

## EXECUTIVE SUMMARY

### Background

#### *Introduction*

- 1 The Commerce Commission (Commission) is undertaking the Natural Gas (gas) Control Inquiry (Inquiry) in response to a request from the Minister of Energy (Minister) dated 30 April 2003. The Minister has requested the Commission to report by 29 November 2004.
- 2 The letter of request and subsequent correspondence with the Minister (terms of reference) require the Commission to report on whether goods and services supplied by persons in markets directly related to either a gas transmission system or a gas distribution system or both (gas services) should be controlled.
- 3 This report presents the Commission's final recommendations.

#### *Suppliers*

- 4 The suppliers of gas services can be grouped under two headings: transmission and distribution service suppliers.

**Table 1: Transmission and Distribution Service Providers**

<b>Transmission Business</b>	<b>Transmission Pipeline Systems</b>
NGC Transmission (NGCT)	South, North, Kapuni to Rotowaro, Bay of Plenty, Morrinsville, LTS, Frankley Road
Maui Development Limited (Shell, Todd, OMV)	Oaonui to Huntly (Maui pipeline)
Todd Petroleum and Shell	Kapuni to Hawera
Todd Taranaki	McKee Production Station to Faull Road
Swift Energy	Rimu to NGC South and Waihapa to New Plymouth and TCC power stations (the TAW pipeline)
Westech Energy	Surrey Road to NGC LTS
<b>Distribution Business</b>	<b>Distribution Pipeline Systems</b>
NGC Distribution (NGCD)	Northland, Whangaparoa, South Auckland, Waikato, Bay of Plenty, Rotorua, Taupo, Gisborne, Kapiti Coast
Powerco	Napier and Hastings area, Southern Hawke's Bay, Taranaki, Manawatu, Levin and Foxton, Hutt/Mana and Wellington
Vector	Greater Auckland, Tuakau and Ramarama
Wanganui Gas	Wanganui/Rangitikei
Nova Gas	Wellington, Porirua, Hutt Valley, Hastings, Hawera, Papakura and Manukau City

- 5 NGCT is currently the only transmission business that provides third party access to its transmission system. However, Maui Development Limited

(MDL) is currently working through a proposal to offer a service to transport third party gas on the Maui pipeline.

### ***Inquiry Process***

- 6 The Commission has previously released the Draft Framework Paper and Draft Report.<sup>1</sup> Conferences have been held and submissions taken on both of these reports. The Commission's Inquiry process is detailed in Table 2.

**Table 2: Inquiry Process**

<b>Item</b>	<b>Date</b>
Proposed process released by Commission	30 May 2003
Written submissions on proposed process	16 June 2003
Draft Framework Paper released by Commission	16 July 2003
Process published in <i>Gazette</i> notice pursuant to s 57(2) of the Commerce Act	25 July 2003
Written submissions on Draft Framework Paper	20 August 2003
Conference on Draft Framework Paper	1–4 September 2003
Cross submissions following conference	19 September 2003
Draft Report released by Commission	21 May 2004
Revised process published in <i>Gazette</i> notice pursuant to s 57(2) of the Commerce Act	3 June 2004
Written submissions on Draft Report	2 July 2004
Conference on Draft Report	22–28 July 2004
Cross submissions following conference	13 August 2004
Tax Treatment Draft Paper released by Commission	8 September 2004
Written submissions on Tax Treatment Draft Paper	23 September 2004
Draft cost benefit model numbers released by Commission	2 November 2004
Written submissions on draft cost benefit model numbers	5 November 2004
Final Report provided to Minister of Energy	29 November 2004

- 7 Background issues are discussed in more detail in Chapter 1 (Background).

### **Legal Framework**

- 8 The terms of reference and statutory framework for the Inquiry are discussed in Chapter 2 (Legal Framework).

### ***Ministerial Request***

- 9 The Minister requires the Commission to report to the Minister as to whether an Order in Council under s 53 of the Commerce Act may and should be made in relation to gas services (Commerce Act 1986 s 52 and s 56).

<sup>1</sup> Commerce Commission, Gas Control Inquiry Draft Framework Paper, July 2003. Commerce Commission, Gas Control Inquiry Draft Report, 21 May 2004.

### ***Imposition of Control***

- 10 Section 52 of the Commerce Act requires the Commission to consider two key issues in relation to whether or not control under Part V may be imposed. Goods or services may be controlled under s 52 if:
- competition is limited or is likely to be lessened in a relevant market; and
  - control is necessary or desirable in the interests of persons who acquire or supply the goods or services in the affected market or markets.
- 11 In considering whether competition is limited or is likely to be lessened, the Commission assesses both structural and behavioural considerations in the markets in which gas services are or will be supplied.
- 12 In considering whether control is necessary or desirable in the interests of acquirers, the focus is on the benefits of control for the acquirers of gas services (both direct and indirect acquirers). This has involved an analysis of what would happen if a form of control were not imposed (the counterfactual), contrasted with the potential benefits and detriments to acquirers if control were to be imposed (the factual).
- 13 Having determined whether control ‘may’ be introduced under s 52, the Commission has conducted further analysis to determine whether an Order in Council imposing control ‘should’ be made (s 56(1)). The matters considered in relation to whether control may be imposed remain relevant. In addition, the Commission has considered the efficiency costs of achieving reductions in excess returns, the magnitude of the benefit to acquirers, the impact of a recommendation not to control and other qualitative considerations.

### ***The Form of Control***

- 14 The Inquiry is limited to assessing whether control under Part V may and should be imposed and not the form of that control. To advise the Minister on how the Commission would administer control, prior to any declaration of control, would risk predetermining the processes associated with administering control under Part V.
- 15 However, in order to assess the likely costs and benefits of control the Commission must select a hypothetical form of control. Consequently, the Commission has assumed a form of price cap regulation under Part V. The form of control assumed for this purpose is preliminary and will not pre-empt any decision the Commission may be required to make in the future regarding control under Part V.

### ***Request for Additional Advice***

- 16 The Minister also requested the Commission’s advice on ‘the methodology that the Commission considers appropriate for valuation of pipeline assets’, ‘the net benefits to the public of control’ and ‘any other matter that the Commission may think relevant to a decision on whether control should be introduced’.

- 17 Finally, if the Commission recommends that gas services should be controlled, the Minister asked for the Commission's advice on the technical provisions relating to declaration of control as set out in s 57A of the Commerce Act.
- 18 The Commission's responses to these requests are provided in Chapter 20 (Recommendations).

### **Competition Analysis**

- 19 Competition issues are discussed in Chapter 3 (Competition Issues).

#### ***Market Definitions***

- 20 In defining markets, the Commission has given careful consideration to previous decisions of the Courts and of the Commission in energy related cases. In addition, it has given particular attention to determining how markets may be defined to best assist it to address the questions of relevance to the Inquiry.
- 21 The markets adopted by the Commission are:
- the market for the provision of gas transmission services between North Taranaki and Huntly;
  - the market for the provision of gas transmission services for the rest of the North Island;
  - the separate markets for the provision of gas distribution services in the area encompassed by each incumbent gas network; and
  - the market for the provision of gas distribution services to commercial and industrial consumers in the vicinity of bypass networks.
- 22 Metering has been incorporated as an element of the gas services market where the provider of gas services also provides a metering service.

#### ***Generic Competition Issues***

- 23 Transmission systems have natural monopoly characteristics. New competitive entry may be possible where there are capacity constraints, but at present there is surplus capacity in most parts of the transmission system.
- 24 Head-to-head competition between transmission systems is possible between North Taranaki and Huntly (where NGCT and MDL have parallel pipelines) and in Taranaki (where there are several small transmission pipelines in the same area).
- 25 Distribution systems also have natural monopoly characteristics, with limited potential for new entry. Entry where it has occurred has been in the form of bypass pipelines. Bypass opportunities tend to be limited to areas where there is a concentration of medium to large customers who are close to a transmission pipeline, or to an existing bypass network which can expand, or where there is an alternative source of gas (such as landfill gas).

- 26 Where there is a bypass network, the Commission considers that there is strong evidence of vigorous competition, which has had a major impact on distribution prices. However, outside the very limited bypass areas there is little potential for pipeline-on-pipeline competition in the distribution markets.
- 27 The Commission considers that the constraint provided by the energy users to switch energy forms provides a constraint on energy suppliers, but this falls short of the constraint which suppliers face in competitive markets.
- 28 Long-term contracts and the regulatory regime provide some limited constraint on gas service providers, particularly for large users.
- 29 The analysis of generic competition issues has led the Commission to conclude that while, in general, there is workable or effective competition in bypass markets, competition is limited elsewhere.

### **Assessment Overview**

- 30 An overview of the Commission's assessment approach is provided in Chapter 4 (Assessment Approach).
- 31 The Commission, having determined that the goods or services are supplied in a market in which competition is limited (s 52(a)), considers s 52(b) which provides that goods or services may be controlled if control is necessary or desirable in the interests of acquirers. The Commission terms this the net acquirers benefit test (NAB test).
- 32 In applying the NAB test the Commission assesses the net benefit to acquirers of control (the factual) relative to the situation with no control (the counterfactual).
- 33 The NAB of control is estimated using the following approach:
- identifying the potential benefits of control;
  - identifying the potential costs of control; and
  - balancing one against the other.
- 34 The benefits to acquirers of control broadly emerge from reducing any excess returns or inefficiencies associated with the counterfactual (i.e. in the absence of control) less any costs of control. An analysis of company performance in the counterfactual compared to an efficiently operating market is used to measure the potential benefits of control.
- 35 The costs of control emerge in terms of compliance and administration costs for the business and the regulator (direct costs) and the control mechanism's effects on efficiency incentives (indirect costs).
- 36 If the Commission finds that there are net benefits to acquirers from control, then it *may* recommend control.
- 37 In recommending to the Minister whether control *should* be imposed, the Commission may have regard to all matters it considers necessary or desirable.

The Commission considers the following additional matters relevant in deciding whether it should recommend control:

- the net efficiency cost to the economy of reducing excess returns;
  - the size of NAB assessed in terms of the returns earned by the business and the impact of control on prices to consumers;
  - the impact of recommending no control; and
  - other qualitative considerations.
- 38 The Commission notes also that the Minister has a wider discretion than the Commission to consider other matters including alternative forms of regulation distinct from control under Part V.
- 39 In reaching its decisions on whether control may and should be imposed, the Commission has relied on quantitative analysis, using a model developed for this purpose, and qualitative analysis in developing the model and choosing relevant parameters. The model provides support to the Commission's deliberations. However, it does not substitute for the Commission's exercise of judgment in which it ensures that it has taken account of the cumulative effect of all relevant considerations.

### **Assessment Principles for Efficient Prices**

- 40 Chapter 5 (Assessment Principles for Efficient Prices) details the Commission's pricing principles which provide the basis of its building blocks assessment of the net benefits to acquirers.
- 41 The Commission considers the following generic pricing principles are suitable for determining efficient prices and normal returns:
- allocatively efficient prices should be set and normal returns should be earned over time;
  - productive efficiency should be maintained over time. This requires the adoption of least cost production practices. The Commission engaged Meyrick and Associates to provide advice on the productive efficiency of the gas pipeline businesses; and
  - dynamic efficiency should be maintained over time. This requires that over- or under-investment be avoided. The Commission's view is that there are no significant dynamic inefficiencies in the gas pipeline businesses.

### ***Normal Returns***

- 42 The Commission considers that over the life of an asset the returns discounted by an appropriate WACC should equal the initial investment amount. This is referred to as the Net Present Value (NPV) = 0 principle, and is adopted by the Commission in this Inquiry.
- 43 Normal returns need to be assessed over a period of time, so that singular events do not bias the results and thereby unduly influence the Commission's recommendations. The analysis period for most businesses under investigation

covers the period 1997 – 2008, with the exception of Vector whose assessment covered the period 2000 – 2008.

- 44 Returns must be calculated using an appropriately determined asset base. The Commission has used ODV valuations in this Inquiry and a nominal WACC. The NPV = 0 principle requires any revaluation gains/losses on the assets to be treated as income.

### **Assessment Approach**

- 45 The Commission's approach to assessing NAB is described in Chapter 5 (Assessment Approach) and involves:
- identifying the potential benefits of control;
  - identifying the potential costs of control. It is assumed in the main that such costs ultimately fall on consumers;
  - balancing benefits against the costs; and
  - taking account of the asymmetric risks associated with a decision to impose control.

### ***Benefits of Control***

- 46 The Commission considers the potential benefits of control separately from the potential costs. This approach has been adopted for clarity of exposition. The sources of potential benefits of control include:
- excess returns being reduced by control, with a transfer of wealth from suppliers to acquirers (being a net benefit to acquirers);
  - allocative inefficiency being reduced by control. Inefficient levels of service quality for the price charged could also be addressed through control;
  - productive inefficiency being reduced by control; and
  - dynamic inefficiency being reduced by control, because of continued/improved availability of services.

### **Allocative Inefficiencies**

- 47 The Commission has adopted a long-run model using an average cost pricing approach so allocative inefficiencies (which are measured by the deadweight loss of consumer surplus) are driven largely by the degree to which prices diverge from average costs (which include a normal return), and the price elasticity of demand for pipeline services. The Commission assumes an elasticity of -0.3 for the gas distribution services and -0.1 for transmission services.

### **Excess Returns**

- 48 Any excess returns are measured as the difference between what the gas pipeline business is currently earning and what the Commission considers is a normal return for such a business. The calculation can be expressed mathematically as:

$$\text{Excess returns (\$)} = \text{Net Earnings (\$)} - (\text{Asset base} \times \text{WACC}).$$

- 49 Net earnings equal the earnings before interest of the gas pipeline businesses less tax, depreciation and operating expenses plus any revaluation gains/losses and capital contributions from customers.
- 50 Where revaluations are only done periodically (e.g., every three years), the revaluation gains/losses calculated are spread back over the period to which they relate, and the asset base is also smoothed.

#### Productive Inefficiency

- 51 The Commission asked Meyrick & Associates to examine the productivity of the New Zealand gas pipeline businesses and the growth in productivity of NGCT. It was unable to draw conclusions from this analysis. However, the Commission considers that regulation could achieve productivity improvement in addition to the trend rate of 0.83% of total costs for all the gas businesses.

#### Dynamic Inefficiency

- 52 The Commission could not identify (absent control) any significant dynamic inefficiency with regard to gas pipeline businesses. Thus, benefits from control cannot be achieved.

#### ***Costs of Control***

- 53 The costs of control can be broken down into two types: direct and indirect costs.

#### Direct Costs

- 54 The direct costs of control include those that fall on the gas pipeline businesses (compliance costs), and those borne by the regulator (regulator's costs).
- 55 The direct costs of control are those that would be additional to the costs of the existing regulatory regime. The Commission has used figures provided by the gas pipeline businesses to estimate their compliance costs, while it has used the costs of this Inquiry as the primary basis for determining the regulator's costs of control.

#### Indirect Costs

- 56 The Commission has modelled five indirect costs of control, in terms of:
- unrecoverable excess returns;
  - unachievable allocative efficiencies;
  - productive inefficiencies created by control;
  - reductions in service quality; and
  - deterred new investment.
- 57 Control would move towards but would not exactly replicate the competitive price. As a result, only a proportion of the potential allocative efficiency gains would be secured under the control scenario, the rest would be unrecoverable.

The Commission has adopted a factor of 20% to discount the potential excess returns benefits of control (i.e., only 80% of excess returns would be recoverable). Allocative efficiency benefits are discounted by 36%.

- 58 The Commission considers that control could impose productive inefficiency in the order of 0 to 0.66% of total costs, to reflect the potential costs of control. The mid-point of 0.33% is used for the purposes of the modelling base case.
- 59 The Commission considers that dynamic inefficiency may be created by control. Control may cause under-investment that might result in reduced service quality for existing customers, or to a delay in supplying new customers by extension of the network (missing market).

#### Taking Account of the Asymmetric Risks of Imposing Control

- 60 The Commission recognises that the risks associated with imposing control are asymmetric: that is the costs of imposing control when it is not justified are higher than the cost of not imposing control when it is justified. Further, in assessing whether control is justified, the Commission needs to ensure consistency with its likely approach if control were declared.
- 61 The Commission is of the view that a WACC should be chosen from the upper end of the distribution in determining whether to impose control on the gas businesses but that the implicit margin on WACC provided by the costs of control needs to be taken into account. The implicit margins provided by the costs of control for each of the businesses are shown in Table 3.

**Table 3: Implicit Margins Provided by the Costs of Control**

	<b>Direct costs margin</b>	<b>Indirect costs margin</b>	<b>Total implicit margin<sup>ii</sup></b>
<b>Wanganui Gas</b>	2.1%	0.8%	<b>2.8%</b>
<b>NGCD</b>	0.5%	0.8%	<b>1.3%</b>
<b>NGCT</b>	0.2%	0.4%	<b>0.6%</b>
<b>Powerco</b>	0.5%	1.3%	<b>1.8%</b>
<b>Vector</b>	0.3%	1.4%	<b>1.6%</b>

#### **Modelling Issues and Sensitivity Tests**

- 62 Data limitations can affect the results of any model. The Commission has taken every effort to minimise the risks associated with data limitations. It has required gas pipeline businesses to complete a data template, has sought further clarification of the data provided, and in some cases adjusted the information provided.
- 63 The Commission was particularly concerned about common cost allocations by the businesses, and has adjusted the common costs of Powerco and Vector in the base case analysis. The Commission also has reservations as to the forecast information provided and revisions to historical figures made in some cases.

<sup>ii</sup> Note there may be rounding differences when adding the direct and indirect cost margins to get the total margin.

- 64 No model can be expected to reflect all real world scenarios. Nonetheless, the Commission considers that a building blocks model, by linking prices and returns to the costs incurred by gas pipeline businesses does provide a reasonable method for the evaluation of business behaviour in markets of limited competition.
- 65 Sensitivity tests were run on numerous variables in the modelling including:
- asset base – only possible for Wanganui Gas given data limitations;
  - WACC;
  - common costs;
  - self-insurance (Powerco, Vector, Wanganui Gas);
  - growth forecasts;
  - excess returns unrecoverable;
  - dynamic inefficiency costs of control; and
  - tax (Powerco and Vector).
- 66 The range of sensitivities presented for each variable above was a matter of Commission judgment. An overview of the approach is discussed in Chapter 7 (Modelling Issues and Sensitivity Tests) and results are presented in the company chapters.

### **Asset Valuation**

- 67 Chapter 8 (Asset Valuation) discusses asset valuation issues. The valuation of assets is a key variable in the assessment of normal returns, since capital costs are a significant proportion of the total costs.
- 68 The Commission's preference is to use opportunity cost to value non-sunk assets, and a cost-based approach (either historic cost or ODRC/ODV) to value sunk assets. The Commission notes that either the depreciated historic cost (DHC) or ODV approach may be used to assess excess returns under an NPV = 0 approach.
- 69 The Commission has based its advice on the ODV valuations. This is largely based on the greater availability of relatively robust and comparable data for this methodology compared to historic cost data. Non system assets were valued at historic cost as were easements.

### **Weighted Average Cost of Capital (WACC)**

- 70 WACC is the weighted average cost of debt and equity capital raised at the margin. Like the asset base, it is relevant both for determining prices and for assessing performance. The Commission has determined what it considers to be an appropriate WACC for gas pipeline businesses within New Zealand.<sup>III</sup> A

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<sup>III</sup> In formulating the views expressed on WACC in this Report, the Commission obtained advice from Dr Martin Lally. A copy of his report to the Commission is contained on the Commission's website under 'Regulatory Control Inquiry on Gas Pipelines'.

discussion of WACC issues is contained in Chapter 9 (Weighted Average Cost of Capital).

- 71 Key determinants of WACC are the risk-free rate, leverage, debt premium, market risk premium, asset beta and leverage.
- *risk-free rate*: the Commission has adopted a three-year term for the risk-free rate for gas pipeline businesses on the basis that this most closely proxies the likely time horizon of price setting in the gas pipeline industry. The three-year risk-free rate averaged over July 2003 was 0.050.
  - *market risk premium*: the Commission's conclusion is that the appropriate mid-point estimate for the TAMRP is 0.07.
  - *beta*: the Commission has adopted a mid-point asset beta for the gas businesses of 0.5. Although the characteristics of gas transmission and distribution differ in some respects, there is insufficient information available to justify applying different betas.
  - *leverage*: the Commission has adopted an optimal leverage of 40% based on analysis of comparable businesses. It used this leverage weight in determining the debt premium and in determining WACC.
  - *debt premium*: In determining the debt premium, the Commission has considered the actual premiums that the businesses pay above the risk-free rate, as well as costs to businesses with similar credit risk. The Commission is of the view that a debt margin of 0.012 would be appropriate for the gas businesses assuming 40% leverage.

#### ***WACC Estimates***

- 72 A WACC estimate can be derived drawing on the estimates for the various parameters discussed above. These parameter values translate into a cost of equity of 0.092 and a point estimate of WACC of 0.072.
- 73 The point estimate on WACC reflects five parameters over which there is significant uncertainty i.e., the market risk premium and four components of the asset beta. Such parameter uncertainty results in uncertainty over WACC and this can be formalised in a probability distribution for WACC. In translating the uncertainty over parameter values into a distribution for WACC, it has been assumed that the parameters are independent.
- 74 Assuming 'normality' in the WACC distribution, the percentiles of the WACC distribution are derived as shown for 2003 in Table 4 below:

**Table 4: Percentiles of the WACC Distribution**

Percentile	25 <sup>th</sup>	50 <sup>th</sup>	60 <sup>th</sup>	70 <sup>th</sup>	80 <sup>th</sup>	90 <sup>th</sup>
WACC	.064	.072	.075	.078	.082	.087

- 75 The Commission has used the WACC at the 50<sup>th</sup> percentile in its base case analysis ('mid-point WACC').

## Tax

- 76 To ensure that returns are assessed in a way that is consistent with the NPV = 0 principle, the Commission calculates tax payable from taxable net profits rather than the prima facie tax based on profits in the regulatory accounts.
- 77 In calculating excess earnings, the Commission follows standard practice in incorporating the interest tax deduction in the WACC. The tax payable appearing in the calculation of excess earnings is the tax payable in the absence of debt. If the levered tax payable is positive, the unlevered tax payable is simply the levered tax payable plus the interest tax shield. If the gas business is in a tax loss position, the treatment is more complex. The options for treating tax in these circumstances, and other issues, such as the treatment of asset sales are discussed in detail in Chapter 10 (Treatment of Tax in Cost Benefit Analysis).

## Comparative Benchmarking

- 78 The Commission engaged Meyrick & Associates (Meyrick) to undertake a comparative benchmarking study of New Zealand and selected Australian gas pipeline businesses. A copy of the Meyrick report to the Commission is available on the Commission's website.<sup>IV</sup> During consultation, Pacific Economics Group (PEG), on behalf Vector and NGC, provided a benchmarking study that compared Vector and NGC to forty US gas distributors.<sup>V</sup>
- 79 Taken at face value, the results of the Meyrick and PEG analyses provide conflicting evidence on the efficiency of the New Zealand distribution businesses. As a result of the conflicting evidence and the unresolved factors associated with the two analyses, the Commission draws no definitive quantitative conclusions from the benchmarking analyses undertaken to date. Overall the Commission considers that the benchmarking analysis undertaken by Meyrick and PEG reinforces its prior reservations, and those expressed in submissions by interested parties on the Draft Framework Paper, about the ability in such studies to make like for like comparisons given the data currently available.
- 80 Chapter 11 (Benchmarking) describes in more detail the Meyrick and PEG analyses.

## NGCT

- 81 Chapter 12 (NGC Holdings Ltd – Transmission (NGCT)) discusses in detail the competition and cost benefit analysis undertaken for NGCT, and the Commission's recommendations on whether control may and should be imposed on NGCT.

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<sup>IV</sup> Meyrick and Associates, *Comparative Benchmarking of Gas Networks in Australia and New Zealand*, Report prepared for the Commerce Commission, May 2004.

<sup>V</sup> Pacific Economics Group, *New Zealand Gas Distribution Cost Performance: Results from International Benchmarking*, June 2004.

**Competition**

- 82 In respect of the transmission market, the Commission has considered the competitive impact of interfuel competition, head-to-head competition with MDL, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on transmission service providers is limited. Accordingly, the Commission considers that the competition faced by NGCT in the transmission markets in which it operates is limited.

**Net Acquirers Benefit (NAB)**

- 83 In determining whether control may be imposed, the Commission assesses the NAB of imposing control. The results of the Commission's base case and sensitivities of the NAB test over the period 1997 – 2008 are presented below.

**Table 5: NGCT**

<b>Scenario</b>	<b>NAB Annuity (\$000)</b>
Base case	2,364
High and low WACC (75 <sup>th</sup> and 25 <sup>th</sup> percentile)	-263 to 4,913
Higher growth in forecast period [ ]	3,505
High and low unrecoverable excess return (25% and 10%)	2,090 to 2912
Common cost reductions (10-30%)	2,738 to 3,486
Low and high missing market elasticity	2,115 to 2,488
High and low missing market output effect	2,115 to 2,613

- 84 Overall, sensitivity testing on NGCT's NAB indicates that net benefit to acquirers would remain for all but one of the sensitivities tested (75<sup>th</sup> percentile of WACC).
- 85 The Commission's view is that both requirements in s 52 of the Commerce Act are met for NGCT, and that gas services supplied by NGCT may be controlled.

**Should Control be Introduced**

- 86 The Commission considers the following additional matters in assessing whether control 'should' be introduced: the net efficiency cost to the economy of reducing excess returns; the size of the benefits; and the impact of a recommendation not to control.
- 87 The net efficiency costs to the economy of reducing excess returns for NGCT were \$1.096 million in annuity terms in the analysis period. The recoverable excess returns were \$3.629 million, giving a transfer cost ratio of 30% (i.e., the cost of transferring each \$1 of recoverable excess returns to consumers involves a net cost to the economy of \$0.30).

- 88 NGCT earned an average return of approximately 9.1% over the analysis period. The NAB of NGCT suggests that transmission prices could be reduced by as much as 3.5% which would result in a reduction in delivered energy prices to retail customers (assuming transmission constitutes 10% of final price) in the order of 0.35%. Alternatively, the reduction in transmission charges would save the average direct customer \$213,000. Such savings would likely be passed on to end consumers.
- 89 The Commission considers that if control were not imposed, the threat of control might be weakened which could result in future increases in prices from current levels.
- 90 The Commission concludes that control should not be imposed on NGCT.

***Overall Recommendation for NGCT***

- 91 The Commission's recommendations are set out below.
- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by NGCT may be controlled.
  - The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on NGCT under Part V of the Commerce Act should not be made, notwithstanding that the s 52 requirements for control are met.

***Advice on Relevant Matters***

- 92 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. The Commission considers the regulatory constraints on NGCT should be strengthened and requests the Minister consider applying to NGCT a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A.
- 93 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and operation of the Part 4A regime. The Commission's view is that such a regime has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.
- 94 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.
- 95 In addition, the Commission notes the poor quality of business specific data available through the Gas (Information Disclosure) Regulations 1992. The Commission considers there would be substantial benefits from requiring the

businesses to disclose consistent and robust information and therefore, requests that the Minister consider strengthening the gas pipeline information disclosure regime.

***Other Matters for the Minister to Consider***

96 The Commission has not considered the implications of Vector’s proposed acquisition of NGC. The Minister may need to consider the implications of that acquisition should the acquisition proceed.

**NGCD**

97 Chapter 13 (NGC Holdings Ltd – Distribution (NGCD)) discusses in detail the competition and cost benefit analysis undertaken for NGCD, and the Commission’s recommendations on whether control may and should be imposed on NGCD.

***Competition***

98 In respect of competition faced by NGCD, the Commission has considered the competitive constraints arising from interfuel competition, the threat of by-pass, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on NGCD is limited. Accordingly, the Commission considers that the competition faced by NCGD in the markets it operates in is limited.

***Net Acquirers Benefit (NAB)***

99 In determining whether control may be imposed, the Commission assesses the NAB of imposing control. The results of the Commission’s base case and sensitivities for the NAB test over the period 1997 – 2008 are presented below.

**Table 6: NGCD**

<b>Scenario</b>	<b>NAB Annuity (\$000)</b>
Base case	1,600
High and low WACC (75 <sup>th</sup> and 25 <sup>th</sup> percentile)	783 to 2,390
Higher growth in forecast period (3.5%)	2,380
High and low unrecoverable excess return (25% and 10%)	1,440 to 1,921
Common cost reductions (10-30%)	1,788 to 2,165
Low and high missing market elasticity	1,448 to 1,676
High and low missing market output effect	1,448 to 1,752

100 Overall, sensitivity testing on NGCD’s NAB indicates that net benefits to acquirers would remain for all sensitivities tested.

101 The Commission’s view is that the requirements of s 52 of the Commerce Act are met for NGCD, and that gas services supplied by NGCD may be controlled.

***Should Control be Introduced***

- 102 The Commission considers the following additional matters in assessing whether control ‘should’ be introduced: the net efficiency cost to the economy of reducing excess returns; the size of the benefits; and the impact of a recommendation not to control.
- 103 The net efficiency costs to the economy of reducing excess returns for NGCD were \$0.913 million in annuity terms in the analysis period. The recoverable excess returns were \$2.455 million, giving a transfer cost ratio of 37% (i.e., the cost of transferring each \$1 of recoverable excess returns to consumers involves a net cost to the economy of \$0.37).
- 104 NGCD earned an average return of approximately 10.5% over the analysis period. The NAB of NGCD suggests that its distribution prices could be reduced by as much as 5.6% which would result in a reduction in delivered energy prices (assuming distribution constitutes 40% of final price) to retail customers in the order of 2.2%. Alternatively, the reduction in distribution charges would save the average direct customer \$29 or a 5.6% reduction in their annual line charges.
- 105 The Commission considers that if control were not imposed, the threat of control might be weakened, which could result in future increases in prices from current levels.
- 106 The Commission concludes that control should not be imposed on NGCD.

***Overall Recommendation for NGCD***

- 107 The Commission’s recommendations are set out below.
- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by NGCD may be controlled.
  - The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on NGCD under Part V of the Commerce should not be made, notwithstanding that the s 52 requirements for control are met.

***Advice on Relevant Matters***

- 108 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. The Commission considers the regulatory constraints on NGCD should be strengthened and requests the Minister consider applying to NGCD, a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A.
- 109 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and

operation of the Part 4A regime. The Commission's view is that such a regime has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.

- 110 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.
- 111 In addition, the Commission notes the poor quality of business specific data available through the Gas (Information Disclosure) Regulations 1992. The Commission considers there would be substantial benefits from requiring the businesses to disclose consistent and robust information and therefore, requests that the Minister consider strengthening the gas pipeline information disclosure regime.

***Other Matters for the Minister to Consider***

- 112 The Commission has not considered the implications of Vector's proposed acquisition of NGC. The Minister may need to consider the implications of that acquisition should the acquisition proceed.

**Powerco**

- 113 Chapter 14 (Powerco Limited (Powerco)) discusses in detail the competition and cost benefit analysis undertaken for Powerco, and the Commission's recommendations on whether control may and should be imposed on Powerco.

***Competition***

- 114 In relation to competition faced by Powerco, the Commission has considered the competitive constraints arising from interfuel competition, the threat of by-pass, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on Powerco is limited. Accordingly, the Commission considers that the competition faced by Powerco in the markets it operates in is limited.

***Net Acquirers Benefit (NAB)***

- 115 In determining whether control may be imposed, the Commission assesses the NAB of imposing control. The results of the Commission's base case and sensitivities for the NAB test over the period 1997 – 2008 are presented below.

**Table 7: Powerco**

<b>Scenario</b>	<b>NAB Annuity (\$000)</b>
Base case	3,719
High and low WACC (75 <sup>th</sup> and 25 <sup>th</sup> percentile)	2,925 to 4,542
Higher growth in forecast period (3.5%)	5,020
High and low unrecoverable excess return (25% and 10%)	3,421 to 4,318
Common cost reductions (10-30%)	3,978 to 4,497
Low and high missing market elasticity	3,625 to 3,766
High and low missing market output effect	3,625 to 3,813
High and low tax clawback	3,355 to 3,595
Self insurance	3,181

- 116 Overall, sensitivity testing on Powerco's NAB indicates that net benefit to acquirers would remain for all sensitivities tested.
- 117 The Commission's view is that the requirements of s 52 of the Commerce Act are met for Powerco, and that gas services supplied by Powerco may be controlled.

***Should Control be Introduced***

- 118 The Commission considers the following additional matters in assessing whether control 'should' be introduced: the net efficiency cost to the economy of reducing excess returns; the magnitude of the benefits; and the impact of a recommendation not to control
- 119 The net efficiency costs to the economy of reducing excess returns for Powerco were \$0.732 million in annuity terms in the analysis period. The recoverable excess returns were \$4.395 million, giving a transfer cost ratio of 17% (i.e., the cost of transferring each \$1 of recoverable excess returns to consumers involves a net cost to the economy of \$0.17).
- 120 Powerco earned an average return of approximately 12.7% over the analysis period. The NAB of Powerco suggests that its distribution prices could be reduced by as much as 12.2% which would result in a reduction in delivered energy prices (assuming distribution constitutes 40% of final price) to retail customers in the order of 4.9%. Alternatively, the reduction in distribution charges would save the average direct customer \$51 or a 12.2% reduction in their annual line charges.
- 121 The Commission considers that if control were not imposed, the threat of control might be weakened, which could result in future increases in prices from current levels.

122 The Commission concludes that control should be imposed on Powerco.

***Overall Recommendation for Powerco***

123 The Commission's recommendations are set out below.

- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by Powerco may be controlled.
- The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on Powerco under Part V of the Commerce should be made.

***Advice on Relevant Matters***

124 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. If the Minister were to introduce alternative mechanisms for NGCT, NGCD and Wanganui Gas (such as a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A), there may be benefits in having all businesses, including, Powerco, under the same regime.

125 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and operation of the Part 4A regime. The Commission's view is that such a regime has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.

126 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.

127 In addition, the Commission notes the poor quality of business specific data available through the Gas (Information Disclosure) Regulations 1992. The Commission considers there would be substantial benefits from requiring the businesses to disclose consistent and robust information and therefore, requests the Minister to consider strengthening the gas pipeline information disclosure regime.

**Vector**

128 Chapter 14 (Vector Limited (Vector)) discusses in detail the competition and cost benefit analysis undertaken for Vector, and the Commission's recommendations on whether control may and should be imposed on Vector.

***Competition***

129 In relation to competition faced by Vector, the Commission has considered the competitive constraints arising from interfuel competition, the threat of by-

pass, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on Vector is limited. Accordingly, the Commission considers that the competition faced by Vector in the markets it operates in is limited.

***Net Acquirers Benefit (NAB)***

- 130 In determining whether control may be imposed, the Commission assesses the NAB of imposing control. The results of the Commission’s base case and sensitivities for the NAB test over the period 2000 – 2008 are presented below.

**Table 8: Vector**

<b>Scenario</b>	<b>NAB Annuity (\$000)</b>
Base case	6,921
High and low WACC (75 <sup>th</sup> and 25 <sup>th</sup> percentile)	5,692 to 8,215
Higher growth in forecast period (3.5%)	6,612
High and low unrecoverable excess return (25% and 10%)	6,422 to 7,926
Common cost reductions (10-30%)	7,522 to 8,730
Low and high missing market elasticity	6,763 to 7,000
High and low missing market output effect	6,763 to 7,079
High and low tax clawback	6,024 to 6,626
Self insurance	6,557

- 131 Overall, sensitivity testing on Vector’s NAB indicates that net benefits to acquirers would remain for all sensitivities tested.
- 132 The Commission’s view is that the requirements of s 52 of the Commerce Act are met for Vector, and that gas services supplied by Vector may be controlled.

***Should Control be Introduced***

- 133 The Commission considers the following additional matters in assessing whether control ‘should’ be introduced: the net efficiency cost to the economy of reducing excess returns; the size of the benefits; and the impact of a recommendation not to control
- 134 The net efficiency costs to the economy of reducing excess returns for Vector were \$0.702 million in annuity terms in the analysis period. The recoverable excess returns were \$7.489 million, giving a transfer cost ratio of 9% (i.e., the cost of transferring each \$1 of recoverable excess returns to consumers involves a net cost to the economy of \$0.09).
- 135 Vector earned an average return of approximately 13.5% over the analysis period. The NAB of Vector suggests that its distribution prices could be reduced by as much as 18.5% which would result in a reduction in delivered

energy prices (assuming distribution constitutes 40% of final price) to retail customers in the order of 7.4%. Alternatively, the reduction in distribution charges would save the average direct customer \$114 or a 18.5% reduction in their annual line charges.

- 136 The Commission considers that if control were not imposed, the threat of control might be weakened which could result in future increases in prices from current levels.
- 137 The Commission concludes that control should be imposed on Vector.

***Overall Recommendation***

- 138 The Commission's recommendations are set out below.
- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by Vector may be controlled.
  - The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on Vector under Part V of the Commerce should be made.

***Advice on Relevant Matters***

- 139 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. If the Minister were to introduce alternative mechanisms for NGCT, NGCD and Wanganui Gas (such as a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A), there may be benefits in having all businesses, including, Vector, under the same regime.
- 140 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and operation of the Part 4A regime. The Commission's view is that such a regime has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.
- 141 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.
- 142 In addition the Commission notes the poor quality of business specific data available through the Gas (Information Disclosure) Regulations 1992. The Commission considers there would be substantial benefits from requiring the businesses to disclose consistent and robust information and therefore, requests that the Minister consider strengthening the gas pipeline information disclosure regime.

## Wanganui Gas

- 143 Chapter 15 (Wanganui Gas Limited) discusses in detail the competition and cost benefit analysis undertaken for Wanganui Gas, and the Commission's recommendations on whether control may and should be imposed on Wanganui Gas.

### *Competition*

- 144 In relation to competition faced by Wanganui Gas, the Commission has considered the competitive constraints arising from interfuel competition, the threat of by-pass, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on Wanganui Gas is limited. Accordingly, the Commission considers that the competition faced by Wanganui Gas in the markets it operates in is limited.

### *Net Acquirers Benefit (NAB)*

- 145 In determining whether control may be imposed, the Commission assesses the NAB of imposing control. The results of the Commission's base case and sensitivities for the NAB test over the period 1997 – 2008 are presented below.

**Table 9: Wanganui Gas**

Scenario	NAB Annuity (\$000)
Base case	155
High and low WACC (75 <sup>th</sup> and 25 <sup>th</sup> percentile)	47 to 264
Higher growth in forecast period (0.5%)	174
High and low unrecoverable excess return (25% and 10%)	120 to 224
Common cost reductions (10-30%)	174 to 211
Low and high missing market elasticity	152 to 156
High and low missing market output effect	152 to 158
Historic cost asset base	24
Self insurance	121

- 146 Overall, sensitivity testing on Wanganui Gas's NAB indicates that net benefit to acquirers would remain for all sensitivities tested.
- 147 The Commission's view is that the requirements of s 52 of the Commerce Act are met for Wanganui Gas, and that gas services supplied by Wanganui Gas may be controlled.

### *Should Control be Introduced*

- 148 The Commission considers the following additional matters in assessing whether control 'should' be introduced: the net efficiency cost to the economy

of reducing excess returns; the size of the benefits; and the impact of a recommendation not to control

- 149 The net efficiency costs to the economy of reducing excess returns for Wanganui Gas were \$0.374 million in annuity terms in the analysis period. The recoverable excess returns were \$0.527 million, giving a transfer cost ratio of 71% (i.e. the cost of transferring each \$1 of recoverable excess returns to consumers involves a net cost to the economy of \$0.71).
- 150 Wanganui Gas earned an average return of approximately 11.8% over the analysis period. The NAB of Wanganui Gas suggests that its distribution prices could be reduced by as much as 0.2% which would result in a reduction in delivered energy prices (assuming distribution constitutes 40% of final price) to retail customers in the order of 0.1%. Alternatively, the reduction in distribution charges would save the average direct customer \$1 or a 0.2% reduction in their annual line charges.
- 151 The Commission considers that if control were not imposed, the threat of control might be weakened which could result in future increases in prices from current levels.
- 152 The Commission concludes that control should not be imposed on Wanganui Gas.

#### ***Overall Recommendation***

- 153 The Commission's recommendations are set out below.
- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by Wanganui Gas may be controlled.
  - The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on Wanganui Gas under Part V of the Commerce Act should not be made, notwithstanding that the s 52 requirements for control are met.

#### ***Advice on Relevant Matters***

- 154 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. The Commission considers the regulatory constraints on Wanganui Gas should be strengthened and requests that the Minister consider applying to Wanganui Gas, a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A.
- 155 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and operation of the Part 4A regime. The Commission's view is that such a regime

has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.

- 156 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.
- 157 In addition, the Commission notes the poor quality of business specific data available through the Gas (Information Disclosure) Regulations 1992. The Commission considers there would be substantial benefits from requiring the businesses to disclose consistent and robust information and therefore, requests that the Minister consider strengthening the gas pipeline information disclosure regime.

### **Maui Development Limited**

- 158 Chapter 17 (Maui Development Limited (MDL)) discusses in detail the competition and cost benefit analysis undertaken for MDL, and the Commission's recommendations on whether control may and should be imposed on MDL.

#### ***Competition Analysis***

- 159 In respect of the transmission market, the Commission has considered the competitive impact of interfuel competition, head-to-head competition with NGCT, long-term supply contracts and the regulatory regime and concludes that the constraint they provide on MDL's transmission services is limited. Accordingly, the Commission considers that the competition faced by MDL in the transmission markets in which it operates is limited.

#### ***Net Acquirers Benefit***

- 160 The Maui Gas Contract restricts the Maui pipeline to Maui gas alone. However the parties to the Contract have now reached an agreement to vary the Contract to allow for the carriage of non-Contract gas on the Maui pipeline, although priority will still be given to the carriage of Maui Gas which is subject to the Contract. MDL was not able to provide the Commission with revenue and expense data for cost benefit modelling. In the absence of detailed information, the Commission has focussed its analysis on the open access proposal, associated information, and the comparability of MDL with NGCT.
- 161 The access regime for non-Contract gas is still being negotiated and is currently in draft form. The Commission has given careful consideration to the draft open access regime for the Maui pipeline and possible prices for access. However, due to its draft status, it is not sufficiently certain to be used as a basis for assessing MDL's future pricing behaviour.
- 162 The Commission considers that the other significant transmitter of gas, NGCT, faces similar competitive constraints, and has underlying market power which reasonably approximates that of MDL. In the absence of reliable information from MDL which can be used to assess its future behaviour, the Commission has looked to NGCT as a guide.

- 163 The Commission's analysis has concluded that NGCT is earning excess returns and that there would be NAB from control. The Commission infers that there would also be NAB from controlling MDL. The Commission notes that it has calculated that control on NGCT may result in a reduction in its prices by around 3.5%, and concludes that a similar benefit might be achieved through control of MDL.
- 164 The Commission's view is that the requirements of s 52 of the Commerce Act are met for MDL, and that gas services supplied by MDL may be controlled.

***Should Control be Introduced***

- 165 The Commission considers the following additional matters in assessing whether control 'should' be introduced: the net efficiency cost to the economy of reducing excess returns; the size of the benefits; and the impact of a recommendation not to control
- 166 The net efficiency costs to the economy of reducing excess returns for MDL are assumed to be the same order of magnitude as NGCT's i.e., around 30%. Thus, the cost of transferring each \$1 of recoverable excess returns to consumers is likely to result in efficiency costs to the economy of around \$0.30.
- 167 As noted above, the Commission assumes that control could reduce MDL's transmission prices by around 3.5%.
- 168 The Commission considers that if control were not imposed, the threat of control might be weakened which could result in future increases in prices from current levels.
- 169 The Commission concludes that control should not be imposed on MDL.

***Overall Recommendation***

- 170 The Commission's recommendations are set out below.
- The Commission advises that the requirements of s 52 of the Commerce Act for the introduction of control have been met and therefore the gas services provided by MDL may be controlled.
  - The Commission recommends that an Order in Council under s 53 of the Commerce Act to impose control on MDL under Part V of the Commerce Act should not be made, notwithstanding that the s 52 requirements for control are met.

***Advice on Relevant Matters***

- 171 Control under Part V is high cost relative to other regulatory options. The Commission notes that the Minister has a wider discretion than the Commission to consider other matters including alternatives to control under Part V. The Commission considers the regulatory constraints on MDL should be strengthened and requests the Minister consider applying to MDL, a regime comparable to the targeted control regime applicable to electricity lines businesses under Part 4A.

- 172 While the Commission has not carried out a detailed analysis of the costs and benefits of applying to the gas pipeline businesses a regime analogous to the targeted control regime applying to the electricity lines industry under Part 4A, the Commission has considerable experience of the implementation and operation of the Part 4A regime. The Commission's view is that such a regime has the potential to offer a more favourable trade-off between costs and benefits of regulatory intervention than control under Part V.
- 173 If the Minister were minded to consider adopting a regime comparable to the Part 4A targeted control regime applying to electricity lines businesses, consultation with interested parties as to its relative merits may be necessary or desirable.
- 174 The Commission considers there would be substantial benefits from requiring the businesses to disclose consistent and robust information and therefore, requests that the Minister consider strengthening the gas pipeline information disclosure regime and bringing MDL into that regime.

### **Nova Gas**

- 175 Chapter 18 (Nova Gas Limited (Nova Gas)) discusses in more detail the competition analysis undertaken for Nova Gas.

#### ***Competition Analysis***

- 176 Nova Gas operates in the bypass market. Nova Gas faces direct competition from incumbent gas pipelines in the bypass market. The level of competition for customers is vigorous. Nova Gas also faces constraints from interfuel competition and from the regulatory regime.
- 177 With respect to s 52(a) of the Commerce Act, the Commission's assessment is that Nova Gas faces workable or effective competition in the market where it provides gas services. That is, competition is not limited in this market.
- 178 The Commission advises that the gas services supplied by Nova Gas Limited may not be controlled.

### **Taranaki Pipelines**

- 179 In addition to the 'principal' transmission pipelines discussed above there are a number of pipelines of smaller length, all situated in Taranaki.
- 180 The LTS pipeline owned by NGC and the Surrey Road pipeline owned by Westech Energy are considered to fall outside the definition of 'transmission system' in the terms of reference and are therefore outside the ambit of the Inquiry.
- 181 The Frankley Road pipeline owned by NGC is included in the analysis of NGCT.
- 182 With respect to the McKee Production Station to Faull Road pipeline (Todd Taranaki) and the Rimu to NGC South pipeline (Swift) the Commission's assessment is that competition to these pipelines is not limited. The

Commission advises that the gas services provided by these pipelines may not be controlled.

- 183 With respect to the Kapuni to Hawera pipeline (Todd Petroleum and Shell), and the TAW pipeline (Swift Energy) the Commission's assessment is that competition is limited but that there is unlikely to be net benefit to acquirers from control. The Commission does not consider that it is necessary or desirable in the interests of acquirers for control to be imposed. The Commission reports that the gas services provided by these pipelines may not be controlled.
- 184 These pipelines are discussed in more detail in Chapter 19 (Taranaki Pipelines).

## Comparative Business Information

### *Net Acquirers Benefit*

- 185 The benefits, costs and net acquirers benefit assessed at the 25th percentile, mid and 75th percentile points of WACC for NGCT, NGCD, Vector, Powerco and Wanganui Gas are set out in Table 10.

**Table 10: Net Acquirers Benefit**

	Annuity (\$000)		
	25th WACC	Mid WACC	75th WACC
<b>NGCT</b>			
Total benefits	8,278	5,170	2,062
Total costs	3,365	2,806	2,325
<b>NAB</b>	<b>4,913</b>	<b>2,364</b>	<b>-263</b>
<b>NGCD</b>			
Total benefits	4,376	3,375	2,386
Total costs	1,986	1,775	1,603
<b>NAB</b>	<b>2,390</b>	<b>1,600</b>	<b>783</b>
<b>Powerco</b>			
Total benefits	6,927	5,892	4,896
Total costs	2,386	2,173	1,972
<b>NAB</b>	<b>4,542</b>	<b>3,719</b>	<b>2,925</b>
<b>Vector</b>			
Total benefits	11,721	10,047	8,457
Total costs	3,507	3,126	2,766
<b>NAB</b>	<b>8,215</b>	<b>6,921</b>	<b>5,692</b>
<b>Wanganui Gas</b>			
Total benefits	844	706	570
Total costs	580	551	523
<b>NAB</b>	<b>264</b>	<b>155</b>	<b>47</b>

### *Net Efficiency Costs to the Economy of Reducing Excess Returns*

- 186 The Commission has found NAB for all businesses investigated. The positive NAB has been driven by excess returns as the net efficiency effect of control is

always found to be negative. Table 11 highlights the trade off between the net efficiency effects and recoverable excess returns for each business.

**Table 11: Net Efficiency and Recoverable Excess Returns Trade-off<sup>VI</sup>**

	<b>NGCT</b>	<b>NGCD</b>	<b>Powerco</b>	<b>Vector</b>	<b>WGL</b>
Recoverable excess returns (\$000)	3,629	2,455	4,395	7,489	527
Net efficiency effect (\$000)	-1,096	-913	-732	-702	-374
Net cost of \$1 transfer to acquirers	\$0.30	\$0.37	\$0.17	\$0.09	\$0.71
Times recoverable excess returns exceed efficiency effect	3.3	2.7	6.0	10.7	1.4

### *Size of the Benefits*

187 Table 12 shows the average returns earned by the businesses over the analysis period. The mid-point of WACC was 8% on average over the same period.

**Table 12: Average Returns of the Businesses**

<b>Company</b>	<b>Average Returns on Capital</b>
WGL	11.8%
NGCD	10.5%
NGCT	9.1%
Powerco	12.7%
Vector	13.5%

188 Table 13 shows the change in transmission and distribution prices to reduce the positive NAB for each business back to zero.

**Table 13: Effect on Transmission/Distribution Prices**

<b>Company</b>	<b>Price Effect</b>
NGCT	-3.5%
NGCD	-5.6%
Vector	-18.5%
Powerco	-12.2%
WGL	-0.2%

189 Table 14 shows the impact in dollar terms of reducing prices to the point where NAB = 0 relative to the average annual consumption per connection.

**Table 14: Reduced Annual Charges per Connection**

	Average annual gain per acquirer	Average annual charge per acquirer
WGL	\$1	\$323
NGCD	\$29	\$518
NGCT	[ ]	[ ]
Powerco	\$51	\$415
Vector	\$114	\$617

<sup>VI</sup> Recoverable excess returns are calculated as the total excess returns less 20% thereof, as this proportion is considered unrecoverable. The efficiency costs include costs that fall on producers and acquirers.

- 190 Table 15 shows the potential change in the delivered gas price to retail customers if both distribution and transmission prices were reduced to a point where NAB=0 in the Commission's model. This calculation assumes that transmission's share in the delivered gas price is 10%, while distribution's share is 40%.

**Table 15: Effect on Final Delivered Gas Price**

**(Transmission and Distribution Combined)**

<b>Company</b>	<b>Price Effect</b>
NGCD	-2.6%
Vector	-7.8%
Powerco	-5.2%
WGL	-0.4%

- 191 It should be noted that the calculations in this sub-section are made on the basis of bringing NAB back to zero, not to where the efficient level of price would be if the costs of control were ignored.

## **Other Requests from the Minister**

### ***Appropriate Valuation Methodology for this Inquiry***

- 192 The Commission investigated the use of both historic cost and replacement cost valuation approaches for this Inquiry. The historic cost information was found to be generally unavailable. ODV/ODRC valuations were readily available and relatively robust compared to the historic cost information. Therefore, the Commission considers that the appropriate valuation methodology for this Inquiry to be ODV/ODRC.

### ***Net Benefits to the Public of Control***

- 193 The Minister requested the Commission to advise him on the net public benefits of control. The net public benefits assessment measures only efficiency effects. The efficiency effects under the net public benefits assessment are largely the efficiency effects within the NAB test.<sup>VII</sup>
- 194 The benefits, costs and net public benefits assessed at the mid-point of WACC for NGCT, NGCD, Vector, Powerco and Wanganui Gas are set out in Table 16.

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<sup>VII</sup> The Commission notes that two additional benefits and costs of control affect producers only, and are included in the net public benefits analysis. These two additional matters are explained at the end of Chapter 4 (Overview of the Assessment Approach). They have proved generally immaterial in the present Inquiry.

**Table 16: Net Public Benefits**

<b>Company</b>	<b>Mid WACC (Annuity \$000)</b>
<b>NGCT</b>	
Total efficiency benefits	644
Total efficiency costs	1,740
<b>Net Public Benefits</b>	<b>-1,096</b>
<b>NGCD</b>	
Total efficiency benefits	306
Total efficiency costs	1,219
<b>Net Public Benefits</b>	<b>-913</b>
<b>Powerco</b>	
Total efficiency benefits	401
Total efficiency costs	1,134
<b>Net Public Benefits</b>	<b>-732</b>
<b>Vector</b>	
Total efficiency benefits	685
Total efficiency costs	1,388
<b>Net Public Benefits</b>	<b>-702</b>
<b>Wanganui Gas</b>	
Total efficiency benefits	47
Total efficiency costs	421
<b>Net Public Benefits</b>	<b>-374</b>

***Technical Provisions Relating to Section 57A of the Commerce Act***Description of Services

195 The Order made under s 53 of the Commerce Act may identify the services to which it relates:

- by a description of the services; or
- by a description of the kind or class to which the services belong.

196 The Order may apply to services:

- supplied in or for delivery within specified regions, areas, or localities in New Zealand;
- supplied in different quantities, qualities, grades or classes;
- supplied by or to or for the use of different persons or classes of persons.

197 The Commission would identify the services in the Order by the suppliers of the gas services. Accordingly the Order would refer to the services supplied by some or all of NGC Holdings Limited (Transmission), NGC Holdings Limited (Distribution), Powerco Limited, Vector Limited, Wanganui Gas Limited and Maui Development Limited in markets directly related to either a natural gas transmission system or a natural gas distribution system or both.

198 Where 'transmission system' is defined as:

Transmission system means that part of a system that conveys gas from the point where the gas leaves a gas processing facility to the boundary of the gasworks or gate station outlet flange supplying gas-

- (a) for distribution; or
- (b) to a gas customer, where the gas does not enter a distribution system.

199 Where ‘distribution system’ is defined as

Distribution system means all fittings, whether above or below ground, under the control of a gas distributor and used to distribute gas from-

- (a) The boundary of the gasworks or gate station outlet flange supplying gas for distribution; or
- (b) The outlet of the container in which gas for distribution is stored-

to the outlet of the gas measurement system of the place at which the gas is supplied to a consumer or gas refueller (or, where no such gas measurement system is provided, to the custody transfer point of the place at which the gas is supplied to a consumer or gas refueller); and, for the purposes of any regulations made under section 54 of this Act relating to odourisation or the measurement of calorific value, includes a gas transmission system.

200 In addition, the Commission considers that gas meters should be separately identified in any Order.

Date of Expiry

- 201 The Order made under s 53 of the Commerce Act must specify the date on which it expires (s 57A(4)).
- 202 The Commission acknowledges that it can be problematic to set a period of control without determining the form of control. It considers, however, that the appropriate period for expiry of an Order declaring control would be 11 years.
- 203 If a shorter period was adopted then another inquiry would have to be undertaken if control were to be extended. The Commission has the ability itself to vary authorisations and the form of control under Part V and also has the ability under s 56 of the Commerce Act to recommend amendment or revocation of the Order that declares control, should a shorter period of control become desirable.

***Other Matters for the Minister to Consider***

- 204 The Commission has not considered the implications of Vector’s proposed acquisition of NGC. The Minister may need to consider the implications of that acquisition should the acquisition proceed.