



NGC HOLDINGS LIMITED

**COMMERCE COMMISSION
GAS CONTROL INQUIRY**

**SUBMISSION IN RESPECT OF THE
DRAFT FRAMEWORK PAPER**

20 August 2003

TABLE OF CONTENTS

A	INTRODUCTION.....	4
B	OVERVIEW OF SUBMISSION.....	4
C	SCOPE OF THE DRAFT FRAMEWORK PAPER	6
D	BACKGROUND TO NGC AND THE GAS INDUSTRY	9
D1	History of NGC.....	9
D2	NGC’s current business activities.....	10
E	SCOPE OF THE INQUIRY	14
E1	Jurisdiction of the Commission.....	14
E2	Services not covered by the Inquiry.....	15
	LTS pipeline	16
	Consumer gas metering.....	17
	Asset management services	19
E3	Suppliers covered by the Inquiry.....	20
	Transmission	20
	Distribution	21
E4	Acquirers covered by the Inquiry.....	22
	Acquirers	22
	Stakeholders	22
F	LEGAL FRAMEWORK	23
F1	Criteria for recommending control	23
F2	Is Competition Limited or Likely to be Lessened (s52(a))?.....	24
	Meaning of “limited”	24
F3	Is it necessary or desirable for goods or services to be controlled in the interests of acquirers (s52(b))?.....	26
	Approach taken in Airports	26
	Interests of acquirers of gas services.....	28
	Overall threshold for control recommendation.....	29
G	COUNTERFACTUAL.....	30
G1	Regulatory dimensions to counterfactual	30
	Improved disclosure regime	30
	Government objectives for gas industry	32
	Industry Governance	32
G2	Commercial dimension to counterfactual	33
H	CURRENT DISCLOSURE REGIME	35
I	COMPETITION ANALYSIS	36

I1	Market definition	36
	Time dimension	36
	Market structure	37
	Interfuel competition	37
	Barriers to entry	42
	Summary	42
	Maui and NGC pipelines	42
I2	Current pricing structure	43
J	ASSESSING EFFICIENT COSTS.....	45
J1	Benchmarking.....	45
J2	Building blocks.....	45
K	COST OF CAPITAL.....	49
L	ASSET BASE AND VALUATION	49
	Government pressure to adopt ODV as part of light-handed regime.....	49
	NGC responded to Government signals	50
	Adoption of ODV	52
	Current position	53
L2	Intangible assets.....	54
L3	Pipeline easements.....	54
M	BENEFITS AND COSTS OF CONTROL	56
M1	Costs of current regime.....	56
M2	Compliance costs of price cap regulation	56
M3	Current regulatory environment	56
N	NGC RESPONSES TO QUESTIONS POSED IN DRAFT FRAMEWORK	
PAPER	57

A INTRODUCTION

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3 This submission is provided in accordance with the Commission's timetable in respect of the Inquiry, and relates to the Commission's Draft Framework Paper dated 16 July 2003.

4 Commercially sensitive information is identified and highlighted. A public version of the submission has been made available separately to the Commission.

B OVERVIEW OF SUBMISSION

5 NGC's submission is primarily contained in this paper. It is supported by papers from:

- Charles Rivers Associates (CRA), who provide input on the competition analysis, the impact of regulation on efficiency, measuring efficiency in the counterfactual and weighing up the benefits and costs of control;
- National Economic Research Associates (NERA), who provide input on asset valuation; and
- Law and Economics Consulting Group (LECG), who provide input on the weighted average cost of capital (WACC).

6 Where relevant NGC refers to those papers in this submission. Answers to the specific questions asked by the Commission in its Draft Framework Paper are set out in section N of this submission. Where the answers are contained in the other papers, cross-references are provided.

- 7 The key aspects of NGC's submissions on the Commission's Draft Framework Paper are:
 - 7.1 The scope of the Draft Framework Paper (section C);
 - 7.2 The scope of the Inquiry, including the jurisdiction of the Commission (section E);
 - 7.3 The legal framework of the Inquiry, including the criteria for recommending control (section F);
 - 7.4 The correct counterfactual, including both regulatory and commercial considerations (section G);
 - 7.5 Competition analysis, including market definition, barriers to entry, interfuel competition and the current pricing structure (section I);
 - 7.6 How to assess efficient costs, including use of benchmarking and building blocks (section J);
 - 7.7 Calculating the cost of capital (section K);
 - 7.8 The correct asset base and valuation of it, including use of ODV, and inclusion of intangible assets and pipeline easements (section L).

C SCOPE OF THE DRAFT FRAMEWORK PAPER

- 8 NGC welcomes the Commission's decision to publish a Draft Framework Paper at this early stage of the Inquiry. Such a framework is necessary to guide both the Commission and interested parties. Following the conference, NGC will need to undertake a good deal of work in preparation for illustrating the application of the framework to NGC's transmission and distribution businesses.
- 9 In that regard, NGC assumes that the Commission will follow the conference with a revised and final Framework Paper that reflects the Commission's assessment of submissions and cross-submissions. This point is made because the present timetable does not appear to allow for a final Framework Paper. If so, interested parties will be left in considerable doubt as to what framework the Commission is following. Further, there will be a question regarding the effectiveness of the Commission's consultation.
- 10 By way of illustration, one of the points made by NGC in this submission is that a building blocks approach requires that the Commission adopt an avoided cost allocation methodology (ACAM) when assessing efficient costs. Such an approach is necessary both having regard to the regulatory context and to the fact that NGC is a multi-product firm. Preliminary work has been done, but application of ACAM will require a good deal of analysis and expense on NGC's part. It will need to be undertaken prior to the next scheduled paper being produced, because there may not be sufficient time to do so following that paper and before the next scheduled conference. NGC notes that the Commission will not issue its draft paper until March but submissions may be due within a month of issue, which is an extremely short period that will certainly be insufficient to demonstrate the application of any chosen methodology. NGC is reluctant to incur the expense associated with developing an ACAM model prior to March without knowing that the Commission intends to consider it.
- 11 Plainly the Framework Paper will result in decisions being made, at least provisionally, regarding the assets and firms subject to the Inquiry, and the legal and analytical framework. For example, it may establish the range of methodologies that the Commission proposes to use to determine efficient costs. And it will clarify the issues that the Commission will consider during the Inquiry (an example being the question whether cross-subsidisation is an issue in the pricing of gas services).
- 12 However, NGC notes that it can be difficult to assess where the Commission proposes to draw the line between development of a framework and its application. NGC makes no criticism of the Commission in that regard. But NGC should make it clear that it considers the substantive questions posed

by the terms of reference and s52 can only be answered at a subsequent stage of the Inquiry. For example:

- 12.1 NGC has gone into some detail in its submissions regarding the competition analysis, but only for the purpose of illustrating its point that the Commission's traditional framework for assessing market power is inadequate and a wider framework is required. More detail will be required before the Commission can reach a conclusion on the extent to which competition is limited.
 - 12.2 Similarly, NGC has outlined the risks that it faces in order to demonstrate that the question whether it is earning an excess return must be assessed having regard to considerations that the capital asset pricing model does not address. NGC will wish to develop these points later.
 - 12.3 As noted above, NGC has identified the need for the Commission to use an ACAM model if it chooses a building blocks approach, but is not in a position at this time to provide the Commission with an ACAM model or the results that would be produced when applied to NGC.
 - 12.4 NGC has addressed benchmarking at the level of principle but has not developed it, on the basis that all that is required at this stage is to show that benchmarking ought to be considered as part of the substantive inquiry because it potentially complements and provides a check on the building blocks analysis.
 - 12.5 NGC has noted that, should a control recommendation be made, close attention will need to be paid to definition of the services and assets that are subject to the recommendation. However, it has assumed that that topic will be considered at the next stage of the Inquiry.
 - 12.6 NGC wishes to develop submissions at a later date on the benefits of the light-handed regulatory regime.
 - 12.7 NGC has not had time to do a full assessment of the compliance costs of regulation. However, it will wish to make submissions on these.
- 13 NGC notes that the timetable has not allowed sufficient time to develop its case on these issues, even if the Draft Framework Paper had required that NGC do so.

- 14 NGC has not presented detailed submissions relating to consultation principles in this paper, recognising that the Commission is very familiar with the relevant principles. It observes that interested parties must be given a reasonable opportunity to respond to a proposal. In that regard, the draft framework paper has required a great deal of work on NGC's part, and much co-ordination of specialist advisors all of whom have existing commitments. In the result, NGC would have benefited from more time to develop its submissions on the very important and wide-ranging issues raised by the paper. However, as noted above, it is understood that questions of application, including the issues referred to in para 10, will be considered subsequently. Further, consultation principles require that the Commission provide interested parties with a decision on the proposed framework, in time for them to prepare for the next round, and sufficient time to consider and respond to the March 2004 'application' paper.

D BACKGROUND TO NGC AND THE GAS INDUSTRY**D1 History of NGC**

- 15 The Natural Gas Corporation was established in 1967 as a state-owned entity to buy, process and wholesale Kapuni natural gas after the discovery of the Kapuni field in 1959.
- 16 In 1969 transmission pipelines were constructed from Kapuni to Auckland and Wellington to transport Kapuni gas. The Kapuni gas treatment plant was commissioned in 1970 and NGC commenced transmission of bulk gas in that same year.
- 17 The Maui offshore gas field was discovered in 1969.
- 18 The Maui White Paper was signed by the Crown and the Maui Mining partners in October 1973. In that same year, NGC was appointed the operator of the onshore Maui pipeline.
- 19 Construction of the 313km Maui pipeline from Oaonui to Huntly was commenced in 1975.
- 20 In 1978 the Government established the Petroleum Corporation of New Zealand (Petrocorp) as a state owned company. NGC became a wholly owned subsidiary of Petrocorp. The Maui came on stream in 1979. In 1980 the McKee field was discovered. In that same year an era of rapid transmission pipeline construction began. In 1982, 750km of transmission pipeline was constructed, reaching Tauranga, Kawerau, Whangarei and Hastings. By 1984, the pipeline had reached Gisborne.
- 21 Petrocorp became a publicly listed company in 1987, following a 30% sell-down by the Government. Fletcher Challenge acquired all the shares in Petrocorp in the following year.
- 22 In 1991, Natural Gas Corporation Limited acquired Natural Gas Corporation of New Zealand Limited and other associated companies. In 1992, Natural Gas Corporation Holdings Limited was established as the new parent company, issuing Convertible Capital Notes and shares, and acquiring Natural Gas Corporation Limited. Fletcher Challenge sold two thirds of its interest in NGC – one third to The Australian Gas Light Company (AGL) and one third to the public. AGL assumed contract management of NGC's gas sales and distribution activities.
- 23 In 1992 the new Gas Act was passed, abolishing the exclusive retail franchise areas for distribution of gas and removing price control. NGC moved to unbundle its gas contracts and offer separated contracts for

wholesale gas and gas transportation in preparation for the new deregulated environment.

- 24 In 1997, extensive Information Disclosure Regulations were promulgated under the Gas Act as a key element to the operation of the light-handed regulatory regime for the deregulated gas market. In that same year, a \$19m expansion and reinforcement of the transmission system between Huntly and Auckland was commenced to meet demand growth. This was completed in 1998.
- 25 The transition from the former 1980 utility supply contracts (which were reverted to after removal of price control in 1994) was completed in 1997. In 1998, NGC commenced the \$17m reticulation of the Hibiscus Coast north of Auckland.
- 26 In 1998, NGC entered into an agreement with Powerco to acquire its gas retailing business in New Plymouth and Hawera, taking its retail gas customer base to 64,000. As part of the agreement, NGC sold its gas distribution networks in Taranaki to Powerco.
- 27 AGL became NGC's major shareholder in 1999 with a 71.6 percent interest after acquiring Fletcher Challenge's remaining one third shareholding, and a further separate holding of 4.9 percent. NGC's current shareholding is AGL 66.05%, Hutt Mana Energy Trust and Hutt Mana Charitable Trust 6.65% and public 27.30%.
- 28 In 2000, NGC acquired New Zealand's largest electricity retailer, TransAlta New Zealand Limited. On Energy was launched as NGC's new energy retail brand to replace the NGC WEL Energy and TransAlta brands in 2001. NGC also acquired TransAlta's generation interests, principally the Taranaki Combined Cycle Plant, Southdown Generation Station, Cobb Hydro Station and Rotokawa Geothermal Station. NGC sold its electricity retail businesses to Meridian Energy Limited and Genesis Power Limited in 2001.
- 29 In 2002, NGC sold its natural gas retail business (customers under 10TJ) to Genesis Power Limited. NGC also formally changed its name to NGC Holdings Limited. NGC also sold its interests in electricity generation in that same year.

D2 NGC's current business activities

- 30 NGC's business activities are now:

30.1 Gas transmission and distribution. This is a major business activity for NGC, accounting for around 67.6% of assets and 18.4% of revenues.

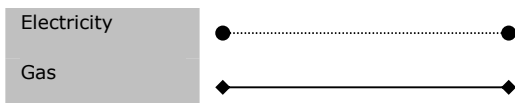
- 30.2 Gas processing, via the Kapuni gas treatment plant which treats raw gas so that it meets specification and produces other products, notably Liquid Petroleum Gas (LPG), as a by product of treatment.
- 30.3 Gas wholesaling. The majority of NGC's gas comes from the Maui field. As the Commission is aware, that field is in decline. NGC now expects its entitlements to end before 2007.
- 30.4 NGC now sells gas to end users whose annual usage exceeds 10TJ. Much of its Maui and other gas entitlements are committed to various buyers, including Genesis.
- 30.5 Energy metering and data administration.
- 30.6 Operation and maintenance of third party pipelines.

31 In the result, NGC no longer has any interest in gas retailing for mass consumption. It has no electricity interests apart from metering and very small generation interests of less than 30MW (mostly from the Kapuni co-generation plant). It continues to sell gas direct to Genesis and industrial users which consume in excess of 10TJ of gas per annum. Its interest on the production side is presently limited to the Kapuni gas treatment plant. Table 1 below sets out the roles of the other major participants in the gas industry (including their interests in electricity where relevant).

Table 1

Company	Production	Wholesale	Transmission	Generation	Distribution	Retail (industrial)	Retail (domestic/small commercial)
NGC		◆		◆	◆	◆	◆
Contact				●	●	●	●
Wanganui Gas					◆	◆	◆
Todd Interests*	◆			◆	◆		◆
Vector/UNL					●	●	
Powerco					●	●	
Genesis				●	●	●	●

• This includes Shell Todd Oil Services Ltd and Nova Gas Ltd.



- 32 The implications of industry structure, in a world in which the availability of cheap Maui gas is already a thing of the past, are developed in the competition analysis section below. In short, NGC agrees with the Commission (para 1.22) that structural factors must be considered as part of this inquiry, but considers that the Commission's proposed framework does not do so adequately.
- 33 NGC operates a neutral and non-discriminatory open access regime for transmission and distribution as set out in the following documents:
- New Zealand Gas Pipeline Access Code of July 1998 (the Access Code);
 - NGC Transmission and Distribution Information Memoranda published annually;
 - Transmission and Network Services Agreements between NGC and users; and
 - Reconciliation Code of 1 July 2000.
- 34 The Access Code is a voluntary code of practice designed to promote the development of competitive gas markets by establishing minimum standards of disclosure and conduct for pipeline owners. NGC is a signatory to the Access Code. Elements of the Access Code include:
- owners of pipelines shall supply any user that meets prudential requirements with any service offered, subject to available capacity;
 - owners shall offer terms and conditions that facilitate access to all capacity and shall act in a neutral and non-discriminatory manner;
 - terms and conditions must be declared in a publicly available memorandum and constitute a binding offer;
 - each owner is required to issue an information memorandum which sets out declared terms and conditions under which the system may be accessed, a description of the capacity available, engineering specifications, gas specifications, etc;
 - owners are obliged, where practical, to unbundle services; and

- confidentiality and ring fencing obligations to ensure that confidential information is secure and not available to another gas trading business.

- 35 In 2002, NGC applied for a section 66 clearance to acquire the gas pipeline assets of UnitedNetworks Limited (Decision 470). Before granting clearance, the Commission investigated the gas transmission and distribution markets and concluded in paragraph 80 that *"to date, at least, it has received no complaints of denial of access by gas network owners, whether vertically integrated or not"*. NGC understands that the Access Code's own dispute resolution procedure has never been invoked.
- 36 The Access Code and the Information Disclosure Regulations require a high level of transparency by NGC not only with respect to access and pricing, but also related party transactions. In Decision 470 the Commission concluded that the proposed merger would not affect the competition in the residential, industrial and commercial retailing markets (paragraphs 90 and 99), adding that *"the merged entity would face constraint from the voluntary pipeline access code, current information disclosure regulations, and the threat of further regulation"*.
- 37 The Draft Framework Paper has misinterpreted the transmission access regime for retailers at paragraph 5.70. A term transmission agreement for a specific power station was negotiated with a large generator which also happened to be a retailer. The transmission services for that company's retail business are provided on the same basis as for other retailers.
- 38 In fact, there are a range of transmission services agreements (TSAs) in place that provide flexibility to shippers. A shipper can negotiate an agreement that is supplementary to its annual TSA to match particular circumstances. In addition, there are term TSAs that are separate agreements to provide gas transportation services for longer term investments such as power stations.
- 39 The standard TSAs allow shippers to transfer or trade capacity (within the physical constraints of the transmission system) so they can manage their customer load profile. Table 2 below summarises the intra- and inter-company transfers in the last two complete gas years and the current year to date. A given capacity transfer could apply for a period from one day to one year. NGC needs to confirm the physical deliverability of any trade once notified by the parties involved in this secondary capacity trading.

Table 2

	Y/E Sept 2001	Y/E Sept 2002	Up to July 2003
Intra-company capacity transfers	620	324	361
Inter-company capacity transfers	14	13	40

E SCOPE OF THE INQUIRY

E1 Jurisdiction of the Commission

- 40 The terms of reference for the Inquiry were set out in a letter from the Minister of Energy to the Chair of the Commerce Commission dated 30 April 2003. In that letter, the Minister requested the Commission to report to him on whether or not an order declaring that goods or services be controlled should be made in relation to:

"goods and services connected with either gas transmission or gas distribution or both ("gas services")"

- 41 The Minister has since clarified the terms of reference:

"Gas" [means] natural gas, and only that gas. Liquefied petroleum gas (LPG) was not intended to be covered by the inquiry."

"gas pipeline services" and "pipeline services" mean "gas services"

"Connected with" means "supplied by persons in markets directly related to"

"Gas transmission or gas distribution" means "a gas transmission system or a gas distribution system" where "transmission system" and "distribution system" are defined in the Gas (Information Disclosure) Regulations 1997 and the Gas Act 1992 respectively"

- 42 In NGC's submission, the clarification of the term "connected with" to mean "supplied by persons in markets directly related to" narrowed the scope of the Inquiry. But for this clarification, the term "connected with" could mean that the Inquiry was to cover goods or services physically connected with gas transmission and distribution pipelines. This, as the Commission pointed out in its letter of 20 June 2003, could include a range of goods and services not owned or operated by owners of gas pipelines.

- 43 Although this clarification is helpful, it does not relieve the Commission of the difficulty of identifying precisely the services it is dealing with. It is necessary to define those services with care for three reasons:

43.1 First, it is necessary to be precise about what is and is not within the terms of reference.

43.2 Second, it is necessary to be precise about what is and is not to be controlled, in the event that the Commission recommends control.

43.3 Third, it is important to ensure that a Commission recommendation does not capture services in respect of which there is contestability and no need for control.

44 A transmission system is defined in the Gas (Information Disclosure) Regulations 1997 as being:

".....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.."

45 Distribution system is defined in the Gas Act 1992 as being:

".....all fittings.....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;....

to the outlet of the gas measurement system of the place at which the gas is supplied to a consumer...."

"Gas measurement system" means a system for measuring the quantity of any gas or the energy content of any gas.....and includes any equipment that forms part of, or is ancillary to, any such system"

"Gas transmission" means the supply of line function services by means of high pressure gas pipelines operating at a gauge pressure exceeding 2,000 kilopascals"

46 Of course the scope of the Inquiry is one thing. The scope of a control recommendation under s57A, should one be made, is another thing altogether. NGC submits that the Inquiry is addressed to two key functions – connection to a gas distribution or transmission network, and transport of gas over that network. *Services* and *assets* that are ancillary to those core functions, such as metering and metering assets, are generally contestable and should not be the subject of a control recommendation. Accordingly, the Commission must define with care the scope of any services in respect of which a recommendation is to be made. This is an issue that NGC will develop at the next stage of the Inquiry.

E2 Services not covered by the Inquiry

47 NGC considers that the following services do not fall within the definition of "gas services" as defined by the Commission and the Minister, and therefore should not be included in the Inquiry. In any event, NGC does

not consider that there are any competition concerns in respect of these services.

LTS pipeline

- 48 The LTS pipeline is used to supply non-specification, high CO₂ gas from NGC's Kapuni gas treatment plant to Methanex's Waitara Valley methanol plant. Methanex's gas supply agreement with NGC is due to end in early 2004.
- 49 A transmission system is defined in the Gas (Information Disclosure) Regulations 1997 as being "*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 out let flange..*"
- 50 Although technically the LTS pipeline fits within this definition, NGC has never considered that the LTS pipeline is a transmission pipeline. It does not conform to the usual requirements for a transmission pipeline to carry specification gas capable of being injected into a distribution system. The gas that is being supplied to Methanex is non-specification, high CO₂ gas. Because of the inability to mix this gas with other, specification gas for delivery into distribution systems or to end users, the LTS pipeline is not subject to the Gas Access Code.
- 51 In addition, the LTS pipeline was built for a specific purpose, to supply Methanex with non-specification gas, an investment which could only be justified on the basis of the economics of the contractual arrangements made with Methanex.
- 52 After the end of Methanex's transmission agreement in early 2004, NGC intends to use the LTS pipeline for gathering raw gas from fields within proximity of the pipeline. Many of these fields are small and the extraction of gas from them is only viable if the field owner can on-sell the gas in an untreated state. To make the purchase viable, the buyer needs ready access to a gas treatment plant, and a pipeline to get the gas to it.
- 53 A good example is NGC's recent announcement that it had entered into an agreement with Westech to purchase at least 1PJ of gas from the Surrey field. At present that gas is being injected into the LTS pipeline and supplied to Methanex. This is only possible because Methanex takes high CO₂ gas. Once Methanex's contract with NGC expires, the gas from the Surrey field will be transported along the LTS pipeline to the Kapuni gas treatment plant for treatment and injection into the transmission system. NGC understands that Westech will submit that its Surrey Road pipeline is not a transmission pipeline on the same basis.

54 NGC has also recently entered into a gas purchase option agreement with Indo-Pacific Energy, under which it is entitled to negotiate first for all gas produced from certain Indo-Pacific fields. Such gas will also be transported through the LTS pipeline to the Kapuni gas treatment plant for treatment and injection into the transmission system.

55 The effect of using the pipeline in this way is it will operate upstream of the Kapuni gas treatment plant, prior to injection of gas into the transmission system. This use clearly does not fit within the definition of transmission system in the Gas (Information Disclosure) Regulations 1997.

56 On that basis, NGC submits that the LTS pipeline should not be included in the Inquiry.

Consumer gas metering

57 Although meters on consumer premises are included in the definition of "Distribution System" in section 2 of the Gas Act 1992, they are generally not considered a gas service for regulatory purposes. In NGC's view, consumer metering services are ancillary to the core functions of connection to a gas distribution or transmission network, and transport of gas over that network, and as such should not be the subject of a control recommendation.

58 In NGC's view these services are also fully contestable and therefore there are no competition issues which warrant a recommendation of control.

59 In the Review of the New Zealand Gas Sector carried out by ACIL Consulting for the Ministry of Economic Development ("Gas Sector Review"), ACIL noted that gas retailers are dependent on either the network provider or a separate organisation for consumer metering. The processes, procedures and timetable for reconciliation of gas quantities between retailers at shared points of transfer are set out in the Reconciliation Code developed by a working group of the gas industry. The industry agreed that any person wishing to be involved in the transport and trading of gas on open access facilities must comply with this Code.

60 Although one submitter commented that the reluctance of metering companies to provide metering in cases of small loads was an obstacle to the expansion of the gas network, ACIL did not identify metering as a barrier to entry in the tariff market.

61 In a paper to the Cabinet Economic Development Committee dated 6 November 2002 recommending that the Minister of Energy request the Commission to report under s56 of the Act, the Minister did identify access to consumer gas meters as a barrier to retail competition for domestic consumers. However, the Minister did not recommend a regulatory solution

to encourage retail competition. Rather, officials proposed that Government give “a clear signal to the industry of its policy expectations for retail markets to help ensure that effective industry outcomes are achieved” by way of the Government Policy Statement on gas (p16, para 74).

- 62 The Commission has consistently segmented gas consumers into “small commercial and domestic” and “medium and large industrial” within the relevant market definitions. The division between the two is made at the 10TJ mark. This division has been considered relevant to whether metering is contestable, to the extent that, although the Commission has been willing to acknowledge that metering is contestable for medium and large industrial consumers, it is often not economic for a new retailer to install new meters to serve small commercial and domestic consumers. On this basis, the Commission has considered that meters on small commercial and domestic consumer premises can act as a barrier to entry to the small commercial and domestic gas retail market (refer Decision 333, 10 December 1998).
- 63 That distinction appears to assume vertical integration of retailing and distribution functions. In practice, however, retailers are not required to install their own meters because NGC operates an open access policy, and, in any event, does not retail to small commercial and domestic consumers.
- 64 There is no need for a distributor to own consumer meters attached to its network. Approximately 51% of meters are owned by Contact Energy Ltd, which it acquired when it bought Enerco’s gas retailing business. Those meters are primarily installed on Vector’s and Powerco’s networks. Contact is a gas wholesaler and retailer which does not own any gas distribution assets.
- 65 NGC owns approximately 23% of the meters in use for small commercial and domestic consumers, most of which are installed on its own networks. However, NGC also installs and owns new meters on other network companies’ distribution networks. For example, it has installed [] meters on Vector’s networks and [] on Powerco’s.
- 66 In the case of small commercial and domestic consumers, NGC leases the meters to the retailer. The retailer reads the meters, but NGC retains ownership of them (for which it also has responsibility for maintenance). Where NGC owns the meter of, and supplies gas to a large industrial consumer, NGC will read the meter.
- 67 As noted, Contact owns 51% of gas meters which it acquired when it bought Enerco’s gas retailing business. Because Contact is not a gas distributor, its consumer meters are not captured by the terms of reference.

68 The other 24% (approximately) of meters are owned by Powerco and Wanganui Gas. NGC understands that Wanganui Gas is also a signatory to the Gas Access Code and, as a result, provides open access to its consumer gas meters.

69 On this basis, NGC submits that consumer gas metering, both for small commercial and domestic and large consumers, should not be included in the Inquiry.

Asset management services

70 Like metering, asset management services are generally not considered a gas service for regulatory purposes. Asset management services include, but are not limited to:

- Operation of pipelines for third parties;
- Metering inspection;
- Calibration of meters;
- Easement services;
- Surveying;
- Pipeline and station service/maintenance;
- Monitoring and upgrading of gas fire detection systems;
- Data provision.

71 Although "gas services" are broadly defined in the terms of reference for the Inquiry, asset management services are not defined in either the Gas Act or Information Disclosure Regulations as being sufficiently connected with a gas service for the purposes of direct regulation.

72 In addition, the definition of "gas services" chosen by the Commission and the Minister is too narrowly defined to include these services as a matter of construction. This view is supported by the limitation on the definition of goods and services "connected with" those gas services provided for in the Minister's letter of clarification, which makes it clear that the Minister did not intend that asset management services be included in the Inquiry.

73 In the Vector/UNL decision (Decision No. 471) the Commission decided it did not need to consider the national electricity network maintenance contract and services markets, nor the national market for construction of new networks, as Vector had contracted out those services to third parties

and UNL had sold its contracting field services (refer p5, para 27). NGC understands that Vector continues to contract out all of those services to third parties.

- 74 NGC generally contracts out construction of new networks, both distribution and transmission. Contract payment amounted to around \$3m in the past 12 months. It also contracts out around \$1m of maintenance services in respect of the transmission system, mostly for compressor maintenance. Distribution system maintenance is almost entirely catered for in-house. The services which are retained tend to be those which are so specialist to NGC's function and method of operation that they would be difficult to sub-contract. Further, there is not sufficient scale in New Zealand to allow for a viable competitive market for these services.
- 75 NGC also performs asset management services for a variety of third parties, including Methanex, Shell Todd Oil Services Limited, Liguigas, Swift, Greymouth Petroleum, NZRC, Wiri Oil Services Limited and Transfield McKee.
- 76 In addition, under the Maui White Paper, NGC was given the role of operating and maintaining the Maui pipeline. It was mandated that this service should be provided to the Maui Joint Venture at cost.
- 77 On any interpretation of the terms of reference, it is inconceivable that revenues, whether at cost or otherwise, connected with asset management services in respect of third party pipelines should be included in the Inquiry, given that they do not relate in any way to ownership of NGC's own pipelines.
- 78 NGC therefore submits that asset management services are not included in the terms of reference and therefore the Commission does not have jurisdiction to consider them. In any event, such services need not be considered by the Inquiry because they are manifestly contestable.

E3 Suppliers covered by the Inquiry

Transmission

- 79 NGC notes that, as set out above, neither the LTS pipeline, nor the Westech owned Surrey Road pipeline should be included in the Inquiry.
- 80 NGC does not consider that there are any other suppliers of transmission services that should be included in the Inquiry. The transmission pipelines that NGC considers should be subject to the Inquiry are:

Company	Pipelines covered
NGC	South, North, Kapuni to Rotowaro, Bay or Plenty, Morrinsville, Frankly Road
Maui Development Limited	Oaonui to Huntly (Maui pipeline)
Todd Energy	Kapuni to Hawera
Swift Energy	Rimu to NGC South, Waihapa to New Plymouth and TCC power stations

Distribution

- 81 NGC agrees that all of the distribution businesses set out in the table at page 4 of the Draft Framework Paper should be subject to the Inquiry. There are no other distribution businesses which NGC considers should be subject to the Inquiry. NGC assumes that Vector's distribution network in Whangaparaoa is included in Vector's Greater Auckland network. The suppliers of distribution services which should therefore be covered by the Inquiry are:

Company	Pipelines covered
NGC	Northland, Whangaparaoa, South Auckland, Waikato, Bay or Plenty, Rotorua, Taupo, Gisborne, Kapiti Coast
Powerco	Napier and Hastings area, Southern Hawkes Bay, Taranaki, Manawatu, Levin and Foxton, Hutt/Mana, Wellington
Vector	Greater Auckland, Tuakau, Ramarama
Wanganui Gas	Wanganui/Rangatikei
Nova Gas	Wellington, Porirua, Hutt Valley, Hastings, Hawera, Papakura, Manakau City

E4 Acquirers covered by the Inquiry

- 82 The Commission's list of main information providers to the Inquiry should be grouped into two sub-classes – actual acquirers, and stake-holders such as PEANZ, which represent the interests of parties (such as producers) which may not have a direct interest in the Inquiry.
- 83 NGC submits that the following are the key acquirers and stakeholders which should be involved in the Inquiry:

Acquirers

- Contact Energy

- Genesis Energy

- Ballance Agri-Nutrients

- E-Gas Ltd

- Carter Holt Harvey

- BHP

- Fletcher Building

- Fonterra Dairy Co-op Group

- Small business consumers

- Residential consumers

Stakeholders

- Petroleum Association of New Zealand

- MEUG

- Business New Zealand

- NZX

F LEGAL FRAMEWORK

F1 Criteria for recommending control

- 84 The Minister has required the Commission under s56 of the Act to report to him on whether he should make a recommendation to the Governor-General to make an order declaring that goods or services be controlled.
- 85 Before making such a recommendation under s56, the Minister must be satisfied that the tests in s52 of the Act are met; accordingly, the Commission's inquiry is directed to s52. The test under section 52 is two pronged. Under it the Commission must consider both whether there is limited competition or competition in a market is lessened and whether it is necessary or desirable for goods or services to be controlled in the interests of acquirers. As the Commission noted in *Airports*, both limbs must be satisfied before a recommendation may be made (pp54-55).
- 86 In considering a report, the Commission may have regard to all matters it considers necessary or desirable (s56(2)).
- 87 NGC agrees with the Commission (para 4.26) that it is necessary to consider the criteria in s70A of the Act, which include:
- 87.1 the promotion of efficiency in the production and supply of the controlled services;
 - 87.2 the extent to which competition is limited.
- 88 NGC also agrees that the terms of reference require the Commission to consider both the interests of acquirers, which requires a long-term perspective, and the net benefits to the public of control. The Minister's specific inclusion of the latter test appears to be a response to the Commission's approach in *Airports*, in which the interests of acquirers were construed narrowly. Refer paras 106-111 below.
- 89 The Commission appears to define net benefits to the public in terms of 'wider considerations of economic efficiency' (para 1.26 and 4.65). NGC agrees that the public interest does include wider efficiency considerations, but that distributional considerations are not relevant (para 4.65). NGC also agrees that the Minister may, indeed must, revisit public benefits as part of a decision to impose control. However, NGC also notes that public benefits may also include considerations that are not easily or exclusively evaluated within an efficiency framework. Environmental considerations are an example, as well as considerations of Government policy. Also an imposition of control may have a wider impact on other infrastructure businesses generally by signalling a threat of control. NGC also notes that

the Minister may be better equipped than the Commission to make assessments that have a social policy dimension.

F2 Is Competition Limited or Likely to be Lessened (s52(a))?

- 90 In *Airports* the Commission considered that it should focus on the higher test of “limited” competition, and need only look at the test of “likely to be lessened” in circumstances where competition is not found to be limited.

Meaning of “limited”

- 91 In the Draft Framework Paper (para 4.39), the Commission suggests that “limited” as used in s52(a) simply means “restricted”. The Commission accepts that a *de minimis* requirement would apply. NGC notes that this test is identical to that used in *Airports* and in the Telecom wholesale determination.
- 92 If these propositions are correct, then the threshold requirement imposed by s52(a) could in theory be satisfied whenever competition in a market is restricted in some way that is more than trivial.
- 93 NGC submits that this is not the correct approach. If, as is accepted, the “limited” test imposes a higher threshold than “lessened”, then “limited” must connote a standard higher than merely a trivial restriction on competition. Further, to read “limited” as “restricted” is merely to adopt a synonym without adding anything to meaning. It begs the question of what extent of limitation or restriction is required to satisfy the threshold requirement.
- 94 NGC submits that “competition is limited” in this context means that workable or effective competition is impaired in a material way. That would require that a market participant possesses a substantial degree of market power. NGC makes several points.
- 95 First, a substantial degree of market power threshold is consistent with the competition thresholds used in Parts II and III of the Act. The premise of the Act undeniably is that competition, and not regulation, is the preferred mechanism for achieving efficient allocation of resources in the long term interests of consumers. Only where it is lessened in some substantial way does the Act intervene. A regulatory response is provided for in Part IV only because the behavioural provisions of Part II notoriously do not capture monopoly pricing, as was pointed out by the Privy Council in *Telecom v Clear* [1995] 1 NZLR 385.
- 96 Second, it is necessary, as the Commission points out in para 4.57, to consider also whether the firm concerned has in fact been exploiting its market power. It is difficult to see how the Commission could make behavioural assessments otherwise than against a substantial lessening

threshold. More refined assessments are simply not possible. For example, there may be many reasons why a firm's earnings may be strong in a particular period. Where prices are variable, as NGC's are, revenues may be high during a cold dry winter in which gas demand was high.

- 97 Third, regulation has substantial costs, including error costs. It is inconceivable that a trivial lessening of competition, relative to a workable competition benchmark, would suffice.
- 98 Fourth, the concept of "limited competition" has been referred to in several Australian cases. Those cases show that "limited competition" normally denotes an absence or near absence of competition, with one dominant participant: see *ACCC v Rural Press Limited* (2001) ATPR 42714; [2001] FCA 116, at para 114 (newspaper with effective monopoly within a region, and "limited competition" from a new entrant in one part of region only); *North West Shelf Project* (1998) ATPR (Com) 50-629 (limited competition in the supply of large volume gas supply contracts in WA, where effectively only one group of companies, seeking a joint marketing authorisation, had the capacity to supply large contracts); *Australian Cargo Terminal Operations Pty Ltd* (1997) ATPR (NCC) 70-000, at 3.2, and Treasurer's Statement of Reasons (lack of competition with Sydney and Melbourne airports, described variously as "very limited competition", "limited competition" and showing "monopoly characteristics"); see also *CCH Australian Trade Practices* at 10-730, where, with respect to rail services, provided by vertically integrated state monopolies, "competition was limited or nonexistent".
- 99 The decided cases in New Zealand show that expressions such as "limited competition" or "competition is limited" have been applied where there is an absence of workable or effective competition, whether because of an effective monopoly, or because on some other basis one or a group of market participants are dominant in a market or have market power: *Vector Ltd v Transpower NZ Ltd* [1999] 3 NZLR 646 (CA) at 650; *Telecom Corporation of NZ Ltd v Clear Communications Ltd* [1995] 1 NZLR 385 (PC) at 404; *Commerce Commission Decision no 460: NZ Bus Ltd and Wellington Regional Rail Ltd/Tranz Metro (Wellington)* 10 April 2002; *Commerce Commission Decision no 347: Fulford Radiology Services Ltd and Taranaki Healthcare Limited* 19 March 1999; *Commerce Commission Decision no 207: Application by Natural Gas Corporation of NZ Ltd* 31 July 1987.
- 100 NGC understands that the Commission wishes to retain discretion in the application of thresholds, and that it does intend to have regard to the costs of regulation when undertaking a balancing exercise. Nonetheless the threshold chosen is incorrect. Because it is extremely low it leads to a risk of error, in that the Commission may fail to recognise that lessening of competition must indeed be substantial, and supported by evidence that

market power has been exploited, before a control recommendation can be justified.

- 101 Further, as explained below, the Ministerial response to the *Airports* decision invites the Commission to reconsider its approach to the threshold test.
- 102 NGC accordingly considers that the Commission ought to revisit its approach to 'limited' competition.

F3 Is it necessary or desirable for goods or services to be controlled in the interests of acquirers (s52(b))?

- 103 The Commission considers that if the weighing of the benefits and costs of control demonstrates that an improvement in the economic welfare of acquirers would result, then control would be demonstrated to be necessary or desirable in the interests of acquirers (p24).
- 104 In considering the benefits of control to acquirers, account must taken of the costs that control itself will impose on suppliers. In doing so the Commission must fix upon a proposed form of control and the criteria the Commission would apply in fixing price. In this case, the Commission is advocating use of a price cap. This was the form of control assumed when the Commission applied the same test in *Airports*.
- 105 Whatever form of regulation is assumed, NGC observes that the Commission should not assume that it will deliver fully efficient prices, because a) there is no form of control that can accurately assess what those prices are and b) for that reason, control is likely to involve some form of incentive regulation in which the firm retains a share of 'excess' profits.

Approach taken in Airports

- 106 In *Airports*, the Commission initially considered in its Draft Determination that it must have regard to the wider scheme of the Act, and to the goals the Act is intended to promote. Its analysis of the purpose of the Act being for the "long-term" benefit of consumers within New Zealand, lead it to conclude that an efficiency-based analysis is consistent with that purpose. The Commission's view was that:

"..the purpose of the control provisions is to address circumstances where markets, due to a lack of competition, are not delivering efficient outcomes for consumers. Any recommendation on whether a declaration of control should be made should consider an assessment of the likely long-term benefit to consumers within New Zealand." (p56, para 2.62).

- 107 The Commission noted that, in conducting such a test, it would take account of economic efficiency and product quality. Such a test does not take account of distributional issues (p56, para 2.63). This view was supported by the Airports, which submitted that the promotion of improved economic efficiency should be the key objective in determining whether control is necessary or desirable, and that the redistribution of wealth between airports and airlines was less relevant (p58, para 2.67). On this basis, in its draft report, the Commission based its recommendation on the wider public benefits test – assessing the efficiency gains from control – and did not take into account of distributional issues.
- 108 However, the airlines did not support this view, although they admitted that the public benefit test in section 3A of the Act is a relevant consideration. In reconsidering its approach, the Commission accepted the view that greater weight had to be put on removing monopoly profits. The Commission noted that the Minister could take into account the other factors including the Commission’s analysis of net efficiency benefits. Accordingly a narrow approach was taken to the s52 test.
- 109 The Minister did not accept the resulting control recommendation in respect of Auckland Airport, taking the view that the benefits of control, which the Commission had assessed by reference to acquirers’ interests, were insufficient to outweigh the costs of control (refer Ministerial statement 323/3/03 paras 36 and 37). This followed an MED recommendation that recognised that control carries public detriments that must be weighed against the interests of acquirers.
- 110 Further, the Minister concluded that the Commission’s assumption that a price cap would be used was not sufficiently sensitive to ‘less costly forms of control’, which presumably include indirect regulation such as improved disclosures. (In that regard, NGC considers that the Commission’s counterfactual, which assumes continuation of the regulatory status quo, is seriously flawed in that it ignores improvements to the disclosure regime that Cabinet has already approved as well as the implementation of a governance regime that must meet the requirements of the Government Policy Statement. Refer paras 119-139 below.)
- 111 Against that background, NGC considers that the Commission has an opportunity to revert to the approach it originally took in *Airports*, which (correctly, in NGC’s view) paid close attention to the long term interests of consumers, the need to promote efficiency in production and supply as required by s70A and the requirement in s3A that public benefit analyses have regard to efficiency considerations. These matters can and should be taken into account both at the threshold (competition) level and when considering acquirers’ interests. They should not be deferred until the net

public benefit assessment that the Commission has also been asked to undertake.

Interests of acquirers of gas services

112 NGC agrees that the interests of acquirers must be considered from a long-term perspective in which incentives for investment are maintained. It observes that that consideration will assume particular importance in this Inquiry due to:

112.1 Substantial investment needs if gas reticulation is to achieve materially higher penetration levels. Although domestic connections continue to grow steadily, penetration in Auckland is still only around 30% of consumers with access to an existing distribution network.

112.2 The absence of any legal or de facto universal service obligation on gas distributors. If returns are reduced to an inadequate level distributors have the option of declining to invest or withdrawing. The same is true for transmission. The marginal customer must provide an adequate return.

112.3 The high option value for investors given that an investment once made is irretrievably sunk.

112.4 Vulnerability of distribution networks to the position of gas as a marginal fuel, and a fuel that competes with electricity and other fuels.

112.5 Quality of gas supply, in the form of incentives to invest in maintenance and security of supply.

112.6 The need to invest in new pipelines to service new gas fields.

113 The Government's growth and innovation policies, as reflected in its March 2003 Government Policy Statement (GPS) and the National Energy Efficiency and Conservation Strategy of September 2001, seek to promote substantial investment in infrastructure. For example, in the GPS, the Government seeks the following specific outcomes:

- a. *gas resources are used efficiently;*
- b. *market barriers to exploration and field development are minimised;*
- c. *the costs of producing and transporting gas are signalled so that investors and consumers can make decisions consistent with obtaining the most value from gas;*

- d. *delivered gas costs and prices are subject to sustained downward pressure;*
- e. *the quality of gas services, and in particular trade-offs between quality and price, should as far as possible reflect customers' preferences;*
- f. *risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties;*
- g. *gas safety is promoted, and*
- h. *greenhouse gas emissions are minimised.*

114 The Commission should recognise that a very significant barrier to exploration and field development is the small nature of the domestic market. It is for this reason that New Zealand is under-explored by world standards. Ultimately, gas producers depend on investment in transmission and distribution to grow the domestic market. There is substantial scope to increase gas penetration, but significant investment will be required.

115 The National Energy and Efficiency and Conservation Strategy, like the GPS, calls for improved institutional arrangements within the gas sector that can improve the system efficiency of gas supply. It also calls for increased direct use of gas as a substitute for electricity where that can achieve national energy efficiency gains (refer National Energy Efficiency and Conservation Strategy, EECA, September 2001).

116 Low cost of capital estimates by the Commission would impede investment in infrastructure that is currently subject to some form of regulatory oversight, or is likely to be subjected to such oversight. NGC refers to submissions by LECG.

Overall threshold for control recommendation

117 In NGC's view, such concerns require the Commission to be well satisfied that control is in the interests of acquirers before recommending that it be imposed. In addition, as the Commission recognises, under-investment is a more significant concern than distributional effects; put another way, the Commission ought to err on the side of the investor.

118 In summary, NGC submits that the Commission must apply a high threshold for deciding that control is "necessary or desirable".

G COUNTERFACTUAL

- 119 NGC strongly disagrees that the correct counterfactual is the status quo. The framework paper fails to recognise regulatory change that is in the course of development or has already been approved by Cabinet. By adopting the status quo, the Commission overlooks the availability of forms of control that are less intrusive than price control. NGC contends that this is a significant error in the framework paper.
- 120 It is NGC's submission that the Commission should consider not whether competition is limited currently as it did in *Airports*, but whether it will be limited in the future. Price control will apply prospectively in a future market, not the market of today. This is consistent with the Commission's forward looking approach to market definition, which takes into account likely changes in the relevant markets which could impact on competition.
- 121 NGC considers that the counterfactual has two dimensions:
- 121.1 Regulatory change in the areas of industry governance including terms of connection and disclosure. NGC agrees that the Commission may also assess the effectiveness of the existing disclosure regime, but it must ultimately base its assessment on the form of regulation that will result in the event control is not imposed.
- 121.2 Use of a stand-alone transmission or distribution entity as the counterfactual.
- 122 NGC addresses these points in turn.

G1 Regulatory dimensions to counterfactual

Improved disclosure regime

- 123 The structure of the current disclosure regime is set out in paragraphs 140-145 below. On 3 May 2000, the Minister of Energy announced that Cabinet had approved extensive amendments to the Gas (Information Disclosure) Regulations 1997. The Minister stated that:

"The information disclosed under the regulations is designed to help gas users monitor and negotiate with pipeline owners. It should also promote access to Commerce Act remedies by private parties or the Commerce Commission. The regulations are focused on gas transmission and distribution pipeline businesses that have the potential to exercise market power. The purpose is to promote transparency of conduct and performance of pipeline owners. There must be curbs on monopoly power and these regulations represent a key component of the regulatory regime for the gas industry."

124 The key changes were:

- The introduction of the mandatory use of the avoidable cost allocation methodology.
- The removal of wholesaling and retailing activities from disclosure.
- The introduction of the mandatory use of the optimised deprival valuation methodology.
- Updated financial performance measures and inclusion of a derivation table.
- The introduction of asset management planning information disclosure.
- Improved disclosure of service reliability performance measures and targets.
- Discontinuation of wholesale contract disclosure by NGC.
- Significant extension of the requirement to disclose pipeline charge methodologies.
- The requirement to make available certain disclosed information on the internet, including financial statements, performance measures and derivation tables, advice of the completion of new valuation reports and asset management plans and gas pipeline capacity.
- Introduction of a requirement to disclose pipeline charges and pricing methodologies for all new Maui contracts.

125 Subsequently, at its meeting of 28 February 2001, when the need for a wider review of the gas sector was considered, the Finance Cabinet Committee agreed that introduction of the amendments be deferred pending the outcome of the wider review (which focuses on this Inquiry).

126 In a paper presented to the Cabinet Economic Development Committee by the Minister of Energy on 6 November 2002, the Minister stated that officials were of the view that the enhancements to the regulations should proceed as they will improve the ability of interested parties and the Government to monitor industry performance. Significantly, the Minister stated that "this type of information will be necessary even if price control

is ultimately recommended by the Commerce Commission inquiry” (p14, para 63).

- 127 In NGC’s view, the counterfactual must assume that the agreed amendments to the Information Disclosure Regulations will be made.

Government objectives for gas industry

- 128 As already referred to in section F above, another significant factor is the long term goals set by the Government for the gas industry as a whole. These are broadly set out in the GPS and National Energy Efficiency and Conservation Strategy. In the GPS, the Government’s overall policy objective for gas is:

“To ensure that gas is delivered to existing and new customers in a safe, efficient, fair, reliable, and environmentally sustainable manner.”

- 129 The Government requires that industry arrangements should promote the satisfaction of consumers’ gas requirements in a manner that is least-cost to the economy as a whole and is consistent with sustainable development. The specific outcomes the Government is seeking are set out in paragraph 113 above. They focus relevantly on dynamic and productive efficiency. Such objectives will require significant investment by the industry, including pipeline owners. Sufficient incentives to invest should therefore be built into the counterfactual.

Industry Governance

- 130 The Government has indicated in the GPS that an industry governance regime will be established. The GPS requires that the arrangements should:
- Enjoy wide support from supply-side gas market participants and consumers.
 - Promote enhanced competition, including inter-fuel competition, where possible and, where it is not, seek outcomes that mirror as far as possible those that would apply in competitive markets.
 - Be stable over time so that investment is encouraged.
 - Ensure there are mechanisms to reduce demand when gas is scarce.
 - Be consistent with government policies on climate change and energy efficiency.

- Be consistent with the Commerce Act 1986 and all other relevant laws.
- 131 The governing entity must have the power to develop and enforce arrangements consistent with the GPS. In relation to pipelines, that regime is to address:
- The establishment of an open access regime across all high-pressure transmission pipelines so that gas market participants can access transmission pipelines on reasonable terms and conditions.
 - The establishment of consistent standards and protocols across all distribution pipelines so that gas market participants can access distribution pipelines on reasonable terms and conditions.
 - The establishment of gas flow measurement arrangements to enable effective control and management of gas.
- 132 The industry has been given the opportunity to put forward an industry-led regime that reflects consumer interests, but the Government will impose a governance regime if the industry does not deliver one that reflect government requirements. The Commission should assume that it will take a very similar form to the Electricity Commission. Indeed, NGC understands that legislative provision will shortly be made for the Electricity Commission to assume the same role for gas that it is to have in the electricity industry, so that the Minister can impose regulation without the need for further legislation.
- 133 In the result, there will be a regulatory body with responsibility for: terms of connection; the wholesale gas market; quality; and distribution. That body will be required to have regard to Government Policy from time to time. Provision has been made for this in the Electricity Act, for example. It follows that it will be required to adopt policies that support infrastructure investment and consumer access to gas.
- 134 In NGC's view, an appropriate counterfactual must build in the inevitability of an Energy Commission or similar, industry-led body performing such a function in the future, and significant amendments to the disclosure regime which mirror those approved by Cabinet in May 2000.

G2 Commercial dimension to counterfactual

- 135 The Commission should ensure that the counterfactual recognises certain attributes which are unique to the industry. In particular, it needs to recognise that demand for distribution is entirely derivative in that it relies

on the availability of gas. That demand has already weakened as supply from Maui decreases, and the post-Maui price of gas increases.

- 136 The correct counterfactual is a stand-alone gas transmission or gas distribution company. The stand-alone cost basis for analysis is founded on the principle that the decision to integrate (either horizontally or vertically) should not be constrained by regulatory intervention. If the Commission were to recommend control on the basis of other cost allocation techniques, this would limit incentives for pipeline owners to structure businesses to maximise economies of scope over time, to the detriment of the wider economy.
- 137 For example, if it emerges that multi-utility retailers are best operated on a stand-alone basis then the Commission should not create artificial barriers to that business model occurring by requiring pipeline businesses to spread costs over a gas retail business.
- 138 Furthermore, regulation on the basis of anything other than stand-alone costs would also deter pipeline owners from realising further economies of scope through integration.
- 139 The Commission has indicated that it intends to consider a building blocks approach to assessing efficient costs. When doing so the Commission should use ACAM, on the basis that:
- 139.1 it has already been mandated for the electricity industry in the "Electricity Information Disclosure Handbook" (June 2000); and
- 139.2 it has been agreed by Cabinet that ACAM be mandated in amendments to the Gas (Information Disclosure) Regulations 1997 (refer para 123-124 above). These amendments would include publication of a "Gas Information Disclosure Handbook" along the same lines as the one for electricity (refer announcement by Minister of Energy dated 3 May 2000, Amendments to the Gas (Information Disclosure) Regulations 1997, MED, May 2000).

H CURRENT DISCLOSURE REGIME

- 140 The current regulatory regime has the following features:
- 140.1 The Gas (Information Disclosure) Regulations 1997 were designed to assist in identifying whether pipeline owners are exploiting their market power. Disclosure is designed to put into the public domain sufficient information to enable an informed assessment of pipeline owners' performance. Information is published on financial and non-financial performance, pipeline capacity, access arrangements and pricing.
 - 140.2 The general requirements of the Commerce and Fair Trading Acts.
 - 140.3 The threat of further regulation, including price control and a governance regime such as the Electricity Commission.
- 141 Safety is addressed through a combination of employee safety under the Health and Safety in Employment Act 1992, consumer and public safety under the Gas Act 1992 and occupational regulation under the Plumbers, Gasfitters, and Drainlayers Act 1976.
- 142 Other legislation which has a significant impact on NGC is the Resource Management Act 1991, and the Consumer Guarantees Act 1993.
- 143 As set out in paragraphs 123-124 above, Cabinet approved extensive amendments to the Gas (Information Disclosure) Regulations 1997 in May 2000. The purpose of these amendments was to overcome perceived deficiencies in the existing regulations including inconsistency in the allocation of costs and the valuation of assets, and insufficiency of information on asset management planning. The amendments were put on hold when it was decided that a wider review of the gas sector was required. However, NGC notes that, in its recommendation to Cabinet that the Minister ask the Commission to carry this Inquiry, officials recommended that the amendments to the regulations proceed. It is plain that they will proceed if control is not imposed.
- 144 Significant aspects of the agreed amendments are mandating the use of the ACAM and the use of ODV for valuing pipeline fixed assets.
- 145 In addition, the Government has made it clear in the GPS relating to the gas industry that it expects the industry to form an industry governance regime to regulate the industry. In the event that the industry does not respond in accordance with the Governments expectations, the Government will impose such a governance regime, most likely led by the Electricity Commission.

I COMPETITION ANALYSIS

I1 Market definition

- 146 The relevant markets identified by the Commission in its Draft Framework Paper are:
- 146.1 Transmission services, split into;
- (a) The provision of gas transmission services between North Taranaki and Huntly; and
 - (b) The provision of gas transmission services for the rest of the North Island.
- 146.2 Distribution services, defined by the geographic regions the distribution systems cover (the similarity between the characteristics of gas distribution in each region being such that they can be dealt with collectively).
- 147 The orthodox view, reflected in all of the most recent decisions made by the Commerce Commission, is that there is one North Island market for the transmission of gas, and separate geographic markets for gas distribution:
- 147.1 NGC/UNL clearance application (Decision 470, 23 August 2002) – North Island market for gas transmission, separate geographic markets for gas distribution;
- 147.2 Vector/UNL clearance application (Decision 471, 23 August 2002) – separate geographic markets for gas distribution;
- 147.3 NGC/AGL clearance application (Decision 435, 8 June 2001) – North Island market for gas transmission, separate geographic markets for gas distribution;
- 147.4 NGC/TransAlta clearance application (Decision 387, 17 March 2000) – North Island market for gas transmission, separate geographic markets for gas distribution.
- Time dimension*
- 148 The Commission has accepted in the past that it can take into account recent, and likely future, changes in products, relative prices and production technology in the process of market definition.
- 149 In the Shell/FCE authorisation decision (Decision 411, 17 November 2000), the Commission stated that it is “appropriate to include a time element in the market definition if a market is likely to exhibit different characteristics

in different periods” (para 33). The decision reflected the predicted depletion of the Maui gas field in around 2009, which, in the Commission’s view, was likely to substantially change the nature of the gas production market (Decision 411, para 35). This decision is elaborated upon in Decision 408.

- 150 NGC notes that the Commission has since concluded, in the Pohokura draft determination, that there will not be a separate market in 2009. The point remains, however, that the days of plentiful supplies of cheap Maui gas are at an end. Substantial price increases, and shortages, are already a fact of life. NGC expects its entitlements to Maui gas to end before 2007.
- 151 These changes affect market definition for purposes of this Inquiry. Any control decision will be forward-looking. It must factor in increasing volatility of transmission and distribution revenues, as a result of gas shortages and substantial increases in gas prices. To the extent that new fields are developed to replace Maui reserves they are also likely to require additional investment in transmission depending on the location of those fields.

Market structure

- 152 The depletion of Maui, and the immediate impact of uncertainty and impending shortages on price, are already having a major impact on distributors. This is due in part to the position of gas retailers, who are vertically integrated into either gas production (Todd interests) or electricity generation (Contact and Genesis). These parties possess substantial market power vis-à-vis NGC because they control gas, or the decision whether to sell gas to end use consumers or convert it into electricity. They also anticipate using less gas themselves. That decision is in turn influenced by the availability of other fuels, principally water for hydro generation. These points are developed in paragraphs 154-173 below.
- 153 Gas has traditionally served as a marginal fuel to supplement hydro generation, but that function, while leading to variability of transmission revenues, did not affect gas retail sales. It now does. Generators are incentivised to use gas for generation rather than for sale to end users.

Interfuel competition

- 154 The orthodox view of the Commission for some time has been that there are discrete product markets for gas and electricity (Decision 490, 4 February 2003). While the Commission acknowledges that price and demand for different energy forms can affect each other because they are substitutable in some circumstances or because, in the case of coal and gas, they can be major cost components in the generation of electricity, this interrelationship and the degree of competition between different

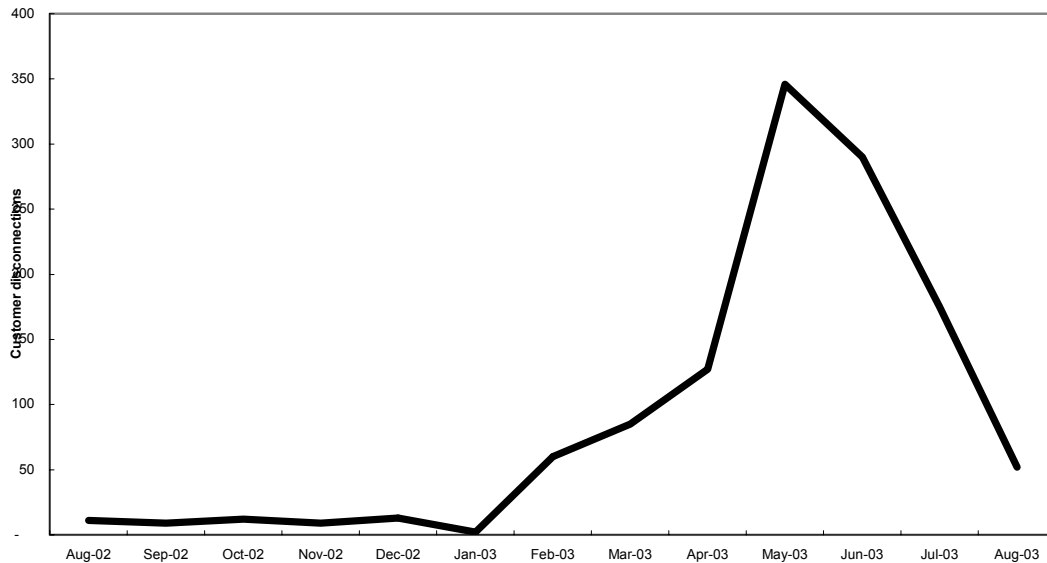
energy forms has not been considered to be sufficient to put them in one market (Decision 490, p6, para 30).

- 155 Demand for gas pipeline services is derivative from the demand for gas. Manifestly gas does compete with electricity for heating, water heating, air conditioning and cooking in domestic and industrial sectors. New applications such as heat pumps, which have a three to one efficiency advantage over direct heating are competing directly with gas in the domestic and small commercial market sector (such as hotels, motels and office buildings). Gas also competes with coal and biomass for applications that require heat for drying or stream raising.
- 156 It is NGC's view that the Commission seriously understates the actual future level of interfuel competition, and the impact of market participants such as Genesis and Contact who retail gas and electricity, and have the ability to burn gas to generate electricity instead of selling the gas to end user consumers via the transmission and distribution networks.
- 157 New Zealand is at the end of an era of low gas prices due to the winding down of the Maui field. NGC expects its entitlements to Maui gas to end before 2007. There is a real prospect of gas shortages in the near future, as no new fields the size of Maui have been discovered, nor are likely to be for some time. This increases the viability of alternative fuels, and the value to electricity generators of using gas to generate electricity. The wholesale gas price is expected to increase significantly. In fact, the energy component of delivered price has almost doubled for some industrial consumers. This creates a significant incentive for industrials to switch to coal.
- 158 All large industrials' current contracts are due to expire before 2009 (which is the expiry date of the Maui contract). Most are due to expire before 2006. Such businesses will inevitably face significant price increases as these contracts come to an end over the next few years.
- 159 Further, many of the large industrials currently using gas are accustomed to the use of coal as an energy source. This is particularly the case in the meat and dairy industries where coal has long been used to fire boilers. Those who do have gas plant are now incentivised to consider replacing it as existing long term contracts end. Two risks are leading businesses to consider such investment:
- 159.1 Security of supply, which is of critical importance; and
- 159.2 Control over a major input cost. It is not simply the cost of gas, but predictability of that cost over time, that matters.

- 160 NGC's experience is that, once a large industrial has switched to coal from gas, it is very unlikely to switch back. Not only is the price of gas increasing, which makes it less economic than coal, but NGC is unable to offer long term supply. This is not the case with coal.
- 161 Large industrials which have more than one plant in close proximity are also able to consider combining resources to run their own energy plants.
- 162 Biomass such as wood waste is another form of fuel which is a current and growing competitor to gas. There are many examples of plants moving from gas to wood waste where the industrial has ready access to it. Using wood waste as a fuel has significant advantages for some industrials in the forestry industry. It is renewable. Further, it poses less of a risk to the environment when burnt than if it is left to rot. Such is the interest in wood waste that Carter Holt Harvey has recently set up a separate company to market it as a fuel.
- 163 Faced with increasing uncertainty in supply, electricity generators (including co-generation), which consume 40% of the gas sold in New Zealand, are also known to be considering alternative fuel options. Genesis will be stockpiling coal for use at Huntly. There are no new planned gas-fired generation plants, or, at least, those that were planned such as Otahuhu C are now on hold. On the contrary, the only planned new generation plants use other forms of energy. A good example is the proposed oil-fired reserve generation plant at Whirinaki.
- 164 In the Gas Sector Review, ACIL concluded that there was insufficient evidence at the time to conclude that electricity prices would act as a constraint on gas prices in the residential sector in all circumstances.
- 165 However, the increasing prevalence of dual-fuel retailers such as Genesis, most of whom are also electricity generators, is having an effect on the variability of demand for use at the domestic level. A good example of this is where Genesis recently introduced a fixed component to its pricing for domestic gas.
- 166 NGC has encountered, and is continuing to encounter an increased number of disconnections from its distribution networks which can be directly attributed to the introduction of the fixed charge. Such dual-fuel retailers are indifferent to disconnections in circumstances where they retain the electricity connection and are able to grow the demand for electricity.
- 167 As an example, in February 2003 Genesis advised its domestic gas customers that it would be introducing a fixed daily tariff into its pricing structure. Gas disconnections immediately rose significantly and have continued to rise over the following months. From February to 13 August

2003, there were 1,135 disconnections. Table 3 below sets out the number of disconnections per month. The sharp spike in May is attributable to the fact that many customers would have received their first bills reflecting the new fixed charge at that time.

Table 3

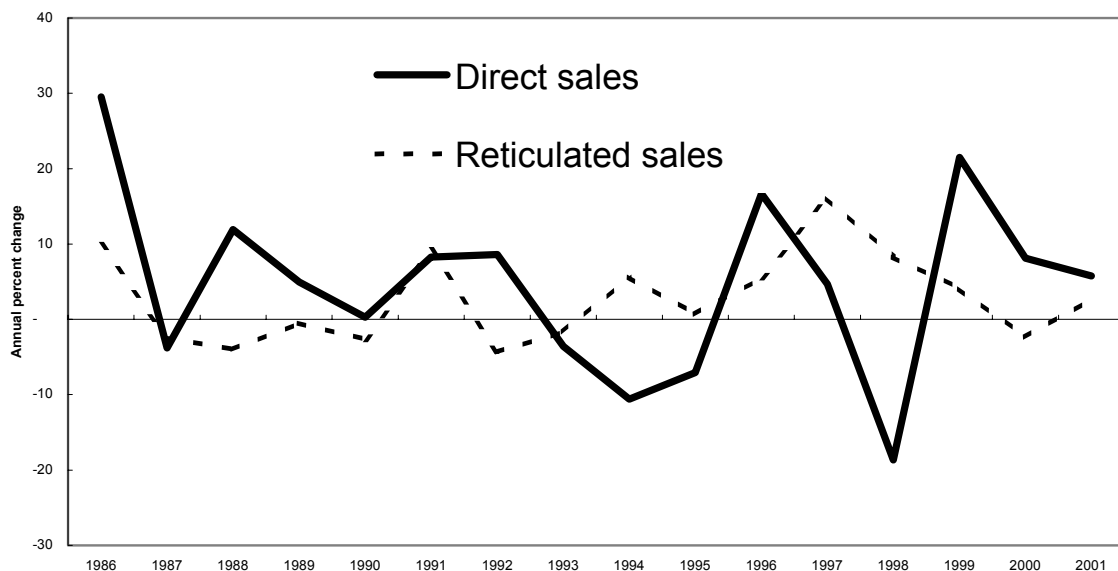


- 168 Historically, in areas where it was developing new networks, NGC did not apply a fixed component to its charges for domestic customers. The reason for this was that consumers resisted paying two sets of fixed charges. Therefore NGC was forced to use variable charges since gas operates as the marginal fuel. Consumers always need an electricity connection. Genesis is indifferent to this consideration because it is also an electricity retailer.
- 169 When NGC sold its domestic customers to Genesis, a range of charges applied. NGC understands that Genesis is currently looking at going through a process of applying a fixed component to all its charges for domestic customers.
- 170 Further, in circumstances of constrained supply of gas (and higher electricity prices), retailer/generators are incentivised to divert supply of gas for their own generation needs. Consequently such retailer/generators put few resources into generating demand for use of gas by domestic consumers.
- 171 The marketing of gas as alternative fuel at the domestic/small industrial level is generally done by the appliance retailers, builders, developers and specifiers. NGC's experience is that domestic/small industrial customers do

not consider gas as an alternative unless they are presented with it as a viable option. It must be remembered that, unlike electricity, gas is always a discretionary fuel. Schools are a good example. Most schools use a mix of coal, diesel or electricity for heating. Many will not consider gas unless it is presented to them as a viable alternative. Consumption of gas is growing (2700 new domestic and 190 new non-domestic connections for NGC in the year to 30 June 2003), but as noted it is not driven by gas retailers.

- 172 Collectively the above factors indicate that demand for gas is variable and that variability will increase with associated impact on transmission and distribution revenues. Table 4 below shows the demand for gas by year since 1986. It illustrates that direct sales to industrials and generators, which account for the lion's share of demand, have fluctuated considerably since 1992. Production is now in decline. Therefore, in the next period the industry expects to see a sharp downturn. (Source Energy Data File, MED, January 2003 and NGC).

Table 4



- 173 A good example is the dairy industry, which is a heavy user of gas. Demand for gas from the dairy industry is linked to the dairying calendar, which sees demand peaking in the summer months. Note that NGC is facing a significant threat to its gas business in the dairy sector due to increased competition from coal as a result of lack of security of supply for gas and the resultant increase in price (refer paras 157-160 above).

Barriers to entry

- 174 As the Commission notes, sunk costs and the cost of easements and resource consents do constitute barriers to entry. However, they are not especially significant, for several reasons:
- 174.1 The sunk cost risk is manageable using entry into a term contract with customers. This is particularly true of industrial customers who account for a large proportion of demand;
- 174.2 Existing facilities focus on Maui. New discoveries will require new transmission infrastructure, and NGC has no advantage over other firms when it comes to constructing it;
- 174.3 Although there are currently no capacity constraints in the transmission system, there would not be sufficient capacity for a major load such as a new generation plant;
- 174.4 Similarly, extension of distribution networks is viable.
- 175 These factors, together with inter-fuel competition and countervailing power of buyers, are sufficient in NGC's view to provide workable competition.

Summary

- 176 NGC has not reached a final view on the question whether these developments mean that the Commission should recognise gas as part of a wider energy market. They certainly point to an absence of market power and a high level of transmission/distribution revenue variability and risk.

Maui and NGC pipelines

- 177 The Commission has taken the view in this case that there is potential for competition between the two pipelines over the distance that they run alongside each other between North Taranaki and Huntly. The Commission has therefore expressed the view that this could form a separate transmission market.
- 178 The Commission accepts that open access to both pipelines is a necessary prerequisite to competition between them. At present, the Maui Joint Venture does not allow open access to the Maui pipeline, and is not a signatory to the Access Code. The Maui contracts currently preclude non-Maui gas from using the Maui pipeline before 2009.
- 179 In a paper to the Cabinet Economic Development Committee dated 6 November 2002, the Minister of Energy recommends that the Government adopt a "facilitative" negotiating strategy to allow commercially negotiated open access arrangements to the Maui pipeline before 2009. This is reflected in the GPS, in which the Government invites the parties to the

Maui contracts to present it with a proposal to enable open access to the Maui pipeline.

- 180 NGC considers that there is competition between the two pipelines, and that they form part of the same market. It notes that the existence of such competition means that a control recommendation in respect of the NGC pipeline could not be justified in respect of those assets.

I2 Current pricing structure

- 181 The Commission queries whether the current structure of prices is efficient.
- 182 As a starting point, the ACIL report notes that NGC's current tariff structure is appropriate to the current New Zealand market, where there are a limited number of injection points.
- 183 Transmission revenue requirements are currently recovered through a multipart tariff consisting of:
- A capacity reservation charge, which recovers the sunk costs of network investments, and allocates the capacity of existing pipeline assets;
 - Over-run fees which encourage customers to nominate the capacity they require and allows efficient management of the network;
 - Through-put fees which recover the operational costs of providing transmission pipelines.
- 184 NGC also permits capacity trading between customers, including trading between delivery points and, in the case of gas retailers, imbalance trading between offtake points on the network, allowing allocatively efficient reallocation of pipeline capacity.
- 185 If customers prefer they may negotiate multi-year contracts which provide fixed prices, in exchange for a discount for providing NGC with a degree of revenue certainty.
- 186 Finally, NGC negotiates supplementary agreements, where customers that are price sensitive are provided with special prices to ensure that they remain on the network and make a contribution to the sunk and fixed costs. This practice increases the allocative efficiency of charges by ensuring customers continue to receive service and lowers the overall charges to all customers.

- 187 Distribution charges are primarily recovered through two part tariffs consisting of a fixed daily charge and variable through-put fee. Such pricing practices are common in infrastructure industries, and are reasonably efficient given information constraints on setting more Ramsey efficient tariffs (refer CRA).

J ASSESSING EFFICIENT COSTS

J1 Benchmarking

188 NGC notes that the Commission intends to consider benchmarking. Benchmarking is appropriate provided it:

188.1 Recognises a clear distinction between “controllable” and “uncontrollable” factors within the company;

188.2 Discloses and justifies subjective assumptions;

188.3 Allows firms to earn a reasonable return – the average firm will only ever be averagely efficient and it is not possible to combine the most efficient elements of various firm’s costs and expect this to be met by any individual firm.

188.4 Takes into account:

- (a) market/consumer characteristics such as low penetration rates, population density, scattering of customer base and average customer use;
- (b) both operating and capital costs – there is inevitably a trade off between higher operating and higher capital costs, and not accounting for both elements risks biasing incentives towards higher than optimal levels of investment;
- (c) environmental differences such as climate and topography;
- (d) quality differences such as increasing uncertainty over certainty of supply, and the resulting effect on customer satisfaction etc;
- (e) economies of scale.

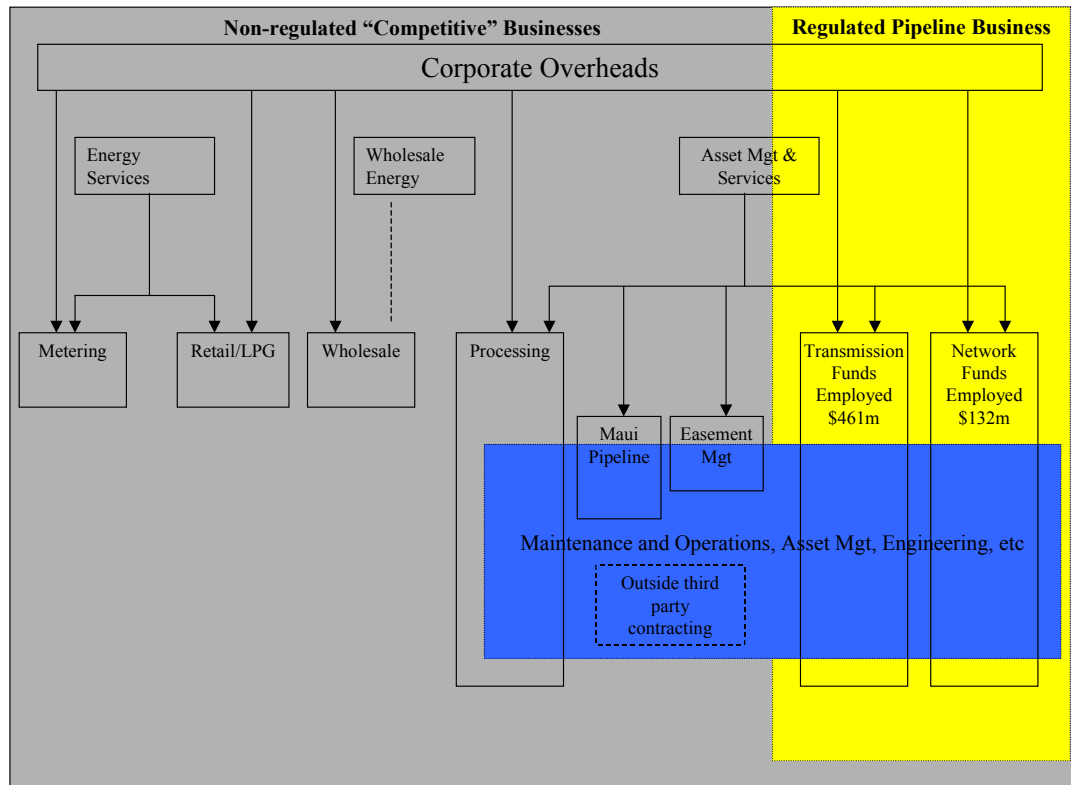
J2 Building blocks

189 NGC notes that the Commission also intends to use a building blocks approach to assessing efficient costs.

190 As mentioned above in paragraphs 123-124 above, Cabinet approved amendments to the Gas (Information Disclosure) Regulations 1997 which included mandating the use of avoidable cost allocation methodology (ACAM) to improve transparency of any monopoly rents (including the source of any cross-subsidies favouring competitive activities), and the provision of separate stand-alone financial statements for transmission and distribution activities by both are provided by individual pipeline owners.

- 191 ACAM separates that part of an existing integrated business seen as a natural monopoly from other contestable business activities (the incremental businesses). It is used to determine if monopoly profits are being earned and/or cross-subsidies exist between business units. The natural monopoly is identified as a "stand-alone" business by excluding expenses, revenue, assets and liabilities that would be avoided if the operator of the natural monopoly did not operate other businesses.
- 192 As noted above, a stand-alone distribution or transmission pipeline business is also the appropriate counterfactual. It is therefore consistent to use ACAM when assessing efficient costs.
- 193 The two main principles under ACAM are:
- 193.1 The stand-alone "monopoly" business and the incremental "competitive" businesses should be defined so that a) the stand-alone business is confined solely to provision of natural monopoly gas activities; and b) all contestable (and potentially contestable) activities are provided by the incremental businesses.
- 193.2 The expenses, revenues, assets, and liabilities are allocated to the stand-alone and incremental businesses in such a way that a) those items (and components of those items) that would not be avoided if the pipeline owner did not operate the incremental business are allocated to the stand-alone business; and b) those items (and components thereof) that would be avoided are allocated to the incremental business.
- 194 Under the second principle, costs directly attributable to either the stand-alone or incremental businesses are allocated to those businesses. Shared costs are allocated by a) direct allocation of any components of those items directly attributable to one of the businesses; and b) assessing the proportions of shared costs that are avoidable and non-avoidable and allocating these items on this basis.
- 195 For NGC, the residual business is the pipeline business. Table 5 below sets out a graphical depiction of the aspects of NGC's business that would need to be re-allocated under ACAM.

Table 5



- 196 ACAM has already been mandated for the electricity industry in the "Electricity Information Disclosure Handbook" (June 2000). As already stated above, in paragraphs 123-124 Cabinet has approved making ACAM mandatory for the gas industry. These amendments would include publication of a "Gas Information Disclosure Handbook" along the same lines as the one for electricity.
- 197 In adopting a building blocks approach, the Commission must also take into account the fact that capital cost recovery takes place over a long time frame – gas utilities may not be able to recover from customers the full economic costs of providing assets in the early stages of the assets' lives. As a result there may be under-recovery of revenues during the early part of the asset life and compensatory over-recovery later on. In addition, there is a risk that the Commission could inadvertently increase transfers from acquirers to suppliers (or vice versa) if forecasts are materially wrong. Accordingly, the Commission must also evaluate the costs associated with forecast risk imposed on regulated businesses and customers.
- 198 It follows that comparing current prices with an estimate of a current price for an asset with a long life is extremely difficult. The Commission cannot

assume that the price determined by such an analysis would correspond to a competitive market price.

K COST OF CAPITAL

- 199 The Commission proposes to measure cost of capital using the Capital Asset Pricing Model (CAPM). NGC considers that the Commission cannot determine whether NGC is earning excessive returns, as required by s52, by simply applying CAPM. That model does not account for industry or firm specific risks. Nor does it reflect option values, which are particularly high in the case of specialised investments that are sunk once made. These points are developed in LECG's submissions, and will be developed further at the conference.
- 200 In addition, as described in paragraphs 172-173 above, revenues are highly variable due to the derivative nature of demand for gas. Further, gas marketing in New Zealand is still in a relatively immature phase and market penetration rates are low.

L ASSET BASE AND VALUATION

- 201 NGC uses the ODV asset valuation methodology and has done since the early 1990s. The historical basis to the understanding with Government which led NGC to adopt ODV is set out below. NGC considers that ODV is the asset valuation methodology that should be used by the Commission in the Inquiry.
- Government pressure to adopt ODV as part of light-handed regime*
- 202 NGC and other transmission businesses were encouraged by the Crown to adopt the optimised deprival value (ODV) methodology, in return for and as part of the regulatory arrangements put in place in the early 1990s.
- 203 NGC began using ODV from as early as 1991 (refer "Replacement Value as at 30 September 1991 of Existing and Optimised High Pressure Gas Transmission Systems" (NGC, December 1991)). The decision to move to ODV was in large part driven by consistent encouragement from Government in the context of impending deregulation, to adopt a replacement value-related valuation methodology.
- 204 NGC became aware from late 1990 that the Government had a preference for transmission and distribution businesses to adopt consistent valuation methodologies that would allow meaningful comparisons between businesses, and provide efficient signals to those businesses (refer advice from Treasury to the Minister for State-Owned Enterprises dated 13 November 1990).
- 205 NGC was also aware that ODV had been adopted as the appropriate valuation approach for the new Transpower SOE, in consultation with, and with the agreement of, the Ministry of Commerce (MoC). The adoption of

the ODV methodology for Transpower recognised the natural monopoly characteristics of a transmission or distribution business (refer *Valuation of Transpower New Zealand Limited (Stages 1, 2 & 3)* (Ernst and Young, December 1990 to November 1991); *Electricity Industry Executive Briefing* (Coopers & Lybrand, July 1991)).

- 206 In 1991, the Government set up the Electricity Distribution Business Valuation Accreditation Panel. The Panel was set up to develop practical guidelines for the cost-effective and consistent application of ODV to the valuation of electricity distribution businesses, to be incorporated in a valuation handbook, and to express an opinion on ODV. The purpose of the valuation handbook was to provide a consistent basis of valuation at the time of privatisation to facilitate “light-handed” regulation (refer *Electricity Industry Executive Briefing*).
- 207 The Electricity (Information Disclosure) Regulations require electricity lines companies to disclose an annual ODV reconciliation report. Guidance on how to carry out such a valuation is provided in the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Line Businesses (Fourth Edition, October 2000).
- 208 NERA notes in its paper at paragraph 3.1.2, that in MoC papers from 1994, an explicit objective of the Ministry in putting forward ODV was that it would reveal monopoly-pricing behaviour in a regime that relied explicitly on the threat of regulation (refer *Rationale for Financial Performance Measures in the Electricity Disclosure Regime* MoC August 1994; *Financial Performance Measures Optimised Deprival Valuations and Avoidance of Double Counting of Asset-related Expenses* MoC August 1994; *Electricity Information Disclosure Adjustments in Financial Statements for Performance Measures* MoC August 1994; *Questions and Answers on Financial Performance Measures Optimised Deprival Valuations and Avoidance of Double Counting of Asset-related Expenses* MoC August 1994).

NGC responded to Government signals

- 209 In anticipation of the move to light-handed regulation, NGC commissioned CS First Boston to report to it on appropriate asset valuation methodologies and methods for setting rates of return (CS First Boston July 1991). CS First Boston applied as objectives for the rate of return and asset valuation framework that:
- *the rate of return should be sufficient to enable NGC to attract new capital and ensure the business is sustainable;*
 - *the rate of return should not exploit any monopoly position NGC has;*
 - *tariff levels should reflect the costs of efficiently providing transmission;*

- *the rate of return and asset base to which it is applied should be consistent;*
 - *rates of return should be specified as a range rather than point estimates; and*
 - *there should be general acceptance of the methodology.*
- 210 The report proposed ODV as the recommended asset valuation methodology to achieve these objectives. It noted that ODV had been adopted for the valuation of Transpower, and that ODV is the asset based valuation method that most closely resembles a performance or market based valuation method.
- 211 While the Government never officially required NGC to adopt ODV, it was not necessary to do so because NGC adopted it in response to Government pressure. It was made clear to NGC that its valuation methods would have to be defensible, and that adoption of ODV would be the best way to achieve this.
- 212 In May 1992 in preparation for the move to light-handed regulation the Ministry of Commerce (MoC) released draft documents, prepared by MoC's advisers Coopers & Lybrand, providing guidelines for regulatory compliance, including disclosure requirements. The document dealing with transmission businesses and wholesalers dealt with appropriate valuation methodology. At section 7.6.1 it concluded that "an appropriate methodology for valuing transmission assets is the Optimised Deprival Value (ODV) approach" (refer NGC Transmission ODV Valuation, October 1992, para 1.0).
- 213 On 30 June 1992 officials confirmed at a MoC workshop on the draft guidelines that the standard against which a transmission company's return would be measured was a properly conducted and validated ODV (refer NGC Transmission ODV Valuation, October 1992, para 1.0; report to NGC Board on MoC workshop, July 1992).
- 214 A MoC discussion papers dated 5 October 1992 recommended that ODV be used only if inappropriate valuations were adopted:
- "not envisaged at this time that valuations of pipeline businesses using the Optimised Deprival value (ODV) basis will be required for information disclosure purposes (as is proposed for electricity). This approach could be re-evaluated if it became apparent that inappropriate valuations are being adopted (with consequential impacts on prices), or if industry valuation procedures are causing difficulties in making comparisons of performance, including pricing practice...initially, disclosure will be on the basis of book values" [note: book value of current assets was defined as that disclosed in the annual financial accounts: Energy Sector Reform Bill 1991].*
- 215 NGC concluded from the MoC advice that although ODV was not being made mandatory, NGC would need to have an appropriate valuation methodology to support disclosed book values. ODV was selected by NGC,

as the methodology which had clear official recognition (refer NGC Transmission ODV Valuation, October 1992, para 1.0).

Adoption of ODV

- 216 NGC continued to plan for and implement ODV as part of its response to the Government's regulatory initiatives. The Chief Executive noted to directors on 4 December 1992 that NGC was awaiting the fine details of the Transpower valuation methodology, which was being finalised at that time. NGC had also conducted a series of successful seminars with other gas utilities, to obtain a consistent approach to valuation across the gas industry (refer Chief Executive's Memo to Directors "Regulatory reform and issues arising for NGC" 4 December 1992").
- 217 NGC continued working with accounting consultants to update ODV valuations of the corporation. On 16 March 1993 NGC wrote to potential consultants to establish their interest in reviewing the methodology used to that point (refer letter to Coopers & Lybrand 16 March 1993). And by December 1994 NGC had obtained an audit certificate from Ernst and Young and Worley International in respect of NGC's Optimised Deprival Value of the High Pressure Transmission System as at 1 July 1994 (refer letter to NGC, 4 December 1994).
- 218 In the prospectus for the offer of Convertible Capital Notes and Shares dated 22 September, NGC discussed the proposed reforms in the Energy Sector Reform Bill and the introduction of a light-handed regulatory regime based on information disclosure requirements. This is the basis on which investors invested in NGC at that time. As we have already stated above, it was well known at the time that such reforms would require a move to ODV for asset valuation (as had been mandated for Transpower and would be for the electricity industry) on the basis that it was the methodology sanctioned by officials.
- 219 ODV is also the basis on which NGC has made its own internal investment decisions. Examples are:
- North transmission system expansion 1996-98;
 - Te Awamutu North transmission pipeline 1995-96;
 - Delivery point expansion (Harrisville and Drury);
 - Hamilton network annual upgrade;
 - Upgrades to regulator stations;
 - Computerised monitoring upgrade.

Current position

- 220 As already stated in paragraphs 123-124 above, one of the steps agreed by Cabinet on 1 May 2000 to overcome perceived deficiencies in the current Gas (Information Disclosure) Regulations 1997 was to require the use of ODV for valuing pipeline fixed assets (refer paper prepared for Cabinet Economic Development Committee dated 6 November 2002). Work on drafting the recommended amendments was stopped pending the outcome of the Gas Sector Review.
- 221 In its report, ACIL recommended continued use of ODV. ACIL notes that, although ODV has not been mandated by the Government as it has been in electricity:
- "A change in government stance after several years of accepting ODV might have wider negative implications for investment in NZ (this "regulation risk" aspect is now affecting investment in parts of the Australian electricity and gas sectors)." (p82)*
- 222 The Ministry proposed an ODV Handbook for the gas industry in the late 1990s. A second draft was produced in 1999 and consulted on as part of the information disclosure process in that year, after which it was intended to be formally issued. Although NGC understands further work has been done on the handbook, it is yet to be finalised and issued to the industry. The Ministry has proposed issuing the handbook at the same time that the Gas (Information Disclosure) Regulations are amended.
- 223 NGC's view is that it was reasonably led to understand that adoption of ODV was a quid pro quo for the regulatory arrangements put in place in the 1990s. NGC therefore submits that it would be both irrational and unjust if NGC were now compelled to move away from its consistent approach to valuation, in place for over 10 years. This is particularly so in circumstances where the Government has, and is still advocating the use of ODV (see recommendation to Cabinet Economic Development Committee that the amendments to the Information Disclosure Regulations proceed despite the current Inquiry referred to in paragraph 143 above, which would mandate the use of ODV).
- 224 NGC notes that, while most of its assets have been owned continuously, the company carries out a retention policy that is consistent with the guidelines published by the Chartered Institute of Corporate Management (NZ) Inc (The Disposal and Retention of Documents, 4th Edition February 2000). Consequently, many documents relating to the assets will have been disposed of over the life of the assets. It is unlikely that a consistent approach to allocating expenses between operations and capital could be audited by examining the records.

Similarly, it is likely to be difficult to reconcile the depreciation schedule over the life of the assets,

- 225 Therefore, in order to value NGC's assets at historic cost, the Commission would have to choose an arbitrary date. In any event, in NGC's view, historical cost is necessarily arbitrary for the reasons set out at paragraphs 3.1 of NERA's report. The choice of start date has the potential to substantially alter the asset valuation. As NERA points out, even use of a privatisation value would be problematic due to the use of different accounting practice around the time of its public listing in 1992.

L2 Intangible assets

- 226 The system fixed assets of a transmission or distribution pipeline business are not the sum total of such a business' assets at any given point in time. Operation of a complex pipeline business depends on possession of a great deal of information and expertise relating to efficient management of the fixed assets. Businesses must also invest in easements, management systems, intellectual property and a supporting IT structure.
- 227 All of these are assets of the company which necessarily should be included in any asset valuation exercise.

L3 Pipeline easements

- 228 In NGC's view, there is no rational basis for treating pipeline easements any differently from other assets that are included in the asset base. The concepts of historical cost and ODV, and their economic or institutional underpinnings, are invariant to the nature of infrastructure assets. There is no economic or legal case to treat the valuation of land or easement assets any differently from other types of system fixed assets.
- 229 The principal practical difference is that land and easement assets do not depreciate through use. Rather, their economic value moves over time, according to supply and demand circumstances in the market for land, or rights over land. Hence, depreciation of land and easements cannot normally be expected, other than periodic revisions when current cost valuation concepts are being applied on an ongoing basis.
- 230 This view is consistent with that expressed by the ACCC in its 1999 *Draft Statement of Principles for the Regulation of Transmission Services* (refer p22, NERA).
- 231 Further, it is inconceivable that the Commission should consider that easements have no value to the company on the basis that they were acquired at no, or less than market, value. In the past, easements were acquired by NGC under the Petroleum Act 1937. Under that Act, easements could either be negotiated, or were issued by the relevant

Minister if such negotiations were not fruitful. In the former case, suitable compensation would have been negotiated. In the latter, the Act provided for compensation to be paid.

232 Now, any pipeline company must primarily negotiate access and the terms of an easement. The only other way companies such as NGC can obtain access to private land to lay pipelines is as a requiring authority under the Resource Management Act. Such a status is not lightly given by the Minister, and a requiring authority must still comply with the usual processes under that Act. In any event, compensation would still be payable to a land owner, including the possibility that the pipeline company may be forced to buy the land.

233 Such is the position a new entrant pipeline company would find itself in.

M BENEFITS AND COSTS OF CONTROL**M1 Costs of current regime**

234 NGC considers that a full assessment of the compliance costs of regulation will be necessary as part of the application phase; further, NGC has not had time to undertake such an assessment. It will wish to make submissions on these at a later stage in the Inquiry process. These are difficult to assess. NGC's supports CRA's view that the Commission's scaling approach has nothing to commend it. Such an approach will inevitably understate the indirect cost of control by a large margin.

M2 Compliance costs of price cap regulation

235 The Australian Gas Association is preparing a submission on the cost of regulation for the Australian Productivity Commission, which is expected to be public later this month. NGC proposes to present the results of that submission to demonstrate the costs of price cap regulation. NGC has also asked its largest shareholder, AGL, to prepare statistics on the cost to it of price cap regulation in New South Wales.

M3 Current regulatory environment

236 The current regulatory environment is described in Section H above, including agreed changes to the Gas (Information Disclosure) Regulations 1997 and the requirement in the GPS for the industry to develop a governance regime. In NGC's submission the current regulatory regime is adequate to provide sufficient control on pricing of distribution and transmission services.

**N NGC RESPONSES TO QUESTIONS POSED IN DRAFT
FRAMEWORK PAPER**

KEY:

NGC – “Submission In Respect of the Draft Framework Paper” (20 August 2003)

CRA – “Response to Gas Control Inquiry Draft Framework Paper” (20 August 2003)

NERA – “Asset Valuation Within the Gas Control Inquiry” (August 2003)

LECG – “Response to the Commerce Commission’s Gas Control Inquiry Draft Framework Paper: Estimation of the Weighted Average Cost of Capital” (20 August 2003)

1	What services are included in “gas services”?
	<p>See NGC Section E2 “Services not covered by the Inquiry” (paras 47-78).</p> <p>“Gas services” should include gas transmission and gas distribution services only, as defined in the Gas Act 1992 and the Gas (Information Disclosure) Regulations 1997. It should include neither asset management services (whether consumed by NGC, or provided to third parties) nor gas metering services. Further, it should include neither NGC’s LTS pipeline nor Westech’s Surrey Road pipeline.</p>
2	What transmission businesses (systems) should be covered by the Inquiry and why?
	<p>See NGC Section E3 “Suppliers covered by the Inquiry” (paras 79-80).</p> <p>The transmission systems covered by the Inquiry are generally those identified in the Draft Framework Paper (para 4.13). However, the Inquiry should cover neither NGC’s LTS pipeline nor Westech’s Surrey Road pipeline (see Question 2, and NGC “Services not covered by the Inquiry”).</p>
3	What other distribution businesses (systems) are covered by the Inquiry?
	<p>See NGC Section E3 “Suppliers covered by the Inquiry” (para 81).</p> <p>The distribution systems covered by the Inquiry are generally those identified in the Framework Paper (para 4.15). NGC assumes that Vector’s distribution network in Whangaparaoa is included in Vector’s Greater Auckland network.</p>
4	What other key acquirers should be involved in the Inquiry?

	<p>See NGC Section E4 “Acquirers covered by the inquiry” (paras 82-83).</p> <p>The Commission’s list of major information providers should be grouped into two sub-classes – actual acquirers and stakeholders (which represent the interests of parties which may not have a direct interest in the Inquiry). The following are the key acquirers and stakeholders which should be involved in the Inquiry:</p> <p><i>Acquirers</i></p> <ul style="list-style-type: none"> • Contact Energy • Genesis Energy • Ballance Agri-Nutrients • E-Gas Ltd • Carter HoltHarvey • BHP • Fletcher Building • Fonterra Dairy Co-op Group • Small business consumers • Residential consumers <p><i>Stakeholders</i></p> <ul style="list-style-type: none"> • Petroleum Association of New Zealand • MEUG • Business New Zealand • NZX
5	How effective are the current disclosure provisions?
	<p>See NGC Section H “Current Disclosure Regime” (paras 140-145) and CRA 1.2.3 “Impact of Regulation on Efficiency”.</p> <p>NGC considers that the disclosure regulations are effective. NGC notes that the Commission should also take into account countervailing buyer power and inter-fuel competition in assessing the current condition of the market.</p>
6	Are there important aspects of performance that the current disclosure regime does not cover adequately or at all?
	NGC is not aware of any important aspects of performance not covered by the current disclosure regime.
7	What are the relevant markets for gas transmission and gas distribution?

	See NGC Section I1 "Market definition" (paras 146-147) and NGC Section I1 "Maui and NGC Pipelines" (paras 177-180).
8	Are the characteristics of different distribution markets sufficiently similar that they can be considered collectively?
	See question 7.
9	How substitutable are electricity and other energy sources for gas industrial, commercial and residential applications?
	<p>See NGC Section I1 "Inter-fuel competition" (paras 154-173) and CRA 2.2 "Inter-Fuel Competition".</p> <p>Gas is constrained in the commercial and industrial market by inter-fuel competition. Coal and biomass are ready substitutes for customers requiring heat. Technical and regulatory barriers to switching boiler technology appear to be low (CRA 2.2.1 "Commercial and Industrial Customers").</p> <p>Residential consumers are readily able to substitute from gas to electricity. The recent experience with the imposition of fixed charges by Genesis indicates that customers can respond over a period of months to changes in relative prices of gas and electricity (CRA 2.2.2 "Household Sector").</p>
10	Does interfuel competition constrain transmission and distribution charges? How is it likely to change in the future?
	<p>See question 9 and CRA 2.2.1 "Commercial and Industrial Customers".</p> <p>Interfuel competition is a significant source of constraint, and one likely to increase in significance in the future.</p>
11	What scope is there for competition between gas distributors?
	See question 7 and CRA 2.3 "Barriers to Entry".
12	What are the major structural, regulatory and strategic barriers to entry to supplying gas?
	See NGC Section I1 "Barriers to Entry" (paras 174-175) and CRA 2.3 "Barriers to Entry".
13	Do gas transmission or distribution firms currently exercise market power?
	See NGC Section I1 "Competition Analysis" and CRA 2 "Competition Analysis".

14	What degree of countervailing power do industrial, commercial and residential customers currently have?
	<p>See NGC Section I1 "Interfuel competition" (paras 154-173) and CRA 2.4 "Countervailing Powers of Buyers and Long Term Contracting".</p> <p>Large customers possess considerable countervailing power. That power arises in part from interfuel competition. For instance, all existing electricity generators negotiated long-term transportation agreements before beginning construction of their generation plants. Similarly, customers acquire countervailing power from their ability to credibly threaten bypass (complete or partial). Further, some price-sensitive customers are subject to downstream import competition. They hold countervailing power on the basis that they will exit New Zealand entirely if they are presented with too high a price for delivered gas.</p>
15	To what degree would the Maui pipeline (assuming open access) and the NGC system compete?
	See NGC Section I1, "Maui and NGC pipelines" (paras 177-180).
16	Are there capacity constraints in gas transmission? If so, where are they? How costly would it be to increase capacity to overcome the constraints?
	<p>See NGC Section I1 "Barriers to Entry" (para 174).</p> <p>There are currently no capacity constraints in NGC's transmission and distribution networks. However, at many points in the system the transmission system would be unable to add a major new load (such as a new gas-fired generation plant) without major upgrades.</p>
17	What is the potential for assessing the efficiency of gas pipeline prices using the comparative benchmarking approach?
	<p>See NGC Section J1 "Benchmarking" (para 188), CRA 3.4.2 "Cost Efficiency Incentives", CRA "4 Measuring Inefficiency in the Counterfactual" and CRA 4.6 "Productive Efficiency Calculations".</p> <p>Benchmarking is potentially an appropriate complement to the building blocks analysis. It could potentially provide the Commission with a basis for comparing allocative and productive efficiency between New Zealand and overseas gas transporters. The Commission may wish to undertake a benchmarking analysis in addition to the building blocks approach. Using both approaches will provide a check on the other.</p>

18	Could international data be used to supplement data from the New Zealand gas pipeline businesses?
	See question 17. Subject to appropriate normalisation for exchange rates and important differences between domestic and international gas service providers, international benchmarking could be used.
19	Which of the two approaches discussed (the comparative benchmarking and building block approaches are best-suited to the purpose of the Inquiry)?
	See question 17.
20	What issues and risks arise in respect of each approach?
	See question 17, CRA 4.5 "Allocative Efficiency", CRA 4.6 "Productive Efficiency Calculations" and CRA 4.7 "Dynamic Efficiency". Building blocks: <ul style="list-style-type: none"> • <i>Ex post</i> examination of profits and efficiency is an imperfect means of identifying poor performance because of volatility in the economic environment; • Productive and dynamic efficiency performance is generally not capable of direct measurement; and • Will provide the Commission with quantitative results, but care should be exercised in assessing what are likely to be broad estimates rather than determinative calculations of efficiency. • Informationally demanding and theoretical. Benchmarking: <ul style="list-style-type: none"> • Difficulties in normalising for differences between businesses may ultimately mean that benchmarking does not provide sufficiently accurate results; and • Potentially can directly identify levels of allocative and productive efficiency, and may provide a check on estimates derived in the building blocks analysis.
21	What alternative approaches should the Commission consider?
	NGC has identified no alternative approaches which the Commission should consider taking to the Inquiry.
22	Are the pricing structures used by gas pipeline businesses efficient?

	<p>See CRA 3.4.1 "Tariff Setting Behaviour".</p> <p>The challenge for any infrastructure provider is to recover the fixed and sunk costs of network investments, and provide customers with economic signals of the costs of consumption at various locations on the network over time.</p> <p>The multi-part tariff approach (capacity reservation fee to allocate capacity and recover the sunk costs of the network; variable through-put fee to recover fixed costs; penalty fees for capacity over-runs; and capacity trading permitted to price to ration capacity), appears that NGC's pricing framework for transmission is allocatively efficient.</p> <p>NGC also negotiates prices to ensure marginal customers that would otherwise switch to other fuels or exit the NZ market completely. This enhances the Ramsey efficiency of charges.</p> <p>Distribution charges are recovered through two-part tariffs, which are likely to be reasonably allocatively efficient.</p>
23	<p>Is quality an issue in relation to the pricing of gas services? Is the quality provided too high or too low?</p>
	<p>See CRA 3.4.3 "Incentive to Provide the Right Level of Reliability" and CRA 3.5.3 "Incentive to Provide the Right Level of Quality".</p> <p>Quality does not appear to be a significant issue in the New Zealand market at present. NGC notes that under price-cap regulation, there are strong incentives to cut the level of quality to reduce costs.</p>
24	<p>Is cross-subsidisation an issue in the pricing of gas services?</p>
	<p>See NGC Section J2 "Building Blocks" (para 191).</p> <p>Given the potentially large range between incremental and standalone costs and the difficulties inherent in cost allocation, cross-subsidisation is unlikely to be a material issue in practice.</p>
25	<p>What incentives do gas pipeline businesses have to cross-subsidise?</p>

	<p>See question 24.</p> <p>Cross-subsidisation implies that some customers are paying less than the incremental costs of supply. As a result pipeline owners would be better off increasing charges to those customers to encourage disconnection.</p> <p>Cross-subsidisation between vertically integrated business units e.g. transport and retailing, is also irrational. If an incremental business, such as a retailing arm, is earning less than the incremental costs of providing retail services, in general it would be efficient to exit the retail market.</p> <p>We note that there is active competition in the gas retail market and a number of commercial transactions have occurred in recent years where retail customers have changed hands. This suggests that cross-subsidisation is not likely to be a material issue for the inquiry.</p>
26	How can the Commission identify whether above-normal returns are attributable to superior performance or monopoly pricing?
	<p>See question 17.</p> <p>The use of benchmarking could potentially assist the Commission in determining whether NZ gas service providers are of above average efficiency.</p> <p>There are no easy methods for the Commission to determine the cause of returns above estimated WACC.</p> <p>This implies the Commission should take a cautious approach to determining whether above normal returns are a result of monopoly pricing, as productive and dynamic efficiency losses are likely to swamp any benefits of improved allocative efficiency in prices.</p>
27	What is the appropriate opening valuation date for each gas pipeline business (e.g. end of last price control, public flotation, other)?
	<p>See NERA 3.1.1 "The Starting Point".</p> <p>There is no opening historical cost valuation date applicable to NGC that can avoid unacceptable arbitrariness when undertaking a test for control.</p>
28	Where can the information needed to calculate current asset values to be found?
	See question 27.
29	What is the appropriate rate of depreciation to apply to historical costs?

	<p>See question 27 and NERA 3.1.1.2 "The Depreciation Schedule".</p> <p>Unless detailed regulatory accounts or financial disclosure statements have been in place from the outset, there is no practicable rate of depreciation to apply to historical costs for the purpose of deriving a current asset valuation for undertaking a test for control.</p>
30	What is the rate of technical progress in the relevant assets?
	There have been some minor advances in compressor technology, and in technology allowing the insertion of plastic sleeves into existing pipelines which extends the life of existing assets. Further, minor advances in management software technology may assist more efficient operation of the system.
31	What is the economic life of the assets?
	The economic life of system fixed assets varies across the network, and in accordance with the levels of use and maintenance. NGC will make submissions on this matter in due course.
32	What issues affect the optimisation of assets and the derivation of current efficient asset values?
	See question 36.
33	How should ODRC be derived from ORC?
	See question 36.
34	Which gas pipeline assets, if any, were imprudently acquired, and how should the "prudent" level of expenditure on those assets be determined?
	None.
35	Which gas pipeline assets, if any, are not used or not useful?
	None.
36	What issues are there in relation to optimising gas pipeline assets?
	<p>See NERA 4 "The Relevant Asset Base".</p> <p>Issues might arise around excess capacity, pipeline routes, un-used assets, and assets which could be more efficiently provided in an alternative manner.</p>

37	How should gas pipeline businesses be compensated for stranding risk associated with optimisation?
	<p>See NERA 4 "The Relevant Asset Base", CRA 3.5.4 "Hurdle Rates in Investment Decision Making".</p> <p>Stranding risk is a real economic cost of providing gas transport services. The only practicable means of compensation is through ex ante adjustment to the regulatory rate of return in determining maximum tariffs.</p>
38	What intangible assets are relevant to the analytical framework for the Inquiry?
	<p>See NGC Section L2 "Intangible Assets" (paras 226-227), and NERA 4 "The Relevant Asset Base".</p> <p>NGC's system fixed assets are not the sum total of its assets. Other important assets include easements (see question 42), and the information and expertise necessary for efficient management of the system fixed assets (eg management systems, IP and IT). These assets necessarily should be included in any asset valuation exercise. For the most part, the cost of developing expertise will be reflected in the non-system fixed asset costs of the pipeline business. Although returns to efficiency may be viewed as an intangible asset, they are more appropriately represented as superior returns.</p>
39	How should intangible assets be valued? How do they depreciate?
	See question 38.
40	How can intangible assets be determined to be "used and useful"?
	See question 38.
41	What is the replacement cost of intangible assets? How might they be optimised?
	See question 38.
42	How should easements be valued?
	<p>See NGC Section L3 "Pipeline Easements" (paras 228-233) and NERA 4 "The Relevant Asset Base".</p> <p>There is no rationale for treating easements any differently to other assets that are included in the asset base. Land and easements do not depreciate through use. Hence, depreciation of land and easements cannot normally be expected.</p>

43	What other assets should be included in the asset base? How should they be valued?
	See question 38.
44	What asset valuation approach or approaches should the Commission use to establish the current efficient asset value (and thereby establish the efficient level of prices)?
	See NERA 3 "Valuation Methodologies". The Commission should use the ODRC valuation methodology. The historical cost approach to asset valuation is both theoretically and practicably inferior to the ODRC methodology.
45	How can past expenditure be reviewed for efficiency?
	NGC is a private company, with a history of substantial shareholders. It has significant incentives to be efficient. In that light, the presumption should be that both past expenditure has been and forecast expenditure will be efficient.
46	How can forecast expenditures be assessed for efficiency?
	See question 45.
47	What is the best way to determine whether declaration of control would be in the interests of acquirers?

	<p>See NGC Section F3 “Is it necessary or desirable for goods or services to be controlled in the interests of acquirers (s52(b))?” (paras 103-118) and CRA 4 “Measuring Inefficiency in the Counterfactual” and CRA 5 “Weighing up Benefits and Costs of Control”.</p> <p>The Commission should take care in interpreting the results of any quantitative analysis. Quantification of efficiency effects of different forms of regulation is likely to provide the Commission with broad estimates of likely efficiency consequences and not determinative measures. The most important dimension of efficiency, dynamic efficiency, is the most difficult to quantify.</p> <p>Given that substantial investments are required to extend the penetration of gas to new users and bring new sources of supply to market, potential dynamic efficiency costs could be high if incentives to invest are dulled by regulation. The Commission should ensure that public benefits and detriments are taken into account at this stage.</p> <p>Any regulator is likely to encounter significant difficulties in setting the parameters for any incentive-based form of regulation because of the likelihood of significant forecast error caused by uncertainty in upstream gas production markets. The direct and indirect costs of control are likely to be significantly higher in such an environment.</p> <p>In our view the Commission should be cautious in weighing up the benefits and costs of control, taking public benefit issues into account. The Commission should be well satisfied before making a recommendation of control.</p>
48	<p>What is the best way to determine whether declaration of control would be in the public interest?</p>
	<p>See question 47 and CRA 4 “Measuring Inefficiency in the Counterfactual” and CRA 5 “Weighing up Benefits and Costs of Control”.</p>
49	<p>Are there specific qualifications that should be considered when setting the counterfactual?</p>

	<p>See NGC Section G "Counterfactual".</p> <p>The correct counterfactual is forward-looking, and has both a regulatory and a commercial dimension (NGC Section G "Counterfactual" (paras 119-121)).</p> <p>In regulatory terms, the counterfactual will involve an improved disclosure regime, implementation of the Government Policy Statement on the gas industry and the National Energy Efficiency and Conservation Strategy, and establishment of an industry governance regime (NGC Section G1 "Regulatory dimensions to counterfactual" (paras 123-134)).</p> <p>In commercial terms, the counterfactual will account for a declining derived demand for gas services post-Maui. The correct counterfactual against which control is to be assessed is a stand-alone transmission or distribution business (NGC Section G2 "Commercial dimension to counterfactual" (paras 135-139)).</p>
50	What are the compliance costs of the status quo?
	<p>See NGC Section M1 "Costs of current regime" (para 234) and CRA 1.2.3 "Impact of Regulation on Efficiency".</p> <p>In the time available, NGC has not been able to calculate the compliance costs associated with the various options before the Commission. NGC notes that doing so would require a better understanding of the form of regulation currently contemplated.</p>
51	What would the compliance costs be under price cap regulation?
	See question 50 and NGC Section M2 "Compliance costs of price cap regulation" (para 235).
52	How should the Commission determine the indirect costs of control?

<p>See CRA 1.2.2 "Impact of Regulation on Efficiency".</p> <p>Estimating the indirect costs of control is not readily amenable to quantification. The results of any quantitative analysis should be seen as indicative of the magnitude of potential losses only, rather than determinative.</p> <p>The indirect costs of control should not be estimated as a proportion of the allocative efficiency benefits. There is no relationship between the level of pricing inefficiency and productive and dynamic efficiency.</p> <p>Productive efficiency losses could be estimated as a percentage of forecast operating costs, perhaps using X-factors set in overseas jurisdictions as an indicator of productive efficiency losses moving from light-handed regulation to incentive-based forms of control. We emphasize that this would provide the Commission with an estimate of potential productive efficiencies rather than a direct measure.</p> <p>Dynamic efficiency losses under control could be estimated by assuming that a certain proportion of likely future investment levels would be foregone because of profit restraints. This causes losses of consumer and producer surplus through missing investments.</p> <p>Dynamic efficiency losses under control may also result in greater likelihood of network constraints and therefore increased lost load during peak consumption periods. Quantification of losses of consumer surplus using estimates of the value of lost load derived in empirical studies would shed some light on potential losses of dynamic efficiency.</p> <p>Finally, the Commission should also take account of potential reductions in quality of supply under regulation. Regulators can only imperfectly set quality standards for regulated businesses, and because incentive-based regulation creates incentives to lower the level of quality, or denies businesses financial returns for increasing quality if customers seek quality improvements there is likely to be worse quality outcomes under control.</p>
