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## SCHEDULES

“The New Zealand Commerce Commission’s Natural Gas Control Inquiry” by  
Geoffrey Horton

“Response to WACC Issues in Commerce Commission’s Draft Report on the Gas  
Control Inquiry”, Report of Robert G Bowman, Network Economics Consulting Group

## PREFACE

- 1.1 This submission is made on behalf of Powerco Limited ("**Powerco**") in response to the Commerce Commission's "Gas Control Inquiry Draft Report", dated 21 May 2004 ("**Draft Report**").
- 1.2 Powerco's contacts relating to this submission are:

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### ***Conference***

- 1.3 Powerco wishes to appear and be heard at the Conference.

### ***Confidentiality***

- 1.4 Filed separately to this submission is a short letter addressing certain issues in relation to the Powerco Restricted Information to which the Commission refers in its Draft Report. A section 100 order has been sought in relation to that letter.

### ***Disclaimer***

- 1.5 Whilst Powerco believes the statements made in this submission are accurate, Powerco and its respective officers and employees give no warranty of accuracy or reliability.
- 1.6 Powerco has prepared this submission for the purpose outlined above, and it should not be used, copied or reproduced for any other purpose without the express written consent of Powerco. Powerco and its respective officers and employees do not undertake any responsibility arising in any way whatsoever to any person or organisation in respect of the information set out in this submission, including any errors or omissions therein arising through negligence or otherwise, however caused.

## INTRODUCTION

- 2.1. To assist it in responding to the Draft Report, Powerco has retained the services of Geoffrey Horton and NECG. Their reports are annexed to this submission. Geoffrey Horton, in particular, sets out his opinion as to the overall approach that he believes should be adopted by the Commission. Powerco endorses his opinion.
- 2.2. The particular problem that needs to be addressed is how content should be given to the statutory test of “necessary or desirable... in the interests of persons acquiring...”. Powerco agrees that this should be approached through a net benefits analysis, essentially comparing two scenarios (control vs no control).
- 2.3. As with any comparison, though, it needs to be undertaken on a like with like basis. Powerco submits that the Commission’s approach does not achieve this. That is because, in adopting an NPV=0 approach, the Commission should have used Powerco’s acquisition prices as the starting valuations. If a different, and lower, valuation is used, it will result in a negative NPV. In other words, the Commission would simply transfer shareholder wealth to Powerco’s customers, thereby ignoring its own principles for price setting. That may be politically popular in the short term, but will have unfortunate consequences in terms of future investment and service levels.
- 2.4. The hypothetical world of control is assumed by the Commission to provide substantially less risk of stranded assets and, therefore, the Commission is able to conclude that lower prices can result. In effect, the Commission assumes that customers will not ultimately pick up the cost of the risk of stranded assets. That assumption, of course, is flawed. There can be no free lunch.
- 2.5. Geoffrey Horton’s paper explains in more detail why he believes the scope of the Draft Report is impressive but that the Commission’s approach is essentially flawed. The specific area of concern is that of asset valuation. Mr Horton says that taking a snapshot of Powerco’s existing prices, and comparing them with the assumed consequences of control, is likely to provide a misleading conclusion. That is because prices above an FCM level are not necessarily excessive.
- 2.6. It appears the Commission is alive to the problem. For example, in paragraph 6.24, the Draft Report states:

If the Commission assesses returns on a different basis to that used by the company to set prices, then the assessment of excess returns partway through the life of the assets may result in misleading findings of excess or deficient returns even though the NPC of the businesses’ earnings over the life of the asset might be zero.
- 2.7. Powerco believes that this does summarise the problem. Nevertheless, it submits that the Commission’s reasoning does not sufficiently recognise the problem identified by it.
- 2.8. Geoffrey Horton also points to the speculative nature of the analysis undertaken by the Commission. By its very nature, such speculation is inevitable. And while the Commission acknowledges that in some parts of the

Draft Report, overall, that acknowledgement is not reflected in the Commission's conclusions.

- 2.9. NECG has identified some specific weaknesses in the Commission's work on WACC. Powerco endorses its opinion.
- 2.10. Powerco has endeavoured in this Introduction to summarise some of the main issues raised in the following submission and the attached reports. There is always a risk in summary and Powerco commends to the Commission the full text of the attached reports.
- 2.11. In conclusion, Powerco submits that the Commission:
  - (a) Should re-examine its approach to ensure that it compares like with like; and
  - (b) Should revisit its costs assessments, which critically overstate the benefits of control and understate the costs of control.

## FACTUAL ERRORS CONTAINED IN DRAFT REPORT

- 3.1. The Draft Report contains a number of factual errors which will need to be addressed.

### ***Paragraph 11.6***

- 3.2. There is an inconsistency in the figures quoted at paragraph 11.6 of the Draft Report. The Report states that "Powerco's gas distribution network is approximately 3,820 kms in length and services approximately 109,000 customers" and implies that both of these figures relate to the 2003 year.
- 3.3. In fact the distribution network length figure of 3,820 kms relates to the 2003 year, whereas the figure in relation to "customers" of 109,000 relates to the 2004 year. Powerco's weighted average customer number for the year ended 31 March 2003 is 74,212. Powerco's forecast 2004 network length is 5,368 kms.

### ***Table 11.1***

- 3.4. The distribution network length of 5,368 km shown in Table 11.1 is Powerco's 2004 forecast number, and not the figure for the year ended 31 March 2003 as stated. The correct distribution network length for the year ended 31 March 2003 is 3,820 km.

### ***Paragraph 11.35***

- 3.5. The Draft Report assumes that the forecast of the allowance of regulatory expense and utility rates made by Powerco in its operating costs, half results from the forecast regulatory expense.
- 3.6. This amount has been reduced further and a lower estimate of \$249,000 has been substituted by the Commission (refer paragraph 5.65 of the Draft Report).
- 3.7. In fact the regulatory expenses component in Powerco's original estimate provided to the Commission was only approximately 25% of total forecast expenses, or about \$500,000. The Commission has therefore underestimated the direct regulatory costs imposed on Powerco's business.

### ***Information Provided by Powerco***

- 3.8. In a number of parts of the Draft Report (see, for example, paragraphs 4.33, 4.34, 5.122, 6.27, 6.31 – 6.33, 6.46, 6.47, and 11.34 – 11.46), the Commission comments on what it apparently views as inadequacies in the data supplied to it by Powerco. In particular, as to the incompleteness of historic cost data.
- 3.9. The position regarding the information provided by Powerco has been fully set out in Powerco's correspondence with the Commission in response to the two s70E notices issued by the Commission. In particular, Powerco's letter to the Commission dated 4 March 2004.

- 3.10. Powerco does not have historic cost information (as defined by the Commission) for the bulk of its network. Powerco came to own its gas distribution network through a series of mergers and acquisitions. The historic costing data was not provided on acquisition. It has only been since September 2000 that it has constructed any new gas networks, and even then it has done so to only a very limited extent. Should the historic information exist then it resides with the vendors from whom Powerco purchased the assets in question, and Powerco has no means of obtaining access to it. Powerco doubts that in many cases the information exists. In Wellington, for example, some of the pipelines were installed in the 1900s and the relevant information is unlikely to have been retained.
- 3.11. This means that for the bulk of its network, Powerco cannot provide the actual cost of the asset or an estimate thereof as at the date of the asset's commissioning. Powerco can and has provided a cost calculation to the Commission consistent with GAP, or a replacement cost valuation. The position was explained to the Commission's consultants when they met with Powerco and the end of 2003. They appeared to accept it at that time.
- 3.12. It seems surprising that the Commission would criticise Powerco for not complying with a Handbook which is both in draft and not compulsory.

#### ***Tax Issues***

- 3.13. Two tax issues have been identified.
- 3.14. The first error was outlined in the letter dated 18 June 2004 from Vector Limited to the Commission and relates to the way in which tax was inputted to the Commission's calculations for the net benefits to acquirers' test. As Vector's letter indicates, Powerco believes that the same mistake has been made with respect to its calculations as to those of Vector. Essentially it appears that the Commission has overstated the NAB for both companies because it has incorrectly based its calculations on tax paid rather than the before interest tax amounts.
- 3.15. The possibility of an error was acknowledged in the Commission press release of 22 June 2004. Powerco has subsequently received a section 70E notice from the Commission in relation to this matter and will respond to that shortly.
- 3.16. A second and related tax issue arises from the Commission including interest income in Powerco's revenues. The effect is to overstate the calculation of excess profits by approximately \$2.9 million or \$255,000 p.a. on average.

#### ***Government Policy Statement***

- 3.17. Powerco understands that the Government is looking at amending the Government Policy Statement entitled "Development of New Zealand's Gas Industry (28 March 2003)" to stipulate expressly that the incentives for investment in distribution and transmission must be maintained.
- 3.18. Such a policy would recognise that capital is a scarce resource and, as a small country, New Zealand faces higher barriers to attracting capital than larger economies such as the United States of America or Europe. Unless the

investment environment is materially favourable when compared with other countries, new capital will not be forthcoming.

- 3.19. Once that amendment occurs then the Commission will need to take this into account as part of the existing regulatory framework (refer paragraph 1.44 of the Draft Report).

## RESPONSE TO QUESTIONS IN THE DRAFT REPORT

- 4.1. Where appropriate, cross-reference is made to Powerco's Submissions in August 2003, filed in response to the Commission's Draft Framework Paper ("**2003 Submission**").

Q2.1 How should metering be addressed within the Inquiry?

- 4.2. Powerco believes that metering does not need to form the subject of this Inquiry.
- 4.3. But Powerco has no objection to the Commission treating metering as one component of a wider gas services market. However, Powerco notes that the nature of metering is such that it may be more appropriately treated as a discrete metering market, but that nothing turns on that issue for the purposes of the Inquiry.

Q2.2 What, if any, other services should be included or excluded from the scope of this Inquiry?

- 4.4. Refer to paragraphs 3.1 – 3.15 of the 2003 Submissions. In those Submissions, Powerco argued for an output-based analysis to be taken to what constitutes "gas services". The Commission has implicitly rejected Powerco's arguments but without giving reasons. Powerco remains of the view that the position expressed in the 2003 Submissions is correct. It invites the Commission to address the substance of its earlier submissions.

Q2.3 What, if any, other matters should the Commission take into account when assessing whether control is necessary or desirable...in the interests of acquirers?

- 4.5. Refer paragraphs 3.28 – 3.38, 3.55 – 3.60 and 3.85 – 3.86 of the 2003 Submissions.
- 4.6. In summary:
- (a) A key aspect of the benefit to acquirers is the impact of price control on the distribution prices paid by the ultimate end consumer;
  - (b) The cost of the distribution services which Powerco provides comprises only a component of the total charges a consumer receives. The exact percentage varies considerably depending on such matters as geographical location of the network in question, level of consumption, whether consumption is commercial or residential, and the customer's capacity grouping. While the figures are difficult to calculate, in most cases distribution services consist of between 30% and 50% of the total delivered cost of gas to end consumers;
  - (c) Powerco's distribution costs are rebundled by retailers before the total cost is passed on to end consumers. The total cost levied by retailers

includes all of the retailer's costs of sales, including gas costs, transmission costs, overheads and operating costs. The resulting pricing structure used by the retailer may bear little relation to the charge structure used by the distribution business;

- (d) Given that distribution costs comprise only a proportion of total costs to end-users, the Commission should not assume that any reduction in distribution charges will affect total cost or will necessarily be passed on to end consumers by retailers;
- (e) This is an important consideration since, as was the case in the Airports Inquiry, the "real acquirers" are the ultimate customers. Any benefit passing to gas retailers as a result of a declaration of price control of distribution services is simply a transfer and not a net efficiency benefit; and
- (f) The (negative) incentive effects are particularly acute in the case of vertically integrated dual energy retailers who are also thermal generators. That is because the strong incentives of gas transport firms is to maximise utilisation of long life infrastructure through expanding the penetration of gas in direct competition with electricity, and by doing this increase revenues. By contrast, the incentive of a dual energy retailer is to maximise its revenues by swapping gas between its electricity generation business and its gas retailing business – which may involve "shedding" gas customers. It cannot be assumed that any decrease in distribution charges would necessarily be passed on to end consumers.

4.7. Powerco's calculations indicate that for every half million dollars reduction in revenue due to control, the average residential customer will only receive a benefit (assuming pass-through of price reduction) amounting to less than half a cent per day (i.e. \$0.0046 per day) based on the assumption that the allocation would be solely apportioned on a volume basis.

4.8. While this approach has by necessity ignored the complexities of Powerco's existing tariff structure, Powerco considers that it nevertheless provides a reasonably accurate indication of the position.

Q2.4 What, if any other matters, should the Commission consider regarding the issue of foreign ownership of gas pipeline businesses?
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4.9. This is addressed in Geoffrey Horton's paper at section 7.2. The approach depends on the price estimate relative to the present price and on assumptions about the extent to which those paying or receiving the price are and will in the future be foreign.

Q2.5 What other matters, if any, are relevant to a decision on whether control should be introduced?
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4.10. Refer paragraphs 3.169 – 3.180 of the 2003 Submissions.

4.11. Powerco generally has no additional comment on this issue. It notes, as it did in its earlier submissions, that while the Commission has indicated that it will apply its usual efficiency analysis to assessment of net public benefits,

ultimately this decision is one for the Minister to make. In doing so the Minister will need to take a wide range of factors into account, many of which will not have been traversed before the Commission or in fact addressed by it.

Q3.1 How should markets be defined to facilitate the competition analysis required by the Inquiry?

- 4.12. The Commission should give greater weight to the evidence which demonstrates that energy users will switch fuel sources, and the competitive constraint which this imposes on gas distribution businesses.
- 4.13. In particular, significant competitive pressure is placed on gas distributors by other forms of delivered energy. Similar businesses, as defined by ANZSIC, are able to substitute reticulated natural gas for other energy types, and such substitution is commercially viable as well as being technically possible.
- 4.14. The commercial viability of interfuel substitution is demonstrated by the fact that similar businesses differ in their choices as to whether or not they use reticulated natural gas. This is the case even where they are located within close proximity to an existing gas network. Furthermore, reticulated natural gas is not an essential input into most business processes, indicating that this service can typically be substituted for another energy type.
- 4.15. This fact, that reticulated natural gas can typically be substituted for by other energy types, is also illustrated by the fact that practically all ANZSIC code classifications incorporate businesses that are located in geographical areas that do not have reticulated natural gas.
- 4.16. This means that for suppliers of reticulated natural gas such as Powerco to retain and grow their share of the overall energy market, they need to offer a value proposition to their customers that is at least as attractive as other energy types. This is particularly true at the point in time when a customer is making choices with respect to plant and equipment that is designed for a limited set of energy types.
- 4.17. In the case of residential customers, the costs of conversion are small, and in many instances LPG is a cheaper alternative than natural gas.
- 4.18. As a result, the Commission should recognise a wider energy market.

Q3.2 Having regard to the terms of reference for the Inquiry, is it appropriate to incorporate metering services in the gas services market when the gas service provider also owns the meters?

- 4.19. As noted in Powerco's response to Question 2.1, Powerco considers metering to be a contestable activity. It has no objection for the purposes of the Inquiry to the approach which the Commission is proposing to take to metering.

Q3.3 Are the market characteristics in the regions served by bypass pipelines sufficiently distinctive to justify placing those regions in a separate geographical market?

4.20. Powerco has no objection, for the purposes of this Inquiry, to placing regions served by bypass pipelines in a separate geographical market.

Q3.4 Are the market characteristics in the region of the Maui pipeline sufficiently distinctive to justify placing that region in a separate geographical market?

4.21. Powerco has no comment.

Q3.5 How effective is competition for all categories of consumers in the vicinity of bypass networks?

4.22. This matter is addressed fully in:

- (a) Paragraphs 2.22 – 2.26 and 3.25 – 3.60 of the 2003 Submissions;
- (b) Paragraph 1.8 of Powerco's cross-submissions to the Commission following the gas pipelines inquiry conference, dated September 2003 ("**Cross-Submissions**"); and
- (c) Paragraph 7 of NECG's paper to the Commission dated September 2003, attached to Powerco's Cross-Submissions.

4.23. In summary:

- (a) Bypass networks, and the possibility of profitable bypass opportunities, provide a very real constraint on the ability of gas pipeline system businesses to increase price to a level consistent with monopoly pricing;
- (b) The likelihood of bypass is strongest for new projects (including subdivisions) and extensions to existing projects (where the competition between rival projects to secure customers prior to pipeline construction is to be expected); and
- (c) Effective competition from bypass also applies to existing infrastructure due to the absence of any franchise constraints for distribution networks in New Zealand.

Q3.6 Is there any evidence to suggest that a new competing pipeline is sufficiently likely in the near term to place an effective competitive constraint on the incumbent?

4.24. Powerco is aware of planned extensions of competing pipelines within the same geographic area that its pipes are located.

Q3.7 What assessments are available of the price elasticity of demand for gas transmission and gas distribution?

4.25. For reasons previously given, (see answer to Question 3.1), Powerco considers that there are significant competitive pressures placed on gas distributors by other forms of delivered energy.

Q3.8 What proportion of the price of delivered gas can be attributed to transmission and to distribution of that gas?

4.26. The total cost levied by retailers includes all of the retailer's costs of sales, including gas costs, transmission costs, overheads and operating costs. It is extremely difficult to ascertain from that what proportion can be attributed to transmission and which to gas. Powerco believes that distribution costs are around 30 to 50 percent of retail charges to end customers. This depends on a number of variables and assumptions about retail prices and tariffs.

Q3.9 How significant is the competitive pressure placed on gas transmitters and gas distributors by other forms of delivered energy?

4.27. Refer answer to Question 3.1.

Q3.10 What protection from the use of market power arises from long-term and medium-term transmission and distribution contracts?

4.28. Gas retailers and industrial users have significant countervailing power and so are in a position to attract favourable terms for distribution contracts.

Q3.11 Are there significant factors affecting the degree of competition in the relevant markets not covered in the Competition Analysis chapter?

4.29. Powerco has previously noted its views regarding the impact of inter-fuel competition (refer answer to Question 3.1).

Q3.12 Having regard to all the factors which provide competitive constraints, is there workable or effective competition in the:

- market for transmission services between North Taranaki and Huntly?
- market for transmission services in the rest of the North Island?
- market for distribution services?
- market for distribution services in bypass regions?

4.30. Powerco refers to Question 3.1. This matter is also fully addressed in:

- (a) Paragraphs 2.22 – 2.26 and 3.25 – 3.60 of the 2003 Submissions;

- (b) Paragraph 1.8 of Powerco's Cross-Submissions; and
  - (c) Paragraph 7 of NECG's paper to the Commission dated September 2003, attached to Powerco's Cross-Submissions.
- 4.31. Powerco submits that there is workable or effective competition in the markets for distribution services, arising from:
- (a) the presence of significant interfuel competition;
  - (b) the evidence of effective bypass threat;
  - (c) the commitment of gas transport firms to the provision of open access in a manner consistent with the industry's voluntary gas code;
  - (d) the significant countervailing power of customers;
  - (e) the level of transparency associated with the voluntary provision of access information by the industry together with the presence of the existing disclosure regime; and
  - (f) the significant countervailing power of gas retailers, particularly those who are vertically integrated.
- 4.32. Powerco has no comment on the markets for transmission services.

Q4.1 Are there any additional matters the Commission should consider in the assessment of allocatively efficient prices?

- 4.33. Powerco adopts Geoffrey Horton's opinion that an appropriate assessment of marginal costs (on which allocative efficiency depends) implies the use of a modern equivalent asset (MEA) value, rather than ODV or indexed historic cost. Powerco can only expand output by adding increments of capacity to its existing network. The cost of incremental capacity is the MEA value, it is not ODV. The ODV valuation implies a hypothetical, optimised network. Allocative efficiency is not a concept that can be meaningfully applied to a hypothetical network.
- 4.34. Powerco is unable to judge whether the use on an MEA value alone would imply a different conclusion to the Commission's Draft Report.

Q4.2 Can the avoidable cost methodology provide scope for the over-recovery of common costs? If so, how should the Commission deal with this matter for this Inquiry?

- 4.35. The Commission does not accept the level of common costs being claimed by Powerco and states its preliminary view that it will make adjustments to Powerco's common costs (refer paragraph 11.60 of the Draft Report).
- 4.36. Powerco has applied the cost allocation methodology in accordance with the guidance provided by the Ministry of Economic Development (MED), with respect to electricity and the current drafts for gas. It is unreasonable for the Commission to suggest or imply that Powerco has acted improperly in

following this guidance. In fact, the avoidable cost methodology is a reasonable method for ensuring no cross-subsidies between businesses with common costs.

- 4.37. The concept of “over-recovery” implies that there is some other treatment of common costs that Powerco should adopt, and which is more correct or appropriate than the guidance provided by MED. In fact, it is important that companies have incentives to explore opportunities to reduce costs. Identifying synergies between businesses, and thereby sharing common costs, is only one example of actions that businesses take to reduce costs when incentives exist to do so.
- 4.38. The Commission argues that a different treatment of common costs to that adopted by Powerco would benefit customers and helps justify control. This analysis is extremely short-term. In reality, the Commission’s approach introduces dynamic inefficiency and regulatory risk. These costs are difficult to calculate precisely, but are likely to be very substantial indeed.

Q4.3 Is there any additional evidence the Commission should consider in the assessment of service quality issues for gas pipeline businesses?
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4.39. This matter is addressed fully in paragraphs 3.74 – 3.82 and 3.84 of the 2003 Submissions.

4.40. In summary:

- (a) Service quality is a complex but critical issue;
- (b) Most service quality issues involve excessive levels of interruption in service delivery;
- (c) Major system wide interruptions will often be attributable to upstream problems with either transmission pipelines or supply sources. These issues are beyond the control of distribution business;
- (d) The critical issue for the Commission is that service quality can only be maintained and enhanced through the commitment of the industry to continue to invest in maintenance and expansion of infrastructure; and
- (e) There is an inverse relationship between an increase in regulatory risk and service quality. An increase in regulatory risk is likely to have a chilling affect on investment. A reduction in investment may ultimately affect service quality levels.

Q4.4 Is the NPV=0 principle adopted for this Inquiry an appropriate standard for the assessment of returns of businesses facing limited competition?
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4.41. The NPV=0 principle underpins the building block approach adopted by regulators in other jurisdictions. However, the application of the principle relies on an appropriate asset valuation and cost of capital – otherwise the NPV will be negative.

- 4.42. Powerco adopts Geoffrey Horton's opinion that the Commission's analysis of asset values is open to challenge on a number of theoretical and practical levels. In particular, the Commission has disregarded Powerco's acquisition costs even though the Commission's approach conflicts with the NPV=0 principle (because Powerco will not be able to recover its costs over time).
- 4.43. Secondly, Geoffrey Horton explains that an apparently high ODV return does not necessarily imply the absence of financial capital maintenance, which is the NPV=0 principle. He further explains that the Commission is mistaken in comparing prices under control (where stranded asset and optimisation risks are managed) with prices that presently exist (where such risks are not managed). In essence, the Commission is not making an "apples with apples" comparison because under the price control environment it is implicitly shifting valuation risks (such as stranding) from the company to customers. However, the Commission ignores this cost when considering the benefits of control.
- 4.44. In relation to the cost of capital, Powerco's advice from NECG is that the Commission's adopted range is too low, as is the Commission's point estimate of WACC. The appropriate application of the NPV=0 principle depends on the Commission using an appropriate cost of capital.
- 4.45. In summary, Powerco supports the NPV=0 principle – but the Commission's approach falls substantially short of demonstrating that this principle has been applied in practice.

Q4.5 Are there any additional matters the Commission should consider in the application of the NPV=0 principle?
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- 4.46. Powerco's concern is that the principle has not been applied in practice. The result is that the Commission's analysis exaggerates the benefits from control by adopting a price path that will deliver a negative NPV. This approach transfers shareholder wealth to customers without providing any lasting benefit. In fact, Geoffrey Horton points out that such an approach will likely raise the cost of capital – which will no doubt have implications for future levels of investment and service.

Q4.6 Are there any additional matters the Commission should consider in the assessment of the productive efficiency of gas pipeline businesses?
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- 4.47. Powerco adopts Geoffrey Horton's opinion that there is no obvious reason to expect that control would bring an improvement in productive efficiency. The Report does not provide any real justification for its assumption that control would bring a net extra 2/3% pa productivity growth.

Q4.7 Are there any additional matters the Commission should consider in the assessment of the dynamic efficiency of gas pipeline businesses?
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- 4.48. Geoffrey Horton advises that dynamic efficiency may be lower under control than without it. "Private monopolies" have an incentive to invest less than the

optimal amount to improve quality<sup>1</sup> but establishing and incentivising “correct” levels of investment under price control systems is notoriously difficult. The topic has been a major theme in recent UK energy network reviews.

Q4.8 Are there any additional matters the Commission should consider in determining its assessment principles for gas pipeline businesses?

- 4.49. Geoffrey Horton’s paper takes the position that the Commission’s approach to asset valuation is a weak point in an otherwise impressive piece of analysis. In particular, the Commission’s use of asset values derived from either historic cost (HCA) or optimal deprival (ODV) methods will not provide sound evidence that prices are excessive, and that there are real benefits from control.
- 4.50. In particular, Geoffrey Horton explains that no sensible conclusions can be derived from HCA returns without examining the assets’ inflation history. Powerco notes that HCA returns are not available, and instead the Commission has mostly relied on ODV valuations as a starting point for its analysis.
- 4.51. Geoffrey Horton criticises the ODV approach because it seems to assume one thing in a counterfactual thought experiment, but then to apply it to a real world where that is not the case. Importantly, he concludes that a high ODV return does not necessarily imply prices above FCM levels. In other words, the Commission’s analysis does not demonstrate that existing prices are inconsistent with its own NPV=0 principle.
- 4.52. The Commission only makes its case that prices presently exceed NPV=0 (and that there is a benefit from control) by mistakenly comparing prices under one framework (without control) with its own view of prices under control. The benefit to consumers (by claiming that prices can be lower under control) is exaggerated because stranded asset risks will be passed to customers – although no allowance for this extra cost is recognised in the Commission’s calculations.

Q5.1 What are the additional matters the Commission should consider in the measurement of allocative inefficiency, productive efficiency, dynamic efficiency, and/or excess returns?

- 4.53. As noted earlier, the Commission’s approach does not address the question of allocative efficiency appropriately because it does not use an MEA asset valuation. In addition, Geoffrey Horton advises that the Commission’s analysis provides no justification for the assumed improvements in productive efficiency. Furthermore, the approach to measuring excess returns is open to challenge from a theoretical and practical perspective. The Commission is not making an “apples with apples” comparison of prices. The analysis presented exaggerates the benefits of control by ignoring costs and risks, which real-world companies cannot ignore.

<sup>1</sup> A seminal article is A.M. Spence “*Monopoly, quality, and regulation*”, Bell Journal of Economics 1975

Q5.2 Which of the costs measured by the Commission can/can not be assumed to ultimately fall on acquirers?

4.54. For the purposes of the Inquiry, the Commission's approach (refer paragraph 5.46 of the Draft Report) that all of the costs of control would ultimately fall on acquirers is correct.

Q5.3 Are there any additional matters the Commission should consider in the measurement of the direct costs of control?

4.55. There are no additional matters of which Powerco is presently aware.

Q5.4 Are there any additional matters the Commission should consider in determining the level of excess returns and allocative inefficiencies that would be unrecoverable by control?

4.56. Powerco doubts whether there are any benefits to control, so the question of how much can be transferred to consumers is academic. The Commission's analysis systematically overestimates the benefit of control by making inappropriate comparisons between how companies must charge in the current environment, with how they would charge if the environment were different. Any comparison must be on a like for like basis. The Commission's approach disallows the recovery of existing assets and operating costs otherwise in accordance with the guidelines issues by the MED.

Q5.5 Are there any additional matters the Commission should consider in the measurement of the indirect costs in terms of productive inefficiency from control?

4.57. As noted above, the Commission's Report provides no justification for its findings.

Q5.6 Are there any additional matters the Commission should consider in the measurement of the indirect costs of control in terms of service quality?

4.58. As the Commission notes, the possible impact of regulatory uncertainty on investment, and the resulting impact on quality is, with the information available to the Commission, largely speculative (refer paragraph 5.104 of the Draft Report). Powerco does not believe that the Commission's approach properly considers customers' willingness to suffer a deterioration in service levels as a result of control being imposed. Powerco does not believe that its customers want or will accept a worsening level of service. Powerco is surprised that the Commission apparently accepts that price regulation may lead to a deterioration in service levels.

Q5.7 Are there any additional matters the Commission should consider in the measurement of the indirect costs of control in terms of new investment?

4.59. The Commission should be very concerned that regulation will damage new investment, especially given that the prices contemplated by the Commission do not remunerate shareholders for past investments. Powerco does not accept that the Commission's analysis properly assesses the negative impact in terms of future investments levels.

Q5.8 Are there any additional variable and/or sensitivity tests that the Commission should consider during its assessment approach of gas pipeline businesses?

4.60. As noted above, Geoffrey Horton's paper makes it clear that the Commission's approach is likely to lead to erroneous conclusions. The sensitivity analysis undertaken by the Commission does not address the fundamental issues raised in Geoffrey Horton's paper.

Q6.1 Are there any additional matters the Commission should consider regarding its position that an opportunity cost approach is inappropriate for the assessment of gas pipeline businesses when assets are sunk?

4.61. No. A sunk cost approach would not be consistent with financial capital maintenance and therefore would have a seriously negative impact on dynamic efficiency.

Q6.2 Are there any additional sources of historic cost asset values of gas pipeline businesses that the Commission should explore?

4.62. Yes, the use of acquisition costs is entirely consistent with NPV=0. As noted earlier, Powerco does not accept the Commission's approach to asset valuation and believes that it leads to erroneous conclusions. See Geoffrey Horton's paper.

Q6.3 Are there any additional matters the Commission should consider regarding the valuation of easements for gas pipeline businesses?

4.63. There is no basis for assessing easements on a different basis to other assets employed in the business. However, the major flaws in the Commission's approach will not be resolved by addressing this issue alone.

Q6.4 Are there any additional matters the Commission should consider in determining the appropriate asset valuation approach for gas pipeline businesses?

4.64. Acquisition costs.

Q7.1 Are there any other matters the Commission should consider regarding the various components of WACC?
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4.65. While the Commission has included most relevant components for the WACC, it has reached positions on many of these components that result in the WACC being understated. For example, the Commission has:

- Erred in its assertion that adoption of a domestic version of the Capital Asset Pricing Model (CAPM) overstates the returns to firms compared with an international version of the CAPM;
- Set the market risk premium at a level that is both too low and fails to reflect variability in the parameter in the range. The proposed value is 1% lower than Lally's own best estimate for Australia, implying significantly lower market risk in New Zealand, which appears implausible;
- Adopted a risk free rate that fails to reflect standard commercial practice and the largely unregulated market that the gas businesses operate in; and
- Chosen to avoid making allowance for asymmetric risk.

4.66. Further details on all these issues are provided in the attached expert report from Robert G Bowman.

Q7.2 Should the 75th percentile of the WACC range be used for the final report?
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4.67. While the Commission has adopted a 75th percentile for the WACC, partly to reflect the social cost of underestimating the WACC, the way it has estimated the WACC implies that this value is more a preferred point estimate than a confidence interval. This point is considered in detail in the Report of Robert G Bowman where the following points are made.

4.68. First, when statistical inference is being made and confidence intervals are chosen, the acceptable level of confidence adopted is usually 90% or 95% before a result is considered significant. Therefore, in terms of statistical significance, choosing a 75% confidence interval provides an unusually low level of confidence.

4.69. Second, the 75th percentile value chosen by the Commission does not reflect a true statistical point in the distribution of possible values of WACC. The Commission's WACC has been derived from a series of point estimates or small ranges of particular variables, where the ranges given on each parameter do not reflect statistical distributions. For example, the range of 6.0 to 8.0% for the MRP represents Associate Professor Lally's view of a distribution of plausible point estimates for the MRP, not a feasible distribution of the parameter.

4.70. Third, the choice of the 75th percentile is meant in part to provide some headroom for variables associated with the cost of capital that the Commission and Associate Professor Lally consider are either difficult to calculate or relatively trivial by themselves, and which are thereby excluded in

the Commission's WACC. This includes allowance for the cost of self-insurance, debt issuance costs, and amending estimates of the MRP to be consistent with bond maturity in the risk free rate.

- 4.71. If the Commission continues to dismiss issues that it deems too small to warrant inclusion or adjustment, and as those issues predominately favour a higher WACC, one approach to reflect their aggregate impact would be to increase the confidence level.

Q7.3 Are there any other matters the Commission should consider in the calculation of WACC?

- 4.72. While the Commission has considered all relevant variables, it has not devoted significant attention to the estimation error associated with particular variables. This suggests that the Commission should adopt a wider range for those variables where a range has been used (beta, market risk premium) and allow ranges for variables where no range has yet been applied (such as the debt margin).

- 4.73. In addition, Powerco does not believe that the WACC is correctly specified. The treatment of WACC starts from the premise that the businesses are already operating under a system of price cap regulation, rather than a largely unregulated arrangement.

Q8.1 What additional information could be used to improve this comparative benchmarking analysis?

- 4.74. Powerco has no comment.

Q11.1 What material factors, if any, affecting the level of competition faced by Powerco have not been taken into account in the Commission's analysis?

- 4.75. This issue is addressed fully in the NECG Report to the Commission dated September 2003, attached to Powerco's Cross-Submissions, at paragraph 7.

- 4.76. As indicated, the Commission should give greater weight to the impact of interfuel competition, especially from LPG, potential and actual bypass and the countervailing power of retailers and industrial consumers.

Q11.2 Does Powerco face workable or effective competition in the markets in which it provides gas services?

- 4.77. Powerco refers to its answer to Question 3.12.

Q11.3 What additional sensitivities, if any, should the Commission test for its final report?

- 4.78. The sensitivities contemplated by the Commission ignore the fundamental weaknesses in the Commission's approach. It is clear that the Commission

cannot base any sensible conclusions on its analysis of existing prices. The Commission has failed to demonstrate that existing prices are anything other than consistent with the Commission's principle of NPV=0.

Q11.4 What percentile of the WACC range should be used for the final recommendation?

4.79. There is a consensus that the social costs of under-estimating WACC are substantially greater than the social costs of over-estimating WACC. The Commission has accepted this asymmetry and has used it as its motivation for choosing the 75th percentile.

4.80. However, the appropriate place to reflect this asymmetry is in choosing a confidence interval that reflects the relative costs. If the Commission chose the mid-point WACC for evaluating excess returns, there would be a 50% chance that it would reach a conclusion that was socially damaging. Clearly this would be an unacceptable risk unless the social costs between over and under estimating were equal. The difficult issue is to determine what is the appropriate confidence level for the Commission to set that reflects the relative costs to society of over and under estimating WACC.

4.81. In scientific inquiries, the confidence levels chosen to reflect significance are rarely less than 90% and are often 95%. The importance of the relative social costs is such that a confidence level of this magnitude would be appropriate.

Q11.5 What adjustment to the level of common costs, if any, should be made for the final recommendation?

4.82. Powerco refers to its answer to Question 4.2.