality are rapidly increasing with the widescale adoption of computing and sophisticated machinery (milking, irrigation etc.). Revenue based on valuation methodology that considers sunk assets would not be adequate for the replacement of the assets in these regions with the same level of service previously supplied by the asset.</p> <p>A valuation methodology may effectively penalise investment or maintenance to increase quality levels by optimising down the value of the affected assets. Rationally, no investor would commit funds to such a project in the expectation of recovering less than the cost of capital on their original investment.</p>

<p>10.</p>	<p><i>In assessing asset valuation methodologies for system fixed assets, how important is productive efficiency? What factors should be considered?</i></p>	<p>In our opinion, productive efficiency gains are small compared to dynamic efficiency. As with Powerco’s perspective on allocative efficiency, provided the valuation methodology is dynamically efficient, it will optimise productive efficiency in a wider context.</p> <p>In a regulatory regime which had a systematic deterrent to capital investment such as that described in our answer to question 9, the resulting network “underbuild” would probably be accompanied by over-maintenance to achieve expected service levels. This would be productively inefficient.</p>
<p>11.</p>	<p><i>In assessing asset valuation methodologies for system fixed assets, how important is dynamic efficiency? What factors should be considered?</i></p>	<p>The appropriate, and only benchmark, is that of the competitive market standard incorporated within “... the efficient operation of markets ... through targeted control for the long-term benefit of consumers ..”. As we have argued at length in our other submissions to the Commission on Part 4A, the Purpose Statement of that Part places a particular (if not singular) emphasis on dynamic efficiency.</p> <p>This is no more than a reflection of the capital-intensity, and long asset lives that characterise the industry.</p>
<p>12.</p>	<p><i>How important is the identification of excess returns as a criterion for the assessment of valuation methodologies? What factors should be considered?</i></p>	<p>It is possible to use a valuation methodology may be used as a way of determining the profits of a lines business. In such circumstances, the cost of establishing whether the profits so derived are “excessive” or not may outweigh the benefits of doing so. The process of examining profits in this way may increase regulatory uncertainty and distort management decision making, which would be dynamically inefficient and ultimately inconsistent with the Purpose of Part 4A of the Act.</p> <p>As the process of gauging profit levels using a WACC v ROI formula approach is entirely circular, the absolute level of profitability will require a company-specific determination of the level of efficient profit implied by a particular valuation methodology in the light of:</p> <ul style="list-style-type: none"> • asset betas and hence WACC; • WACC premium for non-systematic risk; • Compensation for inadequacies in the valuation methodology: <ul style="list-style-type: none"> • Omissions (e.g. intangible and corporate assets) • Incorrect input values • Incompleteness • Average Operating cost – allowing a premium for above-average performance; • Local consumer pricing expectation; • Ownership structure; and • History.

		<p>This requires an assessment of the cost of capital, which acknowledges any inadequacies in the valuation methodology, amongst other things. The valuation methodology in itself does nothing to inform the regulator whether the return is excessive or not.</p> <p>Powerco's view remains that price control measures should be based on outputs incorporating a normalised price/quality trade off determined by consumer preferences. It is a matter of historic record that line prices in New Zealand have fallen in real terms over the last five years whilst reliability levels have increased. This is the absolute reverse of what would be expected if line companies had chosen to use the monopolistic characteristics of their supply networks to extract monopoly rentals. There is absolutely no evidence to support the theory that line companies have or are earning excessive profits when the levels of price and reliability are compared to overseas regimes, allowing for the differences in infrastructure, consumer and load densities.</p> <p>We acknowledge that in some overseas regimes the regulatory process has resulted in the removal of excess profits through large downward price adjustments. The starting point with regard to asset values and level of costs is completely different in New Zealand however</p> <p>Where the need to meet the Commission's proposed criterion relating to the identification of excessive profits causes a valuation methodology to be dynamically inefficient it should be disregarded. Dynamic efficiency is the sole evaluation criterion with regard to encouraging a satisfactory level of investment to support the level of quality determined by consumers' preferences.</p>
<p>13.</p>	<p><i>How important is cost effectiveness as a criterion for the choice of valuation methodology? What factors should be considered?</i></p>	<p>The cost of the entire regulatory regime should not outweigh its benefits. As an input to a valuation regime, the cost effectiveness of the choice of valuation methodology is of less importance.</p> <p>The complexity and level of regulatory intrusion in the asset valuation methodology will determine the compliance cost necessary to establish and maintain the valuation regime over time. The process dictated by the valuation methodology must therefore be subject to a stand-alone test of efficiency in order to determine whether or not there is a net benefit in the value of its outputs.</p>



Valuation and Regulatory Control

14.	<i>How great is the scope for bilateral or multilateral contracting regarding asset investment?</i>	<p>Powerco engages in bilateral or multilateral contracting for the assets that apply to major consumers. Our view is consistent with the principle articulated by UnitedNetworks in their submission on the Thresholds discussion paper: <i>since the distribution services supplied to large users (e.g., with a connection greater than 300kVA) are contestable, they should be excluded from the thresholds</i> since this is the level that the connection is competitive.</p> <p>Assets serving domestic and smaller industrial and commercial consumers are widely shared. Given the difficulties faced by Transpower with multilateral contracts between a relatively small numbers of consumers, we believe multilateral contracting for distribution assets <300kVA to be impractical given the sheer number of end consumers connected to each asset. Where certain assets are for sole or group use however and both distributor and consumer(s) are prepared to contract directly on reasonable terms then where practical both the revenue and assets involved should be removed from regulatory control.</p> <p>Our experience is that even large consumers with dedicated connections may be loath to enter into long-term contracts and that it may not be possible to rely on any form of contract to underwrite a lines business's investment risk.</p>
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<p>15.</p>	<p><i>How should contractual management of asset-related risks be dealt with in the context of regulatory asset valuation?</i></p>	<p>The regulatory asset valuation should allow for the allocation of risk, by excluding both the contract revenue and the assets from the regulated revenue base. For example, if:</p> <p>(a) a new heavy industrial consumer wanted to connect to an lines business's assets and in order to connect them to the network significant new investment was required; and</p> <p>(b) the consumer and the lines business agreed (amongst other things) that the consumer was to bear all "optimisation" risk;</p> <p>then the assets should not (pursuant to the valuation methodology) be optimised down (i.e., the contractual allocation of risks should take precedence).</p> <p>In the alternative, if the valuation methodology does not take into account the allocation of risks pursuant to contract, then the rate of return allowed on the assets valued pursuant to the valuation methodology must contain an increased risk premium.</p> <p>If neither of the above applies, there will either be no investment or the levels of investment undertaken will be inefficiently low.</p> <p>Powerco does not believe it is appropriate to deal with contractual management of asset related risks in the valuation methodology, but that it should be dealt with in the rate of return. If this were not an equitable situation, the consumer would have not agreed to the contract.</p>
<p>16.</p>	<p><i>Who is best placed to manage the various forms of investment risk faced by electricity lines businesses?</i></p>	<p>The Distribution Businesses are best placed to manage the risk in consultation with consumers. If a consumer chooses to accept risk by entering into the long-term contract, the provision for such should be given. However, if the consumer is not prepared to enter into this risk, the lines business should manage this risk and be rewarded if successful.</p> <p>See answer to question 14.</p> <p>The Commission notes that in a regulated requirement asset owners' compensation must consist of:</p> <p><i>a regulated return on capital (i.e. risk-adjusted weighted cost of capital (WACC) plus an allowance for asymmetric risks that are not ordinarily provided for in the WACC).⁹</i></p>

⁹ Discussion Paper paragraph 4.10

<p>17.</p>	<p><i>In a regulated environment, how should investment risks be compensated? Is it preferable that some risks be compensated through WACC and others through the valuation methodology (e.g. through the choice of depreciation regime or treating revaluation gains/losses as income)?</i></p>	<p>Powerco's preference is that investment risks be compensated through WACC rather than the valuation methodology, consistent with the accounting treatment of depreciation and asset values set out in FRS 3.</p> <p>Revaluation impacts revenue, as a result, associated risks should be included in the WACC calculation.</p>
<p>18.</p>	<p><i>What are the relative merits of dealing with inflation through WACC or the valuation methodology?</i></p>	<p>Inflation levels vary from asset to asset, thus the treatment of inflation within the valuation methodology more accurately adjusts the changes in value over time.</p>
<p>19.</p>	<p><i>Is it appropriate that investors bear the risk of asset failure? In what circumstances would it not be appropriate for investors to bear the risk of asset failure?</i></p>	<p>Yes, unless a customer chooses to accept the risk through a specific contractual agreement (i.e. a form of price/quality trade-off). In Powerco's experience however the occurrence of this would be limited as consumers are reluctant to accept these types of risk and generally lines businesses are required to manage that risk with investors bearing the risk of asset failure.</p> <p>This will be appropriate as long as the risk is recognised in the calculation of WACC (or allowable premium on it), see answer to question 16.</p>
<p>20.</p>	<p><i>How can accounting depreciation best be kept in line with economic depreciation?</i></p>	<p>Accounting depreciation can be best kept in line with economic depreciation by updating a valuation handbook to reflect the actual remaining life of assets. The rules should reflect the reality of the physical asset.</p> <p>Powerco adopts New Zealand GAAP consistent with this practice:</p> <ol style="list-style-type: none"> 1. For the statutory accounts we use accounting depreciation for the remaining useful life of the assets 2. For ODV purposes we use the numbers prescribed in the Handbook. <p>If regulated depreciation reflected economic reality as New Zealand GAAP does, then there should be no difference between the accounting and economic depreciation, and the issue raised in question 21 would not exist.</p>

21.	<i>How should assets be treated when they remain useful beyond their expected life?</i>	As suggested in our answer to question 20, by maintaining a current New Zealand GAAP depreciation that reflects the estimated useful life of the asset, no further adjustments will be necessary.
22.	<i>How should uncertainty as to the useful economic life of an asset be accounted for in terms of regulated depreciation?</i>	<p>Through the use of the New Zealand GAAP this uncertainty should not exist.</p> <p>In our opinion, it is necessary to accurately estimate what the economic life of the asset is. While uncertainty is inevitable, repeated and regular estimation will increase accuracy and alter the depreciation period in the light of new information.</p>
23.	<i>What effect would economic depreciation have on price profiles over time?</i>	<p>The effect of economic depreciation on price profiles over time depends on the time period over which the asset value is examined.</p> <p>Powerco smoothes the effects of one-off disruption such as revaluations. If a lines business were to set the price based on strict formula, which reflected economic depreciation directly, then large fluctuations would be likely. This is against consumers' preferences, which are for price stability.</p>

<p>24. <i>Is capital efficiency best determined ex ante or ex post, or by a mixture of both? Are some factors pertaining to capital efficiency best considered ex post and others best considered ex ante? How are capital efficiency assessments best conducted?</i></p>	<p>Powerco’s various submissions on Part 4A have suggested a self-imposed ex-ante capital efficiency review conducted by the lines business itself as a routine part of the asset management planning process. This is clearly preferable to involving the regulator directly in ex ante capital efficiency reviews which would effectively require that all network additions were approved before construction and remove efficiency incentives from the companies themselves.</p> <p>Capital efficiency relates to minimising any avoidable over build of the network this is clearly important if investment is to be dynamically efficient. While ex post reviews achieve this purpose they also threaten to introduce uncertainty and threaten network under-build, where investors refuse to commit capital to projects if there is a risk that capital were subject to regulatory claw back.</p> <p>The present ODV methodology includes an ex post capital efficiency test in the optimisation process that is now well developed and rigorously applied. The recalibration audit of ODV valuation reports showed this to be the case. The August 2002 report emanating from that audit process found that <i>“Optimisation was generally well done. ELBs systematically applied the optimisation tests set out in Appendix C of the ODV Handbook, and described the valuation methodology they used in some detail in their valuation reports”</i></p> <p>Even with the thorough application of the optimisation rules the average reduction in valuation due to optimisation is less than 2%. This is a clear indication that even with the legacy of network system designed and installed before the advent of modern asset management techniques and disciplines, there is very little evidence of gold plating or over-build in New Zealand electricity distribution systems.</p> <p>The current regime works well under information disclosure, and lines businesses are able to anticipate whether they are at risk of optimisation. Once such investments are subject to optimisation, the systematic risks are incorporated into the asset beta in the WACC. Any move away from the existing arrangements would need to be carefully considered as to its impact on risk levels and the unintended consequences (due to over- or under-building) caused by the allocation of that risk between lines businesses and consumers.</p> <p>Under a thresholds regime the most efficient form of capital efficiency review for the regulator to conduct would be ex post at the time of an investigation for threshold breach, which would avoid the demerits of such reviews observed above.</p>
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<p>25.</p>	<p><i>What investment incentives do the various types of capital efficiency reviews create?</i></p>	<p>Capital efficiency reviews create both over and under investment risks</p> <p>All regulated reviews tend to lead to under investment. An ex post approach to capital efficiency, will drive capital from the sector unless the risk associated with it is allowed for in any premium on WACC. An ex ante approach is dependant on the regulator but if over-harsh will reject good projects.</p>
<p>26.</p>	<p><i>How frequently should capital efficiency reviews be conducted? What factors should be considered in deciding how frequently to conduct such reviews?</i></p>	<p>The ex ante reviews should be conducted by lines businesses as part of their asset management plan/disclosure process, which is an annual cycle.</p> <p>Ex post reviews should be conducted ad hoc as part of an investigation into threshold breach.</p>
<p>27.</p>	<p><i>Does the level of inflation/deflation in the electricity industry suggest one valuation methodology would be better than others? Would compensation for inflation through indexation preserve the purchasing power of investors' committed funds? What are the pros and cons of indexation?</i></p>	<p>Provided that a starting value can be determined at the establishment date, additional assets can be valued at historic cost. Is this adequate to fund replacement. Powerco suggests that replacement cost may be a better approach to use.</p>

<p>28.</p>	<p><i>What relevance does FRS-3, or any other standards and policies, have for the Commission's criteria for evaluating valuation methodologies?</i></p>	<p>FRS-3 has great relevancy and should be the principle driver for the treatment of related issues in a regulated valuation methodology. New Zealand GAAP is a statutory requirement on companies in New Zealand and provides consistent treatment for the way in which asset values change over time. FRS-3 argues that assets should be recorded at market value where there is a ready market, but in the absence of such a market that the assets should be recorded at ODRC. An example of the latter case would be local authority assets such as parks and reserves that do not change hands. Electricity assets on the contrary have established a recent history of sale and purchase and in Powerco's view a ready market does exist and therefore market value is appropriate.</p> <p>Representatives from the professional firms have had various discussions and in concept have agreed that these assets should be accounted for at their market or DCF value.</p> <p>The Commission should not be overly concerned with the use of DCF valuations. The DCF valuation proposed under an FRS-3 approach avoids the major distortion created by all standard-cost-based methodologies – which would force all lines business pricing should converge regardless of the wishes of the owners of the businesses.</p> <p>Elsewhere we have questioned the legality of universal thresholds or forms of control¹⁰. The differing ownership structures and community expectation of lines business in New Zealand justifies the variation in pricing levels across the country. A valuation calculated as a function of standard values and used to derive an "efficient revenue" or an ROI threshold, would create an incentive for low price companies to increase their prices.</p> <p>By building in future revenues, FRS-3 acknowledges the difference in economic value perceived by consumers on different networks, in particular where owned by trusts who choose to sacrifice full economic rents for tax-efficient lower prices.</p>
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¹⁰ Regulation of Electricity Lines Business: Powerco's submission on matters raised during the oral hearings 17-24 July: 9/8/02.

<p>29.</p>	<p><i>What other accounting policies or practices, if any, are relevant to the review?</i></p>	<p>FRS-3 is part of New Zealand GAAP, for internal consistency it is important that GAAP be adopted in its entirety. Given the consistency of GAAP with the objectives of the regulatory valuation regime, harmonising to GAAP would result in accounting book value and regulated value that was the same.</p>
<p>30.</p>	<p><i>What scope is there for substitution of capital and operating expenses for electricity lines businesses system fixed assets?</i></p>	<p>Prior to 1993 power companies had quite strong incentives to substitute capital with operating expenditure in order to avoid paying tax. This resulted in the value of the asset base being understated and is another reason why historic costs, even if they were identifiable, would not be suitable as part of a regulatory asset base.</p> <p>As with our answer to 20 - provided assets are strictly accounted for according to FRS-3, the resulting valuations would be equivalent, resulting in the same asset value.</p>
<p>31.</p>	<p><i>Should the regulatory asset valuation methodology include prescribed accounting policies, such as in relation to capitalisation and depreciation?</i></p>	<p>If the regulatory policies conform to New Zealand GAAP (FRS-3) then the two are equivalent.</p>

Asset Valuation Methodologies

<p>32.</p>	<p><i>Are there some system fixed assets that could be put to alternative uses outside of the electricity industry and, therefore, appropriately valued at opportunity cost? What assets have high specificity (i.e. only have value in their current use)?</i></p>	<p>With one or two exceptions, most system fixed assets have no alternative use and would be valued as scrap if opportunity costing were applied to it.</p>
<p>33.</p>	<p><i>What could explain the evidence of transactions of electricity lines businesses' system fixed assets greater than their ODV? How important are current and intangible assets in explaining the evidence?</i></p>	<p>Powerco recently acquired certain electricity assets from UnitedNetworks Ltd. In our valuation of these assets to determine the purchase price, we deviated from a strict (ROI = WACC) x ODV with regard to:</p> <ul style="list-style-type: none"> • The need to adjust WACC for systematic risk • A non-systematic risk premium • Synergy gains and sharing • Incompleteness in scope of current ODV Handbook for revenue setting purposes (corporate services, IT etc) • Limited intangible asset value <p>The model used to determine our valuation of the business included a regulatory cap on income allowing for the factors described above. This happens to yield a particular multiple of the ODV value of the system fixed assets but the multiple did not drive the investment decision.</p> <p>ODV reflects the brick and mortar of the network. The revenues associated with intangible assets, the difference between the purchase price and the regulated revenues net of full cost reflects the economic rental of the intangible assets such as easements without which the systems fixed assets would have no useful function.</p> <p>This argument is important to the question of regulatory value as it demonstrates that excessive profits are not being made on a complete valuation of the regulated business. An FRS-3 approach to valuation of the regulated asset base eliminates the need for a building block exercise in practice</p>

<p>34.</p>	<p><i>What are the pros and cons of combining capital efficiency reviews with a historic cost approach? How great is the scope for capital efficiency reviews under a historic cost method?</i></p>	<p>The distinction between ex post and ex ante capital efficiency reviews is useful here.</p> <p>An ex ante capital efficiency review combined with historic cost is typical of a US-style Rate of Return regulatory regime. Once approved, all investments are safe harboured at historic cost. Investors are exposed to negligible risk but have clear incentives to gold plate. This method however does involve a high level of regulatory involvement and intervention in the ex ante process. If the regulatory pressure is too great it is likely to result in a lack of capital expenditure with an ensuing lowering of reliability levels for which the regulator must assume responsibility and be accountable to consumers.</p> <p>Conducting capital efficiency reviews ex post would threaten investors in getting back their capital, unless compensated for in the WACC. The risk associated with this would increase cost of capital in the sector to no benefit.</p>
<p>35.</p>	<p><i>What events could be used as a base for valuing system fixed assets at historic cost? What are the relative merits of using the book values at each of these particular events as a base for a historic cost value? What would be the most appropriate date to use for assessing the historic costs of electricity lines businesses?</i></p>	<p>Other than using current book values, which are a true reflection of current assets, there are no past events, which lend themselves to a calculation of accurate historic cost.</p> <p>Other than for establishing a depreciation schedule, lines business book values were not been used for anything prior to 1987. When power authorities became subject to taxation in 1987, substantial discounts (up to 20%) were allowed because asset registers were either extremely inaccurate or non-existent. This situation did not improve in the short term. When Powerco audited the book values of the Taranaki Electric Power Board and New Plymouth Department of Energy at the time of their merger, both asset records were found to be materially incomplete making the valuations they described quite unsuitable for inter-company comparisons, let alone the determination of profit or revenue figures.</p> <p>It was not until the ODV methodology was introduced for information disclosure purposes that asset registers were either created or updated to begin to reflect what was actually out on the network. That process continues today as asset management techniques and record systems improve.</p>
<p>36.</p>	<p><i>What are the pros and cons of indexing historic cost values for inflation?</i></p>	<p>Indexation smears inflation across assets uniformly, whereas in a building block (replacement cost) approach, the standard values in the handbook, the change in standard values varies from asset to asset.</p>

37.	<i>How important is it that an asset valuation methodology replicates or mimics competitive market outcomes, given the regulatory objections of Part 4A and the Commission's evaluation criteria?</i>	<p>Section 57E sets out the objective of the price control regime as “promoting the efficient operation of markets directly related to electricity distribution and transmission services . . .”. Therefore, it is important that the asset valuation methodology chosen promotes dynamic efficiency.</p> <p>If the valuation methodology leads to a generally low asset value, then that may have an adverse impact upon dynamic efficiency.</p>
38.	<i>Does the ODRC approach have economic merit in terms of mimicking competition? Do any other asset valuation approaches have more merit in this regard?</i>	<p>Market value is the ultimate competitive standard. Lines businesses have regularly and recently been sold in arm's length transactions, making it unnecessary to determine alternative cost-based valuations as a proxy.</p> <p>As we note in our answer to question 28, we note the Commission's concern with DCF-based valuations of this sort. Our principal concern with ODRC as a proxy market value is that the ex post optimisation effect it uses it potentially penalises companies with hindsight.</p> <p>Optimisation reflects the way that assets can become stranded in a competitive market. In a competitive market, asset owners will price the asset to earn a profit level above its cost of capital before the asset becomes stranded so that the profits generated by the asset at least equal the cost of capital over the asset's life.</p> <p>Unless lines business asset owners have the same opportunity (notwithstanding accelerated depreciation) there is a risk that they will generally be constrained to returns below their cost of capital whenever the asset is optimised.</p> <p>As the Commission observes, Transpower has been the major subject of downward optimisation in New Zealand. Powerco's experience of Transpower is that it is risk adverse with respect to new investment to the point of actively avoiding investment opportunities unless the risk can be transferred to others through bilateral investment contracts— which is not normal characteristic in a competitive market.</p> <p>Ultimately, however, the only true valuation is that of between a willing buyer and a willing seller in a competitive market.</p>

<p>39.</p>	<p><i>If electricity lines businesses have revalued their assets in the past but have not matched those revaluations with income forgone, should their current return on capital be calculated using a real WACC?</i></p>	<p>The import of this issue relates to revenue changes at the time of the revaluation rather than the accounting treatment of the revaluation itself.</p>
<p>40.</p>	<p><i>If revaluation gains have not been treated as income, should consumers now be compensated in some way? If so, how?</i></p>	<p>Powerco has always treated revaluations as income foregone, and has not affected prices in that time period as a result of price smoothing under a self-imposed price cap.</p> <p>We do not believe many (if any) lines businesses calculate their prices through a direct formula based on valuation and WACC. If any did, any misallocated a revaluation gain; their prices would jump substantially for one year – to the displeasure of their consumers.</p>

41.	<i>Are there likely to be significant differences between the inflation of asset prices and the inflation implicit in a nominal WACC calculation?</i>	Yes. Input costs to the electricity industry do not consistently move in line with changes in CPI.
42.	<i>If businesses bear the cost of downward revaluations is this risk asymmetric (i.e. to the disadvantage of investors) and how could it be reflected in the WACC without compromising incentives for efficient investment?</i>	<p>See answer to question 38.</p> <p>Optimisation reflects the way that assets can become stranded in a competitive market. In a competitive market, asset owners will price the asset to earn a profit level above its cost of capital before the asset becomes stranded so that the profits generated by the asset at least equal the cost of capital over the asset's life.</p> <p>Unless lines business asset owners have the same opportunity (notwithstanding accelerated depreciation) there is a risk that they will generally be constrained to returns below their cost of capital whenever the asset is optimised.</p> <p>As the Commission observes, Transpower has been the major subject of downward optimisation in New Zealand. Powerco's experience of Transpower is that it is risk adverse with respect to new investment to the point of actively avoiding investment opportunities– which is not normal characteristic in a competitive market.</p> <p>See also reference to Transpower's threshold submission commentary in our cross submission p 24-29.¹¹</p>
43.	<i>If businesses bear the cost of downward revaluations is this risk asymmetric (i.e. to the disadvantage of investors) and how could it be reflected in the WACC without compromising incentives for efficient investment?</i>	Ditto
44.	<i>How important is an EV assessment to the theoretical underpinning of ODV?</i>	While theoretically important, the effect of the adjustment is presently immaterial for most lines business (see answer to question 45).

¹¹ Submission on the Commerce Commission Discussion Paper: Regulation of Electricity Lines Business, May 2002, Pg 24-29

<p>45.</p>	<p><i>Why does the EV component have a limited impact on ODV values (as per the ODV Handbook)? Are the factors identified by the Commission significant?</i></p>	<p>The limited materiality of EV adjustments reflects the historic construction of networks in New Zealand, the static nature of New Zealand demand growth and the largely radial nature of most distribution business systems.</p> <p>Whilst the recalibration audit report by PB Associates found that “most ELBs found the EV methodology difficult to apply”, and that even when the necessary compliance adjustments had been made, the aggregate impact on ODV only moved from 0.25% to 0.35%.</p> <p>As the numbers and capacity levels of distributed generation schemes increase, as it is forecast to do, then the networks will need to cope with bi-directional power flows.</p> <p>This will require a different design philosophy and considerable capital investment to reinforce these systems at the ends of the present radial systems. The regulatory regime will need to recognise and adapt to these changes if the capital is to be provided by private investors rather than the government of the day.</p> <p>This is only now being realised as a very substantial issue in overseas regimes such as the UK. It is likely to be at least as great an issue in New Zealand, if not greater due to the rural nature of much of the distribution systems here.</p>
<p>46.</p>	<p><i>What are the additional costs of an EV assessment (over and above an ODRC assessment)?</i></p> <p><i>Do the costs outweigh the benefits?</i></p>	<p>Scenario analysis of uneconomic services is costly and does not materially affect ODV values (see 45). It may be net beneficial for lines businesses with a high degree of low-use rural wires but generally is not.</p>
<p>47.</p>	<p><i>Are there significant numbers of “uneconomic” consumers for electricity lines businesses?</i></p> <p><i>How should the costs of any uneconomic consumers be allocated?</i></p>	<p>The obligation to maintain rural line services (section 62 of the Electricity Act 1992) has perpetuated some uneconomic feeders. Powerco has attempted to replace these assets with hybrid generation schemes to ensure that the true value of supply is observed when replacement decisions become due. Powerco’s General Manager, Asset Strategy provided an example of a project during the Thresholds conference: “it would not have been economic to renew the line, but if we had met the EV spur test in the ODV handbook, we could have put that into -- that would have been a legitimate thing to seek revenue from. But, clearly, inefficient to do such a situation.” (Electricity Lines Business Conference, Conference Day 4, 23 July 2002.</p>

Current Use of the ODV Valuation Methodology

<p>48.</p>	<p><i>If the prescribed ODV method were to be used as an input into the regulatory functions under Part 4A, what, if any, changes would be required to the fourth edition of the ODV Handbook? What effect would any necessary changes have on the values of system fixed assets?</i></p>	<p>With respect to the first question, the value of system fixed assets is only part of the value of a regulated asset base that would be used for regulatory functions under Part 4A. As we have explained elsewhere this explains the differences between asset ODV and the market price presently being paid where lines business are changing hands. This difference needs to be recognised in assigning a value to the regulated asset base for threshold or price control purposes. We believe that this difference can be assessed through a building block approach i.e. Regulated Asset Base = Value of System Fixed Assets + Value of other assets necessary to operate the business. We do not advocate a building block approach in the application however as we contend that the present value is the business valuation. The building block approach could be used as a one-off confirmation of this value provided the present deficiencies in the ODV Handbook with regard to the valuation of fixed system assets are rectified.</p> <p>With regard to the deficiencies in the ODV Handbook we have three comments. First, the ODV Handbook would need to be given regulatory force. Secondly, the independent auditor (as required by regulation 331(4) of the Electricity Information Disclosure Regulations 1999) has [approved] an lines businesses' ODV valuation report, consumers should not be permitted to dispute the ODV valuation. Thirdly, the ODV Handbook needs a thorough and comprehensive review. For example, maximum asset lives and the maximum value for each building block needs to be reviewed. In general, the items associated with the handbook that require revision relate to</p> <ul style="list-style-type: none"> • Standard costs; • Standard lives; and • Scope/completeness. <p>The maximum lives permitted in the Handbook may appear to serve a function for Disclosure purposes, but are so “broad brush” that anomalies are created in their application.</p> <p>The effective life of any asset, or asset component is a function of a number of factors including</p> <ul style="list-style-type: none"> • The quality of the initial design; • The quality of the asset materials; • The suitability of the materials for the function;
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		<ul style="list-style-type: none"> • The level of maintenance performed on the asset; • The ability to obtain spare parts for the asset; • The ability to get ongoing maintenance or vendor support for the asset; • The operational use profile of the asset; • Functional and Technical redundancy; and • The environment in which the asset is located. <p>With any network, weather and the environment have a significant influence on the ability of outdoor equipment to continue to function for the “planned life” of any asset items.</p> <p>All these many and diverse issues need to be incorporated in order to derive a realistic remaining life of the asset.</p> <p>During 1999/2000, Powerco undertook a major survey of the concrete poles in its overall network from New Plymouth to Wairarapa, to determine the current condition of the stock and make an assessment of the remaining life of that stock. This took into account climatic conditions in the different geographic and environmental locations.</p> <p>The full report was submitted to the Ministry of Economic Development in May 2000.</p> <p>A similar argument exists for overhead line conductor although the climatic effects differ. By separating out the support structure from the wires, both can independently be ascribed their realistic lives.</p> <p>We comment elsewhere on the inadequacy of a “system fixed asset valuation” for the regulation of a business that requires other assets (e.g. intangibles, IT and corporate) to deliver its regulated services.</p>
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Industry Specific Issues

<p>49.</p>	<p><i>Are the standard costs currently listed in the ODV Handbook appropriate?</i></p>	<p>The “appropriateness” or otherwise of the standard costs begs the question of the purpose for which the Handbook valuation is to be used.</p> <p>Work undertaken by Powerco over the last four years on the make-up of line costs from bottom up, has shown that the standard costs for light and medium conductor sizes are appropriate for the prescribed Handbook valuation methodology, but that the standard value does not reflect the true cost in respect of the heavy conductor.</p> <p>Apart from this component cost aspect, there are real cost differences due to regional differences throughout New Zealand. To build an overhead line in the greater Auckland metropolitan area, would incur a different cost from a line in rural Taihape or Coromandel. These cost differences arise from both the different economies in each region and for geographic reasons.</p> <p>Hence the use of any single standard value across New Zealand for regulatory purposes will be quite unsuitable for financial records for the lines business.</p> <p>This issue is partly addressed in the Handbook by the application of “multipliers” to account for terrain and span (i.e. number of poles), although it is still all based on a per unit length and requires some judgement in determining the multiplier factor.</p> <p>It is more appropriate to value a portion of overhead line using a bottom up basis. With a comprehensive database and modern GIS records; sufficient data should be available to enable such calculations to be made.</p> <p>A further issue regarding standard values relates to present inconsistencies in maximum standard values between the same items in different parts of the Handbook.</p>
<p>50.</p>	<p><i>How significant is the rate of technological progress and the potential for shifts in demand for the valuation of electricity lines businesses system fixed assets?</i></p>	<p>Technological change is enabling line companies to improve the quality and security of supply to customers while at the same time holding costs.</p> <p>The regulatory system needs to support and encourage this investment in order to improve dynamic efficiency. If systematic risk is introduced in the rules for asset valuation without suitable countervailing provisions then this will deter investment and reduce dynamic efficiency.</p>

<p>51.</p>	<p><i>Is there evidence that the replacement costs of system fixed assets will rise or fall (and how fast) relative to the rate of CPI inflation?</i></p>	<p>Changes in costs of materials and equipment used in a network fall under a number of different statistical classifications including Plant Price Index, Materials Price Index, Capital Goods Price Index, etc.</p> <p>Further analysis of the effects of these indices on replacement costs has not been possible in the timeframe provided.</p>
<p>52.</p>	<p><i>Is there evidence that rates of technological change are sufficiently high to warrant full depreciation over a period significantly shorter than the relevant asset's technical life?</i></p>	<p>No. Having decided on the life of the asset item under review if the life of the asset item is governed by technological redundancy, then that is the life of that asset. For financial recording it would thus be prudent to depreciate the asset based on that life.</p>
<p>53.</p>	<p><i>What industry specific issues can affect the prudence of investment decisions? What relevance do these issues have for the choice of valuation methodology?</i></p>	<p>Powerco's General Manager Asset Strategy presented the Commissioners with several examples of the distortionary effect that intrusive regulatory regimes can have on prudent investment during the Thresholds conference.</p> <p>The effect of a valuation methodology on investment prudence relates to the use to which it is put in a regulatory regime rather than the valuation methodology itself.</p>
<p>54.</p>	<p><i>Under what circumstances should capital contributions be excluded from the regulatory asset base? Where this is desirable, how should they be excluded?</i></p>	<p>We distinguish between 2 types of "capital contribution":</p> <ol style="list-style-type: none"> 1. Cashflow: to encourage lines business to invest this year rather than later, consumer pays for some of the asset but lines business gains complete ownership. Contribution is not regulated revenue but the full value of the asset forms part of the regulatory asset base. 2. Revenue foregone: Asset at risk of premature stranding. Consumer pays for the uneconomic amount, accounted for as the lost line revenue in that year or spread into the future depending on the quantum. <p>Powerco believes that the treatment of contributions, as revaluation, as income is straightforward. Any resulting peaks in profitability (or revenue) should be dealt with outside the valuation methodology.</p>

55.	<i>Should assets associated with contestable services be ring-fenced from other system fixed assets? What evidence can be provided to demonstrate that specific agreements with one or more consumers were negotiated on fair and reasonable terms and/or subject to competitive pressure?</i>	<p>Yes. For example, the assets constructed to provide services arising from a tender process should be “ring fenced”.</p> <p>One example of the evidence that can be provided is whether or not the agreement (and the assets constructed to provide the services) arose out of a competitive process.</p> <p>Pursuant to section 57Y “system fixed assets” has the meaning ascribed by the Electricity (Information Disclosure) Regulations. (See answer to question 57)</p>
56.	<i>Should the value of some assets be determined by the associated contractual revenue streams (rather than by reference to historic cost or replacement cost)?</i>	<p>Yes. On this point, we note that the Full Court of Western Australia in <i>re Dr Ken Michael Am; Ex Parte Epic Energy (WA) Nominees Pty Ltd & Anor [2002] WASCA 231</i> commented at paragraph 176 of its decision that “there is no reason, implicit or explicit, why a valuation methodology which had regard to the present value of anticipated net returns, including monopoly returns, should necessarily be excluded for these purposes. Nor should there be excluded the expectations of service providers of monopoly returns where those expectations were reasonable under the regulatory regime that applied to the pipeline before the commencement of the Code, . . .”</p>
57.	<i>What assets should be included as “system fixed assets”?</i>	<p>Pursuant to section 57Y “system fixed assets” has the meaning ascribed by the Electricity (Information Disclosure) Regulations.</p> <p>Whether or not this definition is adequate depends upon the purpose to which the valuation of these assets is to be put.</p>
58.	<i>How should an asset be valued for regulatory purposes where it also provides line services that are not subject to regulatory oversight by the Commission?</i>	<p>This question addresses the overall regulatory framework. If the asset is to be valued as if it had no additional use, adjustments may be made to WACC hurdle rates.</p> <p>Alternatively it may be possible to remove a part or portion of the assets from the regulated asset base provided the revenues associated with it do not appear in the regulated income.</p>
59.	<i>Should asset valuations be disclosed in respect of distinct network regions?</i>	<p>No. Asset valuation broken down by geographic region would be of no use to Industry stakeholders but the costs of preparing and disseminating the regional valuations could be material as they are not currently prepared.</p>

<p>60.</p>	<p><i>What is the best way to value land and easements? Should easements be valued differently to other system fixed assets? Are there any access concerns in respect of getting new easements or access to existing easements?</i></p>	<p>The standard approach to valuation of easements, is to calculate a percentage of land value for the area of the easement. The percentage reflects the extent to which the use of the easement inhibits or restricts use of the land for its intended purpose.</p> <p>For pricing purposes, line services should relate to the market value of their specialised assets including rights of access and easements. This value is generally lower than the ODRC when the assets are bought as a part of a business in an arms-length transaction.</p> <p>Once exercised by, for example, the placement of a pipeline or distribution line on the land, the statutory right creates a "corporeal hereditament" which is a form of interest in land. Such interests are capable of valuation</p> <p>There is no economic rationale prescribed for the inclusion of the value of property rights in the current ODV Handbook.</p> <p>To build an optimised modern equivalent asset today, an investor would need to purchase the property rights (presumably by way of easements unless constructed along the side of roads). The purchase of the required property rights could exceed the "bare bones" replacement cost of the asset described by the current ODV Handbook. Recent transaction values for lines businesses in some way reflect the value of these property rights but the total businesses have consistently been traded below their replacement cost.</p> <p>As previously explained however, Powerco does not advocate a building block approach to determining a regulated asset base, which would involve assigning a specific value to easements.</p> <p>There are access concerns in obtaining new easements: for instance, landowners are often reluctant to grant easements.</p>
<p>61.</p>	<p><i>What factors or considerations could provide a basis for different valuation approaches across different sectors?</i></p>	<p>Rate of technological change. Link between regulatory regime and vesting contracts.</p>

International Practice

62.	<i>What lessons can be learned from international practice?</i>	<p>Vesting contracts have a considerable influence in the establishment of opening values where the government was responsible for both selling the assets and establishing the regime for their regulation. In many cases the assets were sold at a substantial discount to their economic value and regulation was used in part to redress this balance. This has not occurred in New Zealand where changes to asset values in part reflect the commercialisation of pre 1993 power companies that in the main operated as non-profit making organisations with no private capital and little or no debt to service.</p> <p>This experience overseas was therefore from a completely different starting point and is of little relevance for New Zealand.</p>
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Implementation and Operational Issues

<p>63.</p>	<p><i>To what extent are the implementation and operational issues identified by the Commission relevant and, if so, to what extent for each valuation method? Are there any other implementation and operational issues that should be identified and, if so, how significant are they?</i></p>	<p>The net-efficiency test proposed by the Commission should ensure that no impractical methodologies are adopted.</p>
<p>64.</p>	<p><i>If DHC (or DIHC) were the preferred method for establishing the baseline valuation of electricity line business system fixed assets for regulatory functions under Part 4A, how could this be best achieved?</i></p>	<p>As a matter of fact, it is not possible for Powerco to establish a DHC valuation for its electricity lines based on construction cost. We have acquired several lines businesses over the past decade – but rarely have we obtained construction cost data with them. True historic cost for Powerco would be what we paid for those businesses consistent with FRS-3.</p>

<p>65.</p>	<p><i>Up to what time were historic cost-based system fixed asset records maintained? Are possible difficulties surrounding establishing a true historic cost-based opening valuation genuine concerns? How could these difficulties be overcome, if at all?</i></p>	<p>It is certainly true that New Zealand lines businesses have maintained various book values over time but significantly none of them were complete or accurate.</p> <p>Although book values existed prior to 1987, audits in 1987 (when an opening value for tax purposes was established) revealed that pre-existing book values were incomplete for all businesses audited.</p> <p>Prior to 1987, book values were not actually used for any purpose that would have exposed these flaws. Even for taxation purposes, the materiality of errors in asset values is small when used to establish a depreciation schedule over assets with 40-year lives.</p> <p>In paragraph 9.5 the Commission suggests that DHC at 1994 correctly accounts for fixed assets in place at that time. Having applied ODV to assets at that date, Powerco discovered many assets in the ground that were not accounted for in the valuation. We would question the comparability of company values at 1994 DHC over (say) a more recently calculated ODV value which is based on a more accurate asset register.</p> <p>Neither ODV nor 1994 historic cost are sufficiently complete views of the asset to be used for the assessment of an efficient revenue requirement or profitability.</p>
<p>66.</p>	<p><i>If true historic cost could not be derived for the baseline valuation, is there a reasonable proxy for historic cost that could be used instead? What implementation issues might exist with a “reasonable proxy” approach?</i></p>	<p>As discussed elsewhere in the discussion paper, indexed historic cost and replacement cost can be equivalent if inflation applied uniformly to all assets. Given the characteristics of lines business assets, inflation rates differ between network components. As an economic valuation for regulatory purposes, we conclude that replacement cost may be preferable to historic cost as a way of reflecting the change in asset value over time.</p> <p>We repeat our observation that as a matter of fact it is not possible to calculate complete historic cost valuations based on past data. The cost of adjusting any existing historic cost data as an opening value to make it both consistent between companies and suitable for use in a thresholds and control regime would be greater than that involved in adjusting the current application of ODV which does at least draw on reasonably reliable asset registers.</p> <p>Due to the significant mergers and acquisitions that Powerco has undertaken since 1992 it would be extremely difficult to determine a cost based on original construction cost. In that context use of the current ODV or ODRC would be the most suitable proxy to represent the value of the system fixed assets.</p>

<p>67.</p>	<p><i>What implementation or operational disadvantages or pitfalls might exist if the latest ODV value of system fixed assets were used for the baseline valuation, with future assets included and accounted for in the asset base at DHC (or DIHC)?</i></p>	<p>The principal shortcomings of the latest ODV values as a starting value are that:</p> <ul style="list-style-type: none"> • Some standard values are out of date • Standard costs for labour reflect the scale economies obtained in large construction projects but are unrealistically low for smaller projects, maintenance and renewal activity • The scope of assets covered by the handbook is not a complete description of the system fixed assets of a lines business • The scope of assets covered by the handbook does not include all intangible assets necessary to render a “bare bones” asset construction useable – particularly with respect to property easements and rights of access • The scope of assets covered by the handbook does not include the corporate and non-specialised assets necessary to deliver line function services (property, furniture, fittings, IT etc) <p>The latter 2 omissions are pragmatic but must be accounted for outside the valuation methodology if it is to be used in the evaluation of profit levels or revenue control.</p> <p>As previously explained however, Powerco does not advocate a building block approach to determining a regulated asset base, which would involve assigning a specific value to easements.</p> <p>Powerco agrees with the Commission’s assessment that valuing asset additions at DIHC is both straightforward and may be adequate from a policy objective.</p> <p>The concept of the ODV is based around providing a value faced by a new entrant to the market from a green fields basis. This implies that the costings are based on economies of scale and are not intended to reflect costs at a maintenance level.</p> <p>If the valuation methodology is to reflect the value of the network both now and in the future considering how a new entrant sees it, then valuation by current replacement cost is the most logical approach. Unlike DHC or DIHC approaches, the use of a valuation methodology based on current replacement cost not only provides the platform for the new entrant to make its cost assessments based on current materials, but allows for issues such as modern replacement costs due to supersession or technological redundancy to be appropriately addressed.</p>
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<p>68.</p>	<p><i>Assuming it was possible to determine a baseline valuation for system fixed assets using a historic cost-based approach (or a reasonable proxy for historic cost), what implementation issues might arise in attempting to align the detailed (ODV) asset records with the baseline valuation? How could any implementation issues be satisfactorily addressed?</i></p>	<p>Powerco’s concern is not so much in the practicality of aligning records between two such valuations but the practicality of determining a historic -cost based approach at all (see answer to questions 64 and 65).</p> <p>In fact (as we argue in answer to question 64 above) lines businesses would probably have to use the asset registers supporting current ODV calculation and “standard historic values” to ensure the completeness and accuracy of any existing historic cost data. This would effectively duplicate steps of the current ODV process to no benefit.</p> <p>Revaluation treatment would (under FRS-3) should be no different in the case of a valuation methodology change from that cause by an economic value adjustment.</p>
<p>69.</p>	<p><i>What would be the implementation and operational implications for accounting systems and processes if regulatory asset valuation required an historic cost-based approach (DHC or DIHC)? How could the implementation issues be satisfactorily addressed and in what timeframe?</i></p>	<p>There is a premise in this question that a historic cost can be established for lines businesses consistent with the Commission’s obligations under Part 4A of the Act. This premise is false. See our answers to questions 64, 65 and 68.</p> <p>The processes and systems required to administer FRS-3 treatment of statutory book value would straightforwardly adapt to account for regulatory valuation adjustment if the Commission adopted FRS-3 policies.</p>
<p>70.</p>	<p><i>To what extent should the valuation method (DHC, DIHC, DRC, ODRC, or ODV) be prescribed by the regulator?</i></p>	<p>Where market value is not available, Powerco’s preference is for the regulatory valuation methodology to be set out in a handbook similar to the current ODV Handbook to guide consistent interpretation and application.</p>

<p>71.</p>	<p><i>If the ODV method were adopted for regulatory purposes, is the handbook for the prescribed ODV method adequate, or are changes required?</i></p>	<p>See answer to question 67. ODV is a consistently applied valuation yardstick that allows the normalisation of performance data between companies of different sizes as part of an information disclosure regime. If ODV is to be used as an input to the determination of absolute levels of profitability or the declaration of control it will be necessary to take account of the principal shortcomings of the current ODV method:</p> <ul style="list-style-type: none"> • Some standard values are out of date • Standard costs for labour reflect the scale economies obtained in large construction projects but are unrealistically low for smaller projects, maintenance and renewal activity • The scope of assets covered by the handbook is not a complete description of the system fixed assets of a lines business • The scope of assets covered by the handbook does not include all intangible assets necessary to render a “bare bones” asset construction useable – particularly with respect to property easements and rights of access • The scope of assets covered by the handbook does not include the corporate and non-specialised assets necessary to deliver line function services (property, furniture, fittings, IT etc) <p>The latter 2 omissions are pragmatic but must be accounted for outside the valuation methodology if it is to be used in the evaluation of profit levels or revenue control.</p> <p>As previously explained however, Powerco does not advocate a building block approach to determining a regulated asset base, which would involve assigning a specific value to easements.</p>
<p>72.</p>	<p><i>In respect of historic cost-based asset valuation approaches, could reliance on accounting standards (particularly FRS-3) and conventions be relied upon to ensure consistency or comparability of valuations?</i></p>	<p>No.</p> <p>FRS-3 relates to future economic value, not historic cost. Previous accounting standards such as SSAP and EPB Accounting regulations cannot be relied on as they were in many cases ambiguous and did not provide sufficient guidance on an appropriate balance between maintenance and capital expenditure. In some aspects they were not compulsory and so there was little consistence in application. Power Boards with no profit motive tended to expense as much as possible of their refurbishment work and therefore understate the asset base. This situation was extenuated after 1987 when the incentive to minimise surpluses was increased in order to avoid paying tax.</p>

73.	<i>What implementation period would be necessary for implementation of the different valuation methods? What factors would influence the amount of implementation time needed?</i>	<p>We repeat our concern about the practical impossibility of establishing a historic cost starting value – and the substantial work that any such initiative would entail to limited benefit.</p> <p>A replacement cost-based approach for starting values would be straightforward to implement if based on the building blocks of the current ODV valuation methodology.</p> <p>FRS-3 treatment of regulatory valuations, in particular depreciation, revaluation, and capital additions would be a straightforward extension of existing processes for the management of statutory book values.</p>
74.	<i>What factors are relevant to deciding the appropriate period between system fixed asset (re)valuations for regulatory purposes? How often should (re)valuations of system fixed assets be undertaken for regulatory purposes?</i>	FRS-3 requires annual revaluations. Given the synergies involved in adopting the standard for regulatory valuation purposes, there would be benefits in adopting the same frequency of revaluation for regulatory purposes.
75.	<i>Should independent financial and engineering experts continue to be required to approve valuation reports?</i>	Yes
76.	<i>What are the advantages and disadvantages of using a common auditor across all electricity lines businesses? Should this process be undertaken by the Commission?</i>	This is largely a matter of productive efficiency and second order to the policy issues of principal concern in this consultation.

<p>77.</p>	<p><i>What work do auditors currently perform under the electricity information disclosure regime in respect of system fixed assets? How does this audit work compare with audits carried out for statutory financial statement purposes? Are the audit scope and audit work carried out sufficient?</i></p>	<p>The asset valuation audit work is an audit of the valuation report to certify that the requirements of the ODV Handbook have been met, which is a requirement of the Electricity (Information Disclosure) Regulations. This includes a correct application of the optimisation rules and the economic value test on segmented parts of the network.</p> <p>The audit of financial statements is to ratify compliance with accounting regulations and to certify that proper accounting records have been kept and that they give a true and fair view of the financial position. In addition to this a separate verification of the disclosed financial performance measures is required.</p> <p>In Powerco's opinion the audit work is of sufficient scope and details to ensure that information disclosure is adequate and the regulatory requirements are met.</p> <p>The work that auditors are to perform is prescribed by the Electricity Information Disclosure Regulations 1999.</p> <p>The scope of this audit largely excludes engineering characteristics. Given the relationship between services delivered by network assets and their value, a regulatory regime is likely to draw on both factors. It may be appropriate to widen the scope of the disclosure auditors to cover asset performance disclosure data in more detail.</p>
<p>78.</p>	<p><i>What factors should be borne in mind when considering alternative valuation methods for Part 4A given that electricity lines businesses use system fixed asset valuations for other purposes?</i></p>	<p>Only those factors that are consistent with the scheme of Sub part 1 of Part 4A.</p> <p>The scope of this consultation is the objectives of part 4A and those objectives should not distort decision making in this regard.</p> <p>The sole exception is the treatment of book value in statutory accounts where, as we have observed in answer to question 74, may offer synergetic tools for the treatment of regulated asset values which are consistent with the overall objectives of the statutory regime.</p>
<p>79.</p>	<p><i>What are the costs associated with conducting a valuation under the different approaches?</i></p> <p><i>What costs would be incurred regardless of the valuation methodology used? What costs are likely to be additional?</i></p>	<p>See answer to question 73.</p>

Comparison of Asset Valuation Methodologies

<p>80.</p>	<p><i>What are the pros and cons of limiting capital efficiency reviews to additions to the opening asset base? What level of cost savings could be achieved by limiting capital efficiency reviews to additions to the opening asset base?</i></p>	<p>See answers to questions 24 to 26.</p> <p>Powerco's various submissions on Part 4A have suggested a self-imposed ex-ante capital efficiency review conducted by the lines business itself as a routine part of the asset management planning process. This is clearly preferable to involving the regulator directly in ex ante capital efficiency reviews which would effectively require that all network additions were approved before construction and remove efficiency incentives from the companies themselves.</p> <p>Capital efficiency relates to minimising any avoidable over build of the network this is clearly important if investment is to be dynamically efficient. While ex post reviews achieve this purpose they also threaten to introduce uncertainty and threaten network under-build, where investors refuse to commit capital to projects if there is a risk that capital were subject to regulatory claw back.</p> <p>The relative annual cost of conducting capital efficiency reviews on the entire asset relative to additions to the opening asset base may be as much as 20 times – which reflects the fact that sunk lines business assets are in the order of 20 times the average level of annual capital investment. The ex post check on capital efficiency inherent in the ODV methodology and the evidence of satisfactory compliance from the ODV audit renders the need to apply further review to the opening asset base superfluous should ODV be used for the value of system fixed assets in an opening valuations.</p> <p>As previously explained however, Powerco does not advocate a building block approach to determining a regulated asset base, which would involve assigning a specific value to easements.</p>
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<p>81.</p>	<p><i>What valuation methodology best promotes allocative efficiency? Please provide comment in terms of the level, structure and time profile of prices.</i></p>	<p>See answers to questions 7 to 9.</p> <p>We are concerned at the direct implication in paragraph 10.18 of the discussion paper:</p> <p><i>A DHC approach applied to assets added to the opening base ... would tend to result in higher revenue and prices than ODV early in the asset's life</i></p> <p>It is implied that pricing is a direct allocation of an annual revenue requirement calculated from the regulatory valuation. Powerco and many other lines businesses do not derive prices in this way – and use the regulated revenue calculation as no more than a check, to ensure that short-term fluctuations in asset value do not result in price turbulence against the wishes of consumers.</p> <p>Prices are rebundled by retailers and reshaped. Allocative efficiency of prices, while arguably a matter for the Commission's attention is beyond the scope of this valuation consultation. See our commentary on end-consumer pricing in "Stakeholder and market definition" in pp. 11 to 15 of Powerco's cross submission on the Thresholds discussion paper.</p>
<p>82.</p>	<p><i>Could operational efficiency be improved by the choice of valuation methodology and, if so, how?</i></p>	<p>See answer to question 10. Such considerations are secondary against the objectives of the Act.</p>
<p>83.</p>	<p><i>How important is the ability to perform benchmarking to the choice of valuation methodology, particularly given the nature of system fixed assets?</i></p>	<p>Powerco's preference is for a valuation methodology that is as objective and predictable as possible and for judgmental activities (such as 3rd party capital efficiency assessments and benchmarking) to be conducted at the investigation stage of a threshold breach.</p>

<p>84.</p>	<p><i>What would be the financial and balance sheet implications for electricity lines businesses if profits or prices were constrained on the basis of a DHC (vesting value-based) valuation?</i></p> <p><i>What would be the implications of constraining prices on the basis of current ODV values?</i></p>	<p>As we do not have historic costs and have no way or recreating them with any economic or empirical basis, the first question is purely academic.</p> <p>With regard to ODV, in Powerco’s case, we work on the basis of an assumed regulatory cap on revenues that relates to an asset base of ODV, so such a change would make no difference. In our experience many other power companies self regulated in a similar manner, which demonstrates the success of the present light-handed approach with comparisons from information disclosure providing sufficient constraints on prices and profit levels.</p>
<p>85.</p>	<p><i>Are there any circumstances or considerations that would justify the regulatory valuation of assets above ODV? Should investors in electricity lines businesses have legitimately expected to earn a return on any price paid above ODV?</i></p>	<p>See answer to questions 33 and 84.</p> <p>ODV reflects the brick and mortar of the network. The revenues associated with intangible assets, the difference between the purchase price and the regulated revenues net of full cost reflects the economic rental of the intangible assets such as easements without which the systems fixed assets would have no useful function</p> <p>Whilst these deficiencies remain there will always be a difference between the value of the “system fixed assets” and the value of the business that is being purchased. It would be commercially imprudent to buy the bare assets with no rights for their placement, no information with which to manage them, and no contractual agreements from which to earn revenue. In our view the regulatory valuation must take account of these addition aspects in an appropriate way so that the total business value is reflected in any regulatory asset base that is to be used for control purposes.</p> <p>As previously explained however, Powerco does not advocate a building block approach to determining a regulated asset base, which would involve assigning a specific value to easements.</p>
<p>86.</p>	<p><i>How is the choice of opening asset values likely to effect investors’ perceptions of regulatory risk (and therefore dynamic efficiency) going forward?</i></p>	<p>Unless opening asset values are consistent with the cost of replacing assets at their physical expiry, it will not be possible for companies sustainably to finance their current service levels (or future changes to it).</p> <p>The current consultation process has already affected the regulatory risk borne by lines businesses.</p>

87.	<p><i>What inferences, if any, could electricity lines businesses reasonably have drawn as to the appropriate asset valuation methodology to be used for pricing, from the introduction of information disclosure in 1994?</i></p>	<p><i>None as it was made clear in the preface to the ODV Handbook that “[t]ariff setting is an independent process from preparation of ODVs [and that t]here is specifically no regulatory requirement that prices be determined on the basis of system assets being valued according to ODV”.</i></p> <p>See answers to questions 70 and 71.</p> <p>As cited by the Commission in the Discussion Paper (Footnote p 92) there are no inferences beyond the explicit restrictions in the use of ODV for revenue determination. The reason for this limitation on the use of the valuation methodology is the cost of determining a valuation methodology that would be adequate for such a purpose and lack of any related benefit.</p>
88.	<p><i>What impact might the introduction of Part 4A have had on investors expectations regarding asset valuation methodologies?</i></p>	<p>See answer to question 86.</p> <p>The current consultation process has already affected the regulatory risk borne by lines businesses</p>
89.	<p><i>Which valuation methodology would best promote dynamic efficiency?</i></p>	<p>Consistent with FRS-3 - market value or where no such value exists, replacement cost.</p>
90.	<p><i>To what extent is optimisation required in the case of the system fixed assets of electricity lines businesses?</i></p>	<p>Depending on the form of capital efficiency reviews employed, optimisation may be obsolete.</p> <p>If assets were to be valued at replacement cost they should be subject to a self-administered (but independently monitored) ex ante capital efficiency review. On the breach of a threshold, the Commission’s investigations may include an ex post capital efficiency review as needs dictate. Under these circumstances, optimisation would only serve to increase the regulatory uncertainty in the sector but have no incremental discipline on capital investment.</p>
91.	<p><i>To what extent is this optimisation being undertaken through the application of the current ODV Handbook?</i></p>	<p>Refer to the answer to question 24.</p> <p>The August 2002 audit report by PB Associates found that <i>“Optimisation was generally well done. ELBs systematically applied the optimisation tests set out in Appendix C of the ODV Handbook and described the methodology they used in some detail in their valuation reports”.</i></p>
92.	<p><i>Have electricity lines businesses earned excessive profits in the past?</i></p>	<p>No.</p> <p>Refer to answer to question 84.</p>

93.	<i>How have revaluations gains been treated by electricity lines businesses in the past?</i>	Powerco has always treated revaluations as revenue, consistent with current FRS-3.
94.	<i>How should the issue of consistency (including the treatment of revaluation gains) influence the choice of asset valuation methodology?</i>	Treatment of valuation adjustments is beyond the scope of the valuation methodology. If inconsistent historic accounting has affected revenue or price in a way that contravenes the Act, it would not be a breach of section 57E and so is beyond the scope of this consultation.
95.	<i>How would the Commission's choice of opening values affect the profile of expected returns under different valuation methods into the future?</i>	The choice of valuation methodology should yield a consistent return over the life of the asset once adjustments are made for shortcomings in the valuation methodology. As the Commission notes, certain methodologies vary differently through the economic life of the asset. This would affect the profile of thresholds for price and quality – and so should be equivalent in terms of regulatory outcomes.
96.	<i>Can both ODV and DHC valuation methods deal with the issue of excess profits? What factors should be looked at in determining whether each valuation methodology has been applied consistently over time to avoid excessive profits?</i>	See answers to questions 5, 12 and 95. It should be possible to account for imperfections in any valuation methodology when using it to derive a rate of return although the costs involved in calculating an efficient risk-adjusted WACC against which to compare that return may outweigh the benefits of calculating it. It is much more difficult however to determine if the resulting return is excessive due to the inherent circularity of the calculation. It may be more useful for the Commission to investigate a fair representation of the capital invested in the business upon and of which investors should be able to expect a return. In the case of acquired businesses this is the price paid where there are willing buyers and sellers transacting at arms length in the market.

<p>97.</p>	<p><i>When using a nominal WACC and a replacement cost valuation methodology, should gains due to inflation be treated as income in the year after they occur? Could they be spread over a number of years? What are the difficulties with this approach, e.g., could there be a ‘spiralling up’ of moneys that have to be redistributed to consumers in later years? Would interest need to be charged on this outstanding amount?</i></p>	<p>If revaluations are considered as income (consistent with New Zealand GAAP), their economic value will be correctly accounted for at all times, due to the annual revaluation of sunk assets.</p>
<p>98.</p>	<p><i>How difficult would it be to obtain a valuation based on a “pure” historic cost valuation? How difficult would it be to obtain a valuation based on book value at vesting plus additions and deletions valued at historic cost? Is the information available from separation or more recently? Does the quality of information available preclude the use of any opening valuation methodology?</i></p>	<p>As noted above, it would be practically impossible to calculate a pure historic cost valuation of most New Zealand electricity lines businesses. In Powerco’s case, we do not have construction cost data for the majority of the assets in networks acquired since 1994.</p> <p>Notwithstanding this constraint, where construction cost data does exist it is incomplete.</p> <p>Archiving policies (limited to 7 years for data such as construction cost) may compound the problem of such an initiative).</p>
<p>99.</p>	<p><i>On balance, what is the preferred valuation methodology for opening valuations of distribution businesses system fixed assets? Please comment on the relative importance of the factors considered by the Commission and any other factors considered relevant.</i></p>	<p>See answer to question 89. Dynamic efficiency is of paramount concern in this consultation.</p> <p>Opening valuation should be consistent with FRS-3 - market value or where no such value exists, replacement cost.</p>

<p>100.</p>	<p><i>On balance, what is the preferred valuation methodology for future valuations of distribution businesses system fixed assets? Please comment on the relative importance of the factors considered by the Commission and any other factors considered relevant.</i></p>	<p>See answer to question 89. Dynamic efficiency is of paramount concern in this consultation.</p> <p>Opening valuation should be consistent with FRS-3 - market value or where no such value exists, replacement cost.</p>
<p>101.</p>	<p><i>On balance, what is the preferred valuation methodology for opening valuations of Transpower's system fixed assets? Please comment on the relative importance of the factors considered by the Commission and any other factors considered relevant.</i></p>	<p>In some cases Transpower's assets may provide technical alternatives to distribution projects and so should be valued consistently to ensure that dynamically efficient tradeoffs can between projects proposed in asset management plans and their technical alternatives (low voltage, high voltage, supply- and demand-side).</p>
<p>102.</p>	<p><i>On balance, what is the preferred valuation methodology for future valuations of Transpower's system fixed assets? Please comment on the relative importance of the factors considered by the Commission and any other factors considered relevant.</i></p>	<p>In some cases Transpower's assets may provide technical alternatives to distribution projects and so should be valued consistently to ensure that dynamically efficient tradeoffs can between projects proposed in asset management plans and their technical alternatives (low voltage, high voltage, supply- and demand-side).</p>