

---

Supplementary Submission with respect to:

## **Commerce Commission Review of Electricity**

### **Lines Businesses' Asset Valuation Methodologies**

---

5 December 2002

Prepared by



**Disclaimer:** While every effort has been made by Simon Terry Associates Ltd to ensure the accuracy of information in this document, no liability is accepted for errors of fact or opinion, or for any loss or damage resulting from reliance on, or the use of, the information it contains.

# CONTENTS

<b>Introduction and Summary</b>	<b>3</b>
<b>1. Newly “Discovered” Assets</b>	<b>4</b>
<b>2. Restatement or Revaluations</b>	<b>6</b>
<b>3. Is the Issue Price or Profit</b>	<b>7</b>
<b>4. Transfers and Allocative Efficiency</b>	<b>11</b>
<b>5. Response to NGC</b>	<b>14</b>
<b>6. Correction to Original Submission</b>	<b>16</b>
<b>Appendices</b>	<b>17</b>
1. Asset Registers Included in Establishment Plans of Buller Electric and Mainpower	

## Introduction and Summary

This supplementary submission is made by Simon Terry Associates Ltd (STA) in response to the Commission's invitation to the parties at the recent RAVM conference to respond to points made by others at the conference. We set out in this supplementary submission detailed responses to five propositions put before the Commission which in our view should be rejected. Those propositions and our responses can be summarised as follows:

- It was argued to the Commission that the vesting values of 1993 should be set aside as the starting point for regulatory analysis of excess profits, on the grounds that previously unknown assets have been "discovered" since vesting. We disagree. The vesting values were agreed transfer values for the businesses as going concerns, inclusive of all assets actually used in the businesses, whether or not those assets were formally recorded.
- Some parties have argued that the term "revaluation" ought to be interpreted narrowly to cover only inflation in the replacement-value prices of the relevant capital assets, that "restatements" should be excluded, and that changes in valuation methodology ought not to be classed as revaluations and hence are not income. We submit, on the contrary, that the definition of revaluation specified by MED for the calculation of ARPs/ROIs in the disclosure regulations is appropriate for economic analysis and regulatory purposes, and that in a natural monopoly context the so-called "restatements" are, and should be treated as, revaluation gains. So should mid-life changes in asset valuations resulting from a switch in methodology from DHC to ODV.
- Some lines company spokespersons argued to the Commission that its inquiry ought to focus only on price, not on profits. Hence, they suggested, so long as the price charged by a lines company remained constant, or even fell, there should be no concern about excess profits and no concern about asset revaluations. Submissions from both Powerco and Vector maintained that they have held their prices constant and that such absence of price increases ought to be the focus of threshold requirements. We argue, on the contrary, that it is the price-cost margin, not price alone, that should be scrutinised. It is changes in profits, not prices or revenue on their own, that should be the focus of the Commission's attention. If revenues remain unchanged, but costs fall (as they have for lines businesses), there will be higher profits. These are the "benefits of efficiency gains" which the Act requires to be passed through to consumers via price reductions. This point was made decisively in the course of the Gas Review.
- A cross-submission from Vector and UnitedNetworks dated 27 November 2002 and entitled "Comments on the STA Submission" contains the strong statement that "wealth transfers are not efficiency gains" and argues that our \$200 million estimate of excess profits has "confused a transfer of wealth ... with an allocative efficiency gain". The cross-submission's economic analysis is in error, as is its interpretation of the purpose of the valuation inquiry, and its attribution to STA of a claim that the \$200 million figure is an "efficiency gain".
- NGC, in its submission and presentation, quoted from a series of studies authored by personnel from the Institute for the Study of Competition and Regulation. The quotations, as presented, appear to cast doubt on STA's analysis. However, they do not support the inferences drawn.

# 1. Newly “Discovered” Assets

Several lines companies have argued that revaluations have resulted from the incorporation into the register of assets that were not counted at the time vesting valuations were struck in 1993. They have further argued that as the inclusion of these newly found assets were just “catch-up” entries, they should not be treated as income.

“I don't believe, as Mr Upson pointed out, that a restatement from historic cost to replacement cost is not [sic] a revaluation, it's not a profit, it's just a restatement. It should not be accounted for as a profit; it should be accounted for just as a restatement, therefore you would not bring that sort of restatement through the income statement. The same with discovery -- it's not the discovery of new assets, it's the rectification of inadequate records. These restatements are not profits ...”<sup>1</sup>

“[A]sset registers prior to the regulatory introduction of the ODV process were incomplete and understated the quantity of assets utilised by the ELB. The relatively high regulatory ROI's reported by ELBs in recent years incorporate revaluation movements as required by the Regulations representing a restatement of asset values which were previously significantly understated.”<sup>2</sup>

In response, STA submits the following:

1. Government defined an establishment process for all lines companies as part of industry wide deregulation and reform. That was the opportunity for all lines companies to document formally what each possessed, and what these assets were worth.
2. Descriptions of each business were submitted by establishment boards, audited, and approved by the Minister, as part of the 1993 establishment plans. Section 18(2) of the Energy Companies Act 1992 provided in part that:
  - (2) The establishment plan prepared by an establishing authority shall-
    - (a) Identify with reasonable precision the energy undertaking that is to be vested in the relevant energy company; and
    - (b) Value that energy undertaking, which valuation shall be made on such basis as is determined by the Minister after consultation by the Minister with such representatives of electrical supply authorities (within the meaning of the Electricity Act 1968) as the Minister thinks fit...
3. Establishment plans were duly developed for each entity, agreed with stakeholders and signed-off by the Minister. STA has studied sample establishment plans. Attached to this supplementary submission are the asset listings from two of these for the Commission's reference. These are from two of the smaller and presumably least well-resourced undertakings. They show a

---

<sup>1</sup> Mr Hagen, appearing for Powerco, 28 Nov, Transcript p 34, 35  
<sup>2</sup> Orion submission , p.9

high level of detail, contrary to the contention offered by a number of lines companies that records were typically very poor.

4. The filing of the establishment plans was the legal procedure that created the companies. If there were to be any revisiting of that process, presumably the same parties, in particular the Minister, would need to agree any changes.
5. The valuations at vesting were in most cases tested against future income expectations. A number of companies explicitly stated that their historic-cost book values coincided with the estimated economic value of their business, on the basis of the discounted present value of anticipated earnings. (See, for example, the establishment plan for Capital Power.)
6. Due to the natural monopoly character of the lines businesses, prices can be sustained at levels reflecting asset values far above replacement cost. “Fair pricing” and “fair value” for assets are therefore circular. But once any asset value has been set, efficiency gains that are retained as shareholder wealth (rather than shared with consumers) lead to increases in the value of the business. The business is able to generate higher profit levels from the same revenue stream – from prices that remain constant.
7. Newly-discovered assets are no different from the revaluing of assets already on the register. If added to the book value, they increase the wealth of the owners of the business. Whether a revaluation or a “discovery”, the additional value are part of the total returns, and the reported profit (ARP/ROI) must reflect the windfall.
8. A regulatory regime focused on delivering benefits to consumers would require that the internal rate of return on actual investment does not exceed the regulatory benchmark. This in turn would require that in no single year does the ROI rate of return exceed the WACC. As revaluations entered the books each year, revenue would need to drop by a corresponding amount in those years. Consumers would get a one-off rebate (or its perpetuity equivalent) equal to the scale of the revaluation or, to put it another way, the lines business effectively purchases the right to charge customers for the used of the revalued asset.
9. Were this principle established, it would quickly become clear that “discovered assets” represent no net additional value to lines company shareholders. We would then expect any interest in pursuing a process of “restating” asset values to fall away entirely.

An important question opened up by the notion of “discovered assets” is where the process might end. One lines company has suggested that all the discovering is now done. “The relatively high regulatory ROI’s reported by ELBs in recent years incorporate revaluation movements as required by the Regulations representing a restatement of asset values which were previously significantly understated. As that “catch-up” is now complete, future Regulatory ROI’s should be somewhat lower.”<sup>3</sup>

However, on the final day of the RAVM conference, it was clear this was not a view shared by all lines companies. Powerco submitted that its assets were even now

---

<sup>3</sup> Orion submission, p 9.

undervalued and that the ODV handbook needed to be modified to reflect new classes of asset previously unrecognised – one of these being easements. The question arose with respect to recent Powerco acquisitions. Powerco conceded, under questioning, that the price paid for the assets included no explicit accounting for the value of easements.<sup>4</sup>

If the Commission at this stage allows asset values to be retrospectively marked up for any asset not individually identified in the vesting asset inventory, it will have no basis in principle for refusing in future to allow lines companies to “discover” unpriced easement rights, incorporate them into their book values, and thereafter charge customers for the services flowing from those easements. Once this slippery slope is embarked upon, there is endless potential for lines companies to “discover” new assets in their possession for which they have never paid but on which they seek to make a return. From the “missing” physical assets of 1993 to the hitherto-unvalued easements of 2003 and on to yet-to-be identified physical or metaphysical assets is a logical progression which should be halted at source.

In summary, we do not see discovered assets as any different to other revaluations. They should therefore be accounted for as wealth gains. If the Commission wishes to consider matters further in investigating the issues surrounding this principle, we would note that those submitters raising the notion of “discovered” assets have not provided sufficient evidence to buttress this proposition. In particular, we are not aware of evidence being placed before the Commission which clearly demonstrates the alleged incompleteness of the 1993 asset registers. No lines company or consultant has, to our knowledge, tabled in submissions a properly-audited comparison of the detailed asset registers as they stood at vesting date in 1993 with those utilised in the first, second, and subsequent ODV valuations.

## 2. Restatements or Revaluations?

Statements made by accountants appearing in the course of the RAVM conference - in particular Mr Taylor of Price Waterhouse Coopers and Mr Hagen of the Accounting Standards Review Board - suggested that the concept of “revaluation” ought to be given a rather restrictive interpretation. The effect of such a restrictive definition would be to exclude “restatements” resulting from the “discovery” of assets<sup>5</sup>, and to exclude changes in valuation methodology such as the switch from DHC to ODV during the late 1990s<sup>6</sup>.

---

<sup>4</sup> Transcript Day 4 p. 30 lines 21-33; also p.4 lines 12-15, and pp.48-50.

<sup>5</sup> See, for example, the statement by Mr Hagen, who appeared for Powerco, at page 44, lines 8-13 of the Day 4 transcript (28 November 2002): “A change from \$150 replacement cost to \$160 replacement cost, because we've found another pole or other assets that were missed originally, is a restatement and is not a revaluation gain that should be accounted for as profit or a gain. See also Mr Taylor of PWC, Day 2 p.13 19 lines 19-27: “It's also important to note that revaluations since vesting reflect corrections to previously under-valued assets, not pure inflationary revaluations. ... A change away from ODV for opening value could lead to potential under-recovery of investment as a result.”

<sup>6</sup> Mr Hagen again, at p.34 of the Day 4 transcript, lines 42-49: “Simon Terry Associates ..., as I read them, ... say that the switch from historic cost to replacement cost has led to monopoly profits, but I don't believe, as Mr Upson pointed out, that a restatement from historic cost to replacement cost is not [sic] a revaluation, it's not a profit, it's just a restatement. It should not be accounted for as a profit; it should be accounted for just as a restatement, therefore you would not bring that sort of restatement through the income statement.” And at page 44 lines 4-7: “a

Insofar as their views represent accepted New Zealand accounting practice, we submit that this simply demonstrates the gap between accounting convention on the one hand and established international regulatory practice and the economics literature on the other. Increases in lines company asset valuations from 1993 to 2002 represent holding gains to the owners of the companies, and are therefore income under the principles of current cost accounting (see references listed in footnote 24, p.12 of *Lining Up The Charges*, STA 2000, a copy of which was appended to our submission.)

Our use of the term “revaluation” refers to any holding gain in the value of an asset between the time at which it enters into the possession of the relevant entity and its value at the terminal date of the analysis. This is consistent with the classic treatments by authors such as Hicks, Coase, Bell, Solomons, Baxter, Whittington and Scott. It matches the Byatt Report approach to regulatory accounting. It is consistent with the approach to revaluations by the US Supreme Court and Securities and Exchange Commission.

We consider that the Electricity (Information Disclosure) Regulations 1994 were designed to implement the concept of revaluation as used by the international authorities, with the explicit aim of identifying the taking of excess profits.

### **3. Is the issue price or profit?**

Some lines companies spokespersons have argued to the Commission that its inquiry ought to focus only on price, not on profits. Hence, they suggested, so long as the price charged by a lines company remained constant, or even fell, there should be no concern about excess profits and no concern about asset revaluations.

Vector, for example, laid stress on the proposition that the industry should be judged on “outputs”, not “inputs”. On Day One (25 November) Mr Whyte stated<sup>7</sup>

In previous submissions we have proposed thresholds that would focus on performance that is of direct relevance to consumers; namely, the quality of service provided by the lines business, and the price charged for that service. We do not see valuation methodology playing a pivotal role in the thresholds design; rather, the thresholds should focus on the output of concerned consumers. The Commission should focus its efforts on setting its thresholds on these price and service outputs at an appropriate level. You get this right and valuation becomes less relevant.

Similarly, in its presentation, Powerco argued that “thresholds should only be a function of outputs”.<sup>8</sup> (“Outputs” are effectively price in the context of those comments.)

---

<sup>7</sup> change from historic cost to replacement cost, that is in my view -- it's like a change from \$100 to \$150 is a restatement; it is not a revaluation gain. A change from \$150 replacement cost to \$160 replacement cost is a revaluation gain and should be accounted for as such.” Essentially the same claims are made by Vector and UnitedNetworks on pp.1-2 of their 27 November 2002 cross-submission.

<sup>8</sup> Transcript, 25 November p.63 lines 40 – 49.  
Powerco presentation to Commission, p 19.

However, Section 57E of the Commerce Act 1986<sup>9</sup> yields a clear interpretation that merely holding prices constant is not sufficient. The purpose statement is clear that targeted control involves passing cost reductions through to price reductions:

“The purpose of this subpart is to promote the efficient operation of markets directly related to electricity distribution and transmission services through targeted control for the long-term benefit of consumers by ensuring that suppliers –

- (a) are limited in their ability to extract excessive profits; and
- (b) face strong incentives to improve efficiency and provide services at a quality that reflects consumer demands; and
- (c) **share the benefits of efficiency gains with consumers, including through lower prices.**” [emphasis added]

A more subtle form of the argument that “only price matters” concedes that revaluation gains could potentially boost lines company wealth, but claims that it does so in fact only if prices are raised. So long as revenues remained unchanged, there is no gain to account for, it was said.

Mr Upson of Powerco argued that:<sup>10</sup>

“I think the real point is that, if the revenue remains unchanged, regardless of which cost base you're using, then the [N]PV is unchanged, and hence there is no gain or loss. The only time you have any gain or loss is if you change the revenue stream ...”.

This also appeared to be the position Dr Layton was advancing when clarifying Powerco's position.<sup>11</sup>

---

<sup>9</sup> As amended by the Commerce Amendment Act (No 2) 2001

<sup>10</sup> Transcript, 28 November p.37 lines 4-12.

<sup>11</sup> **DR LAYTON:** .... The next issue I want to raise with you and get your view on is related to revaluations as restatements. If I've understood you right you have said that really revaluations that are associated with changes in pricing could well be increases in income, but revaluations that are unconnected to pricing are just restatements of the accounts. Is that your position?

**MR HAGEN:** What I meant to say was that, a change from historic cost to replacement cost, that is in my view -- it's like a change from \$100 to \$150 is a restatement; it is not a revaluation gain. A change from \$150 replacement cost to \$160 replacement cost is a revaluation gain and should be accounted for as such. ....

**DR LAYTON:** But if they had have initially set their prices on the basis of \$150, found they have the extra asset and now said, "well, now we're going to set our prices at \$160", have they made the gain of the 10 and should count it as income?

**MR HAGEN:** Well, presumably they would adjust their pricing because then they are recovering all their costs.

...

**DR LAYTON:** But just a restatement that it doesn't impact prices -- it's the impacting on prices that's important, isn't it?

**MR HAGEN:** From your point of view, yes. From the company's point of view, it's getting the proper basis, a proper record of what they own.

**DR LAYTON:** So, in carrying through that analysis, the issue I wanted to raise in relation to the revaluations was the proposition that PowerCo have about easements. ... [I]f they did introduce easements into the asset base and rejigged prices on the basis of their higher asset base, they would have to count the value of the easements as revenue in that, from a regulator's point of view?

**MR HAGEN:** No, I don't think so, because what you are doing in that situation, it's a bit like just discovering another asset that you –

**DR LAYTON:** Which we've said, if you adjusted your prices, would in fact lead to a gain.

Again however, it is changes in profits, not revenue, that should be the focus. If revenues remain unchanged, but costs fall (as they have considerably for lines businesses), there will be higher profits. These are the “benefits of efficiency gains” the Act requires to be passed through to consumers via reduced prices.

The relationship between revaluation gains and excess profits was a key focus of the recently completed Gas Review. In the course of the Gas Review, NGC commissioned the Institute for the Study of Competition and Regulation (ISCR) to critique a report by STA that estimated the two largest gas pipeline companies were collecting excess profits of around \$60 million a year. The ISCR study, led by Professor Evans, disputed this estimate principally on the following basis:

“The revaluation only represents a capital gain to investors if prices increase as a consequence. If prices are held constant, then the real/market value of assets is not affected by changes in valuation methodology, and so **valuations should not be considered as gains and losses to investors.**”  
[Emphasis added]<sup>12</sup>

However the Ministry of Economic Development (MED) commissioned an independent review of the ISCR and STA papers which concluded that:

“In our view once having established an opening initial asset value for the assets, then **revaluation gains should be regarded as income** to investors if ODRC **asset values can be used to set future prices.**”<sup>13</sup> [Emphasis added]

Similarly, MED itself concluded that:

“The Ministry's view is also that **revaluation gains should be included as revenue** when calculating ex-post returns for regulatory purposes. This recognises that in response to an increase in asset value, **a profit maximising monopoly will increase revenue (profit) to equate this to the allowable return on that asset**, which is based on WACC.”<sup>14</sup> [Emphasis added]

In other words, once an asset value is set for regulatory purposes, the monopoly service provider will be able to price up to the allowed return for that value. It is this scope to take monopoly profits that the Gas Review identified as critical to whether revaluation gains are counted for regulatory purposes.

---

**MR HAGEN:** If you overall increased your prices, then your cashflows will increase, therefore you'd have a gain, yes. But –

**DR LAYTON:** But if they didn't recognise them, it wouldn't be an issue, so long as they didn't price on the basis of the new found asset?

**MR HAGEN:** Yes

(Extracts from transcript, Day 4, pp.43-45.)

<sup>12</sup> Lewis Evans, Graeme Guthrie, and Stephen Hutton, *Report on “Pipeline Profits: Gas Pipeline Rates of Return”*, by Simon Terry and Associates, Institute for the Study of Competition and Regulation report prepared for Natural Gas Corporation, February 2002, p.8.

<sup>13</sup> “Commentary on *Pipeline Profits: gas pipeline rates of return*, by Simon Terry Associates and response to this report by the New Zealand Institute for the Study of Competition and Regulation Inc”, Alastair Marsden, Auckland UniServices Ltd, May 2002

<sup>14</sup> Ministry of Economic Development, [http://www.med.govt.nz/ers/gas/review/decisions/paper-02/paper-02-06.html#P155\\_39061](http://www.med.govt.nz/ers/gas/review/decisions/paper-02/paper-02-06.html#P155_39061)

The central problem with the opposing view is the absence of any reference to costs or markups. Our work has applied the standard approach of economic theory to the analysis of market power, whereas the submitters quoted above (and Dr Layton's line of questioning) depart entirely from the standard economic approach to this question.

In the mainstream literature the market power of a firm is measured by its ability to sustain a price above marginal or variable cost. Let  $p$  stand for the average price and  $c$  for the marginal cost. Then the markup charged by the firm is given by  $(p-c)$ . This is the key input for calculation of the most commonly used indicator of market power, namely the Lerner Index.

To illustrate the approach of mainstream economic theory, the following passages from the standard text by Carlton and Perloff are relevant, emphasising as they do that it is the price-cost margin – not price in isolation – that is the relevant magnitude for analysis of market power and monopoly profits<sup>15</sup>:

The ability to price profitably above the competitive level is referred to as market power, and such conduct leads to welfare losses by society.

...

[W]e can write the profit maximising condition for the monopoly as

$$\frac{p - MC}{p} = -\frac{1}{\mathbf{e}}$$

The left-hand side of [this equation] is the **price-cost margin**: the difference between price and marginal cost as a fraction of price,  $\left[ \frac{p - MC}{p} \right]$ ... The price-cost markup is also called the Lerner Index of market power.

...]

[W]hether price is already elevated significantly above competitive levels, can be answered directly by comparing price and marginal cost... To avoid the problems associated with calculating rates of return, many economists use a different measure of performance, the Lerner Index or *price-cost margin*,  $\left( \frac{p - MC}{p} \right)$ ...

[B]ecause a marginal cost measure is rarely available, many researchers use the price-average variable cost margin instead of the appropriate price-marginal cost margin... Using  $v$  in place of marginal cost... [the relevant equation is]

$$\frac{p - v}{p} = -\frac{1}{\mathbf{e}} + (r + \mathbf{d}) \frac{p_k K}{p Q} \quad (8.4)$$

[T]he last term...,  $(r + \mathbf{d}) \frac{p_k K}{p Q}$ ,... is the rental value of capital divided by the value of output.

<sup>15</sup>

D. Carlton and J. Perloff, *Modern Industrial Organization*, 3<sup>rd</sup> edition, Addison-Wesley 2000, pp.8, 91-92, 611.

In *Lining Up The Charges*, and in our submission to the Commerce Commission's Electricity Lines Businesses Conference on 18 July 2002, STA presented evidence that the average variable cost ( $v$  in the equation above from Carlton and Perloff) had fallen while average lines charges ( $\varphi$  in the above equation) had remained unchanged, so that the price-variable cost margin in electricity lines businesses has widened dramatically.

We can take equation 8.4 from Carlton and Perloff and rewrite it as follows in terms familiar to those engaged in the present debate in lines business asset valuation:

Margin of price over average operating cost

= Lerner Index of market power

$$+ \frac{(\text{WACC plus depreciation rate}) \times \text{Asset Valuation}}{\text{Total revenue}}$$

A regulator seeking to mimic competitive market outcomes will be aiming at the price that would be consistent with this equation when the Lerner Index is zero (the value of  $\frac{1}{\varepsilon}$  under perfect competition where  $\varepsilon = \infty$ ). It then follows that there is a direct linkage between the asset valuation and the allowable price-cost margin, measured using average variable cost. It is that relationship that is the focus of our submission and, in our view, of this inquiry.

## 4. Transfers and Allocative Efficiency

A cross-submission from Vector/United Networks to the Commission questions the basis for STA's \$200 million-per-year estimate of excess profits.

Vector states (pp.2-3):

the STA analysis confuses a transfer of wealth from lines businesses to consumers with an allocative efficiency gain... [T]he allocative efficiency gain would be in the order of \$10 million, rather than the \$200 million as claimed in the STA submission. The STA claim of a \$200 million efficiency gain mistakenly identifies the transfer of wealth which would occur under the pricing proposal ... as an efficiency gain. It is not.

At the outset it must be pointed out that STA has not at any stage described the \$200 million as an "efficiency gain". Throughout our documents over the last three years we have emphasised that the \$200 million is a transfer of wealth from consumers to lines companies. We have at no time been confused between transfers and efficiency gains; the Vector cross-submission has not recognised this. The existing transfer of \$200 million per year of monopoly rents from consumers to the lines companies is a consequence of allocatively-inefficient pricing behaviour. Reversal of that transfer would flow as a direct consequence from regulatory intervention to cap the price at a fair and reasonable level. There is therefore a direct link between the promotion of

allocative efficiency and the return of the rents to consumers, but we have never confused the two.

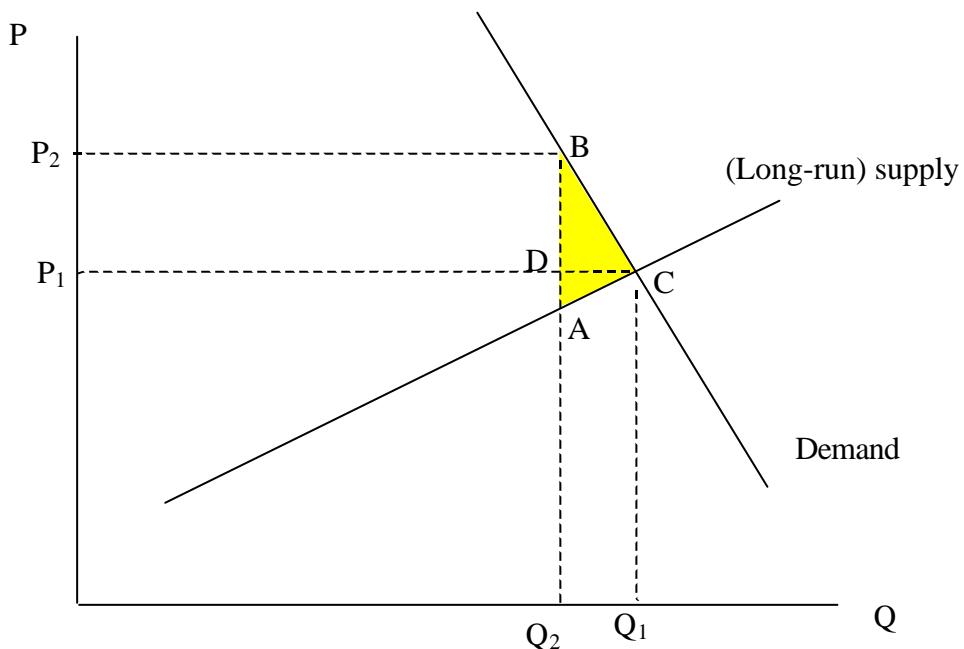
Next, it must be pointed out that efficiency gains per se are not the central focus of the present inquiry, which has as its ultimate purpose the long-term benefits of consumers. Transfers of monopoly rents back to consumers are “benefits to consumers” just as much as allocative efficiency gains are. Both fall squarely within the terms of reference for the inquiry. What Vector’s cross-submission actually implies is that our \$200 million figure was understated because it does not include any estimate of the narrowly-defined allocative efficiency gain Vector identifies. We would be willing to add at least some of Vector’s \$10 million estimate to our \$200 million.

In essence, Vector’s cross-submission has incorrectly interpreted:

- The diagram presented in its cross-submission;
- The purpose of the review set out in s57E of the Commerce Act.

Vector’s cross-submission has also made the incorrect claim that wealth transfers have no efficiency implications. This is highly implausible once the consequences of rent-seeking behaviour are taken into account.

To establish these elements of our rebuttal it is best to begin with the diagram, as reproduced below from Vector’s note (we have added notation for  $Q_1$  and  $Q_2$ ).



The analysis deals with the consequences of a downward shift in prices from  $P_2$  to  $P_1$  which increases allocative efficiency by the amount of the shaded triangle. The transfer of wealth from suppliers to consumers (the reduction in monopoly profit) is given by the rectangle  $P_1P_2BD$ .

Vector’s proposition is that the calculation of benefit to consumers should focus only on the allocative efficiency gain from the viewpoint of the economy as a whole, which is shown by the triangle ABC. STA’s submission, in contrast, estimated the size of the rectangle  $P_1P_2BD$  as the “cost to consumers” associated with the existence of allocative efficiency gain.

inefficiency due to monopoly pricing, and entered the resulting \$200 million estimate in our submission.

The issue is whether the Commission should limit its calculations to the \$10 million (Vector's figure) deadweight loss for the economy as a whole, or should focus on the losses suffered by consumers as a result of the taking of excess profits.

On our reading of s57E, there is no basis for the position advanced by the Vector cross-submission. The statute refers clearly and explicitly to "the benefit of consumers", which flows from the promotion of economic efficiency. It makes no reference to restricting the Commission's analysis to deadweight loss. The extraction of excess profits is damaging to consumers primarily because it involves a transfer of wealth from consumers to the owners of lines businesses. The amount of that transfer is the rectangle  $P_1P_2BD$ . Our estimate of \$200 million per year is that transfer of wealth from consumers to lines business owners.

The redistributive effects of monopoly pricing were appropriately emphasised in the Commission's discussion document. At paragraph 3.19 the document noted (correctly) that capping average revenue in pursuit of allocative efficiency involves "changing an income distribution in favour of consumers in the short-term" and went on to refer to "significant distributional effects, between asset owners and consumers".

In paragraph 10.91 the Commission noted that: "one view is that the purpose of a control regime is to protect consumers from the market power that could be exercised by monopoly businesses, subject to efficiency considerations. The acceptance of this view might lead to DHC being favoured on distributional grounds."

In our submission we noted the statutory requirement to focus on consumer benefits and on the criterion of fairness. We described our \$200 million figure as a "first estimate of the benefit to consumers of the allocative efficiency gain from adopting DHC rather than ODV"

The strictly accurate calculation of the costs to consumers currently associated with monopoly pricing would be our rectangle of wealth transfers plus the triangle  $BCD$ , which represents consumer surplus foregone as a result of allocative inefficiency. The rectangle  $P_1P_2BD$  is consumer surplus created but then held back from consumers as excess profits. In our order-of-magnitude estimate we excluded the deadweight loss effect because it is small relative to the main wealth transfer.

Both the Commission's discussion paper and our submission are clear on this issue. Neither is open to the interpretation which Vector has advanced.

Having established these points, we turn to the cross-submission's assertion that the transfer of monopoly profits from consumers to suppliers has no efficiency dimension. This suggests that the authors are unfamiliar with the extensive literature on rent-seeking, which began from the observation by Tullock (1967) that a monopolist should be prepared to spend up to the area of the rectangle  $P_1P_2BD$  on lobbying and litigation to preserve its monopoly privileges. This diversion of resources from alternative uses to unproductive rent-seeking activities involves an allocative efficiency loss.

As various writers have observed, the amount of rent-seeking activity will generally be smaller in practice than the rectangle of monopoly rents, because of the ability of most

of the players in a privileged industry to free-ride on the lobbying effort of a few major players (see Tullock 1989 Part 1). For the Commission’s guidance, should it be interested in pursuing this line of discussion, we list in a footnote the key references<sup>16</sup>. In the original paper by Tullock (1967), Vector’s diagram appears as Figure 3.1 in the reprint version, and which on p.48 notes that:

“The rectangle to the left of the welfare triangle is the income transfer that a successful monopolist can extort from the customers. Surely we would expect that with so large a prize dangling before us, potential monopolists would be willing to invest large resources in the activity of monopolizing... The holders of the monopoly ... would be willing to put quite sizeable sums into the defence of their power to receive these transfers.”

## 5. Response to NGC

NGC’s submission section 4.2 quotes from a series of papers that are apparently critical of various STA analyses of excess profits in gas pipelines and port companies. We make the following points in response:

1. All three papers/extracts cited by NGC that are purportedly critical of STA’s work were authored by personnel of the Institute for the Study of Competition and Regulation (ISCR).
2. NGC is a core sponsor of ISCR, along with a number of other major utility service providers including Transpower and Telecom.
3. One of the papers NGC cites is *Report on “Pipeline Profits: Gas Pipeline Rates of Return by Simon Terry and Associates*. That ISCR report was directly commissioned by NGC. ISCR’s study and STA’s original report were independently reviewed by Alastair Marsden of Auckland University. NGC implies (p. 6) that the Marsden review was equivocal between the papers. In fact, it was decisive on the issue of revaluation gains.

The ISCR paper contains on p.8 the statement which we have already alluded to above:

“The revaluation only represents a capital gain to investors if prices increase as a consequence. If prices are held constant, then the real/market value of assets is not affected by changes in valuation methodology, and so **revaluations should not be considered as gains and losses to investors.**” [Emphasis added]

The independent Marsden review concurred with STA’s view and states:

---

<sup>16</sup> Tullock, G., “The Welfare Costs of Tariffs, Monopolies, and Theft”, *Western Economic Journal* 5: 224-232, June 1967, reprinted as Chapter 3 in Buchanan, J.M., R.D. Tollison, and G. Tullock (eds) *Toward a Theory of the Rent-Seeking Society*, Texas A&M Press 1980; other papers by Tullock Buchanan, Krueger, Posner, and Cowling & Mueller in Buchanan et al (1980); Rowley, C.K., R.D. Tollison, and G. Tullock (eds) *The Political Economy of Rent-Seeking*, Kluwer Academic Published 1988; Tullock, G., *The Economics of Special Privilege and Rent Seeking*, Kluwer Academic Publishers 1989.

"In our view once having established an opening initial asset value for the assets, then **revaluation gains should be regarded as income to investors** if ODRC asset values can be used to set future prices."<sup>17</sup> [Emphasis added]

4. A second ISCR report quoted by NGC (p.5) deals with the usefulness of internal rate of return (IRR) analysis in measuring monopoly profits. In essence, the passage quoted on p.5 of NGC's submission says that monopoly profits will not be reliably revealed by IRR analysis if the entry and exit values for the business are based on market values or on replacement cost.

The quote is irrelevant. STA did not rely on either measure for entry and exit values in calculating its IRRs. STA used book value as both the entry and exit price for its core analysis of electricity and gas lines. Alternative valuations were used only for sensitivity analysis.

NGC's introduction to this quote, which on the face of it equates the "IRR methodology adopted by Simon Terry and Associates" with the use of replacement cost or market-value entry and exit values, is therefore inaccurate.

5. In a related citation, NGC quotes (p. 5) from a report by Charles River Associates (CRA), a section of which critiqued the STA report *Portly Charges*. ISCR personnel are senior advisors to CRA and we are informed by CRA staff that it was those ISCR individuals who wrote the section of the paper quoted by NGC, which stated:

"The use of book value for the beginning of the period and market value at the end of the period does not provide a consistent basis for the comparison, and only a comparison using book values at both the beginning and end of the period would provide a plausible basis for comparison."

As before, STA did use book value as both the entry and exit values for our core analysis. Thus STA did in fact 'provide a plausible basis for comparison'. The ISCR comment may have been directed at a parallel set of estimates STA undertook which used book value for entry and a market value for exit and showed similar results.

6. NGC attributes to STA the following position (p. 8, with a footnote citation to our 1994 report *Gas Transmission Contracts: A Sustainable Framework*):

"Other commentators have expressed the view that a combination of the depreciated replacement cost valuation methodology and information disclosure would be preferred in an environment of a light handed regulatory regime, whereas ODV would be the sensible approach in a regulated environment."

This refers to a public report STA completed for Enerco on gas transmission arrangements in 1994. The apparent intent is to suggest a contradiction with STA's submission. No contradiction exists:

- a) STA's clearly stated concern is not whether a switch was made to ODV, or any other methodology, but the *way* that switch was made. In particular, the

---

<sup>17</sup>

"Commentary on *Pipeline Profits: gas pipeline rates of return*, by Simon Terry Associates and response to this report by the New Zealand Institute for the Study of Competition and Regulation Inc", Alastair Marsden, Auckland UniServices Ltd, May 2002

issue is whether revaluation gains secured through the process of the switch have been accounted for as income and consumers appropriately compensated.

b) The recommendations in the 1994 report cited by NGC made no suggestion whatsoever that revaluation gains could simply be retained by NGC without compensatory concessions. On the contrary, the switch to a DRC valuation of the NGC transmission system for contractual pricing purposes was envisaged as one part of a comprehensive contractual package including substantial concessions by NGC on other contract issues, especially pipeline capacity entitlements.

c) The rationale behind STA's recommendation for DRC in the context of the 1994 negotiations over gas transmission pricing is fully set out in the paper, a copy of which has been provided to the Commission staff.

## **6. Correction to Original Submission**

We take this opportunity to correct a statement made in our original submission:

On page 23 paragraph 4 of our submission we stated that

“all companies valued their assets at historic cost, on the basis of clear and explicit instructions issued by the Minister of Energy in May 1993. Had the Minister intended the companies to trade forward on the basis of replacement-cost book values, the time for him to say so was 1993 (when, incidentally, the ODV-based information disclosure regulations were being drafted in parallel with the establishment process for the new companies). On the contrary, the Minister chose to vest the assets at historic cost, and in doing so opened the way for the companies to trade forward on that basis”.

The instructions from the Minister of Energy were in fact issued on 27 May 1992 (as stated in our oral presentation), not May 1993 as stated above, and required the transfer of assets to be undertaken at “book value”, not “DHC”. The effect was that the great majority of companies simply carried over their pre-existing book values as a starting value, and declared in their statements of accounting policy that DHC would be used thereafter. However, we accept (on the basis of further research of our own, combined with submissions from other parties at the conference) that in fact a small number of lines companies successfully vested their assets using “book values” established on alternative bases.

We remain of the view that, once incorporated into the establishment plans and signed off by the Minister, the resulting vesting values are authoritative starting points for any regulatory accounts.

## **ATTACHMENT 1**

### **Asset Registers Included in Establishment Plans of Buller Electric and Mainpower**