



Consultation Paper

**Gas Transmission Access  
Issues Review**

June 2006

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# Executive Summary

## Introduction

Gas Industry Co is reviewing transport arrangements on New Zealand's high pressure transmission pipelines to assess whether the objectives of the Gas Act and Gas Policy Statement are being met. This Consultation paper forms part of this review and sets out the Gas Industry Co's preliminary views on issues arising under the current arrangements.

This review is being undertaken in three stages: stakeholder interviews, issues analysis and options analysis. We have interviewed 21 stakeholders (see Appendix 5) and the issues raised – together with our analysis of them – are presented in this paper. Gas Industry Co invites written submissions on this paper and will then undertake, on the basis of submissions received, an analysis of the options available to address the issues raised. Our preferred solutions and recommendations will then be presented to the Minister.

## Structure of this Paper

The review to date has deliberately cast the net very widely and as a result has captured a large number of potential issues. The challenge for this paper is to present these issues – and potential solutions – in a coherent, accessible and concise way. To do this, we have grouped the issues into areas of commonality which we have called “themes”. Issues under a theme may still be rather diverse, but are likely to stem from a common root cause and be amenable to a common solution.

There are nine themes:

- *legacy*: the rights of “legacy” Maui gas and the implications for transportation of legacy and non-legacy gas;
- *capacity*: the transport services offered by MDL and VT and their implications for wholesale gas trading and shipper-on-shipper competition;
- *balancing*: the arrangements for pipeline balancing and their impact on operating and transaction costs;
- *quality*: the operational and contractual arrangements for managing gas pressure, composition and odorisation;
- *title tracking*: the determination of traded quantities of gas before and after the gas day and their implications for pipeline operations and settlements;
- *allocation*: the problems caused for retailers of having monthly determination of delivered quantities and how these problems might be mitigated;

- *operators*: the management of conflicts of interest where pipeline operators have affiliate production or shipping businesses;
- *access*: the principles and processes for allowing new entrants to interconnect with existing pipelines; and
- *governance*: the multilateral frameworks required to oversee and enforce access arrangements and the changes to these arrangements proposed in this paper.

For each theme this paper discusses the current arrangements, the issues arising and some preliminary conclusions on how these issues might be resolved.

### Legacy Theme

Legacy gas – gas sold under Maui gas contracts – enjoys special rights under the MPOC, in recognition of the need to grandfather pre-existing contractual rights. These rights essentially allow parties to flow as much legacy gas as they need on the day, rather than having to forecast their requirements in advance and then paying penalties (in the form of balancing charges) for any forecasting errors.

Whilst we are not proposing to change these legacy rights, we note that they impact on the transportation of non-legacy gas. In particular, they impact on pipeline balancing: the calling of “balancing gas” at short notice to offset forecasting errors and manage the levels of linepack.

Currently, non-legacy gas quantities are small in comparison to legacy gas and, consequently, there is little need for balancing gas. This is liable to change over time as new gas comes on-stream and legacy gas depletes and eventually – in 2009 – expires. Pipeline operators need to recognise the changes in balancing arrangements over this transition period and plan their operations accordingly.

We are also concerned about what may happen in the event of a Maui production contingency. The MPOC is designed to give incentives – through balancing charges – to shippers and welded parties to assist with balancing under contingency conditions. However, because Maui parties are not subject to these charges, it is not clear how they will respond in these circumstances.

In summary, we conclude that pipeline operators need to plan for this transition period and consult with an inform shippers and WPs accordingly. Furthermore, contingency planning (through the development of the NGOCP) needs to take account of the impact of legacy rights.

### Capacity Theme

MDL and VT offer different capacity services on their pipelines. MDL offers a “common carriage” service which requires no advance booking but, because it is open to all-comers, has no guarantee of availability should demand for capacity exceed physical supply.

If they are concerned about capacity availability, shippers can book a priority service, known as authorised quantity (AQ). However, some shippers have questioned whether even this AQ service will be available under all conditions. We recommend that shippers clarify their concerns and request the necessary changes to the MPOC. We see no need for direct Gas Industry Co involvement.

VT, on the other hand, offer a “firm” service which they guarantee to be available under all but *force majeure* conditions but which must be booked in advance and paid for a full year, irrespective of the extent to which it is used. VT also offer a non-booked service, but at ten times the price of the booked service. Either way, a shipper requiring capacity at short notice or for only a short period must pay a premium rate.

Whilst we understand the economic and commercial reasons underlying VT’s capacity marketing, we are concerned that it could inhibit the development of wholesale gas trading market, which is one of the government’s objectives. We therefore recommend that VT develop the capacity service(s) needed to support such a market and will consider making Rules to this effect should VT’s response be unsatisfactory.

We have also considered whether the design of the MDL or VT capacity services would allow an existing shipper to “hoard” capacity and so prevent a potential competitor from accessing a pipeline. Whilst this is not possible under MDL’s common carriage approach but VT pipelines can indeed become “fully booked”. Although VT then offers an interruptible service the terms of this service are unclear and we recommend that VT clarifies them.

Finally, we note that, where MDL and VT pipelines run parallel to each other, the combined pipeline capacity could be jointly marketed. This might simplify transportation arrangements (at least for shippers) but would also remove the measure of pipeline competition that currently exists. We are seeking stakeholder views on the relative merits of these alternatives.

### Balancing Theme

“Balancing” is where a pipeline operator calls upon additional gas at short notice to offset the aggregate effect of shipper forecasting errors, which can cause linepack to increase or decrease, potentially to beyond safe operating limits.

Historically, the MDL and VT pipelines have been operated as a single system, using Maui as the source of “balancing gas”. Essentially, if overall linepack levels in this system were becoming too high or too low, Maui production would be adjusted accordingly.

Under MDL open access arrangements, the MDL pipeline is balanced separately from the VT pipelines. As a consequence of this (and also related to the structure of MDL transport charges), VT balances each of its three main pipelines separately. So, instead of a single balancing “pool”, the new arrangements have four pools.

This has a number of potential consequences. Firstly, it is inevitably more complex than a single pool, leading to higher costs for balancing operations and settlements. Secondly, it may lead to higher balancing costs overall, since each operator may only have access to balancing gas local to their pool. Thirdly, due to the complexity, shippers may find it hard to manage balancing costs and, instead, may simply pass these through to the end user who will then face higher, more volatile gas prices.

These new arrangements have only just begun operating and it is too early to assess their impact and to begin considering alternative approaches. However, we think it is important for all parties have a clear understanding of how balancing costs will be incurred, allocated and recovered, so that operators, shippers and WPs have a better chance of managing these costs. We therefore recommend that pipeline operators develop and

publish the necessary procedures and educate shippers and WPs on their operation and implications.

### Quality Theme

Gas “quality” refers to the pressure, composition and odorisation of gas: intrinsic qualities that accompany the physical gas flows in a pipeline, irrespective of the shipping arrangements overseeing these. It is managed operationally by welded parties – producers, pipelines and distributors – through real-time monitoring and control.

It would be sensible for all contractual obligations regarding gas quality to be placed on these welded parties, but this is not always the case currently. In the VT arrangements, in particular, some obligations to deliver quality gas are placed on shippers who have no practical way to ensure that these obligations are met. We understand that VT is currently negotiating new ICAs with its WPs to address this concern and we welcome and support this process.

Where gas quality requirements are common across all pipelines – as is the case with gas composition for example – we think the corresponding contractual rights and obligations should be placed in an “interconnection code” that applies to all pipelines. Gas Industry Co proposes to develop such a code, in consultation with pipelines and WPs.

### Title Tracking Theme

Under current arrangements, gas can be traded at receipt points on MDL or VT pipelines. Gas can, potentially, change hands several times before reaching the end user. There is, therefore, a need to determine “gas transfer” quantities at each trading point – to “track” the gas title – to allow accurate and reliable settlement of gas contracts and transportation charges.

Title tracking takes place in two timescales: before the gas day (“*ex ante*”) and after (“*ex post*”). The *ex ante* process involves each buyer of gas determining how much gas they need and then “nominating” this requirement to their supplier(s). This process cascades *up* the title chain: end users nominate to retailers who nominate to wholesalers who nominate to producers. Shippers must inform MDL – but not VT – of these nominated quantities.

The *ex post* process involves each seller of gas determining how much it sells to each of its customers: obviously, all of its gas, but no more, must be sold to somebody (including, possibly, itself as an end user). This process cascades *down* the title chain: producers sell gas to wholesalers who sell to retailers who sell to end users. The sold quantities are notified to pipelines so that they can levy the appropriate transportation charges on shippers.

The obvious question that arises is this: are the *ex ante* and *ex post* quantities different and, if so, why? In fact, for the MDL pipeline they are the same. Whatever is nominated gets transported: the so-called “flow-on-nomination” protocol. However, for flows or trades taking place away from the MDL pipeline, the two quantities may be different and, currently, generally are.

The reliability and robustness of title tracking is essential for the efficiency of gas transportation and trading. Mistakes in the *ex ante* process could lead to large forecasting

errors and so high balancing costs on the day. Mistakes in the *ex post* process may lead to commercial disputes and settlement delays.

The current arrangements place obligations on shippers and WPs to manage title tracking. However, these may either be too light-handed to ensure reliability or too heavy-handed and so inhibit gas trading. We think the best solution is to simplify the processes: in particular, by extending flow-on-nomination so that *ex ante* and *ex post* quantities are identical. This means that all title tracking takes place before the gas day, allowing better management of capacity and balancing in real-time.

### Allocation Theme

No gas trading takes place downstream of VT pipelines. Therefore, the amount of gas VT delivers for a shipper is deemed to be equal to the amount that that shipper delivers to its end customers: ie the customer metered quantities. The meters of smaller “retail” customers only get read monthly, so a retailer will not know its gas delivery allocation for a day until after the end of the calendar month.

“Mismatch” is the difference between a shipper’s daily receipt and delivery quantities within a balancing pool. Mismatch and “running mismatch” (mismatch accumulated over time) provide the basis for balancing charges. A shipper can, in principle, reduce its balancing charges by keeping these mismatch quantities as low as possible. However, for a retailer this is impossible, because it cannot calculate its mismatch until the end of the month, by which time it is too late to do anything about it.

Whilst exact delivery quantities cannot be calculated until month-end, good estimates can be made within a day or two of the gas day, using information available from daily-read meters. Such estimates are provided to retailers in many gas markets overseas. Indeed, they are provided for in New Zealand under the Reconciliation Code but are unreliable or inaccurate, due to the absence of formal customer registration and transfer processes here.

If good “day-end estimates” could be provided, this would allow retailers to manage their mismatch, reducing their balancing charges and also helping to reduce the level of overall pipeline imbalances. Indeed, if these estimates were sufficiently objective and robust, they could actually form the basis for balancing charges, so long as any estimation errors were properly reconciled once the actual delivery quantities were known. Again, some overseas markets take this approach.

We are currently reviewing allocation and reconciliation processes and these are the subject of a separate consultation paper. In the light of the discussion above, we will consider the potential for these processes to support day-end estimation and for balancing charges to be based on these estimates.

### Operators Theme

There are, rather confusingly, six pipeline operators: 3 each for MDL and VT pipelines (the Commercial, System and Technical Operators). Five of these roles are undertaken by business units within VT, with the sixth undertaken by STOS: a subsidiary of Shell, Todd and OMV.

Because these operators are each affiliated with gas shipping or production businesses, they face conflicts of interests which need to be managed. This is currently done by “ring-fencing protocols” set out in the MPOC and in VT’s Information Memorandum.

We have reviewed these arrangements and consider that they are not entirely satisfactory, in a number of ways. Firstly, it is not entirely clear how they operate. Secondly, it is not clear whether the MDL and VT operator roles within Vector are operationally separated. Thirdly, the ring-fences do not appear to apply for ancillary roles, such as the welded party role of reviewing and confirming shipper nominations. Fourthly, the contractual obligations of these operators leave them with substantial discretion which could, potentially, be misused to favour affiliates.

We think that the best protection against such favouritism is clarity and transparency of pipeline operations. This should be done through the development and publication of detailed procedures for all operator activities and decisions and establishing a mechanism to ensure that these procedures are properly followed.

### Access Theme

Since MDL open access there have been two applications for new interconnection to the MDL pipeline. One of these (the one not involving MDL affiliates) has been problematic. Some lessons can be learnt from this.

Most significantly, it appears that new interconnecting parties have no formal rights under the MPOC (notwithstanding that it has provisions relating to new interconnection) because they are not signatories to the MPOC and will not be until the interconnection is complete. Although the situation is similar with VT pipelines, VT is a signatory to the New Zealand Pipeline Access Code (NZPAC) which is a voluntary code that, *inter alia*, sets out principles for dealing with new interconnections.

We consider that the ability for new entrants (producers or end-users) to interconnect to existing pipelines on reasonable terms is intrinsic to open access. We believe that this is best promoted by an over-arching code that gives some “pre-contractual rights” to new entrants. A single code should cover the MDL and VT pipelines. Gas Industry Co therefore proposes to develop such a code, using the existing NZPAC as a starting point.

Additionally, MDL originally had no procedures for processing and progressing interconnection applications and has had to develop these as it goes. These procedures should be developed further, should address the issues arising with the current interconnections and should be consistent with the terms of the new access code once this has been developed.

An alternative to new interconnection is to access the MDL pipeline via existing “closed” pipelines. This raises the question as to whether some or all of these closed pipelines should become subject to open access. We are not persuaded that this is currently necessary or appropriate.

### Governance Theme

This theme is last, but not least, since government arrangements will affect the implementation and the effectiveness of all of the recommendations made under the previous eight themes. All of the issues arising in these other themes are “multilateral” in

the sense that they will jointly affect multiple parties and are not easily dealt with by bilateral agreements between two parties at a time. In short, multilateral frameworks are required.

Several types of multilateral framework currently exist, which can be placed into three broad categories: “codes”, such as the NZPAC, which guide the contractual and operational behaviour of code signatories; “standard contracts” where all or most contracts of a given type (eg VT TSAs) have common terms; and “operating procedures” which provide that a pipeline operator must deal with all shippers and WPs using common, specified processes. MDL currently issues operating instructions and guidelines, whereas VT describes all of its process in its annual Information Memorandum.

The existing arrangements are either voluntary or contractual. However, regulatory options also exist: in particular, through the government promulgating “Rules” or “Regulations”. These options have been established – together with the Gas Industry Co to develop and manage them – to address the perceived failure of the industry to develop satisfactory arrangements on its own. Thus, Gas Industry Co must consider carefully whether the issues discussed in this paper should be addressed through development of Rules (or, possibly, Regulations) or whether commercial arrangements can achieve this.

We have concluded that all industry codes should be regulated, by converting them into Rules. This conversion would apply to existing codes (ie the Gas Transfer Code and the Reconciliation Code) as well as additional codes proposed in this paper (an Interconnection Code and an Access Code).

Whilst we do not propose regulating the commercial contracts (TSAs and ICAs) between pipeline owners and their customers, we would like to ensure that these contracts are properly “multilateral”: ie common to all parties and changed through common agreement rather than by pipeline diktat. We consider that the MPOC model – of a single “operating code” containing common terms invoked through bilateral TSAs and ICAs – is a good approach, although alternative approaches may be considered. We would like to see VT adopting such a multilateral model and regard the expiry of many existing VT TSAs in 2007 as a good opportunity to do this.

We have noted elsewhere in this paper the importance of developing operating procedures and consider that these are best developed “unilaterally” by pipeline operators and owners. However, they should not be used as a vehicle to change or undermine the terms or intend of standard contracts or codes. To prevent this happening, we propose to establish a mechanism – to be governed by the Gas Industry Co – through which any disputes between pipelines and their customers about the appropriateness of operating procedures are considered and resolved.

A mechanism is needed to ensure that these frameworks for standard contracts and operating procedures are implemented and enforced. We propose to do this through the access code (which will become Access Rules) discussed earlier.

Some terms of pipeline service concern only the pipeline owner and an individual pipeline customer. These “bilateral terms” can therefore be negotiated and specified bilaterally. Thus, any TSA or ICA would consist of the common, multilateral terms specified in the relevant operating code, together with some specific, bilateral terms.

## Wrap Up

Under the nine themes presented above, we have discussed a number of issues and proposed ways to resolve these, all within a new governance framework which is described in the Governance Theme. Table 1 summarises this governance framework and the actions to be taken in relation to each tier in this framework.

**Table 1: Governance Framework and Proposed Actions**

<b>Category</b>	<b>Coverage</b>	<b>Current Frameworks</b>	<b>Additional Frameworks</b>	<b>Proposed Approach</b>
<b>Industry Codes</b>	Cover multiple parties and pipelines	NZPAC, GTC, Rec Code	Interconnection Code	Convert into Rules
<b>Standard Contracts</b>	Cover multiple parties on single pipeline	MPOC	VTOC	Use MPOC model or similar
<b>Operating Procedures</b>	Describe processes for achieving contract terms	VT IM, MDL operator procedures	Access procedures	GIC to resolve any disputes
<b>Bilateral Terms</b>	Remaining Areas (Specific to individual party)	Parts of TSA, ICA		No change

The conclusions and recommendations presented in this paper represent Gas Industry Co's preliminary view. We invite comment on these and on the issues discussed. Once we have received written submissions, we will undertake a further process of "options analysis" to identify and evaluate a full range of feasible alternative solutions and, based on this analysis, decided upon the preferred option for resolving each issue.

Our formal advice to the Minister will then consist of a description of the issues arising in the current access arrangements and our preferred option for resolving each issue, together with supporting analysis.

# 1 Introduction

## Objectives

- 1.1 Gas Industry Co is reviewing transport arrangements on New Zealand's high pressure transmission pipelines to assess whether the objectives of the Gas Act and Gas Policy Statement (see Appendix 1) are being met.
- 1.2 This consultation paper forms part of this review and sets out the Gas Industry Co's preliminary views on issues arising under the current arrangements. It discusses issues which have been raised during interviews with key stakeholders and sets out our preliminary views on how these might be addressed. Following consultation on this paper and analysis of stakeholder responses, Gas Industry Co will advise the Minister of Energy of its findings.

## Review Process

- 1.3 This review is being undertaken in three stages: stakeholder interviews, issues analysis and options analysis (see Figure 1). These stages are described below.

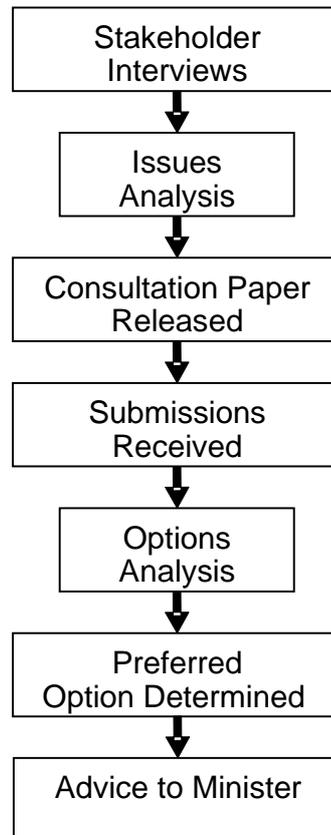


Figure 1: Review Process

### *Stakeholder Interviews*

- 1.4 Gas Industry Co held a series of interviews with twenty-one stakeholders during March, April and May. Although the interviews were “structured”, in the sense that Gas Industry Co provided a high level agenda, interviewees were encouraged to discuss any aspects of gas transmission which were of particular importance to their organisations.
- 1.5 All interviews were constructive and open. Most took several hours and were attended by one or more senior managers from each organisation. Some organisations raised issues of immediate concern; others took a more strategic view and discussed matters which they believed would cause problems in the longer term. A full list of (non-attributed and non-confidential) issues raised is included in Appendix 2.
- 1.6 During stakeholder interviews matters confidential to the interviewee’s business were often discussed. Gas Industry Co appreciates this openness and the trust this assumes and has been careful not to disclose any such commercially sensitive information in this paper. Where necessary, drafts of relevant sections of the paper have been discussed with interviewees to ensure that confidences have been kept.
- 1.7 Gas Industry Co thanks participating organisations for making their managers available and for the helpful and positive engagement of those managers in the interview process.

### *Issues Analysis*

- 1.8 In this consultation paper we analyse the issues raised in interviews and present our preliminary findings. The paper reflects Gas Industry Co’s own ideas and analysis about the significance of the issues, in the context of the Gas Act and GPS, and how they might be resolved. The steps that we have taken in drafting this paper are described in the Structure section below.
- 1.9 This paper has now been sent to all interviewees and other parties who Gas Industry Co believes may have an interest in transmission access. The paper has also been posted on the Gas Industry Co website. We have invited interested parties to make written submissions on the paper and comment on whether all substantial issues have been included and properly described.
- 1.10 In the light of submissions received, we may revise our analysis of the issues. This could be by changing our description of the issues in this paper or by

including new issues which we have “missed”. We will then publish our analysis and findings.

### *Options Analysis*

- 1.11 In this paper we include some “preliminary conclusions” about how issues might be resolved. We invite parties to comment on whether these conclusions are appropriate and, if not, what alternative solution or solutions should be considered.
- 1.12 Under the Gas Act, Gas Industry Co is required to identify solutions to achieve the GPS objectives, to analyse their relative merits and to select a preferred option.
- 1.13 We will therefore review all alternative solutions put forward in written submissions (as well as any additional options we identify internally) to decide, firstly, whether they are feasible and likely to resolve the issue identified and, secondly, whether they are preferable to our preliminary conclusions. Accordingly, we will identify and describe the preferred option. Again, we will publish our options analysis and findings.

### *Advice to the Minister of Energy*

- 1.14 Our advice to the Minister will consist of a description of the issues arising in the current access arrangements and the preferred option for resolving them. Gas Industry Co is aiming to report to the Minister in August.
- 1.15 Whilst not wishing to pre-empt or constrain what this advice may contain, we foresee it being recommendations of the following forms:
- that pipeline owners or operators review and consult on specified aspects of existing agreements or procedures;
  - that Gas Industry Co initiate workstreams to investigate and report on a particular matter in a specified timescale; and
  - that Gas Industry Co draft Rules to complement, govern or supersede specified aspects of pipeline access.

**Q1:** *Are you satisfied with the review process? Are there any other forms of recommendation to the Minister which Gas Industry Co should consider?*

## Submission Requirements

- 1.16 Submission must be received by 5pm on Friday 21 July 2006. Please note that submissions received after this date may not be able to be considered. Our preference is to receive one hard copy and one electronic copy (in Microsoft Word or Adobe acrobat format).
- 1.17 The electronic version should be emailed to [info@gasindustry.co.nz](mailto:info@gasindustry.co.nz) with the phrase "Submission on Gas Transmission Access Review" in the subject header. The hard copy should be posted to:
- Ian Wilson  
Senior Pipeline Adviser  
Gas Industry Co  
Level 9, State Insurance Tower  
1 Willis Street  
PO Box 10-646  
Wellington  
New Zealand
- 1.18 We will acknowledge receipt of all submissions electronically. Please contact Ian Wilson, Senior Pipeline Adviser on (04) 494 2462 if you do not receive electronic acknowledgement of your submission within two business days.
- 1.19 Submissions should be provided in the format shown in Appendix 3. The Gas Industry Co values openness and transparency and, therefore, submissions will generally be made available to the public on the Gas Industry Co's website. Where submitters intend to provide confidential information as part of their submissions we ask that you discuss that with Gas Industry Co prior to lodging the submission.

## 2 Structure of this Paper

### Structuring the Issues

- 2.1 The review to date has deliberately cast the net very widely and as a result has captured a large number of potential issues. The challenge for this paper is to present these issues – and potential solutions – in a coherent, accessible and concise way. We are very aware of the burden that consultation processes place on stakeholders – particularly the smaller companies – and aim to avoid adding to this burden unnecessarily. Thus, we have taken a number of steps to qualify and structure the issues raised.
- 2.2 The first step is to filter each of the issues for relevance. Is it within the scope of the review? Does it represent a significant impediment to the achievement of the objectives in the Gas Act and the GPS (see Appendix 1)? Is it likely to be of general importance, rather than specific to a particular party<sup>1</sup>? Is it likely to be of ongoing concern, rather than just a “teething” issue that is being addressed anyway? Issues that appear to us not to meet these criteria have not been considered in this paper, although – for completeness – all issues raised with us which are not confidential have been included in Appendix 2.
- 2.3 The second step is to group the issues into areas of commonality which we have called “themes”. Whilst the issues grouped within a theme may still be rather diverse, we consider that they are likely to stem from a common root cause and may be amenable to a common solution. We consider issues arising on the MDL or VT pipelines to have “commonality” even if the root cause of the issue may lie in the MDL or VT access arrangements, respectively. In short, each theme takes a “trans-pipeline” perspective.
- 2.4 The third step is to identify the three or four main elements of each theme. For each element, we briefly describe the current arrangements, consider the relevant issues arising, discuss options for addressing these issues and pose questions for stakeholders to respond to.

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<sup>1</sup> Of course, they may currently be *manifested* to only one party, but nevertheless have generally importance going forward.

2.5 At the end of each theme, we set out some preliminary conclusions. The intention is to give stakeholders an indication of our current thinking and also present something concrete for them to respond to. These conclusions are not *faits accomplis* but neither are they straw men. As noted in the previous section, we will review and reconsider each conclusion in the light of comments received before making our final recommendations to the Minister.

### Our Themes

2.6 Table 1 below presents the nine themes explored in this paper. We have grouped these themes into four, high-level categories: legacy, (physical) supply chain, title chain and oversight.

**Table 2: Themes of this consultation paper**

Theme	Category
Legacy	Legacy
Capacity	Supply Chain
Balancing	
Quality	
Title Tracking	Title Chain
Allocation	
Operators	Oversight
Access	
Governance	

2.7 “*Legacy*” (which covers just one theme) covers all issues that arise from the rights and characteristics of legacy gas<sup>2</sup>. Legacy rights terminate on or before 27th June 2009, so the issues will not extend beyond this date. Conversely, all of the issues in our other eight themes are *not* related (at least, not directly) to

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<sup>2</sup> Gas sold under a Maui legacy contract, as defined in the MPOC.

legacy rights and so these issues *may* extend beyond this date – although, of course, they may be resolved before this.

2.8 “*Supply Chain*” means the chain of gas *custody*, from producer to pipeline to customer, and the associated physical logistics and commercial arrangements. It considers the physical flow of gas, irrespective of whom it “belongs” to. There are three themes in this category:

- the *Capacity Theme* considers the terms under which transportation services are offered to shippers and whether these are aligned with shipper needs;
- the *Balancing Theme* considers the physical and commercial arrangements in place for managing imbalances between gas production and consumption and, in particular, discusses the issues that arise from the pipeline system being managed as several, separate “balancing pools”; and
- the *Quality Theme* considers the physical characteristics of the gas itself (pressure, composition and odourisation) and how these are managed between the various WPs and shippers.

2.9 “*Title Chain*”, on the other hand, means the chain of gas *title*, from producer to wholesale to retailer to customer. There are two themes in this category:

- the *Title Tracking Theme* considers the processes through which title chain participants interact, both before the gas day in order to make nominations and after the gas day in order to settle up, and how these processes can be rationalised; and
- the *Allocation Theme* considers the conflicting requirements of timeliness and accuracy in determining gas allocation and how these might be best reconciled.

2.10 This distinction between *supply* and *title* may seem somewhat arcane, but in fact it is a distinguishing feature of gas transportation<sup>3</sup>. For example, a shipper may nominate for its gas to flow north on a pipeline, but the actual molecules of gas

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<sup>3</sup> Or, in general, of any “displacement” delivery mechanism.

that it nominates to put into the pipeline may flow south: so supply and title need not coincide and in fact never will. It is the need to reconcile supply and title that makes gas transportation interesting and difficult, and creates the need for multilateral access arrangements to manage this reconciliation.

2.11 “*Oversight*”, then, considers how these access arrangements are managed and overseen. Think of the oversight themes as “meta-themes”: the supply chain and title chain themes discuss how access is arranged; the oversight themes then discuss how the “access arrangements” themselves are arranged.

2.12 There are three themes in the oversight category:

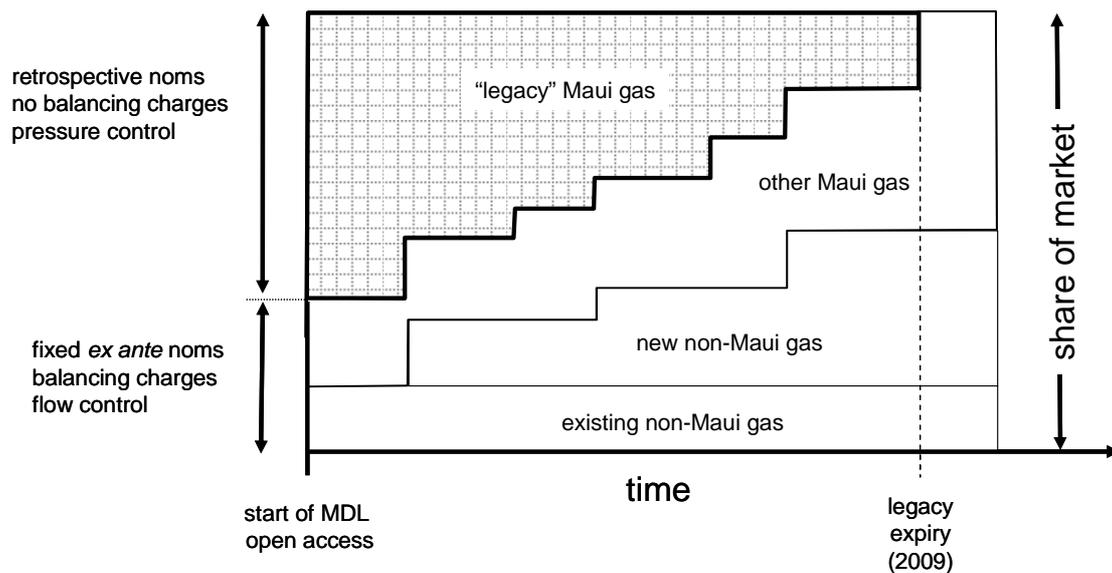
- the *Operators Theme* considers the need to ensure that pipeline operators and agents act impartially and do not favour affiliates;
- The *Access Theme* considers how to facilitate and promote the continued growth and development of the gas market, in particular by ensuring new entrants can obtain access to existing pipeline capacity; and
- The *Governance Theme* considers the need for multilateral arrangements – to manage externalities, for example – and the strengths and weaknesses of different approaches.

### How to Read this Paper

2.13 Our interviews have reminded us of the diversity of the gas industry and of how issues which are critical to one party or sector may be irrelevant or invisible to others. In the light of this, we would suggest that individual stakeholders focus on those themes which are of specific interest to them. To assist with this, each theme has a “front page” providing an outline of the issues arising, sufficient – we hope – to allow the reader to decide whether to delve further.

### 3 Legacy Theme

#### Legacy Arrangements are Unclear and Uncertain



#### Theme Summary

Arrangements for Maui Legacy Gas – particularly the ability to retrospectively adjust nominations – negate many of the incentives and mechanisms built into balancing arrangements. On the other hand, the flexibility provided by Maui gas lessens the need for such incentives. However, as Maui depletes, flexibility may decline gradually, whilst balancing incentives may only be restored once legacy arrangements expire. Do potential balancing risks arise as a result? How might these risks be mitigated?

#### Issues Arising

- impact of legacy rights on gas balancing
- effect of legacy rights during a Maui contingency
- need for transition plan at legacy expiry

## Overview

- 3.1 It should be remembered that the MDL pipeline was built to transport Maui gas; even now, this gas represents the overwhelming majority of gas transported. Furthermore, the continuing provisions of the Maui gas contract, together with the “grandfathering” legacy provisions in the MPOC mean that Maui gas continues to be transported much as it always has been (as we describe further below).
- 3.2 For these reasons, many of the issues we discuss in this paper have yet to be manifested in operational or commercial outcomes. Whilst we may be crying wolf, we hope rather to be ahead of the game, looking forward to a world without Maui gas, or at least without the legacy rights that it enjoys. Although legacy arrangements may serve to mitigate, obscure or invalidate these concerns for the time being, they may surface once these arrangements expire: in 2009 or before.
- 3.3 Therefore, in discussing issues in all of the *other* themes in this paper, we have implicitly assumed that the legacy arrangements no longer operate. Conversely, the legacy arrangements do create their own challenges and these are the subject of this theme.
- 3.4 When considering how to address these legacy issues, our starting point is that the legacy arrangements themselves are immutable.

## Legacy Arrangements

- 3.5 Pre-existing rights to delivery of legacy gas (see Box 1) are grandfathered through special “legacy rights” and associated processes under the MPOC. These processes are described in detail in Appendix 5. The two most important legacy rights are:
  - the right for the legacy MDL shipper to retrospectively adjust nominations;
  - and

- the right for WPs<sup>4</sup> to be exempt from cash charges for OI to the extent that this is attributable to legacy gas.

3.6 These renominations flow back up through the title tracking chain and, eventually, lead to corresponding renominations from STOS, the legacy MDL shipper. If Maui production had followed *ex ante* nominations then these renominations would lead to significant operational imbalances<sup>5</sup> at the MDL welded points where legacy gas is received (ie Oaonui) and delivered.

#### **Box 1: Legacy Gas**

The MDL pipeline was built from Oaonui to Huntly to transport gas from the Maui field to major consumers, power stations and other transmission pipelines. Maui gas is produced by the Maui Mining Companies (MMCs) - which are Shell, OMV and Todd – and sold to the Crown, who then on-sells it to Methanex, Vector and Contact Energy who, in turn, either consume it or on-sell it to customers or other retailers.

After being substantially renegotiated in 2003, the Maui Gas Contract currently provides for two further tranches of gas to be supplied: these have specified (maximum) volumes and must be purchased prior to 27th June 2009. This gas – and only this gas – receives special “legacy rights” under the MPOC to reflect the pre-existing contract and is therefore referred to here as “legacy gas”.

STOS is the shipper of legacy gas on the MDL pipeline. It is also the Maui field and Oaonui WP operator and so controls Maui production and the flow of Maui gas into the MDL pipeline.

This paper uses the “legacy” moniker for all persons and concepts involved in the title chain of legacy gas. Thus, STOS is the legacy MDL shipper. Vector Contact and Methanex who buy legacy gas from the Crown at MDL delivery

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<sup>4</sup> A list of acronyms is provided in Appendix 7. Note that this paper uses the term Welded Party (WP) to mean the owner of assets physically connected to a pipeline. This is wider than the definition of a Welded Party in the Maui Pipeline Operating Code where it just relates to parties with contracts for interconnection with just the Maui pipeline.

<sup>5</sup> For discussion of Operational Balances see Box 3 and the Balancing Theme.

points – and other shippers who buy gas from them - are legacy shippers. “Legacy expiry” is the date on which the last GJ of legacy gas is sold.

- 3.7 To mitigate these imbalances, MDL operators are understood to manage legacy gas flows on “pressure control” rather than “flow control”: ie they will ignore the *ex ante* nominations and instead allow sufficient gas to flow to maintain steady levels of linepack in the MDL and VT pipelines. Whilst appearing to create operational imbalances (when gauged against *ex ante* nominations), this arrangement actually has the affect of reducing imbalances once the retrospective nominations are factored in.
- 3.8 A simple example will illustrate how this happens. Suppose, for simplicity, there is a single shipper serving a customer base with a forecast demand of 100TJ and suppose that it therefore nominates, *ex ante*, 80TJ of legacy gas and 20TJ of non-legacy gas. Suppose further that, on the day, its customers only consume 95TJ. The non-Maui producer operates to nomination, but the Oaonui WP – operating on pressure control – “ignores” the 80TJ nomination and produces only 75TJ: ie just enough gas to maintain linepack. After the event, the shipper realises it only needed 75TJ of legacy gas and renominates accordingly. Since this is what Maui actually produced, there is no imbalance at Oaonui. And since linepack in the pipelines has remained constant, there can be no imbalances at other WPs either.
- 3.9 In summary, most gas is allowed to flow on “pressure control”, just as it always has. The “new world” looks very much like the “old world”, at least until legacy expiry.

### Legacy Balancing

- 3.10 Under these legacy arrangements, there is no requirement for balancing gas (see the Balancing Theme) except during interruptions to the Maui gas supply, since linepack is maintained at a constant level by the “legacy” WPs. In the light of this, there has been no urgency for the MDL CO to enter into any balancing gas contracts – although this fact does not seem to have been made clear to shippers. In effect, the legacy producer is the provider of balancing gas although what may have appeared to be balancing gas on the day becomes scheduled gas once *ex post* renominations have occurred.
- 3.11 However, there are two potential flaws in these arrangements, which suggest that they might not be sustainable even during the legacy period:

- the arrangements require that the legacy producer – and others with rights to legacy gas - are willing to continue to provide the swing gas needed to balance the pipeline: this may not always be the case (discussed below); and
  - the arrangements require that the Maui field is able to provide the swing gas needed to maintain linepack: this may not be the case during a Maui outage (discussed further in the next section) or if Maui production capacity is otherwise depleted.
- 3.12 Why might the legacy producer or a legacy shipper have concerns about the current arrangements? The problem is that it provides, at no charge, physical balancing for the whole pipeline system, including WPs and shippers not related to the legacy arrangements. In effect, it seems to be providing balancing gas (see Balancing Theme) for free.
- 3.13 There may be a solution to this problem: perhaps along the lines of paying legacy shippers for the amount of balancing gas deemed to be provided once *ex post* renominations are factored in. However, this might raise competition concerns, as it is difficult to see how any non-Maui balancing gas supplier could provide a similar service.
- 3.14 In summary, the current operational practice seems to sit in a no-man’s-land between two different access regimes and does not appear to be sustainable in the face of increasing penetration of non-Maui gas.

**Q2:** *Have we described the current balancing arrangements correctly? Do you think they are sustainable through the legacy period? If not, how do they need to change?*

### Maui Contingency

- 3.15 The need to call on balancing gas is likely to be greatest when there is a major production or pipeline outage. Unfortunately, if this affects Maui production, this may be when the existing arrangements are least able to cope.
- 3.16 This concern is potentially exacerbated by two consequences of the legacy arrangements:
- the MDL operator has not entered into any alternative balancing contracts and there is little commercial incentive for any person to assist with balancing without having a contract; and

- because WPs are exempt from imbalance charges in relation to Maui gas, there is no incentive for WPs – or the corresponding shippers - to help with managing any imbalances.
- 3.17 If the imbalances are not managed through the normal commercial framework, the inevitable outcome is that linepack becomes depleted and the NGOCP is triggered. It is possible that the NGOCP itself may be compromised by the legacy arrangements, since if a non-Maui gas customer (eg a major power station) is curtailed, its supplier may simply curtail an equivalent amount of production to avoid an imbalance. This would be to the detriment of the market and probably to the detriment of the supplier since it closes in gas which could otherwise have been delivered to market.
- 3.18 In short, there are significant concerns that the balancing arrangements built into the access arrangements may be ineffective in the event of a Maui production contingency.

**Q3:** *Do you agree with these concerns about Maui contingency arrangements? If so, what might be done to address these?*

### Legacy Expiry

- 3.19 If the current “legacy period” seems to amount to a phoney<sup>6</sup> open access, then what will happen at legacy expiry? We can envisage two possible scenarios for the legacy period and expiry:
- as more and more non-Maui gas flows, the balancing mechanisms begin to bite and shippers, operators and WPs will have become fully accustomed to these before legacy expires: ie a “soft landing”; or
  - legacy gas continues to be the swing gas supplier and so there are no balancing actions, costs or charges until legacy expiry; shippers, operators and WPs are then not prepared for them when they first occur: ie a “hard landing”.

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<sup>6</sup> For non-historians, the metaphor here is the “Phoney War” period of the Second World War, where war had been declared but nothing seemed to be happening – unless you were Polish that is.

- 3.20 Under the hard landing scenario, it is important that there is a plan to manage the transition. This might be complicated by the fact that the exact expiry date may not be known – except to Maui confidantes. It may seem premature to start planning now, but 2009 is not too far off.

**Q4:** *Do you agree that a transition plan is needed to manage the legacy expiry? If so, who should be responsible for developing this plan?*

### Preliminary Conclusions

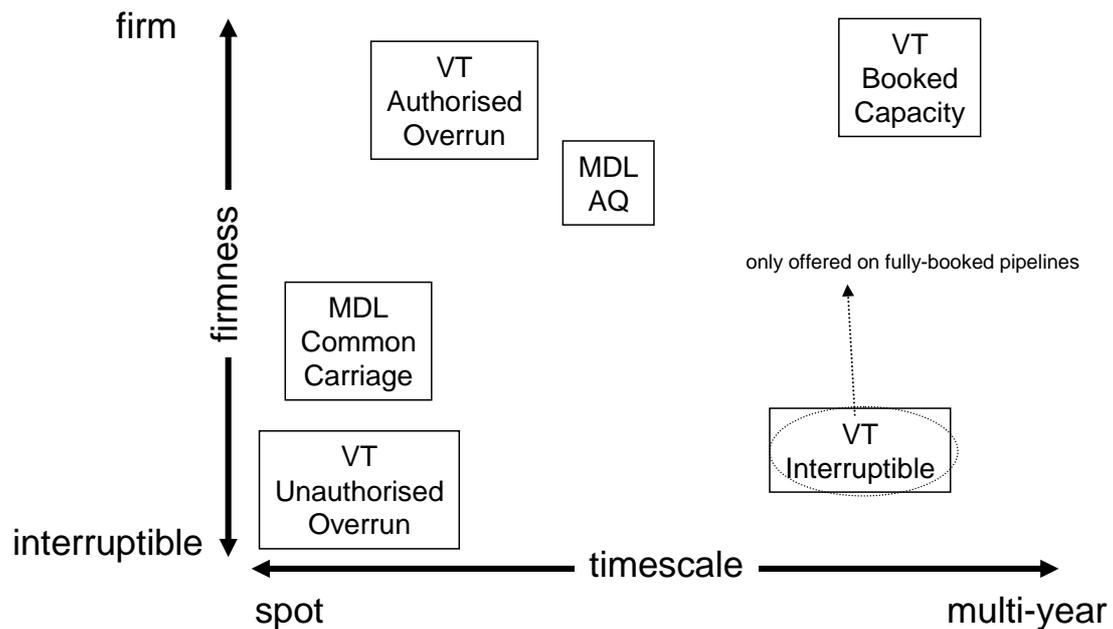
- 3.21 Even after speaking with all of the parties involved, we are unclear about the operational and commercial details of the current balancing arrangements. Whilst the specifics of the Maui Gas contract are commercially confidential, we think that the pipeline operators should be more open about how balancing is currently being undertaken and what their plans are for the future, both before and after legacy expiry.
- 3.22 We are also concerned about the capability of these balancing arrangements to manage imbalances and supply continuity, particularly in the event of a Maui contingency. The Wholesale Market Working Group is currently addressing the voluntary nature of the existing contingency arrangements and we think it would be appropriate for MDL CO to be invited to assist this group in that work.
- 3.23 Given the risk of a “hard landing” on legacy expiry, a transition plan is required. This plan would need to be in place by mid-2007 to allow sufficient lead time for regulatory solutions, and to allow for the uncertainty over when the legacy arrangements will end.

**Q5:** *Does the Legacy Theme identify all of the issues arising during the legacy period as a result of legacy rights? If not, what other issues should be considered?*

**Q6:** *Do you agree with the actions proposed to address the legacy issues? If not, what other options should be considered?*

## 4 Capacity Theme

Capacity Needs are not being met



### Theme Summary

Shippers have a need for a variety of capacity “products”: from very long-term to very short-term and from firm to interruptible. Do current arrangements provide the necessary product range?

### Issues Arising

- Does VT offer satisfactory short-term capacity?
- Does MDL’s Authorised Quantity satisfy shipper demand for firm capacity?
- Can Shippers switch between parallel pipelines?
- Do capacity products facilitate shipper competition?

## Overview

- 4.1 From a shipper perspective, pipeline *capacity* means the right to have gas transported along a pipeline. A capacity service offered by a pipeline owner will specify:
- the purchasing *timescale*: capacity may be “booked” some time ahead of need or purchase “spot” as and when it is needed; and
  - the *firmness*: in the event that demand for capacity exceeds (physical) supply, shippers with interruptible capacity may have their service curtailed, so that shippers with firm capacity can continue to enjoy the service.
- 4.2 MDL and VT have taken different approaches to marketing capacity. MDL’s main offering is spot, interruptible service, whilst VT mainly offers firm, long-term capacity. MDL and VT both allow booked capacity to be traded between shippers. VT also allows booked capacity to be “transferred” between locations.
- 4.3 MDL and VT pipelines run in parallel only between Waitara and Huntly, and so the scope for pipeline-on-pipeline competition is limited. However, pipelines do play an important role in facilitating shipper-on-shipper competition. Do existing capacity arrangements improve competition and **facilitate** access for new entrant shippers or instead, do they support or protect incumbents?

## VT Capacity Services

- 4.4 VT’s main offering is a firm, booked service. VT also offers an interruptible, booked service, but only on the “parallel pipeline<sup>7</sup>” and on other pipelines where firm service is already fully booked.
- 4.5 A shipper can acquire short-term (less than one year) VT capacity in 4 ways through:
- *authorised overrun*: this incurs a booking fee equal (in \$/day) to that for long-term capacity, plus a usage fee of eight times the long-term rate;

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<sup>7</sup> The VT pipeline that runs parallel to the MDL pipeline

- *unauthorised overrun*: this is not booked, but incurs a usage rate of ten times the long-term rate and also makes the shipper liable for any consequential damages if other, booked capacity services are interrupted;
- *capacity transfer*: a shipper can transfer booked capacity between pipelines for a specified period of a day or longer<sup>8</sup>; and
- *capacity trading*: capacity can be purchased from another shipper with booked capacity.

- 4.6 These options each have drawbacks for a shipper: overrun is very expensive; capacity transfer relies on a shipper having surplus booked capacity elsewhere; and capacity trading relies on another shipper having surplus booked capacity and also being willing to offer it to a competitor. In short, whilst unused physical capacity may be available, it may be uneconomic or impractical for a shipper to make use of it. (In contrast, MDL spot capacity is *always* available, at the same price as booked capacity, although there is a risk of curtailment should demand for this capacity exceed physical supply.)
- 4.7 The need for spot capacity is being considered by the Wholesale Markets Working Group. It is likely that some form of short-term capacity will need to be offered on MDL and VT pipelines in order to support the proposed new platform bilateral agreements for short-term gas trading. The VT overrun service may not be sufficient to adequately perform this role.
- 4.8 Spot capacity marketing may affect the market for booked capacity. For example, a shipper must currently book an amount of capacity close to the peak demand of its customer base on the relevant pipeline<sup>9</sup> to avoid significant usage of the costly overrun service. If spot capacity were available, the shipper might book less capacity and buy shorter-term spot capacity to cover the peak demand period: the lower the offered spot capacity price, the greater the impact on booked capacity. A lower level of booking would mean capacity prices needing to rise (assuming pipeline revenue is to remain unchanged), impacting those

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<sup>8</sup> Subject to VT approval, see VT Information Memorandum section 4.15.

<sup>9</sup> It may use some overrun at the demand peak. See discussion in section 13.9 of the VT IM.

customers and shippers with a flat demand profile and no existing requirement for spot capacity.

- 4.9 A lower level of capacity booking may also mean insufficient revenue certainty for VT should it be considering capacity expansion. On the other hand, if capacity is becoming fully utilised, shippers may become more inclined to book anyway, since availability of spot capacity would become uncertain.
- 4.10 An efficient and liquid capacity secondary trading market would ensure that spot capacity was always available, at a price that represented its value to shippers. However, this would still not “release” any *unbooked* physical capacity. In any case, the specificity of capacity and the level of shipper concentration make it unlikely that a liquid market would develop.
- 4.11 In summary, VT *does* provide short-term capacity, but at a high price. It also facilitates a secondary market in capacity trading and transfer. If short-term capacity were offered at a lower price, it might facilitate better interaction between electricity and gas markets, but it might also adversely affect the price and attractiveness of long-term capacity.

**Q7:** *Do current arrangements meet your requirements for short-term capacity on VT pipelines? If not, how might these arrangements be modified?*

### MDL Capacity Services

- 4.12 MDL’s main capacity offering is a “common carriage” service, where spot capacity is provided – and paid for - as required. Since capacity demand may exceed physical supply, MDL has a mechanism to ration or “curtail” spot capacity at such times. Thus, common carriage is not a firm service: it is provided only “as available”.
- 4.13 This risk of curtailment may be unsatisfactory for shippers that required firm capacity. For this reason, MDL also offers “authorised quantity” (AQ), which is booked for a year or more like conventional booked capacity. MDL has committed to restricting the amount of AQ sold to 70% of physical capacity.
- 4.14 In the event of curtailment, shippers holding AQ will have priority and will only be curtailed in the, unlikely, situation where physical capacity is substantially reduced. Thus, AQ seems, *prima facie*, to be broadly analogous to firm, booked capacity.

- 4.15 However, a number of issues arise. Firstly, the price for AQ is the same as the common carriage tariff, albeit levied on a take-or-pay basis. This will vary from year-to-year, meaning that purchasers of AQ will not obtain the level of price stability available under a conventional long-term firm capacity contract<sup>10</sup>.
- 4.16 Secondly, MDL makes no assurance about sufficient capacity being available to “back” AQ holdings, or that AQ holders will be able to make use of that capacity. Instead, AQ holders must obtain their comfort based on the provisions of the MPOC regarding AQ issuance and the nominations and curtailment process.
- 4.17 Finally, the current terms of the AQ service require that shippers notify MDL day-ahead of their intention to use it. If they do not do this – but then find, on the day, that they unexpectedly require it – it may be unavailable, having already been offered to common carriage shippers<sup>11</sup>.
- 4.18 Some shippers are under the impression that MDL has agreed to review AQ provisions when legacy arrangements expire in 2009, but the MDL CO has told us that this is a misunderstanding<sup>12</sup>.
- 4.19 In summary, whilst MDL does offer firm, booked capacity through its AQ service, its novel structure – and the lack of long-term fixed pricing - creates some doubt as to the level of its firmness compared to conventional alternatives.

**Q8:** *Do current arrangements meet your requirements for long-term, firm capacity on MDL pipelines? If not, how might these arrangements be modified?*

### The Parallel Pipelines

- 4.20 Where VT and MDL pipelines run in parallel, capacity on the MDL pipeline is around 10 times greater than on the VT pipeline and can easily accommodate
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<sup>10</sup> In contrast, shippers can potentially negotiate a long-term fixed priced deal with VT, although the standard offering is only for one year.

<sup>11</sup> This scenario is broadly analogous to a traveller with a confirmed flight ticket arriving late at the airport and finding that his seat has been sold to a standby customer.

<sup>12</sup> In any case, shippers can propose changes to the MPOC provisions at any time, through the MPOC modification process.

aggregate shipper demand. Therefore, if shippers have a real choice of which pipeline to use, one would expect VT's prices and/or terms would need to be competitive with MDL's, to avoid its capacity being unused<sup>13</sup>.

- 4.21 However, for this choice to exist, it needs to be feasible and practical for shippers flowing gas north from Waitara to use whichever pipeline has the lower capacity charges. We understand that shippers can do this currently: as long as they have booked the necessary VT capacity, they can "switch" between pipelines by making the appropriate nominations to MDL (at MDL-VT welded points) and notice to VT. VT offers interruptible capacity on their parallel pipeline<sup>14</sup>.
- 4.22 If the parallel pipelines were under a common owner, it seems likely that they would be jointly marketed (ie shippers would not need to specify which pipeline they wished to use) and would be operated according to RPO principles. A similar arrangement might be possible under current ownership, with MDL and VT jointly marketing the *aggregate* parallel capacity and then dividing the capacity revenue between them according to an agreed formula. Such an arrangement might lead to lower operation and transaction costs than the current arrangement, although shipper choice – and any associated competitive drivers – would of course be lost.
- 4.23 In summary, two alternative models exist for the parallel pipelines: competition or convergence. The former may give shippers greater choice but the latter may improve commercial simplicity and operational efficiency.

**Q9:** *Would you prefer to see capacity in the parallel pipelines to be marketed separately – as now – or jointly marketed as a single, virtual pipeline? What are the strengths and weaknesses of these alternatives?*

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<sup>13</sup> In its final report to the 2004 Natural Gas Control Inquiry, the Commerce Commission gave its view that competition for the provision of the transmission services is limited.

<sup>14</sup> It offers interruptible capacity on other pipelines as well, but only when they are already fully booked.

## Facilitating Competition

- 4.24 An objective of the Gas Industry Co is to minimise barriers to competition. This section considers whether the current capacity marketing arrangements achieve this objective.
- 4.25 One issue is whether capacity can be “hoarded” by shippers: booked not for intended use but rather with the intent of excluding new entrants. This is not possible with MDL capacity, because common carriage capacity is *always* made available, irrespective of existing AQ bookings: in colloquial terms, common carriage capacity is “use it or lose it”. However, shippers *could* hoard AQ, which might then deter new entrants seeking firm capacity.
- 4.26 VT, on the other hand, offers interruptible capacity on pipelines that are fully booked, subject to certain conditions including agreed nominations and curtailment processes<sup>15</sup>. However, since VT does not require nominations from users of firm capacity, it is not clear how such processes would work and the extent to which an interruptible shipper could make use of capacity not used by firm shippers.
- 4.27 A second issue is whether VT’s capacity transfer mechanism unduly advantages existing, larger shippers. A shipper with unused capacity on pipeline A, say, may be able to transfer this capacity to pipeline B, say, for a short period, in effect providing that shipper with spot capacity on pipeline B. However, a shipper with capacity booked only on pipeline B can obtain additional, spot capacity on that pipeline only by paying high overrun charges.
- 4.28 Another issue with the capacity transfer mechanism is that VT can, in effect, sell the same pipeline capacity twice. Although VT does not directly benefit from this, it can lead to a situation of a customer being charged twice.<sup>16</sup>

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<sup>15</sup> see section 3.4.2 of its Information Memorandum

<sup>16</sup> This has arisen where a customer has changed supplier mid-year. The old supplier must continue paying for the relevant booked capacity for the remainder of the year, and passes this cost through to the customer. The new supplier has transferred capacity from another pipeline in order to supply the customer, and also levies a capacity charge on the customer. In effect, VT has sold – and the customer is paying for - the same physical capacity twice over.

4.29 In summary, the MDL arrangements seem to better promote shipper competition than the VT arrangements.

**Q10:** *What barriers to shipper competition exist in MDL or VT capacity arrangements? How might these impediments be removed?*

### Preliminary Conclusions

4.30 VT does not currently offer a satisfactory short-term capacity service to support short term trading of wholesale gas. We would urge VT to develop such a product, in discussion with the Wholesale Market Working Group over the next six months. In this area our strong preference is for such a non-regulatory solution to be developed rather than for the Gas Industry Co to recommend an alternative solution to the Minister.

4.31 VT should clarify how it decides to make interruptible services available and on what terms. In particular, it should explain why it offers interruptible on the parallel pipeline, but only on other pipelines where these are fully booked.

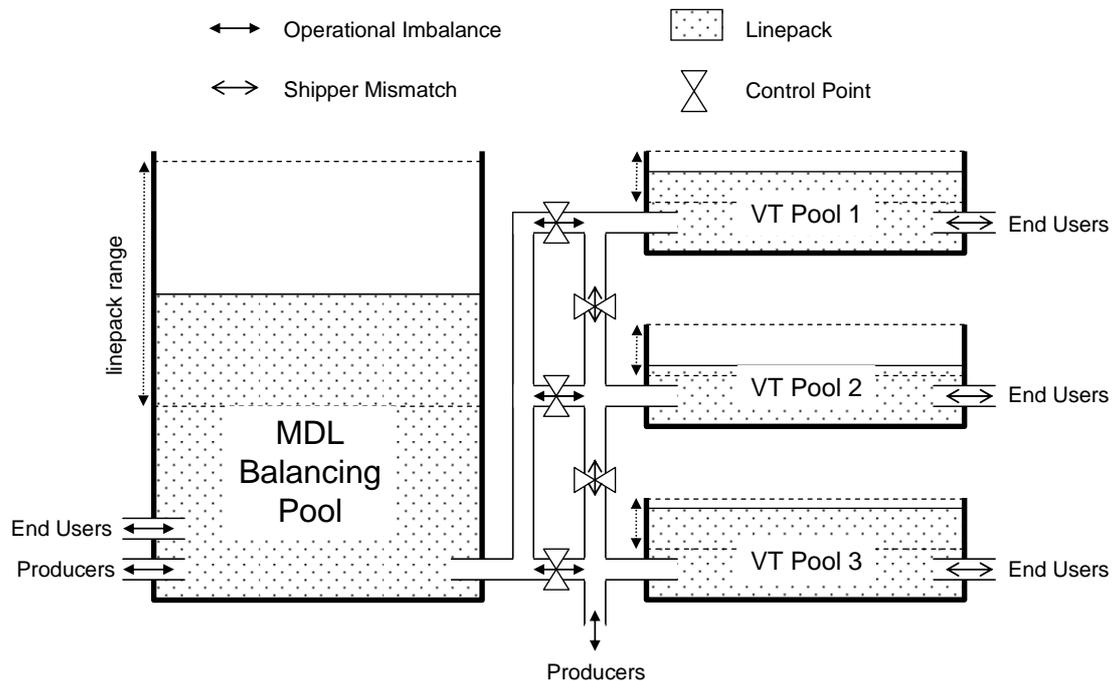
4.32 Where shippers are concerned about the firmness of MDL AQ service, we urge them to put specific issues – and proposed solutions – to MDL so that these can be assessed through the MPOC change process.

**Q11:** *Does the Capacity Theme identify all of the issues relating to capacity services? If not, what other issues should be considered?*

**Q12:** *Do you agree with the actions proposed to address the capacity issues? If not, what other options should be considered?*

## 5 Balancing Theme

### Too many Balancing Pools, too much Complexity



#### Theme Summary

Current arrangements divide the NZ pipeline system into 4 main balancing pools: (1 for MDL + 3 for VT). Is this necessary to reflect physical characteristics? If not, does it lead to unnecessary complexity and potential inefficiency?

#### Issues Arising

- Will multiple balancing pools lead to higher balancing costs?
- Does incidence of balancing costs affect operational decisions?
- Do multiple balancing pools add materially to transaction costs?
- What is the impact on customers?

## Overview

- 5.1 Gas Balancing (see Box 2) is an essential service that is provided by all pipeline companies..Whilst it is generally considered that the combined VT-MDL pipeline system could be balanced as a single system (and, in fact, has been so managed historically, using Maui gas as the balancing gas), the current arrangements provide for the MDL and VT pipelines to be balanced separately, albeit by a single company (VT) acting as operator for both pipelines.

### **Box 2: Gas Balancing**

As gas producers and consumers act largely independently, at any point in time it is unlikely that the total amount of gas injected into a pipeline will exactly equal the total amount withdrawn. The difference between the two is the pipeline imbalance.

In the absence of any operator action, any imbalance is drawn from linepack: a negative imbalance (withdrawals greater than injections) causes linepack to deplete; a positive imbalance (injections greater than withdrawals) causes linepack to accrue. Linepack capacity provides pipelines with an intrinsic tolerance to imbalances.

However, should linepack approach its upper or lower operational limits, the operator may need to take action to source or dispose of additional “balancing gas”, in relation to negative or positive imbalance, respectively. This balancing gas may come from a supply (producer) or demand (consumer) response or a combination of the two.

Pipeline operators will often enter into contracts with providers of balancing gas under which they may be called upon at short notice, with the balancing gas providers then receiving payments in accordance with the contract. Thus, “balancing costs” are incurred by the pipeline operator in the first instance, but are usually then recovered from shippers or WPs.

- 5.2 Furthermore, VT has decided to separately balance its three main pipelines<sup>17</sup>. Thus, the current arrangements have four separate balancing “pools”, where a single pool would be feasible – technically, at least.
- 5.3 Having separate balancing pools increases the complexity of balancing operations and charging. This may lead to higher balancing costs or to an unfair or inefficient allocation of those costs. Cost allocation may depend upon how an operator decides to manage the flow of gas between balancing pools.
- 5.4 Shippers who incur balancing costs are likely to pass these on to their customers. Indeed, the more complex and unmanageable these costs, the more likely they are to be passed on, irrespective of the customer’s ability to manage them. This may lead to adverse and unfair impacts on customers.

### Managing Balancing Costs

- 5.5 To minimise the level of balancing costs, a pipeline operator should call upon balancing gas in “merit order”: ie call the cheapest source first, then the next cheapest source and so on, until pipeline balance is restored.
- 5.6 Currently, where there are multiple balancing pools, operation may depart from this merit order ideal where one operator is not able to access a cheaper source of balancing gas because it is only available in another balancing pool and so must call on a dearer, local source. It is like being forced to shop at your local supermarket, when cheaper shopping may be available in a neighbouring suburb. Higher costs might arise where:
- the VT operator is unable to source balancing gas from the MDL pipeline linepack due to restrictions on, or charges for, OI;
  - the VT operator is unable to source balancing gas from MDL shippers;
  - MDL is unable to source balancing gas from VT producers; and

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<sup>17</sup> the Southern, Bay of Plenty and Northern Pipelines. It has other minor pipelines which will also be separately balanced.

- general practical impediments prevent operators from identifying or sourcing non-local balancing gas within the necessary balancing timescale.

### **Box 3: Operational Imbalance**

Where two pipelines interconnect, they need to agree how to manage gas flows at the interface. A common approach is an operational balancing arrangement (OBA), where the pipelines aim to allow an agreed “scheduled quantity” to flow and to manage any “operational imbalance” (OI) - deviation from this quantity - so as to minimise its cumulative impact.

OBA principles apply at all interconnection points between the MDL and VT pipelines. The scheduled quantity is based on nominations on the MDL pipeline. VT – who controls the gas flow at the interface – must manage OI so as not to exceed specified limits. Where these limits are exceeded, MDL may levy a charge on VT, reflecting the burden that the OI has placed on MDL’s pipeline balancing.

In summary, an OBA allows interconnecting pipelines to share each other’s linepack, but only up to specified limits and with the proviso that any “borrowing” of linepack is repaid over time. In NZ, the MDL-VT OBA in effect provides VT with a major source of “free” balancing gas.

- 5.7 These concerns can be – and are to a significant extent – mitigated through, firstly, OI tolerances at VT welded points and, secondly, through special nomination provisions for balancing gas providers. However, these mitigations (especially the first) can give rise to concerns that VT (as an MDL WP) receives unduly lenient treatment compared to other WPs. Furthermore, the process for setting OI limits is a source of uncertainty and confusion.
- 5.8 In summary, the current arrangements may lead to higher balancing costs than if all transmission pipelines were operated as a single balancing pool by a single operator.

**Q13:** *Will having multiple balancing pools lead to higher balancing costs than under a single-pool arrangements? Is a single pool feasible, given the current ownership structure and capacity arrangements?*

### **Operator Decisions affect Cost Allocation**

- 5.9 There is a concern that an operator may not even use the cheapest source available locally where, to do so, would adversely affect certain shippers or WPs.

This may be as a result of how its sourcing decision impacts the allocation of costs between balancing pools, or between shippers within a balancing pool.

5.10 For example:

- VT balancing provisions mean that shippers are only charged for balancing gas when a cash transaction occurs. VT may therefore prefer to source balancing gas on a borrow/lend basis (eg through MDL OI) even though this may give rise to higher future costs or risks; and
- MDL balancing provisions mean that WPs are only charged for balancing costs when excess OI is cashed-out. Other balancing costs will simply accrue within the operating “cost centre” and be recovered from MDL shippers through the following year’s capacity tariff<sup>18</sup>.

5.11 These concerns could be mitigated somewhat by:

- establishing a single balancing pool (although the concerns may still apply to how costs are allocated within that pool);
- managing operator conflicts of interest (see Operators Theme), so there is no question that an operator is making decisions which favourably impact the balancing charges of affiliates; and
- developing clear and transparent operating procedures and guidelines which have an objective of minimising balancing costs overall.

5.12 In summary, operational decisions will affect the way that balancing costs are allocated between parties. This linkage could influence operator decision-making, to the potential detriment of balancing efficiency.

**Q14:** *Is the allocation of balancing costs likely to affect operator decisions? If so, might this lead to higher balancing cost overall or to inappropriate cost allocation? What could be done to address this?*

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<sup>18</sup> The MPOC allows “Tariff 2” to recover any operating costs not recovered from shippers in the previous year.

## Transaction Costs

- 5.13 A related issue is the cost of managing and settling multiple balancing pools. Allocation of costs between the MDL and VT pools is relatively straightforward: MDL will only charge VT for balancing where the OI exceeds specified limits. However, it relies on the setting of OI limits, which may be complex and contentious.
- 5.14 The allocation of costs between VT balancing pools is potentially made more complex by the need to account for both physical imbalances and OI trading between these pipelines<sup>19</sup>. Physical imbalances must be measured (ie an OI must be defined) and this implies the need for a nominations regime or something similar on the parallel VT pipeline, so that a “scheduled quantity” is defined. OI flows and trades must then be accounted for by “shadow transactions” between the different pipeline pools, which implies a need to price the trades. These potentially complex issues are discussed in some detail in VT’s 2006 IM<sup>20</sup>.
- 5.15 An obvious potential solution would be for VT to have a single balancing pool instead of multiple pools. However, this could mean shippers essentially getting free transport on the MDL pipeline to the extent of their mismatch<sup>21</sup>.
- 5.16 In summary, the way in which balancing arrangements are split between the MDL and VT pipelines has led to VT further splitting balancing between individual VT pipelines. This has the potential to create further complexity and cost.

**Q15:** *Are the VT arrangements for allocating balancing costs unduly complex? If so, how might they be simplified?*

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<sup>19</sup> a physical imbalance is analogous to an operational imbalance between two VT pipelines. OI trading is where one VT pipeline’s OI with MDL is “sold” to another VT pipeline (with opposite OI).

<sup>20</sup> section 13.11

<sup>21</sup> This problem arises because MDL capacity charges are levied based on nominations rather than “actual flows”, so shipper mismatch arises only on the VT pipeline and can only be charged for on this pipeline. This issue would also need to be addressed if a single, combined MDL-VT balancing pool were to be implemented.

## Impact on Customers

- 5.17 The complexity described above means that it is very hard for shipper's to gauge or manage their likely balancing charges. An obvious – and apparently common - response is to pass these charges on to customers, which solves the problem for shippers but not for customers, who may be even less able to manage these charges.
- 5.18 If a customer is able to forecast and manage its demand, a shipper may only levy balancing charges to the extent actual demand differed from forecast<sup>22</sup>. If all customers were able to do this, pipeline imbalance – and hence balancing costs – would be reduced.
- 5.19 However, such an arrangement would not be practical for smaller customers. If balancing charges are passed onto these customers, the end result will simply be to increase their costs and potentially lead them to seek alternative energy sources.
- 5.20 In summary, the structure of balancing charges may be better suited to large customers than to small, “retail” customers. However, it is not clear whether having a different structure for retail customers would be appropriate or practical.

**Q16:** *Will current arrangements lead to unfair or unreasonable balancing charges being levied on small customers? If so, how might this be ameliorated?*

## Preliminary Conclusions

- 5.21 Gas Industry Co considers that current pipeline balancing arrangements are potentially inefficient, complex and unfair. This position is not yet supported by practical evidence, because no balancing charges have been levied - on either pipeline: indeed, charges are unlikely for some time, possibly until the end of the legacy period (see Legacy Theme).

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<sup>22</sup> Since this “variance” could cause the shipper to have a mismatch and so incur balancing charges from the pipeline operator.

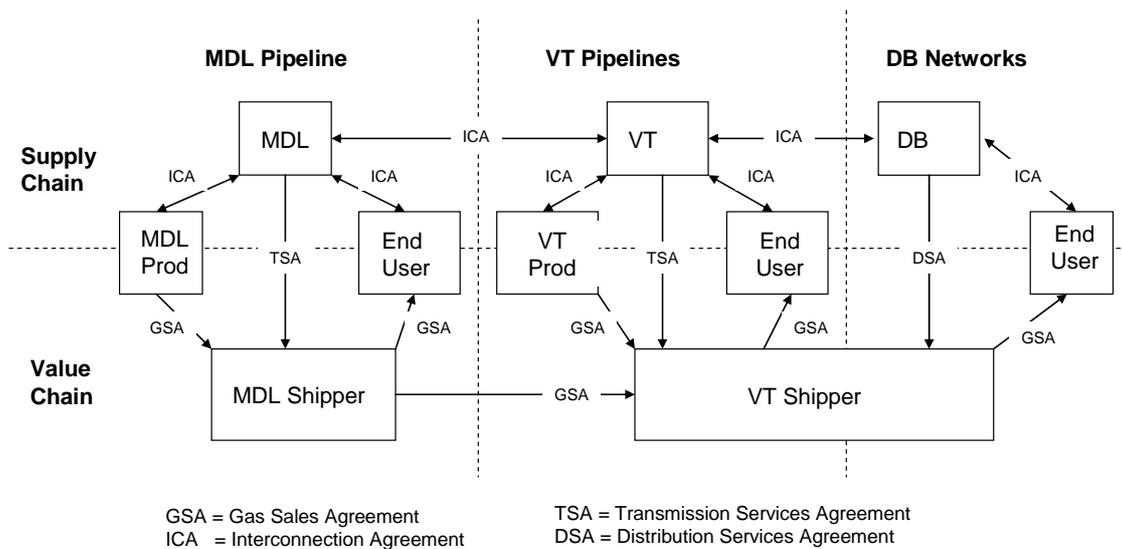
- 5.22 Furthermore, pipeline operators with responsibility for managing balancing operations and settlements are still working through some of the procedural details which may turn out to ameliorate some of our concerns.
- 5.23 Gas Industry Co urges MDL and VT to expedite their procedure development, to consult with shippers on these and to ensure that the operating procedures – and the corresponding balancing operations – are as transparent as possible.
- 5.24 There is a need for pipeline operators to help shippers to understand how these procedures operate, how shippers are likely to be affected by them and what actions shippers can undertake to mitigate the associated commercial risks.
- 5.25 Gas Industry Co would expect to see substantive progress on these matters over the next six months. We will then undertake a specific review to see if any changes are justified to achieve the objectives of the Gas Act. This will give the industry sufficient time to implement and bed down the new arrangements prior to the expiry of the legacy period.

**Q17:** *Does the Balancing Theme identify all of the issues relating to pipeline balancing? If not, what other issues should be considered?*

**Q18:** *Do you agree with the actions proposed to address the balancing issues? If not, what other options should be considered?*

## 6 Quality Theme

### Shippers should not be responsible for Gas Quality



#### Theme Summary

To what extent should shippers be involved, or be quarantined from, matters relating to gas quality: ie pressure, composition and odourisation. How should this be reflected in the contractual framework?

#### Issues Arising

- Contractual responsibility should align with operational responsibility
- Current arrangements for gas pressure
- Current arrangements for gas composition
- Current arrangements for gas odourisation

## Overview

- 6.1 The previous two themes covered two aspects of the supply chain – capacity and balancing – which involve close interactions between shippers and pipeline operators: the former managing their gas flows according to their transportation rights and the latter managing any deviations from these requirements.
- 6.2 However, there are other essential aspects of the supply chain which directly involve, not shippers, but welded parties (WPs). These aspects – referred to here as “gas quality” and covering gas pressure, gas composition and gas odourisation - are the subject of this theme.
- 6.3 Operationally, each of these aspects is managed by WPs and pipeline operators. Shippers do not and cannot operate in these areas. We would expect this *operational* practice to be reflected in the commercial framework (ie the various contracts between shippers, WPs and pipeline owner) which governs gas transportation. However, this is not always the case.
- 6.4 The next section describes what we consider to be the essential characteristics of an effective commercial framework for managing interconnection issues. The following sections then evaluate current practice against this model framework for each of the three aspects of gas quality.

## A Model Commercial Framework

- 6.5 The model framework in this section is based on the principle that, as far as possible, parties should only be responsible for risks that they can manage. In the context of this theme, this means that, since WPs necessarily have operational responsibility for interconnection issues, they should also have commercial responsibility. This implies the following three key characteristics for a model framework.
- 6.6 Firstly, gas supply agreements - contracts in the “title chain”, from producers to wholesalers to retailers to customers - should not place obligations relating to gas quality. So whilst each participant in the title chain must be held responsible for *arranging* delivery of gas to the next person in the chain, they should not be held responsible for the quality of gas delivered.
- 6.7 Secondly, arrangements between pipeline owners and WPs, whether specified by code or contract, must adequately cover gas quality. They should describe the relevant quality standards and tolerances, the operational obligations on

each party required to conform to these standards and the operational and commercial responsibilities and remedies should these standards be breached.

- 6.8 Thirdly, TSAs between pipeline owners and shippers, whilst they may refer to gas quality, should not place any obligations on shippers and should place obligations on pipelines only to the extent that these are consistent with ICA provisions.
- 6.9 In principle, these characteristics should feature in distribution as well as transmission arrangements. Generally practical or desirable for DBs to have separate ICAs with end-customers, whose sole contract is with its retailer. However, there is no reason why an interconnection code could not apply, and be enforceable, between end customers and the distributors who supply them.

**Q19:** *Do you agree that responsibility for gas quality should be placed solely on WPs? If so, how should this be done? If not, what aspects should shippers remain responsible for?*

### Gas Composition

- 6.10 Gas composition in all open access pipelines in NZ must comply with the relevant New Zealand standard: NZS 5442:1999. This standard specifies limits for various characteristics and components of gas to ensure that it can safely be transported and used in the range of existing gas appliances.
- 6.11 On the MDL pipeline, the MPOC unambiguously attributes all responsibility for gas composition to injecting WPs. Shippers take no responsibility. We are not familiar with the GSAs operating on the MDL pipeline and do not know to what extent these refer to gas composition. As far as we are aware, therefore, the MDL commercial framework appears to be consistent with our model framework.
- 6.12 For historical reasons, arrangements are different on VT pipelines. Until recently<sup>23</sup>, VT has not had ICAs with its WPs and so has placed commercial responsibility for gas composition on shippers under TSAs. Shippers then transfer this risk up the title chain through the GSAs negotiated with their gas

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<sup>23</sup> VT has recently established ICAs with MDL and with new VT producers

suppliers. This provides a “line of sight” through various contracts to the operationally responsible party – the producer.

- 6.13 The VT arrangements are obviously inconsistent with our model framework. However, we understand that VT is in the process of developing and negotiating ICAs with producers and distributors and would expect these to better conform to our model framework.
- 6.14 Since gas composition requirements are common across all open-access pipelines, elements relating to the monitoring, management and notification of gas composition should be common across all ICAs: with MDL and VT.

**Q20:** *What changes should be made to existing arrangements in relation to gas composition?*

### Gas Pressure

- 6.15 The MPOC specifies maximum and minimum operating pressures on the MDL pipeline. The maximum limits are some way below the engineering limits of the pipeline itself, due to limitations at some welded points.
- 6.16 As part of the scheduling process, the MDL SO also establishes a “Target Taranaki Pressure”: the pressure in Taranaki which the operator believes is necessary to deliver all shipper approved nominations and to provide some spare gas for contingency and offtake variations. Normally it will be in the 42 to 48 bar gauge range, but MDL is required to use reasonable endeavours to manage it to be as low as possible. This would minimize the compression costs for injecting WPs. Those parties must still be prepared to inject against pressures, up to the MAOP of the pipeline if necessary, but MDL is required to give them 12 months notice if it this is likely to be outside the 42 to 48 bar range.
- 6.17 MDL is responsible for receiving and delivering scheduled quantities of gas at operating pressures within these limits, although it is indemnified against having to compensate WPs should it fail to do so. Should a breach of the minimum limit be caused by the excess operational imbalance of a WP, that WP would be liable to provide the compensation. Compensation amounts are specified in the MPOC, through the “incentive pool” arrangements.
- 6.18 Thus, responsibility for pressure control lies between MDL and its WPs. Shippers cannot be held responsible. Although shipper nominations indirectly affect pressure levels, should these nominations be likely to cause pressures to

breach operating limits, they would be curtailed in the scheduling process. Therefore, the MPOC conforms to our model approach.

- 6.19 As with gas composition, VT's lack of ICAs with downstream WPs mean that rights and obligations in relation to pressure are placed with the shipper through its TSA. VT recognises that this situation is unsatisfactory and is taking steps to address it<sup>24</sup>. In summary, VT's arrangements do not conform to our model framework.

**Q21:** *What changes should be made to existing arrangements in relation to gas pressure?*

### Gas Odourisation

- 6.20 Natural gas is odourless. Odorant is a chemical which is added to gas to give it a strong and distinctive smell. This makes even very small gas leaks easy to detect. Odourisation is therefore a key contributor to gas safety.
- 6.21 The handling and injection of odorant into the gas stream requires specialist skills and equipment. To assess if adequate odour is present, gas needs to be sampled at its point of use since the effectiveness of odorant tends to "fade" as it is carried through pipelines.
- 6.22 Odorant can contaminate catalysts used at petrochemical plants. For this reason odorant is not present in the MDL pipeline (which supplies gas to the Methanex plants) or in VT's Frankley Road pipeline (which supplied gas to the Ammonia Urea plant at Kapuni. All other transmission and distribution pipelines carry odourised gas.
- 6.23 Odorant is normally injected at receipt points into VT's pipelines or, where distribution networks are fed directly from the Maui pipeline or the Frankley Road pipeline, at delivery points onto those networks.

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<sup>24</sup> Section 2.3.2 of VT's October 2005 Transmission System Information Memorandum.

- 6.24 Under Regulations, odourisation is the responsibility of the “gas supplier”<sup>25</sup>, which has been interpreted by the industry to mean the gas retailer rather than the pipeline owner. Retailers cannot, of course, control odourisation, but instead arrange for distributors to regularly sample gas close to its point of use.
- 6.25 VT’s standard TSA provides that, where VT injects odourant it does so at a level in accordance with the relevant NZ standard<sup>26</sup> and undertakes to conduct spot checks from time to time. However, VT accepts no liability for any loss incurred by a shipper arising from loss of odourisation.
- 6.26 In summary current arrangements seem to place odourisation responsibility on the retailer, although it is VT who manages it operationally. This does not align with our model framework.

**Q22:** *What changes should be made to existing arrangements in relation to gas odourisation?*

### Preliminary Conclusions

- 6.27 In relation to interconnection issues, MDL arrangements broadly align with our model framework, but VT arrangements do not. However, we understand that VT is currently making changes to their arrangements: negotiating ICAs with all WPs and making corresponding changes to their standard TSA. The governance issues which arise in relation to these arrangements are discussed in Section 11.
- 6.28 Aspects of gas quality which are common to the MDL and VT pipelines (specifically, gas composition) should be specified in an “interconnection code” (see Governance Theme), with which all ICAs should comply. MDL, VT and WPs should develop and agree the contents of this code.

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<sup>25</sup> Section 5 of the Gas Regulations 1993 states that “Every supplier of gas shall ensure that the gas supplied has a distinctive and unpleasant odour so that the presence of gas in the atmosphere is readily detectable at a concentration equivalent to one-fifth of the lower flammability limit of the gas.”

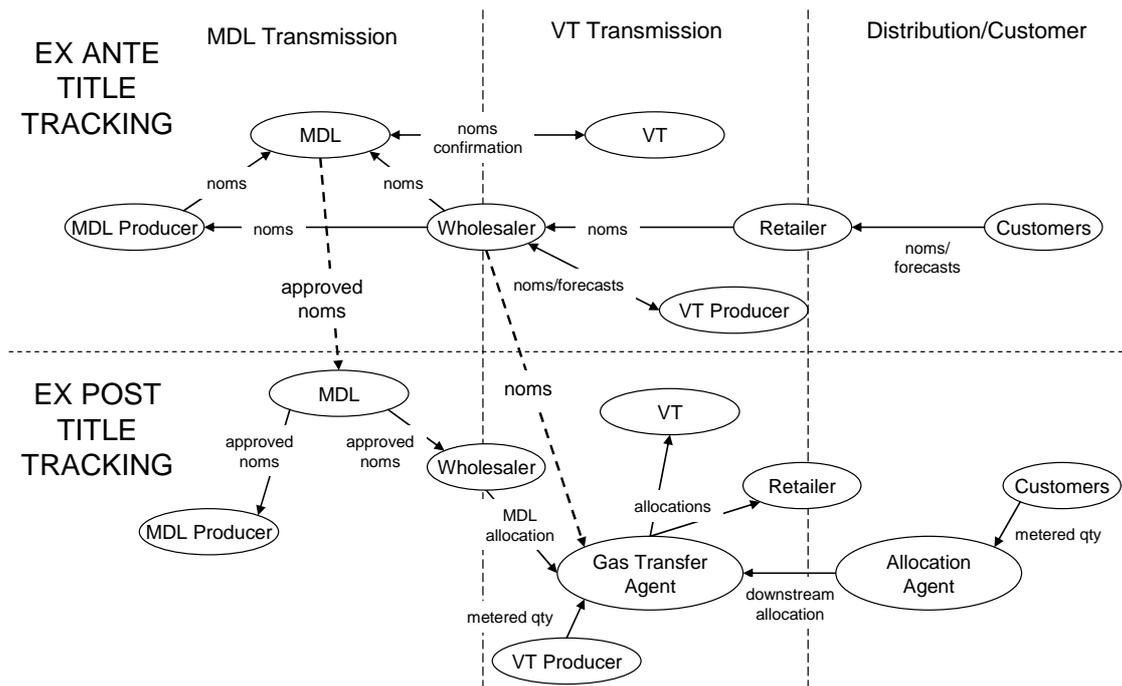
<sup>26</sup> New Zealand Standard 5263:2003: Gas Detection and Odourisation

**Q23:** *Does the Quality Theme identify all of the issues relating to gas quality? If not, what other issues should be considered?*

**Q24:** *Do you agree with the actions proposed to address the quality issues? If not, what other options should be considered?*

## 7 Title Tracking Theme

It is easy to lose Track of Gas Title



### Theme Summary

Where title to gas is transferred at points on the pipeline system, what are the appropriate roles of shippers and WPs? How should transfer arrangements interface with scheduling and allocation processes? Are existing arrangements efficient and effective?

### Issues Arising

- Role of pipeline owners in title tracking
- Role of WP in title tracking
- Should *ex ante* and *ex post* title tracking be brought together?

## Overview

- 7.1 The first 3 themes considered aspects of the supply chain. The next two themes consider aspects of the title chain and how they may affect the operational efficiency of gas supply. This theme deals with “title tracking”: capturing and processing the multitude of gas trades that take place along the title chain.
- 7.2 Under current arrangements, gas trading may take place at any receipt point on the MDL or VT pipelines (including MDL-VT interconnection points), but not at other welded points or within a pipeline.
- 7.3 Gas trading, *per se*, is outside the scope of this paper and is being progressed through Gas Industry Co’s wholesale markets workstream. However, it is of interest to this review where it impacts on pipeline access (through obligations placed on shippers or WPs) or operation.
- 7.4 Gas title tracking takes place in two timescales (see Box) which this paper refers to as “*ex ante*” and “*ex post*”. Both processes, in their own way, are vital to efficient operation of the supply chain – scheduling and balancing, respectively – as well as, of course, being intrinsic to gas trading. Interestingly, though, they are operated and governed quite differently.
- 7.5 The MDL pipeline uses a “flow-on-nomination” protocol, which means that *ex ante* and *ex post* title quantities are identical<sup>27</sup>: whatever a shipper nominates, it gets. In contrast, *ex ante* and *ex post* quantities on the VT pipelines are generally quite different. This appears illogical - since there should be enough gas to “go round” – and may be a consequence of legacy arrangements (see Legacy Theme).

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<sup>27</sup> The only exception to this rule is when nominations are curtailed – as a result of gas or capacity shortages – discussed further below.

#### **Box 4: Title Tracking Processes**

“Title Tracking” is the process of determining ownership of the gas that is injected into or withdrawn from pipelines at each welded point. The process takes place in two timescales: prior to gas scheduling (“*ex ante*”) and after gas metering and allocation (“*ex post*”).

In the *ex ante* title tracking process, nominations must be made along the title chain (from customer to retailer to wholesaler to producer) and also along the supply chain (from shipper to pipeline operator, but only in relation to MDL gas flows). Each nomination quantity must take into account all relevant downstream trades, nominations and consumption forecasts. For example, a shipper nominating at a receipt point may be selling that nominated quantity to a range of wholesalers, retailers and customers according to fixed, nominated or forecast quantities. It must successfully and accurately estimate and aggregate these quantities, otherwise it or its customers will not obtain all of the gas that they require.

The *ex post* title-tracking processes begins on the MDL pipeline, where the “flow-on-nomination” allocation protocol applies, meaning each MDL shipper has title to the amount of gas that it nominated: ie its *ex post* amounts are deemed equal to its *ex ante* amounts. The title amount for each MDL shipper is then shared between various VT shippers, according to “gas transfer rules” specified in the relevant gas supply agreements. These rules may refer to fixed, nominated or (downstream) allocated amounts and can be quite complex. In fact, the only constraint on these rules is that all gas must be allocated, so that no “untitled” gas flows into VT pipelines.

#### **Role of Pipeline Owners**

- 7.6 *Ex post* title tracking must follow a process specified in the Gas Transfer Code (GTC)<sup>28</sup>. This Code – given force through the MPOC and VT TSAs – requires every shipper to be party to a gas transfer agreement, which contracts a Gas Transfer Agent to carry out the necessary processes. It also contains various rules to ensure that the tracking results are timely and accurate.

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<sup>28</sup> At VT receipt points. The GTC does not apply to MDL receipt points.

- 7.7 In contrast, the MPOC and VT TSAs are largely silent in relation to *ex ante* title tracking. While the MPOC requires that the *results* of the process are formally notified to MDL through the nominations process, VT does not require any such notification<sup>29</sup>. Thus, title tracking processes are carried out according to the requirements of the various gas supply agreements (GSA) along the title chain, each of which are bilaterally agreed between the relevant buyer and seller.
- 7.8 Given the perceived need for governance of *ex post* title tracking by pipeline owners, an obvious question is whether there is a similar need for governance of *ex ante* title tracking. (Or, conversely, since *ex ante* title tracking is *not* governed whether there is a need for governance of *ex post* title tracking.)
- 7.9 The GTC was developed because VT felt it important to know whose gas was flowing into its pipelines. This information is needed for settlement of transport and balancing charges. Without a formal process, VT was concerned that inaccuracies or disputes may arise and settlement may be delayed.
- 7.10 *Ex ante* title tracking cannot be delayed, since it must take place before (or during) the gas day, to allow nominations (or renominations) to occur. However, it may nevertheless be incomplete or inaccurate. The consequence of this would be that an inappropriate amount of gas was scheduled and substantial imbalances could arise. This would seem, *prima facie*, to be at least as important as a delay in settlements.
- 7.11 A more formal process may also assist parties on the title chain by reducing operational overheads. However, if this were the only benefit, the issue may better be picked up by the reconciliation workstream.
- 7.12 In summary, the lack of any pipeline oversight of the *ex ante* title tracking process seems anomalous when contrasted with the *ex post* arrangements. Any *ex ante* title tracking errors could have adverse consequences for pipeline operations.

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<sup>29</sup> Except under specific circumstances, such as for power stations or where a shipper is using interruptible capacity.

**Q25:** What role should the pipeline owner perform in relation to *ex ante* or *ex post* title tracking?

### Role of Welded Parties

- 7.13 Perhaps in recognition of its importance, MDL *does* endeavour to inject some quality assurance into the *ex ante* title tracking process, by requiring – through the MPOC - that WPs approve nominations and, by implication, filter out any erroneous nominations. For producer or customer points, this has a clear rationale, as the WP is likely to be the seller or buyer of gas at that point, respectively.
- 7.14 However, at VT welded points, the rationale is less compelling. VT is unlikely to be in a position to know whether the nominations are appropriate or reasonable: firstly, because it has no nominations regime on its own pipelines; secondly, because it will not have any *ex ante* title tracking information. Indeed, shippers nominating at the MDL welded point may not even be VT shippers and may therefore have no commercial relationship with VT whatsoever. In practice, then, VT is unlikely to be able to do any more than confirm whether the proposed scheduled quantity (the aggregate of nominations) is reasonable and physically feasible.
- 7.15 This raises two questions. Firstly, is it necessary or appropriate to provide VT with confidential shipper nominations (with the associated confidentiality concerns)? The answer to this question is “perhaps”: it’s not ideal, but in the context that VT receives much shipper information anyway, it is perhaps not too much of a concern.
- 7.16 Secondly, would another party – the gas transfer agent for example - be better placed to approve the nominations? The answer here is: yes, if there were a formal *ex ante* title tracking process carried out by the gas transfer agent – although then the agent may be doing no more than checking its own calculations. However, without such a process, the gas transfer agent will be no better informed than VT – particularly as *ex ante* and *ex post* title amounts may be quite different.
- 7.17 Similar issues might arise at MDL producer welded points where there are multiple producers (eg Pohokura) or whether there are additional, secondary gas transfers taking place apart from the primary sales of gas from producer to MDL shipper. Again, the WP may not be able to verify the accuracy of the nominations to MDL.

7.18 In summary, it is questionable whether the WP is the appropriate person to confirm nominations at certain welded points.

**Q26:** *Who should be responsible for confirmation of nominations at different welded points?*

### Bringing Ex-ante and Ex-post Processes together

7.19 As noted above, since *ex ante* and *ex post* title amounts are equal on the MDL pipeline (as a result of the flow-on-nomination protocol) it should be possible – and simple – for them to similarly equate on the VT pipeline.

7.20 For example, suppose that VT shippers A and B buy gas from MDL shipper X. If A nominates 30TJ (to shipper X) and B nominates 40TJ, X knows that it requires 70TJ of gas, and nominates this to its producer and to MDL. *Ex post*, X will always be allocated 70TJ (except if nominations are curtailed, discussed in the next section) and can transfer 30TJ to A and 40TJ to B. What could be simpler?

7.21 Actual practice is not so simple, for three reasons:

- legacy arrangements allow MDL nominations to be changed retrospectively (see Legacy Theme) and gas sales agreements between legacy shippers reflect this;
- even where non-legacy gas is involved, existing contracts may give shippers the right to purchase amounts based on downstream allocation rather than the amount nominated; and
- VT producers do not have OBAs with VT and so may produce (and so have to transfer) more or less than was nominated.

7.22 However, if it were possible in the future (eg post-legacy) to equate the two, a number of issues might be resolved:

- accuracy of nominations and scheduled quantities could be ensured by applying (and adapting as necessary) the GTC to the *ex ante* title tracking process;
- nominations could be made to VT at the same time as they are made to MDL;
- VT (as WP) would be able to confirm to MDL whether the aggregate nominations on the MDL side of the MDL-VT interconnection point equalled the aggregate nominations on the VT side; and

- *ex post* title tracking would become trivial – simply equating quantities with approved nominations.

7.23 In short, extending flow-on-nomination to title tracking on VT pipelines seems, at first sight, to be attractive. However, it would not be possible during the legacy period.

**Q27:** *Would there be benefits from equating ex ante and ex post title quantities: in effect, having flow on nomination at VT receipt points? What are the practical impediments to implementing this?*

### Title Tracking under Contingency

- 7.24 Under the MPOC, contingencies – such as producer or pipeline equipment outages – may lead to curtailment of nominations on the MDL pipeline which, through the flow-on-nomination protocol, will cause an equivalent impact on MDL allocations. This will, in turn, affect the *ex post* title amounts of VT shippers, since an MDL shipper must transfer its entire allocation/nomination and no more.
- 7.25 The way that this is done will be critical for VT shippers, since it will determine their mismatches and hence their balancing charges - which are likely to be high under contingency conditions. Curtailment of title quantities needs to be clearly specified in gas transfer rules. We do not know if this is currently the case.
- 7.26 If *ex ante* and *ex post* title amounts were to equate – as discussed in the previous section – curtailment of the VT nominations would take place *ex ante*, just like MDL nominations at present. VT shippers would then know in real-time how they were to be affected<sup>30</sup> and they could take corresponding actions to curtail their customers in order to manage their emerging mismatch positions. Such actions will, of course, help to stabilise the contingency situation and may help avoid the need to invoke the NGOCP.

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<sup>30</sup> In relation to receipt quantities. They are unlikely to know delivery quantities, as discussed in the Allocation Theme.

- 7.27 In summary, there is a need to ensure gas transfer rules are specified for contingency conditions. Furthermore, equating *ex ante* and *ex post* title tracking would seem to assist pipeline balancing under contingency conditions.

**Q28:** *Do you think that the title tracking arrangements will operate successfully under contingency conditions? If not, how should they be changed? Would extended flow-on-nomination arrangements help?*

### Preliminary Conclusions

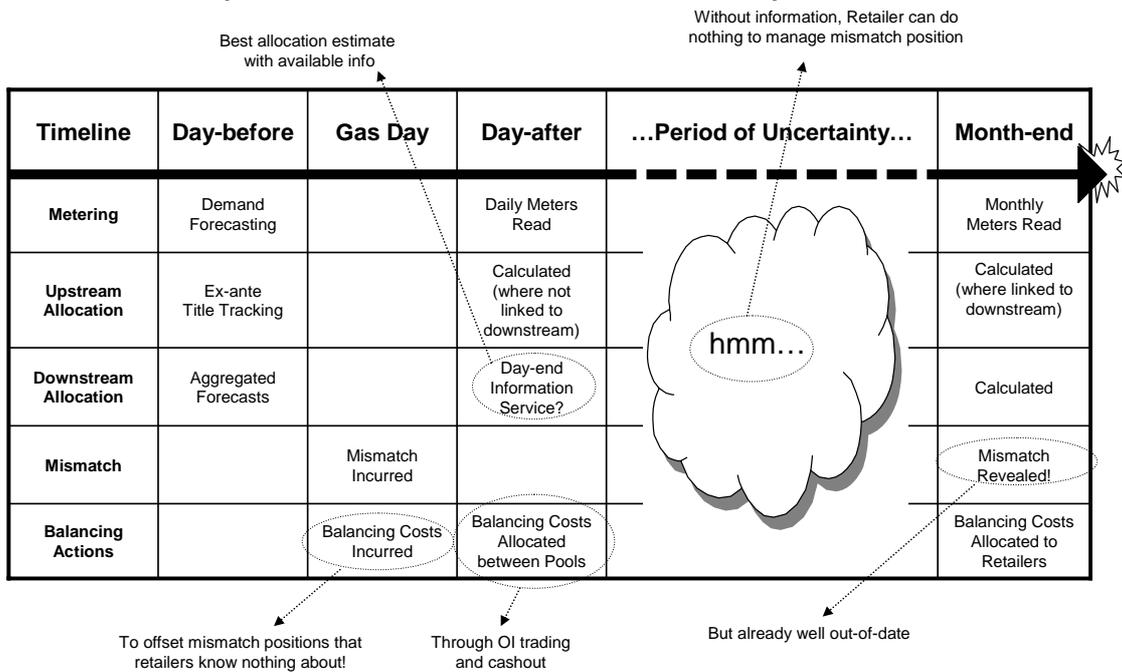
- 7.28 Existing title tracking processes are complex and cumbersome, creating operational risks which could lead to problems in pipeline operations or settlements, in relation to *ex ante* and *ex post* timescales, respectively. Much of the complexity stems from legacy arrangements and so may diminish on legacy expiry.
- 7.29 The pipeline owners have taken some measures to mitigate these risks: MDL requires nominations to be confirmed by WPs; VT requires *ex post* (but not *ex ante*) title tracking to comply with a Gas Transfer Code. However, Gas Industry Co does not believe that these measures are sufficient to manage risks, particularly during contingencies, where gas transfer rules may need to be clarified.
- 7.30 Gas Industry Co considers that title tracking would be simpler and more robust if *ex post* title quantities were deemed equal to *ex ante* quantities: in other words, if flow-on-nomination were extended to VT receipt points. We realise that this is infeasible under legacy arrangements, but consider it a sensible goal post-legacy.

**Q29:** *Does the Title Tracking Theme identify all of the issues relating to title tracking? If not, what other issues should be considered?*

**Q30:** *Do you agree with the actions proposed to address the title tracking issues? If not, what other options should be considered?*

## 8 Allocation Theme

### Monthly Allocation is no use in a daily Market



#### Theme Summary

The current arrangements assume that shippers are able to manage their own imbalances. However, this may be unrealistic for retailers<sup>31</sup> where gas allocation is not known until long after the gas day. Can allocation information be made available more quickly? If not, are the current arrangements efficient and equitable?

#### Issues Arising

- Impact of delayed allocation on shippers
- Possible provision of improved day-end information
- Ex post mismatch trading

<sup>31</sup> By "retailers", we mean shippers that supply small customers which typically have monthly metering.

## Overview

- 8.1 Downstream allocation takes place at those VT delivery points or “gate stations” serving multiple end-customers – typically via a distribution network. This allocation works on the “flow on delivery” protocol: the amount of gas allocated to a shipper at the gate station is equal to the aggregate amount delivered to that shipper’s customers downstream of that gate. In short, there are no trades occurring or imbalances arising in the downstream network. The complexities described in the Title Tracking Theme do not arise.
- 8.2 Nevertheless, downstream allocation is problematic because it relies on myriad customer meters, few of which are read daily or provide daily quantities. As a result, downstream allocations are generally not determined until a month or more after the gas day. Where *ex post* title tracking<sup>32</sup> depends upon the downstream allocation, upstream allocation will be similarly delayed.
- 8.3 Balancing costs are recovered from shippers according to their mismatch position (see Balancing Theme), which is calculated for each day<sup>33</sup>. Retailers will not know their mismatch position until long after the gas day, by which time it is far too late to do anything to manage it so as to mitigate balancing costs. This raises the question whether it is efficient or even fair for shippers to be so charged.
- 8.4 These concerns might be mitigated by:
- exempting such shippers from balancing charges, but this doesn’t seem fair to other shippers who will bear the burden instead;
  - providing more timely estimates of downstream allocations<sup>34</sup> Indeed, balancing charges could even be based on such estimates rather than on actuals; or

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<sup>32</sup> see Title Tracking Theme

<sup>33</sup> Before MDL open access, balancing charges were based on a monthly mismatch position and the delays in allocation were therefore less significant.

<sup>34</sup> In fact a “day-end information service” may already be provided for some retailers.

- allowing *ex post* mismatch trading, so that shippers can pool their imbalances and benefit from any diversity between their customer bases.

### Impact of Delayed Allocation on Retailers

- 8.5 When costs are incurred in a VT balancing pool, these are recovered from shippers according to their mismatch position (see Balancing Theme). Since mismatch is the difference between receipts and deliveries, both upstream and downstream allocation amounts must be available before a shipper can determine its mismatch position.
- 8.6 In principle, shippers are able to manage their running mismatch position by:
- increasing their upstream nominations or purchases to correct negative mismatch; and
  - decreasing nominations or purchases to correct positive mismatch.
- 8.7 However where allocation information is delayed by more than a few days, a shipper has to *guess* whether it is in positive or negative mismatch, and its actions are as likely to worsen its mismatch position as to improve it. It is like trying to drive a car by looking in the rear-view mirror! Currently, allocation information is not available until several days after the end of each calendar month and retailer management of mismatch becomes impossible.
- 8.8 In summary, to allow shippers to manage mismatch and balancing charges, either the timing of downstream allocation or the structure of balancing charges (or both) may need to be reviewed.

**Q31:** *What problems does the monthly allocation timing cause you under a daily mismatch regime?*

### Providing Day-end Allocation Information

- 8.9 Because it relies on monthly meter readings, downstream allocation is unavoidable delayed. However, the delay would be less significant if earlier *estimates* of downstream allocation amounts were available to shippers: perhaps within a day or two of the gas day. Whilst the Reconciliation Code already provides for estimates to be provided through a “day-end information service”, this service is little used and its accuracy is far from assured.

- 8.10 Many overseas gas markets<sup>35</sup> have established more thorough processes for providing such allocation estimates (see Box 5). With a central registry being proposed for NZ, a similar approach may become feasible here in the future.

**Box 5: Estimating Allocation**

The exact downstream allocation quantities for a shipper cannot be determined until the meters of all of its customers have been read. This may be a month or more after the gas day. However, a number of methods are used in overseas markets to provide good estimates of the allocation much earlier than this: typically just a day or so after the gas day<sup>36</sup>.

These estimates are based on “demand models”: mathematical models which express a shipper’s estimated allocation as a function of weather, time of year and daily-metered quantities (eg at the gate station). For example, if a shipper’s allocation is typically 10% of gate station demand, then it can quickly be estimated once gate station demand is known. A more sophisticated model might say that the shipper’s allocation is 10% of the typical gate station demand, plus 17% of any variations (eg due to weather).

Demand models typically require a central registry of mass market customers, so that they can be adjusted for customer “churn”. A central body (eg the distributor or allocation agent) must take responsibility for establishing and maintaining the demand model. Since the model typically includes weather variables, it can also be used to forecast shipper demand (eg for nominations) by using the latest weather forecasts.

- 8.11 If these estimates are fairly accurate, and not able to be manipulated by shippers, it might be appropriate for balancing charges to be based on these estimates rather than actuals<sup>37</sup>.

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<sup>35</sup> See the report “[Allocation & Reconciliation in Overseas Gas Markets – Final Report](#)” on the GIC website

<sup>36</sup> Some markets also use these demand models to assist shippers in making accurate nominations.

<sup>37</sup> This approach is taken in some overseas markets. Of course, there is still a need for any differences between estimates and actuals to be reconciled, but this could be done “in kind” rather than through cash charges.

- 8.12 In summary, accurate day-end information – based on demand models - would help retailers to manage mismatch and could even provide the basis for balancing charges. Demand models could also be used to support retailer nominations.

**Q32:** *What need do you have for day-end allocation information? How might this information be improved?*

### Ex-post Mismatch Trading

- 8.13 The impact of delayed allocation might be mitigated by allowing “mismatch trading” to take place once allocations are known: for example a shipper that finds itself in positive mismatch might transfer – for some agreed price – some of this mismatch to a shipper in negative mismatch. Such trading is not explicitly provided for in current arrangements, although it might be possible to do this through a gas contract negotiated *ex ante*<sup>38</sup>.
- 8.14 Such trading may allow a number of small retailers to “pool” their mismatches, in the same way that a large retailer does implicitly by having a diverse customer base. In this respect, it might reduce the competitive disadvantage of small retailers and so better promote retail competition.
- 8.15 Mismatch trading does take place in some overseas gas markets. However, these have different arrangements for allocating balancing costs: for example they may provide for some “mismatch tolerance” and mismatch trading may allow more shippers to manage mismatch levels within this tolerance. It is not clear whether mismatch trading would bring benefits for retailers under the VT balancing charging regime.
- 8.16 In summary, whilst *ex post* mismatch trading might be introduced, this may not substantially mitigate problems caused by monthly allocation.

**Q33:** *Would you like to see ex post mismatch trading introduced? If so, why?*

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<sup>38</sup> For example, two shippers may do a deal where the gas transfer rule is to transfer half of the difference in mismatch (before this is adjusted to reflect the trade) between the two shippers.

## Preliminary Conclusions

- 8.17 With delays of a month or more before information on downstream allocation becomes available, retailer management of mismatch and balancing charges is impossible. For retailers, this makes the balancing charges inefficient and, arguably, unfair. It also means that retailers are unable to assist with pipeline balancing through their response to mismatch prices.
- 8.18 Although a delay in determining the actual allocation amounts is unavoidable, Gas Industry Co considers that it may be feasible to calculate good estimates and provide these to shippers within a day or two of the gas day. Furthermore, if these estimates were accurate and objective, they could be used as the basis of balancing charges, with the actual amounts only being used to determine a later “in kind” reconciliation.
- 8.19 The estimation process would need to build upon current developments in downstream allocation<sup>39</sup>: in particular, the establishment of a customer registry. Therefore, the Gas Industry Co proposes to:
- review current proposals for downstream allocation, to ensure that they are consistent with possible future development of a day-end estimation process; and
  - progress the development of this estimation process once the current round of allocation developments is fully defined and being taken forward to implementation.
- 8.20 The Gas Industry Co does not currently support the introduction of mismatch trading or other mechanisms for helping retailers to manage their balancing costs, but may return to these options should the estimation approach turn out to be impractical.

**Q34:** *Does the Allocation Theme identify all of the issues relating to downstream allocation? If not, what other issues should be considered?*

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<sup>39</sup> Gas Industry Co is releasing a separate consultation on these developments.

**Q35:** *Do you agree with the actions proposed to address the allocation issues? If not, what other options should be considered?*

## 9 Operators Theme

### Pipeline Operators have Conflicts of Interest

Agent	Roles	who?	Affiliations
MDL Commercial Operator	Administer agreements;	STOS	Shell, Todd, OMV
MDL System Operator	Manage Title Chain	VT	Vector Wholesale Vector Retail
MDL Technical Operator	Manage Supply Chain	VT	
MDL Welded Party	Confirm Nominations; Manage Imbalance	VT	
VT Commercial Operator	Administer Agreements	VT	
VT System Operator	Manage Title Chain, Supply Chain	VT	
VT Technical Operator	Schedule Maintenance, Plan expansions	VT	
Gas Transfer Agent	Calculate VT upstream allocations	VT	
Allocation Agent	Calculate VT downstream allocations	T&A	None

at VT interconnection points
Tetenburg & Associates Limited
unless otherwise agreed

### Theme Summary

The diverse interests of pipeline owners and operators create potential conflicts of interest for them. Are there aspects of the current arrangements which exacerbate these conflicts? To what extent are existing ring-fencing and confidentiality protocols sufficient to manage and mitigate conflicts?

### Issues Arising

- Ring-fencing of operators
- Chinese walls to preserve confidentiality
- removing discretion from operators
- Oversight of operators

## Overview

- 9.1 MDL has appointed three “operators”: agents who together operate the MDL pipeline. Their respective roles are described in the MPOC and on the MDL website. Broadly speaking, in the parlance of this paper:
- the *technical operator* (TO) is responsible for *supply chain* activities (including managing physical pipeline capacity, balancing and gas quality) as well as for providing technical advice to the commercial operator (eg on balancing tolerances);
  - the *system operator* (SO) is responsible for *title chain* activities: including nominations and scheduling, and OI and mismatch trading; and
  - the *commercial operator* (CO) is responsible for *oversight* activities: negotiating and managing commercial contracts (MPOC, TSAs, ICAs and Balancing Gas agreements), setting commercial terms pursuant to the MPOC (eg balancing charges, capacity tariffs etc) and approving operating procedures and guidelines for the other operators; the CO also manages financial settlements.
- 9.2 VT has also established three operators, roughly mirroring the MDL structure<sup>40</sup>. These roles are carried out within VT itself rather than by agents.
- 9.3 Finally, shippers are required to appoint agents for title tracking: a Gas Transfer Agent at MDL-VT interconnection points, and an Allocation Agent at VT gate stations. Currently, the sole Gas Transfer Agent is a business unit within VT and the sole Allocation Agent is Tetenburg & Associates Limited, an independent company.
- 9.4 All of these operators and agents are required to act in accordance with the relevant access agreements and, in particular, be impartial and objective in actions and decisions affecting shippers and WPs.

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<sup>40</sup> section 1.5 of the VT IM. There are some anomalies, however. For example, the VT SO, rather than the TO, is responsible for “gas control”: ie capacity management and balancing.

9.5 However, many of these agents are themselves – or have as affiliates – shippers and WPs. Even where the agents are themselves independent, they may be influenced by their “principal” – the pipeline owner – who itself has affiliate shippers or WPs.

9.6 Therefore, most of these operators have conflicts of interest – between their shareholders (and their affiliates) and their “clients” (shippers and WPs). This theme discusses how these conflicts are – or should be – managed: through:

- *ring-fences*: so that agents cannot be in operational contact with affiliate shippers or WPs and so cannot be influenced by them;
- *Chinese walls*: so that confidential client information received by agents is not made available to their affiliates;
- limiting the *discretion* that can be exercised by the agents and so their opportunity to discriminate; and
- *oversight* of agents’ actions to reveal – in hindsight – any discriminatory actions.

These mechanisms are discussed in the sections below.

### Ring-Fencing

9.7 A “ring-fence” means an operational separation or segregation of the relevant operator or agency function. Separation may be:

- *functional*: the function is placed in its own business unit, with separate reporting lines to senior management or Board;
- *employee*: the function cannot share employees with other parts of the business and transfer of employees may be restricted;
- *physical*: the function is physically separated from other parts of the business and access is restricted; and/or

- *accounting*: costs of the function are separately accounted for and shared costs are appropriately allocated.
- 9.8 The MPOC<sup>41</sup> requires that MDL operators are at “arms-length” from MDL so as to operate impartially, but does not specify how this should be done<sup>42</sup>. In practice, the operator roles are undertaken by separate businesses (the CO by STOS and the TO and SO by VT), so there is full separation for each of the factors listed above. However, significantly given VT’s role, the MPOC does not specify any “arms-length” requirement between the operators and VT – or other shippers and WPs, for that matter. This may be covered in the relevant agency agreements, which we have not seen.
- 9.9 We are not aware of any corresponding provisions or requirements relating to VT operators: except for the Confidentiality Protocol discussed in the next section. However, we understand that VT has separate staff work areas for “Pipes Business” (transmission and distribution functions) and “Gas Business” (gas wholesaling and retailing functions). While there are no physical barriers or security systems preventing access, gas business staff are not permitted to enter the areas occupied by the Pipes Business unless invited to do so by Pipes Business staff.
- 9.10 A question arises of whether separation between MDL and VT operators is necessary or desirable (given that both are undertaken by units of VT) and if so to what extent. For example, would it be unfair to other MDL WPs, if VT operators (who, in effect, are also MDL WPs) were able to influence the activities of the MDL TO?
- 9.11 Whilst ring-fencing may be beneficial in managing conflicts of interest, it also may add to costs, or may even be impractical. For example, the MDL and VT operator gas control functions share the same control room and cannot be physically separated. There is a trade-off between the degree of separation and the cost.
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<sup>41</sup> para 8 Schedule 4

<sup>42</sup> although it contains some separation provisions in its Chinese walls – eg see Schedule 4 clause 5.1(b)

- 9.12 In summary, ring-fences are necessary to manage conflicts of interests arising within pipeline operators and agents. Some, but not all, ring-fencing requirements are established in current arrangements. In considering the desirable extent of ring-fencing, there may be a trade-off between the cost and the effectiveness.

**Q36:** *Are existing ring-fencing arrangements adequate to manage potential conflicts of interest? If not, how should these be changed or strengthened?*

### Chinese Walls

- 9.13 A Chinese wall<sup>43</sup> means a mechanism to contain confidential information within a business unit of a company. In the context of this theme, it means the ring-fencing of an agency or operator in relation to information disclosure.
- 9.14 Information should only pass over a Chinese wall where it is not confidential or when the receiving business unit has a business need for that information and the relevant party has agreed that the information may be transferred.
- 9.15 Operators and agents will receive a large amount of confidential shipper data, such as nominations, trades, capacity rights and allocations.
- 9.16 The MPOC contains a confidentiality protocol to ensure that confidential client data is not available to MDL affiliates and is only used within MDL for MPOC activities. It applies to MDL employees involved in open access activities and any related “contractors and consultants”, which presumably includes the MDL operators.

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<sup>43</sup> The term Chinese wall may refer to the Great Wall of China and to its scale and effectiveness at separating one side from the other. It is more likely to refer to a traditional practice among Chinese mandarins in the Late Imperial period. Theoretically if a junior mandarin saw a senior mandarin on the road he was expected to bow and present his compliments. In Beijing this tended to happen quite a lot and so traffic was frequently blocked. Instead mandarins came up with a method of pretending they did not see each other on the road by the clever placing of a retainer with an umbrella. Because they did not “see” each other, they were not obliged to stop. In effect they placed a “Chinese wall” between themselves. (source: Wikipedia)

- 9.17 VT also has a Confidentiality Protocol<sup>44</sup> and is obliged under its standard TSA to maintain confidentiality of information received pursuant to the TSA. It aims to ensure confidentiality of all client data which the client specifies to be confidential. The Chinese Wall is around the Pipes Business. It is not clear which operator roles this includes and, in particular, whether it establishes a Chinese Wall between the VT and MDL operator roles.
- 9.18 In summary, both VT and MDL have confidentiality protocols to establish and manage a Chinese wall around their pipeline functions, to prevent affiliate functions or businesses obtaining confidential client data. These protocols do not define whether, or to what extent, there are Chinese walls between different operator roles.

**Q37:** *Are existing Chinese Walls adequate to maintain confidentiality of information seen by pipeline operators and agents? If not, how should these be changed or strengthened?*

### Removing Discretion

- 9.19 Operators and agents must act in accordance with the agreements under which they operate. However, this may leave them with some operational discretion which could potentially be used to discriminate in favour of affiliates. This is particularly the case for operators, where discretion exists in relation to several areas including:
- managing operational imbalances at MDL-VT interconnection points (VT SO);
  - making recommendations on OI tolerances (MDL TO);
  - making recommendations on new interconnections (MDL TO);
  - cashing out OI (MDL CO); and
  - releasing contingency linepack (MDL SO).

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<sup>44</sup> Available on the Vector Transmission website.

- 9.20 The MPOC requires that the MDL CO issues and publishes “operating instructions” to the other MDL operators. These provide detail on how the relevant MPOC provisions should be interpreted and applied. As well as reducing discretion, this increases the transparency of this decision-making. However, discretion remains with the MDL CO over how to draft these procedures (often on the recommendation of the instructed operator). Furthermore, the procedures will be ineffective if they remain general and leave significant discretion.
- 9.21 A number of procedures/instructions have been developed and published by the MDL CO. However, in some cases, these are at a fairly high level and still leave significant operator discretion. Furthermore, in other areas where discretion exists, there are no procedures (as yet).
- 9.22 VT publishes an IM annually, which gives detail on how TSA provisions will be interpreted and applied. However, VT is not obliged, under the terms of its TSAs or ICAs, to operate in accordance with the IM<sup>45</sup>.
- 9.23 The Reconciliation Code and GTC provide little discretion to the relevant agents and, in any case, their procedures are described in detail in the corresponding allocation or gas transfer agreement.
- 9.24 In summary, under current arrangements, the development and publication of procedures does limit operator discretion and should provide some comfort to shippers and WPs that operators act impartially. However, the legal status of these procedures is not always clear. Furthermore, since the procedures are in many cases developed by the operators themselves, the possibility of bias or discrimination is not completely removed.

**Q38:** *Can conflicts of interest be managed by removing or reducing operator discretion? Is this being done effectively at present? How might current arrangements be changed?*

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<sup>45</sup> See section 1.3 of the 2005 Information Memorandum.

## Oversight

- 9.25 The MPOC provides that MDL must appoint an auditor annually to report on its compliance with ring-fencing and confidentiality requirements. Furthermore and any shipper or WP may appoint an auditor at any time if it believes breach has occurred.
- 9.26 Similarly, VT arranges for compliance with its confidentiality protocol to be audited annually. However, allegations of breaches are only investigated internally.
- 9.27 In summary, these oversight provisions appear primarily concerned with establishing Chinese walls. It is not clear whether they would ensure compliance with operating procedures/instructions or, more generally, impartial treatment of shippers and WPs.

**Q39:** *Do existing oversight arrangements provide you with assurance that ring-fencing requirements are being complied with? If not, what changes are necessary?*

## Preliminary Conclusions

- 9.28 Gas Industry Co considers that affiliations between pipeline operators and shippers/WPs have the potential to create a significant barrier to competition in the gas industry. We recognise that both MDL and VT have taken steps to mitigate the potential conflicts that arise, particularly in establishing confidentiality protocols for shipper/WP data. However, we consider that the broader concern – that operators may not be perceived as impartial and objective – has not been adequately addressed.
- 9.29 We believe that the best protection for non-affiliated shippers/WPs is to improve transparency and clarity of operator activities. To achieve this, we recommend the development and publication of detailed operating procedures which:
- define the roles and responsibilities of the various pipeline operators;
  - specify in detail the interactions between these operators and between operators and shippers or WPs; and
  - provide guidance or instruction to operators in making decisions, particularly those which substantially and differentially impact shippers or WPs.

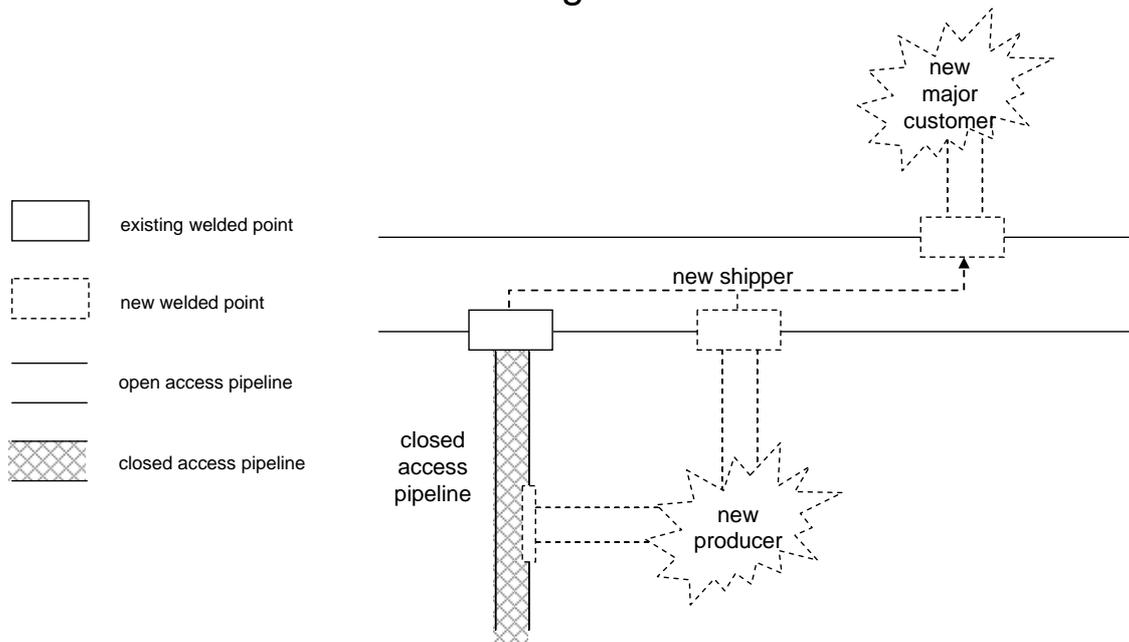
9.30 These procedures should be developed by the relevant operators and approved by the pipeline owners. Gas Industry Co could develop a governance framework to monitor and enforce operator compliance with these procedures.

**Q40:** *Does the Operators Theme identify all of the issues relating to pipeline operators and agents? If not, what other issues should be considered?*

**Q41:** *Do you agree with the actions proposed to address the operator issues? If not, what other options should be considered?*

## 10 Access Theme

### New Entrants need Access Rights too



#### Theme Summary

Effective access arrangements must promote new development and entry as well as specifying the rights and obligations of existing parties and pipelines. This may best be done by developing an overarching access code.

#### Issues Arising

- New welded points
- Access to existing welded points and closed-access pipelines
- Overarching access code

## Overview

- 10.1 The objective of open access on a pipeline is to ensure that any party wishing to can access and use any spare capacity on a pipeline to transport gas. However, existing access arrangements – as embodied in the MPOC and in VT TSAs – only give explicit access rights to *existing* parties (shippers and WPs). Indeed, provisions in the MPOC relating to new parties seems as much geared to protecting the interests of existing parties as to ensuring access to new parties. In fact MDL do not accept that the MPOC gives rights to any parties other than those who hold transmission or interconnection contracts that reference the MPOC.
- 10.2 Whilst shipper-on-shipper competition is a useful objective in itself, the most important driver of gas market development is likely to be the development of new gas fields and production. For this gas to be shipped to end-customers, these new producers must be able to interconnect to existing pipelines. This can either be through new welded points or through access to existing welded points: ie by interconnecting with an existing “closed access” upstream pipeline. Existing access arrangements may not adequately facilitate this.
- 10.3 This begs the question as to whether there should be some overarching access code which provides “pre-contractual rights” to new entrants to seek and obtain access to pipelines. Such a code currently exists in the form of the New Zealand Pipeline Access Code (NZPAC), but this is a voluntary code and only VT is a party to it.

## New Welded Points

- 10.4 Essentially, Section 2.12 of the MPOC provides that any person can establish a new connection to the Maui pipeline, as long as it meets the Schedule 1 technical requirements and any other requirements as to location, design or construction standards which MDL may set. The person must also indemnify MDL against any loss that may arise from the construction, testing and commissioning of the new Welded Point.
- 10.5 While there is some doubt as to the enforcement of this position by persons not party to the MPOC, it is understood that MDL has acted in accordance with the MPOC provisions in respect of recent interconnections.
- 10.6 Since the introduction of the MPOC, two interconnection applications have been made: with the Pohokura production for Shell/OMV; and with the Turangi production for Greymouth.

- 10.7 Gas Industry Co is aware of a number of issues concerning the Greymouth interconnection. These can broadly be categorised as:
- *Technical specification issues.* Greymouth believes that the technical specifications have been modified by MDL a number of times leading to expensive delays and rework.
  - *Conflict issues.* Vector has played two roles in the process: firstly, as Greymouth's contractor; secondly as MDL Technical Operator and technical adviser. This placed it in a position of having to review (as TO) its own proposals (as contractor).
  - *Agency Issues:* Greymouth believed that, as TO, VT was an agent, for MDL, able to formally receive relevant documents. However, MDL regards the TO as a contractor, not an agent.
  - *Liability issues.* Pursuant to the MPOC requirement that a new WP indemnifies MDL against loss, MDL required that Greymouth obtain \$100m of insurance coverage, which Greymouth considered unnecessary and unreasonable.
- 10.8 Whilst, as the first application under the MPOC arrangements, some teething troubles might be expected, some lessons can be drawn from this saga:
- that new interconnections are complex and risky and having four clauses in the MPOC is inadequate, by itself, to describe and manage the process;
  - that MDL apparently has *carte blanche* to develop and apply new procedures, so long as they are in accordance with the MPOC;
  - that a new entrant has little commercial or legal leverage to challenge MDL's requirements and interpretations; and
  - that nothing in the existing governance or ring-fencing arrangements would seem to prevent MDL deliberately acting in a way which would favour its producer affiliates by obstructing the entrant of a competitor.
- 10.9 This is not to say that MDL has acted in such a way. Indeed, the procedures and requirements that it has developed are both transparent (published on their website) and non-discriminatory (applying to all interconnection applications). Nevertheless, in respect of competition barriers, perceptions are as important as reality: a potentially entrant may be loathe to enter a market where it perceives that its main competitor is acting as gatekeeper.

- 10.10 Unlike MDL, VT is a signatory to the NZPAC (see Box 6), which, requires that a pipeline owner establish a new connection at any location where a user wishes to connect with the pipeline, at the location requested by a user, except for reasons of good industry practice. The owner must also to set standards, consistent with good industry practice, for the construction, operation and maintenance of facilities associated with receipt points and delivery points.
- 10.11 VT has negotiated several new receipt point interconnection arrangements since its pipelines became open access (but not since MDL open access). No issues were raised by the parties interviewed by Gas Industry Co. VT does not have any affiliates in the production sector.
- 10.12 In short, problems have arisen in the development and approval of new welded points on the MDL pipeline. These may be just teething issues, may reflect conflicts of interest or may indicate the need for more clarity on the rights of new entrants.

**Q42:** *Why have delays to the development and approval of new welded points occurred? What needs to be done, if anything, to prevent these delays occurring in the future?*

### Access to Existing Welded Points and Closed-access Pipelines

- 10.13 Given the technical difficulties and risks associated with creating a new interconnection on trunk pipelines, it is worth considering the alternative approach of new producers gaining access to these pipelines through existing welded points<sup>46</sup>. Apart from MDL-VT interconnection points, welded points are generally “closed access” meaning that third parties have no rights of access, although they may be able to negotiate access terms with the owner.
- 10.14 This raises the more general question of what access rights should be available on currently closed access pipelines generally. Given the scope of this review, we consider this question only in relation to existing transmission pipelines

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<sup>46</sup> Indeed, this is how Todd intends to gain access to the MDL pipeline for its Pohokura gas. After initially considering a new interconnection, Todd decided instead to use its existing station at Tikorangi Rd.

downstream of production facilities<sup>47</sup>. There are several such closed pipelines, particularly in the Taranaki region.

- 10.15 Third parties can request access to un-contracted physical capacity of an “essential facility”, but as there are no legal obligations to supply access. The owner has scope to demand what ever price and terms it thinks fit, or to deny access.
- 10.16 Establishing stronger access rights – to currently closed-access pipelines - may bring benefits by reducing the likelihood of the development of duplicate infrastructure: pipelines and/or Welded Points. On the other hand, such rights would infringe on the existing rights of closed-access infrastructure owners to set their own commercial terms for access.
- 10.17 In summary, using closed-access pipelines may be an economic and practical alternative to a new interconnection. However, it is not clear that this, by itself, is sufficient justification for additional regulation of closed-access pipelines.

**Q43:** *What access rights should third parties have to currently “closed” pipelines and welded points?*

### Overarching Access Code

- 10.18 If there were a desire to establish a new framework to govern rights of access and interconnection to gas transmission infrastructure, this would need to be establish “above” and outside the existing arrangements, which only apply to existing parties and to certain pipeline assets.
- 10.19 In fact, NZ already has such a code, the NZPAC (see Box), but this is a voluntary code, developed prior to MDL open access, which has largely fallen into disuse. In contrast, Australia has developed a *statutory* code which remains active and is at the heart of all pipeline access arrangements.

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<sup>47</sup> We have heard concerns about access to production facilities and associated infrastructure such as liquids storage. Whilst we understand that this can impact on gas production and hence transportation, we consider this to be outside the scope of our review.

#### **Box 6: The New Zealand Pipeline Access Code**

The New Zealand Pipeline Access Code (NZPAC) was established in 1998. It is a voluntary code, but is comparable in scope and intent to the (statutory) Australian gas access code<sup>48</sup>.

The code covers areas such as ring-fencing, capacity development, behavioural standards and dispute resolution. It requires pipeline owners to publish annually an "Information Memorandum" (IM) which describe the terms on which pipelines may be accessed. However, the IM is not binding and, to the extent that they differ, the terms of the relevant TSA or ICA take precedence.

Changes to the NZPAC can be proposed by any signatory and are considered by a designated "Code Committee". The Committee invites submissions and votes on the change. A 75% majority is required to approve the change.

Despite these arrangements, the code has never been changed and is, in fact, a rather neglected document. VT is the sole signatory and is alone in still referring to it as a live document.

- 10.20 An overarching code would need to specify, at some level, the terms under which access must be made available. These terms would necessarily apply to existing and new entrants<sup>49</sup>. It would also need to establish the scope of access: ie which pipelines or interconnections are open and which are closed.
- 10.21 In summary, there may be a need for an overarching code which exists outside of – and governs – MDL and VT access arrangements. The NZPAC was intended to operate in this way, but would need updating and revitalising to provide effective oversight of current access arrangements.

**Q44:** *Is there a need for an overarching access code in NZ? Could the NZPAC play this role? If so, what changes would be required to it?*

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<sup>48</sup> National Third Party Access Code for Natural Gas Pipeline Systems.

<sup>49</sup> Except to the extent that they conflict with pre-existing contractual arrangements.

## Preliminary Conclusions

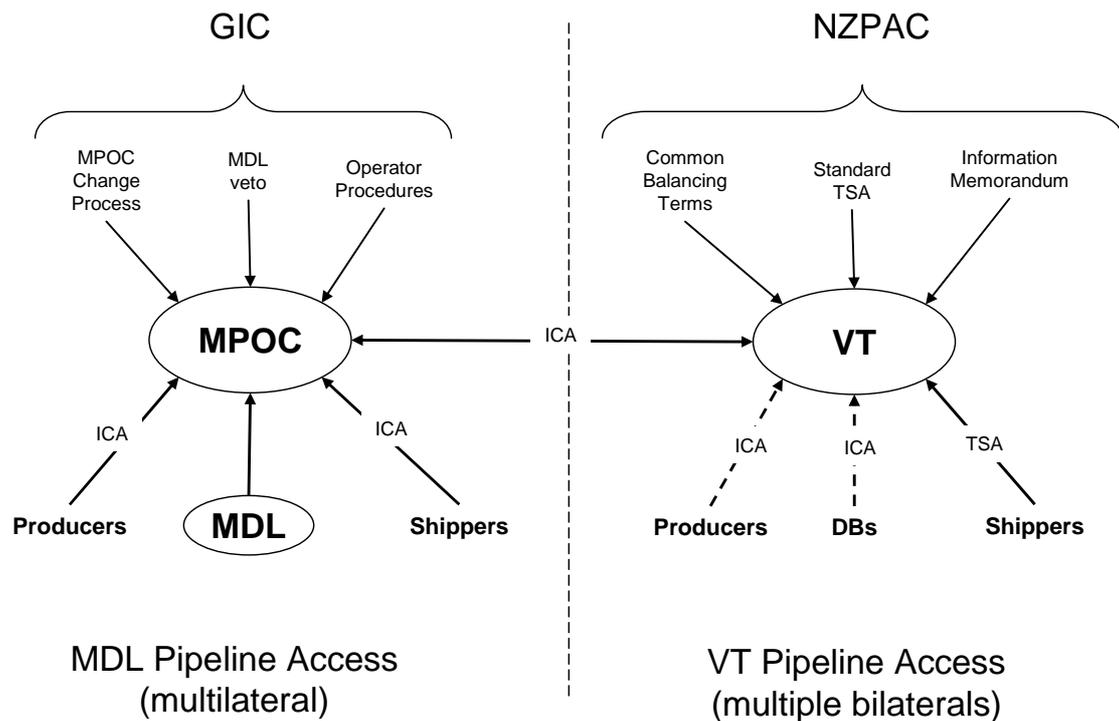
- 10.22 The issues raised in this theme remind us that a truly open access regime must specify the rights of new entrants as well as existing parties. The Gas Industry Co considers that the existing arrangements do not do this adequately. Existing “rights” amount to no more than high-level promises, with uncertain legal standing and poor visibility.
- 10.23 However, we are hopeful that the existing NZPAC could provide the foundation for an overarching code, providing “pre-contractual rights” to new entrants. However, the governance of this Code has to date been unsatisfactory and needs to be addressed (see Governance Theme).
- 10.24 Like the Australian Code, a NZ access code would only apply to certain “covered” pipelines, which we would envisage to be the MDL and VT transmission pipelines. Despite the potential benefits it might offer, we do not recommend extending open access to currently “closed” pipelines.
- 10.25 For them to be effective, the access rights established in an access code would need to be embodied in detailed access procedures, to be developed by pipeline owners and operators. Greymouth’s travails illustrate the potential difficulties faced by a new entrant where these procedures have not been properly established. Therefore, this is another area where development and governance of operating procedures needs to be reviewed (see Operators Theme).

**Q45:** *Does the Access Theme identify all of the issues relating to pipeline access for new producers and customers? If not, what other issues should be considered?*

**Q46:** *Do you agree with the actions proposed to address the access issues? If not, what other options should be considered?*

## 11 Governance Theme

Plenty of Codes but not enough Governance



### Theme Summary

Multilateral frameworks may be necessary to govern arrangements in order to manage externalities, prevent discrimination, ensure uniformity and tradability, or to promote simplicity and transparency. Arrangements must be designed and implemented to modify and to enforce such frameworks.

### Issues Arising

- Scope of multilateral frameworks
- Forms of multilateral framework
- Enforcement mechanisms
- Change processes

## Overview

- 11.1 Current access arrangements are described and governed by commercial contracts between pipeline owners, shippers, WPs and “agents” such as pipeline operators and allocation agents. The contracts themselves may be bilateral or multilateral. However, even where they are bilateral, they often have a multilateral component, in the sense that they are jointly negotiated, contain common terms, or are governed by common requirements.
- 11.2 This “multilateralism” stems from the peculiar characteristic of gas transportation that the supply chain and title chain do not coincide. For this reason, gas transportation is fundamentally a shared endeavour: each party must do its bit and one party’s failure has the potential to affect every other party: for example, one producer’s non-spec gas could end up anywhere – the impact is not confined to that producer’s customers.
- 11.3 However, multilateralism has its challenges. It may stifle innovation or risk-taking, the life blood of a healthy, competitive market, and so it should only be introduced to the extent necessary and beneficial. Each multilateral framework must find a way to simultaneously manage and trade-off the diverse interests of multiple parties as well as ensuring that all parties comply with the common requirements.
- 11.4 The Gas Industry Co was established because of a perceived failure of the gas industry to establish, govern and enforce the multilateral frameworks needed to achieve the GPS objectives, so obviously we have a particular interest in this area. This is not to say that all aspects of access arrangements should be multilateral, or that Gas Industry Co should play a central role in every multilateral framework. However, it does mean that we must consider carefully what our role should be in resolving each of the issues raised in this paper.
- 11.5 Thus, this theme considers:
- what criteria should be considered in deciding whether an aspect of gas transportation should be managed bilaterally or multilaterally;
  - alternatives forms of multilateral framework;
  - how multilateral arrangements should be developed;
  - how a multilateral framework should be modified; and
  - how a multilateral framework should be enforced.

## Need for Multilateral Governance

- 11.6 There are several important and compelling reasons for having multilateral governance of access contracts:
- to manage externalities;
  - to prevent discrimination;
  - to ensure uniformity and tradability; and
  - to promote simplicity and transparency.
- 11.7 *Externalities* arise where the actions or agreements of one party affect another, unrelated party. Externalities are common in gas transportation and arise in areas such as capacity, balancing, gas quality, scheduling and allocation. For example, if one WP takes more gas from a pipeline than scheduled, another WP may be unable to take its scheduled quantity. Without multilateral arrangements linking the two WPs, there would be no efficient route for the affected WP to seek remedy from the WP at fault.
- 11.8 *Discrimination* occurs where a pipeline offers different prices or terms to different shippers or WPs for the same service. Discrimination itself is not necessarily a bad thing. Multilateral arrangements, however, provide a framework for preventing discrimination, where this is appropriate. For example, the MPOC ensures that all shippers are charged a common tariff, although VT has a different approach and, whilst it posts standard tariffs, it *may* still offer discounts to certain customers/shippers.
- 11.9 *Uniformity* has value where it facilitates secondary trading. For example, because VT specifies common terms for its booked capacity, shippers can trade this capacity between themselves. This would not be possible if terms were specific to each shipper.
- 11.10 *Simplicity* arises from standardising access terms so that, for example, a pipeline owner providing access to a new shipper does not need to develop an entirely new contract, but just needs to negotiate a few bilateral terms. From the new entrant's perspective, this standardisation provides *transparency* on the terms that the new entrant can expect.

11.11 In summary, the characteristics of gas transportation mean that many aspects of access arrangements are likely to be covered by multilateral frameworks.

**Q47:** *What aspects of transportation should or should not be subject to multilateral governance, and for what reasons?*

### Existing Multilateral Frameworks

11.12 The current arrangements employ three different forms of multilateral framework:

- codes;
- standard contracts; and
- procedures.

These are described below.

11.13 A *code* defines a set of common principles or practices that are intended to apply to multiple agreements or parties. For example, the Gas Transfer Code requires shippers to enter into gas transfer agreements and sets out certain requirements for those agreements. The Reconciliation Code takes a similar approach. The NZ Pipeline Access Code sets out rights and obligations for all pipeline owners in NZ (see Box 6). A party may voluntarily “sign onto” a code, or may be required to through another agreement: for example, the standard VT TSA requires shippers to comply with the Gas Transfer Code and the Reconciliation Code.

11.14 A *standard contract* is multilateral in the sense that its terms may apply to several parties, even though each of the individual contracts is bilateral. Conversely, a non-standard contract is intrinsically bilateral.

11.15 A *standard contract* framework can be implemented in different ways. The MPOC<sup>50</sup> standardises ICAs and TSAs with MDL by requiring that they have the MPOC terms in common and that they only contain specific, bilateral terms in

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<sup>50</sup> Obviously the MPOC is named a “code” but is not really a code in the sense described in this theme, rather it is a standard contract.

relation to certain items<sup>51</sup>. VT has taken a different approach of developing and publishing a “standard TSA” and offering all future TSAs on those standard terms. The standard TSA requires<sup>52</sup> that all future TSAs have common or similar terms for balancing.

- 11.16 A *procedure* is developed by a pipeline operator and gives parties assurance that the operator will interpret and manage their agreements in a common and consistent way. For example, VT publishes an Information Memorandum annually, which provides a detailed interpretation of the terms of their standard TSA. The MPOC requires MDL to publish certain operating procedures and instructions.
- 11.17 Many concerns with existing arrangements relate to how they were originally developed and to the proper boundaries between code, standard contracts and procedures<sup>53</sup>. For example there are concerns that the Gas Transfer Code was imposed on the industry by the pipeline owners and is too prescriptive (ie more like a standard contract than a code). Conversely, the Reconciliation Code is considered to be not specific enough (leading to uncertainty and lack of uniformity). In relation to the MPOC, some procedures that have been developed have been perceived to address some fundamental matters of access and so are more in the nature of standard contract terms than procedures<sup>54</sup>.
- 11.18 This begs the question as to how to decide whether a particular provision or requirement should be part of a code, a standard contract or a procedure. There is no simple answer to this, but some guidelines would be:
- if it applies to multiple parties it should be part of a code or a contract with appropriate multilateral components; and

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<sup>51</sup> See MPOC clause 2.1(a)

<sup>52</sup> clause 10.32

<sup>53</sup> and, accordingly, how changes to them are governed, as discussed in the next section

<sup>54</sup> And so should have been developed in accordance with the MPOC change procedure, as discussed in the next section.

- if it sets out specific steps or activities for achieving an objective set out in a Code or contract then it should be part of a procedure.

11.19 In summary, a number of different multilateral frameworks exist under current arrangements, which can broadly be categorised as codes, standard contracts or procedures.

### Alternative Multilateral Frameworks

11.20 There are three additional types of multilateral framework that could be introduced:

- Pan-industry Agreements;
- Rules; and
- Regulations.

11.21 A *pan-industry agreement* is a contract which is not effective until all members who are to be bound by it have signed it. It is different from a “standard contract” which become effective as soon as a single counterparty has signed with a pipeline owner. For example, the MPOC might have been established under a pan-industry agreement framework, so that there would be a single contract between MDL, all MDL shippers and all MDL welded parties.

11.22 There are often also differences in change and enforcement processes (discussed in the following sections). The arrangements for new parties to be admitted to a pan-industry agreement can be problematic unless clear membership rights are set out in the original document.

11.23 There would still be a need for separate bilateral contracts to deal with all bilateral provisions.

11.24 The electricity industry was governed by pan-industry agreements for many years. The framework was, arguably, reasonably successful in fairly and efficiently managing the rights of existing parties but some stakeholders consider it was less successful in relation to new and smaller parties.

11.25 Rules and Regulations, both statutory frameworks, are often confused and it is worth describing them in detail here.

11.26 *Regulations* are made by the Governor-General by Order in Council on the recommendation of the Minister of Energy. This means that regulations must be

agreed by Cabinet. Cabinet papers accompanying proposed regulations must show that all relevant government agencies have been properly consulted, and sometimes political parties may be consulted in accordance with their agreements to provide support to the government.

- 11.27 *Rules* can be promulgated in a much simpler way. Rules are made by the Minister publishing a notice in the Gazette. The Ministry of Economic Development must be consulted before a recommendation to make or amend Rules is made to the Minister. The Ministry may choose to provide its own advice to the Minister on whether to accept a recommendation made by the Gas Industry Co.
- 11.28 The Gas Act establishes the subject matters that can be covered by Regulations and Rules. It also sets out the processes that the Gas Industry Co and the government need to follow to make Regulations and Rules. In deciding whether to make a Rule rather than a Regulation, the Minister must consider issues such as the importance of the Rule, the level of technical detail involved, and the breadth of application of the Rule.
- 11.29 Potentially, Rules or Regulations might be applied at the level of a code, contract or procedure, so it would be possible to transform any part of the existing industry governance arrangements into statutory arrangements, in the form of Rules or Regulations.

**Q48:** *What are your preferred arrangements for governing each of the Themes in this paper?*

### Commerce Act Implications

- 11.30 The Commerce Commission has taken the view that any industry arrangement that is agreed between competitors has the potential to include restrictive trade practices and may therefore require authorisation for it to become a legal arrangement.
- 11.31 The following types of arrangements between competitors may in principle raise issues under the Commerce Act:
- arrangements which affect price;
  - information sharing between competitors;
  - cost allocation procedures;

- prudential provisions;
- admission and disciplinary requirements; and
- any other restrictions on participation.

11.32 Any multilateral provisions designed to address the Themes discussed in this paper are likely to raise issues under at least one of these headings. Even if it were concluded that authorisation was not required, an arrangement which appeared to raise any of these issues would likely trigger a Commerce Commission investigation.

11.33 Where authorisation is applied for, the Commerce Commission may decide not to authorise, may place conditions on the authorisation and may even revoke an authorisation should the market situation subsequently change. Furthermore, any amendments to an authorised arrangement would themselves likely require authorisation.

11.34 On the other hand, if authorisation is not sought or obtained, a complaint may be made to the Commerce Commission or the Commerce Commission may decide to investigate the arrangement of its own initiative. The Commerce Commission may then take enforcement action if it concludes that the arrangements:

- have the purpose, effect or likely effect of substantially lessening competition; or
- include provisions fixing, controlling or maintaining prices.

11.35 Any industry arrangement (code, standard contract or pan-industry agreement) would face the Commerce Act risks discussed above. On the other hand, Regulations and Rules are deemed to be specifically authorised for the purposes of the Commerce Act, so they do not carry Commerce Act risks.

**Q49:** *How significant is the Commerce Act in deciding whether to establish industry or statutory governance frameworks?*

### Change Processes

11.36 By definition, any changes to rights and obligations specified under a multilateral framework will affect several parties, and so any change process will tend to be difficult and contentious. Changes might be made unilaterally by one of the parties or perhaps by an external party, or - at the other extreme - changes may require unanimous agreement of all parties. In the middle are alternatives such

as majority voting or veto rights. The challenge in establishing a change mechanism is to facilitate change when required whilst protecting the rights of individual parties.

- 11.37 Current access arrangements encompass a range of approaches to this issue. Where changes can be mandated – or vetoed - unilaterally by one party, it is arguable that they are not genuinely multilateral and so will not achieve the objectives of a multilateral framework that were discussed above.
- 11.38 The MPOC allows any party to propose a change and for the Gas Industry Co to consult on and determine the merits of the proposal. A change will be made (and will then be binding on MDL and all TSA and ICA parties) if it is supported by the Gas Industry Co and agreed to by MDL, who may veto change under certain conditions. The Gas Industry Co is currently developing a “Memorandum of Understanding” with MDL to describe in more detail how this process will operate. A significant concern with the MPOC change process is whether MDL’s right of veto effectively allows it to control the terms of the MPOC and so negate some of the benefits of multilateralism.
- 11.39 VT is obliged to consult with shippers and provide notice of any changes to its standard TSA. The final decision is solely a matter for VT. However, unlike with the MPOC, changes will only affect future TSAs; existing TSAs remain unchanged: eg based on the terms of the previous standard TSA. Furthermore, shippers who disagree with the standard terms have the opportunity, in principle, to negotiate special terms with VT<sup>55</sup>.
- 11.40 As a pan-industry arrangement, the VT approach has a number of weaknesses:
- terms are not standard: a number of “standard” TSAs of different vintages may co-exist, together with other “customised” TSAs;
  - change can only be effected when TSAs are renewed, which may be after a number of years;
  - the change process is fairly informal; and

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<sup>55</sup> Except where the terms of other TSA explicitly prohibit this: eg in relation to balancing.

- the two sides may have unequal “bargaining power” with VT being a monopoly and the shipper side being fragmented<sup>56</sup>. So, again, VT may be in a position to dictate terms, rather than have them agreed multilaterally.
- 11.41 As noted previously, VT is currently in the process of developing and negotiating its ICAs and we do not know what change process is envisaged. However, similar issues are likely to arise.
- 11.42 Changes to procedures (and in VT’s case, the IM) can be made unilaterally by the relevant pipeline owner or operator. However, the procedures must be in accordance with governing contract and not fundamentally change the nature of this contract.
- 11.43 The Gas Transfer Code was originally developed by a single industry participant (VT). Changes to the Gas Transfer Code can be proposed by any MDL or VT shipper. The Gas Industry Co then appoints a “Code Modification Committee” to consider the amendment. If it approves the amendment, the committee must notify all parties of the change and when it is to come into effect. This recently agreed process has not yet been tested.
- 11.44 The Reconciliation Code was originally developed through an industry working group process. Proposed changes to the Reconciliation Code are considered and approved by a “National Allocation Group” established for this process. However, the Code has never been changed.
- 11.45 Change provisions would need to be included in any multilateral agreement since, without these, any change would need to be unanimously agreed. Typically, some form of voting process is established, with different parties being assigned different voting weights according to the extent to which they are affected by the relevant arrangement. Some provisions may be “protected” (immutable, or requiring a large voting majority to approve a change).
- 11.46 A weakness of voting is that, inevitably, large players dominate proceeding and the smaller players – who are often the most innovative and competitive – do not
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<sup>56</sup> Shippers’ ability to organize themselves may be limited by the requirements of the Commerce Act.

have much of a say. This can be countered by a “one party one vote” arrangement, but this has the opposite problem of lending undue and arbitrary weight to small players. In addition, related businesses would need to be identified and “bundled” to ensure that they cannot obtain extra votes through deliberate fragmentation.

11.47 In summary, existing non-regulatory change processes are;

- long-standing, but never used (eg NZPAC, Reconciliation Code);
- newly established and yet to be tested (MPOC, Gas Transfer Code);
- informal, unclear or not yet specified (VT TSAs and ICAs, operating procedures); or
- asymmetrical, with substantial control exercised by the pipeline owner (MPOC, VT TSAs, operating procedures).

There is therefore no model change process with proven success.

11.48 Rules, promulgated under the Gas Act, on the other hand, can be amended by gazetting a change proposal and consulting on it.

**Q50:** *What processes are appropriate for modification of Codes or other multilateral arrangements?*

### Enforcement Processes

11.49 A multilateral framework may be voluntary or mandatory.

11.50 Voluntary frameworks may be successful when it is in the commercial interests of each party individually to comply: eg for reasons of uniformity. Alternatively, they may be implicitly or indirectly enforced by the threat of a mandatory framework should voluntary compliance be unsuccessful. Voluntary codes may also specify dispute resolution processes for parties that disagree over application of the code. The NZ Pipeline Access Code is an example of a voluntary code.

11.51 Mandatory frameworks may be enforced through a contractual mechanism. For example, the MPOC is enforced through bilateral agreements between MDL and Shippers or WPs. Contracts may provide for dispute resolution mechanisms. If these fail, then enforcement would proceed through the courts. Such litigation is often lengthy and expensive and not conducive to efficiency or certainty.

- 11.52 In particular, a shortcoming of enforcement under standard contracts is that there may be no direct contractual relationship between the party in breach and the party that is damaged. For example, one shipper's actions may damage another shipper, but they would have no direct contractual relationship under either the MPOC or VT frameworks. In relation to balancing, these frameworks aim to address this by providing for the payment and claim for liquidated damages through an "incentives pool". Although it remains to be seen whether this approach will be effective. However, there are matters aside from balancing where enforcement may be problematic.
- 11.53 Under a pan-industry agreement, this problem does not arise, although there may be the opposite problem of everybody suing everybody. To avoid this, a pan-industry agreement would typically specify arrangements for dispute resolution and for the enforcement and remediation of breaches: for example through a "Dispute Resolution Committee".
- 11.54 Rules and Regulations can be enforced via the courts or under a tailor-made compliance regime. The Gas Industry Co has recently consulted on such a regime. A discussion paper entitled "Options for Compliance and Enforcement Arrangements in the New Zealand Gas Industry" can be found on its website.
- 11.55 Whether voluntary or mandatory, there is a need for compliance monitoring to identify and correct any non-conformance. This may be done by one or more of the parties to the framework, or by an external party: eg an auditor. For example, the MPOC provides for independent audit of MDL ring-fencing provisions (see Operators Theme).

**Q51:** *How should obligations placed on parties under access arrangements be enforced?*

### Preliminary Conclusions

- 11.56 The characteristics of gas transportation dictate a need for multilateral frameworks to cover most aspects of access arrangements. Indeed, all of the areas discussed in this paper require multilateral approaches: if they did not – ie if they could be resolved through bilateral negotiation – they would probably not need to be covered here.
- 11.57 However, the multitude of existing multilateral frameworks is disparate and confusing. Furthermore, many frameworks appear unbalanced, in that they allow the pipeline owner to play a dominant governance role. Gas Industry Co

considers that it has an important role to play in balancing, clarifying, rationalising and managing these frameworks.

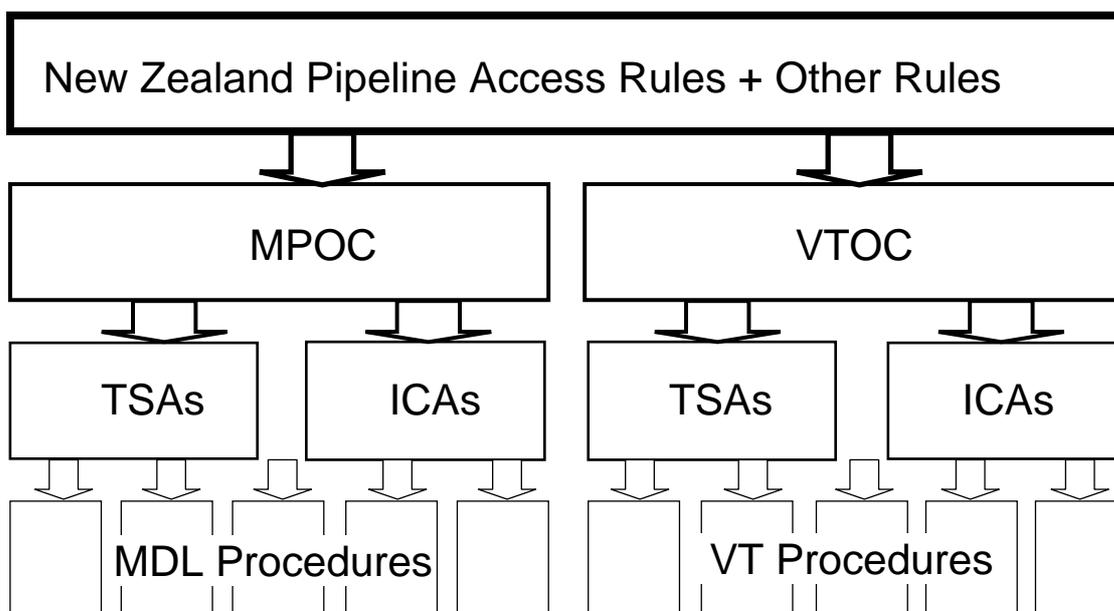


Figure 2: Proposed Governance Framework

- 11.58 As noted, frameworks fall into three categories: codes, standard contracts and operating procedures. A clear and standardised approach to enforcement and modification should be developed and applied for each category, as described below and shown graphically in Figure 2.
- 11.59 Codes (ie the NZPAC, the Gas Transfer Code and the Reconciliation Code) should be developed as Rules and governed and modified in accordance with the Gas Act. The NZPAC would become Pipeline Access *Rules* and would incorporate requirements on the design of multilateral frameworks (as described in this section) and the scope of these frameworks.
- 11.60 Standard Contracts (MDL and VT TSAs and ICAs) should be governed based on the MPOC model or something similar: eg VT might develop a “Vector Transmission Operating Code” (VTOC). That is, they should be invoked and enforced by bilateral contracts, be common to all shippers and WPs (except in relation to grandfathered contracts), and be changed through the approval of

Gas Industry Co and subject to pipeline owner veto under specified circumstances. The veto rights should be designed to reasonably protect the interests of the pipeline owner, without giving that party unduly dominant control over the design and development of the contract terms.

11.61 The alternative approach of a pan-industry agreement does not seem to offer any benefits compared to the MPOC model and so, given that it is a more radical change from the current arrangements, we do not propose to consider it further, at this stage.

11.62 Procedures (pursuant to TSAs and ICAs and incorporating much of the content of VT's Information Memorandum) should be developed by the relevant operator and approved by the relevant pipeline owner. They would need to be in accordance with the relevant contract terms and consistent with neutral and non-discriminatory access. Any party believing that a procedure did not satisfy these requirements could raise a dispute through a mechanism to be established and governed by Gas Industry Co.

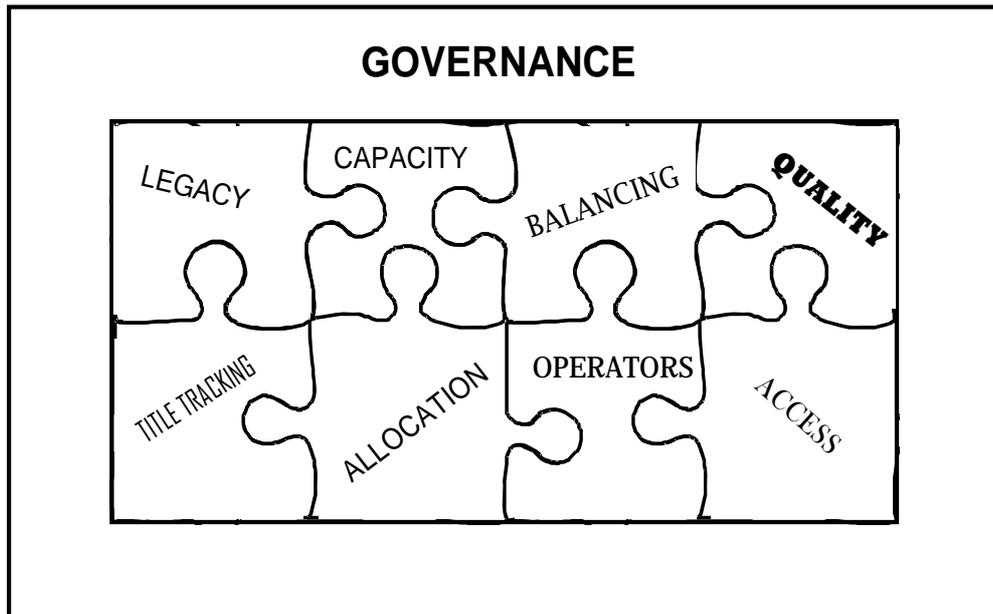
11.63 Gas Industry Co will develop and consult on the governance framework described above and recommend appropriate Rules to the Minister, to be incorporated within the New Zealand Pipeline Access Rules.

**Q52:** *Does the Governance Theme identify all of the issues relating to governance of access arrangements? If not, what other issues should be considered?*

**Q53:** *Do you agree with the actions proposed to address the governance issues? If not, what other options should be considered?*

## 12 Wrap Up

Putting it all together



### Summary

Preliminary conclusions from each of the nine Themes are brought together in this section. The three tiers of multilateral frameworks (codes, standard contracts and operating procedures) described in the Governance Theme will be the basis for resolving the issues identified in the other eight themes.

### Issues Arising

- development of new codes and conversion of codes into Rules
- development of a "VT operating code" by 2007
- development of operating procedures
- change and dispute processes for standard contracts and procedures

## Overview

- 12.1 The first 8 themes in this paper discuss the areas of the existing arrangements which give rise to multilateral concerns. For each theme, we have presented some indicative conclusions which identify where we believe some further work is required – by Gas Industry Co, pipeline owners or pipeline operators – to help to address or resolve these issues.
- 12.2 The last theme – governance – recommends rationalising the existing multitude of approaches to multilateral governance into just three categories: codes, standard contracts and procedures. Each of our proposed actions in the earlier themes can be categorised accordingly. The results of this are presented in Table 2, below. Unless otherwise specified, they apply to both MDL and VT pipelines.

**Table 3: proposed actions for each governance type**

Theme	Code Actions	Standard Contract Actions	Procedure Actions
<b>Legacy</b>			Describe Legacy Balancing Process Develop Legacy Transition Process
<b>Capacity</b>		Provide Short-term Capacity (VT) Describe Interruptible Capacity (VT)	Describe Interruption Process (VT)
<b>Balancing</b>			Describe Balancing operations Detail Balancing Cost Allocation
<b>Quality</b>	Interconnection Code	ICA development (VT)	
<b>Title Tracking</b>	Extend flow-on-nomination (VT)		
<b>Allocation</b>	Day-end information in Reconciliation Code	Balancing costs allocated on day-end mismatch estimates?(VT)	

Theme	Code Actions	Standard Contract Actions	Procedure Actions
<b>Operators</b>			Develop complete operating procedures
<b>Access</b>	Access Rules to provide pre-contractual rights		Develop access procedures
<b>Governance</b>	Develop NZ Pipeline Access Rules	TSAs/ICAs to be governed by a standard contract on the MPOC model (VT)	Disputes on procedures resolved by Gas Industry Co

12.3 Proposed actions for each category are summarised below.

#### Actions on Codes

12.4 All industry codes, existing and proposed, will become Rules, governed by Gas Industry Co in accordance with the provisions of the Gas Act (Governance Theme).

12.5 The NZ Pipeline Access Code (Rules) will incorporate provisions describing governance of standard contracts and operating procedures (Governance Theme) as follows:

- standard contracts will be governed similarly to the MPOC; and
- procedures will be developed by operators, approved by pipeline owners and any disputes on their compatibility with codes or standard contracts will be resolved through a process to be governed by Gas Industry Co.

12.6 The NZPAC will specify the pre-contractual rights necessary to ensure new entrants can gain access to open access pipelines on reasonable terms (Access Theme).

12.7 A new interconnection code will be developed which will establish common requirements for all ICAs for open access transmission pipelines (Quality Theme).

12.8 Gas Industry Co will consider whether to extend flow-on-nomination arrangements to VT receipt points, post-legacy. This would be done through changes to the Gas Transfer Code (Title Tracking Theme).

- 12.9 Gas Industry Co will consider strengthening the requirements for day-end allocation estimates in the Reconciliation Code (Allocation Theme).

#### Actions on Standard Contracts

- 12.10 Gas Industry Co will work with VT to develop MPOC-style governance and modification arrangements for VT TSAs and ICAs. (Governance Theme). These arrangements will include:

- standard contract terms for TSAs and ICAs (contained in a “VTOC” or similar), covering all multilateral areas;
- all *future* TSAs and ICAs will invoke these common terms;
- changes to common terms can be proposed by any party and will be approved by Gas Industry Co; and
- VT will be able to veto changes in certain, specified circumstances, to be agreed.

These arrangements to be introduced by September 2007 – when many existing VT TSAs expire.

- 12.11 As with the MPOC, bilateral terms will still exist for these contracts, to the extent necessary and appropriate.
- 12.12 VT will be asked to develop common terms for short-term capacity based on the requirements of wholesale gas trading, and to discuss and agree these with the wholesale markets working group. VT should also develop common terms for interruptible capacity (Capacity Theme). If progress on this is unsatisfactory, Gas Industry Co may develop the Rules necessary to achieve these requirements.
- 12.13 Gas Industry Co will review VT progress on developing and negotiating ICAs and may take action to support or accelerate these developments if needed (Quality Theme).
- 12.14 Once day-end allocation estimation provisions have been developed, Gas Industry Co will ask VT to consider whether balancing cost allocation could be based on these estimates, rather than actuals (Allocation Theme).

### Actions on Procedures

- 12.15 Gas Industry Co will ask pipeline owners and operators to develop procedures describing balancing processes during the legacy period. Gas Industry Co will also work with these parties to develop a transition process for the end of the legacy period (Legacy Theme).
- 12.16 Gas Industry Co will ask pipeline owners and operators to develop procedures describing balancing operations and balancing cost allocation and Gas Industry Co will review these to ensure they provide for neutral and non-discriminatory access (Balancing Theme and Operators Theme).
- 12.17 Gas Industry Co will ask pipeline owners and operators to develop procedures describing processes for new entrant shippers and WPs gaining access to pipelines (Access Theme).
- 12.18 All procedures must be consistent with the Rules, with the relevant standard contracts and with neutral and non-discriminatory access. Where any party considers that these requirements are not met they could raise a dispute which would be resolved through a process developed and governed by the Gas Industry Co (Governance Theme).

## Appendix 1: Gas Act and GPS Objectives

In relation to transport arrangements on New Zealand's high pressure transmission pipelines, Gas Industry Co wishes to ensure that the objectives of the Gas Act and Gas Policy Statement will be achieved.

Part 4A of the Gas Act 1992 relates to governance of the gas industry. In particular, Section 43ZN sets out the objectives of the Gas Industry Co (the "industry body") in relation to governance regulations. Since most of these objectives are relevant in varying degrees to the matters discussed in this paper they are quoted in full below:

"The objectives of the industry body, in recommending governance regulations under section 43F, are as follows:

- (a) the principal objective is to ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner; and
- (b) the other objectives are –
  - (i) the facilitation and promotion of ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements;
  - (ii) barriers to competition in the gas industry are minimised;
  - (iii) incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced;
  - (iv) delivered gas costs and prices are subject to sustained downward pressure;
  - (v) risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties;
  - (vi) consistency with the Government's gas safety regime is maintained."

In addition, Section 5 of the Government Policy Statement on Gas Governance (October 2004) includes among the specific outcomes being sought:

- "...access to essential infrastructure...";

- “Incentives for investment in... transmission... are maintained or enhanced...”;  
and that
- “Risks relating to... transport arrangements, are properly managed by all  
parties...”

Also, in the context of industry-led solutions, it provides that, where appropriate, the Gas Industry Co will develop arrangements for... “The establishment of an open access regime across transmission pipelines so that gas market participants can access transmission pipelines on reasonable terms and conditions.”

## Appendix 2: Full List of Issues Raised

Theme	Description of issue	Gas Industry Co response	Status
legacy	Crown has not agreed to use of legacy gas for flexibility.	Raises concern about sustainability of current balancing gas arrangements.	covered
legacy	Legacy shippers have unfair advantage, as they are not subject to balancing charges.	Yes, since legacy shippers can nominate retrospectively. But issue is intrinsic to legacy rights so outside scope of review.	outside scope
legacy	If just 1GJ of legacy gas goes through a WP, no imbalances can arise.	This may be true, and confirms confusion over legacy arrangements.	covered
legacy	Outcome of MDL balancing tenders is unclear.	Reflects use of legacy gas for balancing.	covered
legacy	Concern that MDL CO may not call on balancing gas during Maui outage if it might not recover costs from WPs.	Raises concern that this could exacerbate a contingency situation.	covered
legacy	Legacy rights effectively give legacy buyers first right to MDL linepack.	This could result in non-Maui shippers stopping production during a contingency.	covered
legacy	Concern that MDL CO cannot cashout OI at VT interconnection points, as is doesn't know until one month later if it is due to legacy gas.	Raises concern that balancing incentives are ineffective.	covered
legacy	Operator discussions on management of OI at TP WPs have been informal and complicated by legacy arrangements.	There is need for greater clarity on operations under legacy arrangements	covered
legacy	There is no incentive on legacy producer/shipper to manage imbalances during outage since they do not get charged for imbalances.	Discussed in paper.	covered
legacy	A balancing gas tender was held but the outcome was not clear, even to those that tendered.	This is probably related to balancing being provided through legacy arrangements. These arrangements need to be explained to shippers/producers.	covered
legacy	Balancing will not work during Maui contingency because of legacy arrangements. The result will be triggering of the NGOCP.	Discussed in paper.	covered
legacy	MDL CO should enter into range of supply-side and demand-side balancing gas contracts, to cover all contingencies.	Operators need to clarify what balancing requirements and processes are during the legacy period.	covered
legacy	Legacy rights mean that all gas is treated as legacy gas, even if just "1GJ" of legacy gas flows through a WP.	This may be true, and shows the need for greater clarity on legacy arrangements	covered
legacy	"Maui Gas" incorrectly defined in MPOC	Can be addressed by MPOC change request.	Noted
legacy	The MDL CO's attempts to force legacy arrangements into MPOC are causing tension.	Interaction between legacy arrangements and MPOC needs to be clarified.	covered

<b>Theme</b>	<b>Description of issue</b>	<b>Gas Industry Co response</b>	<b>Status</b>
legacy	MDL CO does not accept nomination outside of MPOC timetable.	Mitigated by OATIS, and can be addressed through dispute resolution.	temporary
legacy	May need special "retro-nomination" in last month of legacy gas.	Needs to be considered in a transition plan.	covered
legacy	Legacy shippers have an unfair advantage since they can choose which Maui gas is legacy and which is ROFR	Perhaps, but this is intrinsic to legacy rights, so outside of our scope.	outside scope
legacy	Legacy shippers can use ROFR gas to extend period of legacy gas availability.	Yes, but only until legacy expiry date. This is intrinsic to legacy rights so outside scope.	outside scope
legacy	Legacy shippers are overnominating to give themselves headroom to renominate retrospectively.	This may create balancing problems, hence the need for clarity over how operators deal with it.	covered
legacy	With retrospective nomination of legacy gas it is impossible to know who is shipping gas on the day, so imbalances cannot be managed.	Operators need to clarify the balancing arrangements during the legacy period.	covered
legacy	Legacy gas may expire before contract sunset date.	There is need for a transition plan to deal with uncertainty.	covered
capacity	Like to see differences between MDL and VT access arrangements as this provides some contestability (on parallel pipelines).	There is a trade off between contestability and simplicity, as discussed in paper.	covered
capacity	Rotowaro and Frankley Rd are "natural trading points" where trading already exists.	This suggests different capacity arrangements on MDL and VT pipelines is not an impediment to trading.	covered
capacity	AQ is not as good as "contract capacity". Just a priority mechanism, not a contractual obligation	This may be a fine distinction. Concerns about AQ are discussed in paper.	covered
capacity	MDL should be discussing new arrangements for capacity post-legacy.	It is understood that MDL has no plans to review AQ. However, changes could be addressed through MPOC change provisions.	noted
capacity	If shippers want changes to AQ, they can make MPOC change request.	Agreed. This is discussed in the paper.	covered
capacity	Would prefer contract carriage to AQ, although not sure about differences.	Shippers need to clarify concerns about AQ and make change requests to MDL.	covered
capacity	AQ design driven by need to accommodate legacy rights. Could be revised post-legacy	Shippers need to clarify concerns about AQ and make change requests to MDL.	Covered
capacity	AQs do not have priority in intra-day curtailment and the price can vary annually, therefore AQ is not fully "firm"	These concerns are discussed in the paper.	covered
capacity	There should be no limits on when nominations are made.	Full open access will permit 4 renominations per day, so concern may be mitigated.	temporary
capacity	More renominations should be allowed.	Full open access will permit 4 renominations per day, so concern may be mitigated.	temporary
capacity	VT needs to implement a nominations regime so that interruptible capacity can be offered.	VT already offers interruptible, without nominations, but how it manages its capacity situation in this situation needs clarifying.	covered

Theme	Description of issue	Gas Industry Co response	Status
capacity	Spot market can be used to manage contingencies, but only if spot capacity available.	Agree that spot capacity is needed to complement gas spot market.	covered
capacity	Like to have access to VT spot capacity, since no guarantee of customers running for full year.	The need for spot capacity discussed in the report.	covered
capacity	If spot capacity prices were reduced, this could undermine the price of booked capacity.	This issue is discussed in the paper.	covered
capacity	Capacity booking provides valuable information on future capacity utilisation, so VT nominations may be unnecessary.	This issue is discussed in the paper.	covered
capacity	It is difficult acquire VT capacity quickly when needed.	This illustrates the need for VT to offer short-term capacity.	covered
capacity	Spot capacity is needed to facilitate short-term gas flows and trades.	Agreed, this issues is discussed in the paper.	covered
capacity	The capacity trading market is likely to be illiquid.	It follows that secondary trading is unlikely to be sufficient to provide spot capacity.	covered
capacity	Spot capacity should be priced at a market rate, but not as high as overrun charges.	Overrun is not appropriate for spot capacity.	covered
capacity	VT should offer short-term capacity: firm or interruptible. The "flight from firm" risk is overstated, since most shippers would still book firm capacity	This issue is discussed in the paper.	covered
capacity	Where customers switch, retailer may recover the cost of stranded capacity from the customer.	Relates to capacity transfer arrangements, which is discussed in paper	covered
capacity	Capacity transfer regime allows retailers to compete on how they "package" capacity	The impact of capacity on shipper competition is discussed in the report.	covered
capacity	Where a shipper/customer is double-charged, this is not the fault of VT or its processes	This issue is discussed in the paper.	covered
capacity	A customer has ended up paying twice for the same capacity.	Discussed in paper, relates to capacity transfer processes.	covered
capacity	NGC overrun charges are being increased.	This is not the case. May be confusion with balancing costs.	Not agreed
capacity	VT booked capacity is not "use-it-or-lose-it" so allows hoarding.	This issue is discussed in the paper.	covered
capacity	There are some extreme pricing outcomes from current VT pricing methodology.	Pricing methodology is outside scope of review.	outside scope
balancing	A single ballancing arrangement would avoid potential for operator decisions to adversely impact on cost-sharing between shippers.	Should be addressed through better operator procedures and information.	covered
balancing	Preference for common access terms for VT and MDL pipelines.	Proposed that balancing arrangements to be reviewed after six months.	covered
balancing	There is concern that gentailers may be able to manipulate gas spot prices.	This is a gas market issue, outside of scope.	outside scope

Theme	Description of issue	Gas Industry Co response	Status
balancing	VT takes a risk on paying MDL balancing charges and having to recover these from shippers.	This might be addressed by a single balancing pool.	covered
balancing	If there were one pipeline owner and no legacy gas, there would probably be a single balancing pool.	This suggests multiple balancing pools are driven by commercial issues, not physical characteristics.	covered
balancing	It is "crazy" to have different balancing systems on different pipelines.	It is too soon to consider re-designing the balancing arrangements. Gas Industry Co will review in 6 months.	covered
balancing	We need common balancing terms across all pipelines to prevent discrimination and ensure cost sharing is equitable.	Balancing processes have not yet been fully described or tested. Gas Industry Co will review in 6 months.	covered
balancing	MDL balancing arrangements simply push costs and risks onto VT.	Agree that costs are simply passed down the line - eventually to customers - rather than managed by the parties best able to control the risk.	covered
balancing	Operator may be reluctant to call on balancing gas unless some WP is paying for it (ie excess OI is cashed out), otherwise costs fall into general operating costs.	Raises concern that least-cost actions may not be taken, due to issue of cost allocation.	covered
balancing	In balancing gas tender, MDL CO seems to be confusing two types of balancing gas: that needed urgently during a contingency and that needed to make up any imbalances "cashed out".	Reflects lack of clarity in operating procedures.	covered
balancing	MDL CO has not been involved in developing NGOCP (commercial aspects).	MDL CO should be involved.	covered
balancing	If ROIL tolerances too wide, may need balancing gas before any WPs cashed out.	Operators may not undertake necessary balancing actions because of cost allocation.	covered
balancing	There is a trade-off between capacity and balancing tolerances. Who should do this?	Need clarity over operator procedures for determining imbalance limits.	covered
balancing	Imbalance tolerances are "skewed towards the demand side": ie tolerances for producers are unfairly low.	Need for principles and guidance for setting imbalance limits.	covered
balancing	MDL CO has indicated that it is reviewed imbalance limits, but no announcements on progress.	Reflects a lack of clarity in operating procedures.	covered
balancing	There is a problem with correcting a positive imbalance if a WP station is out-of-service.	This will probably be addressed by full open access when four renomination cycles will be available.	temporary
balancing	Impact of Pohokura gas on balancing arrangements is uncertain.	Gas Industry Co will review balancing in six months (after Pohokura commencement).	covered
balancing	A producer is not able to "bank" gas in the MDL pipeline in the advance of a scheduled production outage, even though this would help with balancing.	This might be possible under existing MPOC arrangements; more guidance to operators and WPs is needed.	covered
balancing	All shippers should have rights similar to those enjoyed by legacy shippers.	This suggestion would just seem to exacerbate "legacy" problems.	Not agreed

Theme	Description of issue	Gas Industry Co response	Status
balancing	Would like to see MDL offer a "park and loan" service, as some overseas pipelines do.	MDL effectively provides this service to WPs. However, unclear how benefits are passed through to shippers. Need more transparency and education.	covered
balancing	Cost of imbalance may be spread across parties not (primarily) responsible.	Balancing charging may be unfair to retailers.	covered
balancing	Costs/risks of retail imbalances unclear. Could be "caught" by a power station creating a large imbalance.	Relates to fairness and transparency of balancing charges.	covered
balancing	VT can trade OI between points, but have no obligation to do this in a way which minimises balancing charges.	VT needs to clarify policy and procedures on OI trading.	covered
balancing	Unclear whether retail allocation affects overall mismatch charges for a daily-metered site.	Reflects need for education on balancing cost allocation.	covered
balancing	Recognise that balancing charges may adversely affect small retailers, but does it matter?	Concern about fairness of balancing charges.	covered
balancing	Producer has noticed how new balancing regime means shippers more concerned with producer deviations from nomination.	Illustrates important role of balancing charges in encouraging good balancing behaviour.	covered
balancing	Balancing charges could have a major impact on customers.	Retailers likely to pass charges through, as they are unable to manage them.	covered
balancing	A customer can manage consumption in real-time to reduce balancing charges, but needs real-time information to do so.	Retailers/Customers can only assess the benefit of real time information when they understand the balancing risks.	temporary
balancing	With the VT parallel pipeline open, VT's pipelines operate as a single system and balancing arrangements should reflect this.	Gas Industry Co plans to review balancing arrangements once they are fully operational.	covered
balancing	VT's definition of "pipelines" (ie balancing pools) are unclear.	VT needs to clarify balancing arrangements.	covered
balancing	Before MDL open access, an incident occurred where excess VT pipeline pressure meant some producers could not inject gas. Not clear who was at fault and commercial remedies were unsatisfactory.	May be addressed by new VT balancing processes. However, demonstrates need for more transparency on balancing.	covered
balancing	Whilst VT has a clearer process for procuring balancing gas, the tender was issued at too short a notice.	Reflects a lack of clarity in operating procedures.	covered
balancing	May need to introduce a nominations regime on the VT parallel pipeline to allow VT pool imbalances to be measured.	Illustrates complexity of separate balancing pools.	covered
balancing	Need allocation on VT parallel pipeline in order to calculate mismatches in each VT balancing pool.	Illustrates complexity arising out of multiple balancing pools.	covered
balancing	A nominations regime is needed on VT pipelines, so flows can be scheduled and deviations from schedule can be managed (also relates to title tracking and allocation).	VT operators need to clarify how balancing is managed without a nominations regime.	covered
balancing	A VT nominations regime would allow causers of imbalances to be identified sooner.	This may not be so since the problem lies more with title tracking and allocation.	covered

<b>Theme</b>	<b>Description of issue</b>	<b>Gas Industry Co response</b>	<b>Status</b>
balancing	Small shippers need a "gas pool" to trade imbalances.	This is ex post mismatch trading, discussed in paper.	covered
balancing	There should be a "retail pool" so balancing charges can be reconciled between retailers, without involving wholesale shippers.	Ex post mismatch trading is discussed in report.	covered
balancing	There could be ex post mismatch trading on VT pipelines.	This is disussed in the paper.	covered
balancing	Ex post mismatch trading would be helpful for retailers.	Discussed in paper, but conclude that this would not be helpful.	covered
quality	Where gas is delivered outside of specification, can lead to major operational problems and even "collapse" of distribution networks.	Contractual arrangements should cover need to manage gas composition.	covered
quality	New gas fields do not have adequate monitoring of gas quality - this is an "accident waiting to happen".	Monitoring requirements should be specified in new interconnection rules.	covered
quality	Gas composition standards are always a trade-off between producers wanting wide tolrances and consumers wanting narrow ones.	Supports case for an interconnection code, where these trade offs can be managed transparently and with all parties having a say.	covered
quality	Concerned about emergency arrangements: DB has no direct contractual relationship with customers so can only disconnect if there is a safety issue.	Distribution contracts outside the scope of this review.	outside scope
quality	Some DBs do not have sufficient operational staff to carry out customer disconnections in an emergency.	Distribution operations are outside the scope of this review.	outside scope
quality	Could increase Maui pipeline capacity by raising pipeline pressure. Would need to trade off capacity benefits vs cost of higher pressure. Who could do this	Interconnection agreement must specify rights and obligations regarding gas pressure.	covered
quality	Major customers have no direct contact with VT on gas quality.	Need for interconnection agreements to manage gas quality issues.	covered
quality	It doesn't make sense for a retailer to be responsible for gas composition.	Paper proposes that gas quality becomes the commercial responsibility of welded parties.	covered
quality	DB has no interconnection agreement with VT, who has been unwilling to negotiate these.	We understand that VT is now negotiating these.	covered
quality	A code would be the simplest approach to negotiating/agreeing interconnection agreements between VT and distributors.	Paper discusses development of an interconnection code.	covered
quality	Distributors were not adequately consulted on development of VT standard interconnection agreement.	Standard terms should be developed in an interconnection code.	covered
Quality	The "maximum allowable operating pressure" needs to be clearly defined in VT interconnection agreement: eg does it apply under contingency conditions.	Gas pressure discussed in paper and would be covered in ICAs and maybe in interconnection code.	covered
title tracking	Length of nomination chain (through legacy) makes renominations impractical.	This is probably only an issues for legacy gas.	covered

<b>Theme</b>	<b>Description of issue</b>	<b>Gas Industry Co response</b>	<b>Status</b>
title tracking	A nominations regime may not help with balancing, as still don't know who is deviating from nominations on the demand-side.	This is true for retail customers, but large customer (it those with telemetered metering) positions would be known.	covered
title tracking	Approved nominations at an MDL welded point should be specified for each producer that a shipper purchases from.	Uncertainty only arises when nominations are curtailed. More clarity on title tracking during curtailment is needed.	covered
title tracking	Mechanisms relating to displaced gas nominations are unclear.	The ex ante title tracking is complex and needs to be clarified.	covered
title tracking	The MPOC should require that any displaced gas nominations specify the nomination that is displaced.	This is a specific amendment to the MPOC which could be progressed through the MPOC change process.	noted
title tracking	Some ring-fencing issues arise for a welded party at a producer WP where multiple parties are buying and selling gas.	Relates to role of welded party in title tracking and operations.	covered
title tracking	Nominations process creates overheads for WP who need to confirm noms in each renomination cycle.	Paper discusses need for WP to be involved in title tracking processes; overheads may diminish with full open access.	covered
title tracking	Do not want to see nominations regime on VT pipelines, as these will create overheads for WPs.	Overheads may in fact be reduced if extend flow-on-nomination regime.	covered
title tracking	An MDL WP could make and not confirm all nominations.	Appropriate role of WP in nominations process is discussed in paper.	covered
title tracking	An MDL shipper may have no contractual relationship with MDL WP and so no remedy if the WP errs in the nominations process.	Appropriate role of WP in nominations process is discussed in paper.	covered
title tracking	Commercial issues not adequately specified in NGOCP: will lead to litigation if contingency occurs.	Need to clarify title tracking under contingency conditions.	covered
title tracking	Current arrangements prevent a WP from establishing a "trading hub" at a WP.	This seems to relate to issues with early open access or OATIS design, not the MPOC arrangements themselves.	noted
title tracking	New gas fields will market under stricter take-or-pay arrangements, so may increase need for gas trading between shippers.	Increased trading will lead to further complexity in title tracking.	covered
title tracking	Gas transfers depend upon downstream allocation. One retailer may be affected by another retailer's customers, so cannot manage mismatch.	Gas transfer rules are too complex, better to have flow-on-nomination.	covered
title tracking	Shipper picks up a mismatch where a VT producer has a production error.	Due to no nominations regime on VT pipeline. Could be addressed by extended flow-on-nomination	covered
title tracking	Meter errors may impact gas transfer quantities, leading to re-opening of settlements if major error detected.	Could be avoided if flow-on-nomination extended (although not feasible under legacy).	covered
title tracking	Where gas transfers depend upon downstream allocation, creates problems and delays.	Gas transfer rules are too complex, better to have flow-on-nominations.	covered
title tracking	No OBAs with VT producers: means that producer errors may cause shippers to go into mismatch. This may motivate shippers to push for flow-on-nominations.	Supports case for extending flow-on-nominations.	covered

Theme	Description of issue	Gas Industry Co response	Status
title tracking	Flow-on-nomination means that metering errors are solely the responsibility of welded parties.	Supports case for extending flow-on-nomination.	covered
title tracking	Not sure if balancing gas can be offered to VT without entering into a gas transfer agreement.	Gas transfer agreements currently only required at gas transfer points listed in schedule to code.	covered
title tracking	Risks of relying on a single person to perform all allocations.	Operational risks of title tracking arrangements are discussed.	covered
title tracking	Flow-on-nomination is simple and should be extended to all VT receipt points.	Supports case for extending flow-on-nomination.	covered
title tracking	Commerce Act concerns on MPOC is in relation to 2.14, which requires MDL shippers to enter into a gas transfer agreement.	Paper discusses need for WP to be involved in title tracking processes.	covered
title tracking	MPOC and gas transfer code prevent "intermediaries" (non-shippers) trading at welded points - impediment to market liquidity.	Paper discusses need for WP to be involved in title tracking processes.	covered
title tracking	Section 41 of the Crown Minerals Act requires all gas trades to be pre-approved by Minister.	This is being addressed in the wholesale markets workstream.	outside scope
title tracking	VT requirements (in gas transfer code) inhibit gas trading.	Whilst role of WP is raised in issues paper, impact on gas trading is a matter for wholesale markets workstream.	outside scope
allocation	Reconciliation code not properly followed or enforced.	Addressed by allocation workstream.	outside scope
allocation	It is not clear who is responsible for meter errors and consequential balancing charges.	Concern would be mitigated if balancing charges based on day-end estimates.	covered
allocation	Downstream allocation process does not meet normal "accounting" standards: eg transparency.	Addressed by allocation workstream.	outside scope
allocation	Meter errors can lead to large mismatches arising: who takes responsibility?	Might be mitigated if balancing costs charged on day-end estimates.	covered
allocation	Improved processes are required for allocation and reconciliation.	This is being addressed in the reconciliation workstream.	outside scope
allocation	The "daily" wholesale market arrangements imply need for daily allocation at retail level: eg estimate non-daily-metered quantities on day after gas day.	Discussed in paper.	covered
allocation	VT is not providing all the information that it should/could on day+1.	Need to strengthen day-end information. However, this issue could just be to do with early open access or OATIS.	covered
allocation	difficult for small retailer to resource forecasting capability - would outsource if this were available	Day-end estimation methodology could be used to provide day-ahead forecasts.	covered
allocation	Do not have sufficient real-time information to manage mismatch position.	Day-end estimation methodology could be used to provide day-ahead forecasts.	covered

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allocation	Full access to gas flow information is needed to allow shippers to manage imbalance risks.	The paper suggests this can be progressed through day-end information, although additional real-time information may also be needed.	covered
allocation	Don't think that UFG should be allocated equally across all customers, as large customers have better metering.	Relates to reconciliation workstream.	outside scope
allocation	Maybe there should be a different balancing charging regime for small customers which recognise the lack of information.	This could be done by charging on day-end estimates instead of actuals.	covered
operators	Chinese walls need to manage information flow from MDL to VT and vice versa.	Discussed in paper.	covered
operators	Could waste money trying to do too much ring-fencing of operators.	Need to have reasonable but effective ring-fencing.	covered
operators	Can manage operator conflicts by detailed rules and procedures.	Discussed in paper.	covered
operators	Pipeline owners/operators have conflict of interest: may prevent access in order to favour affiliates.	Need clear procedures and ring-fencing.	covered
operators	OATIS development has been poorly managed and shippers were not sufficiently involved.	Largely historical issue, although it shows importance of oversight of pipeline operators.	temporary
operators	IT development has been managed poorly by pipeline operators, who simply pass the cost through to shippers/WPs.	This is historical, in relation to OATIS. However, also shows need for operator transparency and shipper involvement.	covered
operators	If VT obtains ownership of OATIS, this could prevent the MDL operator roles being contestable.	This seems to be a market power issue, which is outside of the scope of this review.	outside scope
operators	Lack of clarity over spare capacity on MDL pipeline, and rolling forecasts are unclear.	MDL SO must improve procedures and transparency.	covered
operators	Unclear whether OI can be combined between three points or must be managed individually.	Operators need to clarify the imbalance limits that apply.	covered
operators	Mismatch prices do not seem to reflect tender outcomes, unclear how they are derived.	MDL CO needs to clarify setting of mismatch prices.	covered
operators	The value of running operational imbalance limits have not been specified by MDL, for TP welded points.	Illustrates lack of clarity of pipeline operation.	covered
operators	MPOC requires operators to publish operating procedures, but they haven't done this.	This could be a teething issue. However, paper discusses need for greater transparency.	covered
operators	MDL has added an administration fee to balancing prices which appear excessive.	Pricing is outside the scope of this review.	outside scope
operators	Mismatch prices posted by the MDL CO exceed balancing gas offer prices.	The operator needs to clarify how these prices are set.	covered
operators	It is unclear how Gas Industry Co intends to perform its roles under the MPOC.	Gas Industry Co is drafting an MoU with MDL outside of this review.	outside scope

Theme	Description of issue	Gas Industry Co response	Status
operators	In areas where MPOC is silent, do operators have unlimited rights and no obligations?	Access rules could cover behavioural rules at a high level. Operators should not be able to develop procedures which are inconsistent with the operating codes.	covered
operators	The MDL CO is publishing information on excess imbalances. This seems to contravene confidentiality requirements.	This may be a teething issue (particularly prior to full open access).	temporary
operators	The MDL operators have been unhelpful and pedantic in addressing teething issues.	Operators should develop procedures which would cover how they respond to parties requests.	covered
operators	MDL is making MPOC changes "on the run" - not following due process.	The distinction between MPOC and associated procedures needs to be clarified.	covered
operators	No restriction on WPs in use of shipper information.	Need for chinese walls around welded parties.	covered
operators	Concerned about a competitor also being the welded party at a production point.	May need ring-fencing for WPs as well as pipeline operators.	covered
operators	MDL CO is not sufficiently independent and could favour affiliates: eg by allowing "banking" of gas prior to outage, or deciding not to cashout out excess imbalance.	May need to strengthen ring-fences or reduce operator discretion.	covered
operators	MDL operators have substantial discretion and could use this to favour their affiliates.	Discussed in paper.	covered
operators	The MPOC should establish ring-fencing between the MDL SO and other Vector interests.	Discussed in paper.	covered
operators	Should be more transparency in discount pricing.	Pricing is outside the scope of this review.	outside scope
operators	VT needs more work on ring-fencing between the VT CO and the MDL TO&SO.	Need for ring-fencing discussed in general in paper.	covered
operators	Chinese walls between operators and affiliates are inadequate.	May need some oversight of chinese walls.	covered
access	All pipelines should be "open access" downstream of processing stations, as it is hard to get landowner approval for a new pipeline.	Closed-access pipelines discussed in paper.	covered
access	No reason why existing closed access pipelines need to be "opened". Third party gas has been transported on closed pipeline.	Not supporting opening up of existing closed pipelines.	covered
access	Should be legal rights to third party access on all transmission pipelines.	Considered in paper but not supported.	covered
access	Any new pipelines should be built by Gas Industry Co and liability covered by government.	Inconsistent with Gas Industry Co role and constitution.	outside scope
access	If existing welded points were open to new entrants, would need to consider how existing obligations were passed on or shared.	Not proposing open access for closed pipelines and welded points.	covered

Theme	Description of issue	Gas Industry Co response	Status
access	Level of insurance cover required by MDL for new welded points is excessive.	Need greater clarity on rights and obligations of new interconnecting parties.	covered
access	Before MDL open access, process for new MDL interconnections was satisfactory and more straightforward.	Need to ensure access process is not unduly onerous or complex.	covered
access	MPOC only applies to existing parties. Different issues arise for new parties.	Supports case for access code and procedures, in addition to operating codes.	covered
access	Process for new interconnections to MDL pipeline has all changed since MDL open access. There are now unreasonable charges and delays.	Reinforces need to develop access procedures.	covered
access	MDL can exploit the risks inherent in "hot tapping" to effectively block new pipeline interconnections.	Should be managed through new access code and detailed access procedures.	covered
access	The differences between VT TSAs seem to breach the non-discrimination requirements included in the standard TSA.	This may be a contractual matter. Going forward, discrimination issues should be addressed in the access code.	covered
governance	Terminology is inconsistent between the MPOC and VT TSAs. Consistent definitions are needed.	Depending upon the context, industry-wide definitions could be included in the proposed Rules	covered
governance	MDL/VT should not have a veto on changes to standard contracts.	This would be addressed in design of change processes.	covered
governance	Being overwhelmed by number of consultation papers on reform: eg from Gas Industry Co.	Illustrates a need for clear and fair legal framework and change processes.	covered
governance	Too many consultation papers (from Gas Industry Co): need to focus on critical issues: eg NGOCP.	There is an overarching need for clear legal framework, change processes and objectives.	covered
governance	MDL and VT arrangements are designed for large players, not suitable for smaller players who don't have a voice.	Change processes must provide a voice to smaller players, which militates against a multilateral contract.	covered
governance	Any code change process should not give the pipeline owner a veto.	The terms of any veto need to be considered further.	covered
governance	Since "regulation" requires a drawn-out change process, prefer an industry code.	We do not to propose to regulate the "operating codes".	covered
governance	Gas Industry Co process can be captured by large players, Gas Industry Co should be independent of industry.	Relates to Gas Industry Co constitution, not access arrangements.	outside scope
governance	Outage planning processes should be included in operating codes.	Could be incorporated in MPOC or VTOC, but Contingency workstream should address this.	noted
governance	Pipeline owners may price discriminate between customers, but not shippers: ie different shippers serving the same customer should be offered identical terms.	Price regulation outside the scope of this review.	outside scope
governance	High cost of OATIS reflects extent of new arrangements. Radical change will always give rise to high implementation costs.	Need to factor implementation costs into change processes.	covered
governance	Would not want to see the MPOC being "entrenched" into Rules.	We do not to propose to regulate the "operating codes".	covered

Theme	Description of issue	Gas Industry Co response	Status
governance	There is legal advice that MPOC does not raise Commerce Act issues, so no need to turn MPOC into Rules.	Commerce Act issues remain uncertain.	covered
governance	Some procedures issued by MDL are de facto changes to MPOC but without formal change process.	Need some oversight of procedure change process.	covered
governance	Unduly "ponderous" to go through MPOC change process simply to make changes to procedures.	Still need oversight to ensure procedures are consistent with contract terms.	covered
governance	Where published, MDL instructions to operators are lacking in sufficient detail.	Paper proposes that Gas Industry Co could resolve disputes on the appropriateness of published operating procedures.	covered
governance	In posting new terms for the development of new interconnections, MDL CO is breaching the MPOC.	Paper proposes that Gas Industry Co could resolve disputes on the appropriateness of published operating procedures.	covered
governance	Should have "codification" of transmission access to level the playing field.	Relates to governance of VT TSAs.	covered
governance	For a balancing/liability pool to work (on VT pipelines), all shippers must be part of the pool.	Implies need for standard contract for VT TSA.	covered
governance	Prefer to have standard contract terms: more transparent for new entrants, simpler for pipeline operators.	Propose a VTOC for VT pipelines.	covered
governance	Under the impression that all shippers have virtually identical TSAs, so almost have code anyway.	Establishment of VTOC would remove uncertainty on variation of terms.	covered
governance	VT TSAs should be governed by an operating code rather than being bilateral. Code changes should be based on "one party, one vote".	Code-based governance is proposed in the paper. The change process is to be further considered.	covered
governance	Because VT TSAs are bilateral, it is not clear which shippers contribute to the liability pool. A code is needed.	Multilateral issues should be covered in an "operating code".	covered
governance	Most VT TSAs expire in 2007, which creates an opportunity to introduce an operating code.	Gas Industry Co intends to progress this issue within this timescale.	covered
governance	VT should establish a process for developing an operating code to replace TSA's expiring in 2007.	Gas Industry Co will recommend a process out of this review.	covered
governance	VT has no contractual obligations regarding matters such as peaking, developable capacity, new interconnections and offers of new services.	Many of these matters are covered in VT's Information memorandum and subject to the pipeline access code. Both these arrangements need development.	covered
governance	Shippers under long-term TSAs are not paying the costs of MDL open access: eg OATIS.	Long-term contracts would always be grandfathered anyway.	covered
governance	There should be no MDL veto on MPOC changes.	The change process may be reviewed.	covered
other	Small players have limited opportunity to acquire gas. Market is dominated by large players. This is likely to lead to increased retailer concentration.	Relates to gas purchasing, not transmission.	outside scope

Theme	Description of issue	Gas Industry Co response	Status
other	Market concentration is reducing the incentive to efficiently move customers from electricity to gas,	Not directly related to gas transmission.	outside scope
other	Price control regime reduces investment incentives by increasing risk of making an adequate return on capital.	Pricing is an issue for the Commerce Commission, outside scope of this review.	outside scope
other	NZ gas market is too small too accommodate large new fields.	Exploration and marketing outside scope of review.	outside scope
other	There is an international shortage of production rigs, with NZ a long way down the "pecking order".	Exploration outside scope of this review.	outside scope
other	It is hard to obtain "swing" gas to manage a retail portfolio. Swing resources are tied up by major producers/shippers.	Relates to wholesale market workstream.	outside scope
other	Retailers are bearing higher fixed costs for gas, transmission and distribution, making gas uneconomic compared to other fuels.	Pricing is outside of the scope of this review.	outside scope
other	There is difficulty enforcing metering code and the code may need updating.	Either relates to industry governance arrangements, which are covered, or is outside of scope.	outside scope
other	The price control regime allows DBs to drop prices on contestable pipelines and raise prices on others.	Pricing is responsibility of Commerce Commission and outside scope of this review.	outside scope
other	MPOC does not allow a difference metering arrangement and it would be uneconomic to put in a dedicated meter in some situations.	This relates to an individual party at a single site. The party could put up a MPOC change request.	noted
other	Tariff principles in the MPOC are unclear.	Pricing is outside of the scope of this review.	outside scope
other	Should be legal rights to third party access for liquids storage.	Liquids storage is outside scope of review.	outside scope
other	A dominant producer is inhibiting competition.	Misuse of market power is a matter for Commerce Commission, not for Gas Industry Co or this review.	outside scope

## Appendix 3: Format for Submissions

To assist the Gas Industry Co in the orderly and efficient consideration of stakeholders' responses, a suggested format for submissions has been prepared. This is drawn from the questions posed throughout the body of this discussion document. Respondents are also free to include other material in their responses.

### Recommended Format for Submissions

QUESTION	COMMENT
<b>Q1</b> Are you satisfied with the review process? Are there any forms of recommendation to the Minister which Gas industry Co should consider?	
<b>Q2</b> Have we described the current balancing arrangements correctly? Do you think they are sustainable through the legacy period? If not, how do they need to change?	
<b>Q3</b> Do you agree with these concerns about Maui contingency arrangements? If so, what might be done to address these?	
<b>Q4</b> Do you agree that a transition plan is needed to manage the legacy expiry? If so, who should be responsible for developing this plan?	
<b>Q5</b> Does the Legacy Theme identify all of the issues arising during the legacy period as a result of legacy rights? If not, what other issues should be considered?	
<b>Q6</b> Do you agree with the actions proposed to address the legacy issues? If not, what other options should be considered?	
<b>Q7</b> Do current arrangements meet your requirements for short-term capacity on VT pipelines? If not, how might these arrangements be modified?	
<b>Q8</b> Do current arrangements meet your requirements for long-term, firm capacity on MDL pipelines? If not, how might these arrangements be modified?	

QUESTION	COMMENT
<p><b>Q9</b> Would you prefer to see capacity in the parallel pipelines to be marketed separately – as now – or jointly marketed as a single, virtual pipeline? What are the strengths and weaknesses of these alternatives?</p>	
<p><b>Q10</b> What barriers to shipper competition exist in MDL or VT capacity arrangements? How might these impediments be removed?</p>	
<p><b>Q11</b> Does the Capacity Theme identify all of the issues relating to capacity services? If not, what other issues should be considered?</p>	
<p><b>Q12</b> Do you agree with the actions proposed to address the capacity issues? If not, what other options should be considered?</p>	
<p><b>Q13</b> Will having multiple balancing pools lead to higher balancing costs than under a single-pool arrangements? Is a single pool feasible, given the current ownership structure and capacity arrangements?</p>	
<p><b>Q14</b> Is the allocation of balancing costs likely to affect operator decisions? If so, might this lead to higher balancing cost overall or to inappropriate cost allocation? What could be done to address this?</p>	
<p><b>Q15</b> Are the VT arrangements for allocating balancing costs unduly complex? If so, how might they be simplified?</p>	
<p><b>Q16</b> Will current arrangements lead to unfair or unreasonable balancing charges being levied on small customers? If so, how might this be ameliorated?</p>	
<p><b>Q17</b> Does the Balancing Theme identify all of the issues relating to pipeline balancing? If not, what other issues should be considered?</p>	
<p><b>Q18</b> Do you agree with the actions proposed to address the balancing issues? If not, what other options should be considered?</p>	
<p><b>Q19</b> Do you agree that responsibility for gas quality should be placed solely on WPs? If so, how should this be done? If not, what aspects should shippers remain responsible for?</p>	
<p><b>Q20</b> What changes should be made to existing arrangements in relation to gas composition?</p>	

QUESTION	COMMENT
<b>Q21</b> What changes should be made to existing arrangements in relation to gas pressure?	
<b>Q22</b> What changes should be made to existing arrangements in relation to gas odorisation?	
<b>Q23</b> Does the Quality Theme identify all of the issues relating to gas quality? If not, what other issues should be considered?	
<b>Q24</b> Do you agree with the actions proposed to address the quality issues? If not, what other options should be considered?	
<b>Q25</b> What role should the pipeline owner perform in relation to ex ante or ex post title tracking?	
<b>Q26</b> Who should be responsible for confirmation of nominations at different welded points?	
<b>Q27</b> Would there be benefits from equating ex ante and ex post title quantities: in effect, having flow on nomination at VT receipt points? What are the practical impediments to implementing this?	
<b>Q28</b> Do you think that the title tracking arrangements will operate successfully under contingency conditions? If not, how should they be changed? Would extended flow-on-nomination arrangements help?	
<b>Q29</b> Does the Title Tracking Theme identify all of the issues relating to title tracking? If not, what other issues should be considered?	
<b>Q30</b> Do you agree with the actions proposed to address the title tracking issues? If not, what other options should be considered?	
<b>Q31</b> What problems does the monthly allocation timing cause you under a daily mismatch regime?	
<b>Q32</b> What need do you have for day-end allocation information? How might this information be improved?	
<b>Q33</b> Would you like to see ex post mismatch trading introduced? If so, why?	
<b>Q34</b> Does the Allocation Theme identify all of the issues relating to downstream allocation? If not, what other issues should be considered?	
<b>Q35</b> Do you agree with the actions proposed to address the allocation issues? If not, what other options should be considered?	

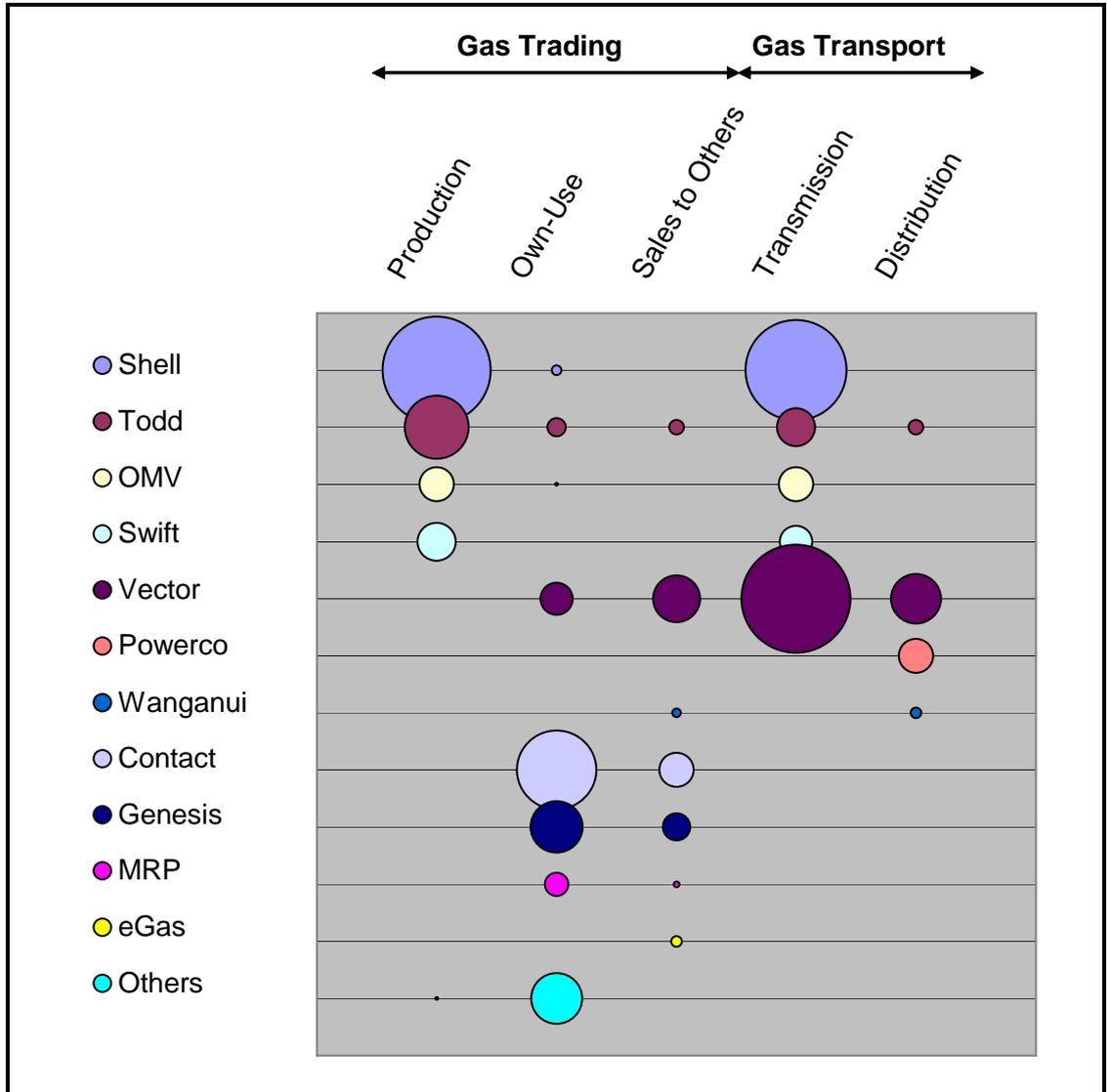
QUESTION	COMMENT
<p><b>Q36</b> Are existing ring-fencing arrangements adequate to manage potential conflicts of interest? If not, how should these be changed or strengthened?</p>	
<p><b>Q37</b> Are existing Chinese Walls adequate to maintain confidentiality of information seen by pipeline operators and agents? If not, how should these be changed or strengthened?</p>	
<p><b>Q38</b> Can conflicts of interest be managed by removing or reducing operator discretion? Is this being done effectively at present? How might current arrangements be changed?</p>	
<p><b>Q39</b> Do existing oversight arrangements provide you with assurance that ring-fencing requirements are being complied with? If not, what changes are necessary?</p>	
<p><b>Q40</b> Does the Operators Theme identify all of the issues relating to pipeline operators and agents? If not, what other issues should be considered?</p>	
<p><b>Q41</b> Do you agree with the actions proposed to address the operator issues? If not, what other options should be considered?</p>	
<p><b>Q42</b> Why have delays to the development and approval of new welded points occurred? What needs to be done, if anything, to prevent these delays occurring in the future?</p>	
<p><b>Q43</b> What access rights should third parties have to currently “closed” pipelines and welded points?</p>	
<p><b>Q44</b> Is there a need for an overarching access code in NZ? Could the NZPAC play this role? If so, what changes would be required to it?</p>	
<p><b>Q45</b> Does the Access Theme identify all of the issues relating to pipeline access for new producers and customers? If not, what other issues should be considered?</p>	
<p><b>Q46</b> Do you agree with the actions proposed to address the access issues? If not, what other options should be considered?</p>	
<p><b>Q47</b> What aspects of transportation should or should not be subject to multilateral governance, and for what reasons?</p>	

QUESTION	COMMENT
<b>Q48</b> What are your preferred arrangements for governing each of the Themes in this paper?	
<b>Q49</b> How significant is the Commerce Act in deciding whether to establish industry or statutory governance frameworks?	
<b>Q50</b> What processes are appropriate for modification of Codes or other multilateral arrangements?	
<b>Q51</b> How should obligations placed on parties under access arrangements be enforced?	
<b>Q52</b> Does the Governance Theme identify all of the issues relating to governance of access arrangements? If not, what other issues should be considered?	
<b>Q53</b> Do you agree with the actions proposed to address the governance issues? If not, what other options should be considered?	

# Appendix 4: Current Transport Market

## Market participants and market shares

- 1.1 Figure 2 shows the volume shares of each company active in the various markets for gas trading (production, own use and sales to others), and gas transportation (transmission and distribution) for the 2004 calendar year. The bubble sizes are in proportion to PJ produced, used, sold or transported.
- 1.2 In the diagram:
- *Production* means “net production” or “sale gas” which is gross production less and gas flared, gas reinjected, LPG extracted, own use or losses.
  - *Own Use* means gas which the various companies bought and used in their own facilities. For example Methanex used all the gas it bought in its methanol plants.
  - *Sales to Others* means gas which the various companies bought for on-sale to others to others. For example Contact uses most of the gas it buys in its own power stations (Own Use) but also sells to a range of industrial, commercial and residential users (Sales to Others).
  - *Transmission* includes all gas transported at pressures over 20 bar gauge downstream of gas treatment facilities.
  - *Distribution* includes all gas transported on distribution networks at pressures at or below 20 bar gauge.



**Figure 2: Gas sector volume shares**

(information is for the 2004 calendar year and predominantly sourced from the January 2006 Energy Data File and pipeline Information Disclosure publications)

1.3 Broadly the participant companies can be described as follows:

- Shell is a multi-national oil and gas company. It owns (through various subsidiaries) 83.75% of the Maui field and pipeline, 50% of the Kapuni field and 48% of the Pohokura field.
- Todd is a private New Zealand company. It owns the McKee and Mangahewa fields and has a 50% interest in the Kapuni field, a 6.25% interest in the Maui field and pipeline, and a 26% share in the Pohokura field. Through its ownership of Nova Gas it also owns a number of small distribution networks through which it supplies gas to commercial and industrial customers.
- OMV is a division of OMV Aktiengesellschaft Austria's largest listed industrial company and a major central European gas and oil exploration and production business. In New Zealand, OMV has a 10% interest in the Maui field and a 26% interest in the Pohokura field.
- Swift is a division of the Swift Energy Company, a listed US company whose principal activities are oil and gas exploration and production. In New Zealand Swift owns the Tariki, Ahuroa, Waihapa, Ngairu Rimu and Kauri fields.
- Vector is a listed New Zealand company. It is a multi network business. It owns New Zealand's largest electricity distribution network servicing Auckland and Wellington, and fibre-optic networks in Auckland and Wellington. It owns 2,300 km of gas transmission pipeline and 7,750 km of gas distribution networks located in Auckland, Hamilton, Tauranga, Taupo, Gisborne, Whangarei and a number of small towns in Northland, Waikato, Bay of Plenty and Kapiti Coast. It also owns the Kapuni gas treatment plant.
- Powerco is part of the infrastructure business of Babcock & Brown, a listed Australian company with global investments in infrastructure which offers a variety of project and corporate finance services. Powerco owns over 5,330 km of gas distribution networks located in Wellington, Hutt Valley, Palmerston North, Napier, Hastings, Hawera, New Plymouth and a number of small towns in the Manawatu and Taranaki.
- Wanganui Gas is a private company 75% owned by the Wanganui Regional Council and 25% owned by Vector. Wanganui Gas owns 354 km of gas distribution networks located in Wanganui and a number of small towns in the

Manawatu. It also retails gas, predominantly to customers in its own network areas.

- Contact is a listed New Zealand company which is likely to merge with its largest shareholder, Australian-listed company Origin Energy (subject to regulatory approval in New Zealand and Australia). This will create a trans-Tasman integrated energy group with 2.7 million customers, interests in around 3,000 MW of generation and a portfolio of oil & gas assets with a market capitalisation of over A\$7 billion. Contact owns a number of power stations including the gas fired Otahuhu and Taranaki Combined Cycle (TCC) stations. It has rights to Maui gas and a 5 year contract to purchase OMV's Pohokura gas entitlements. It is also has a substantial portfolio of retail gas customers.
- Genesis is a State Owned Enterprise. It generates electricity at the dual coal/gas fired Huntly power station and also sells gas to a range of retail customers. It owns 31% of the Kupe field which is likely to be developed by 2008. Genesis is also understood to have long term contracts in place for the purchase of Kupe gas from some of its Joint Venture partners and for the purchase of Todd Energy's McKee, Mangahewa and Pohokura gas entitlements.
- MRP is a State Owned Enterprise. It is an integrated energy generation, trading, retailing and metering business. Its generation portfolio includes the Waikato hydro scheme, geothermal interests at Mokai and Rotokawa and the gas-fired Southdown co-generation station (currently being expanded from 125 to 170MW). Its retail business, Mercury Energy, sells electricity to more than 300,000 customers and also sells gas to some of these customers.
- eGas is a private company which retailers gas to a range of commercial and industrial customers throughout the North Island.
- "Others" includes, in the Production category, gas produced by Greymouth Petroleum at the Kaimiro field and, in the End Use category, gas used by Methanex at its Waitara Valley methanol plant.

1.4 In relation to transmission, the owner companies are:

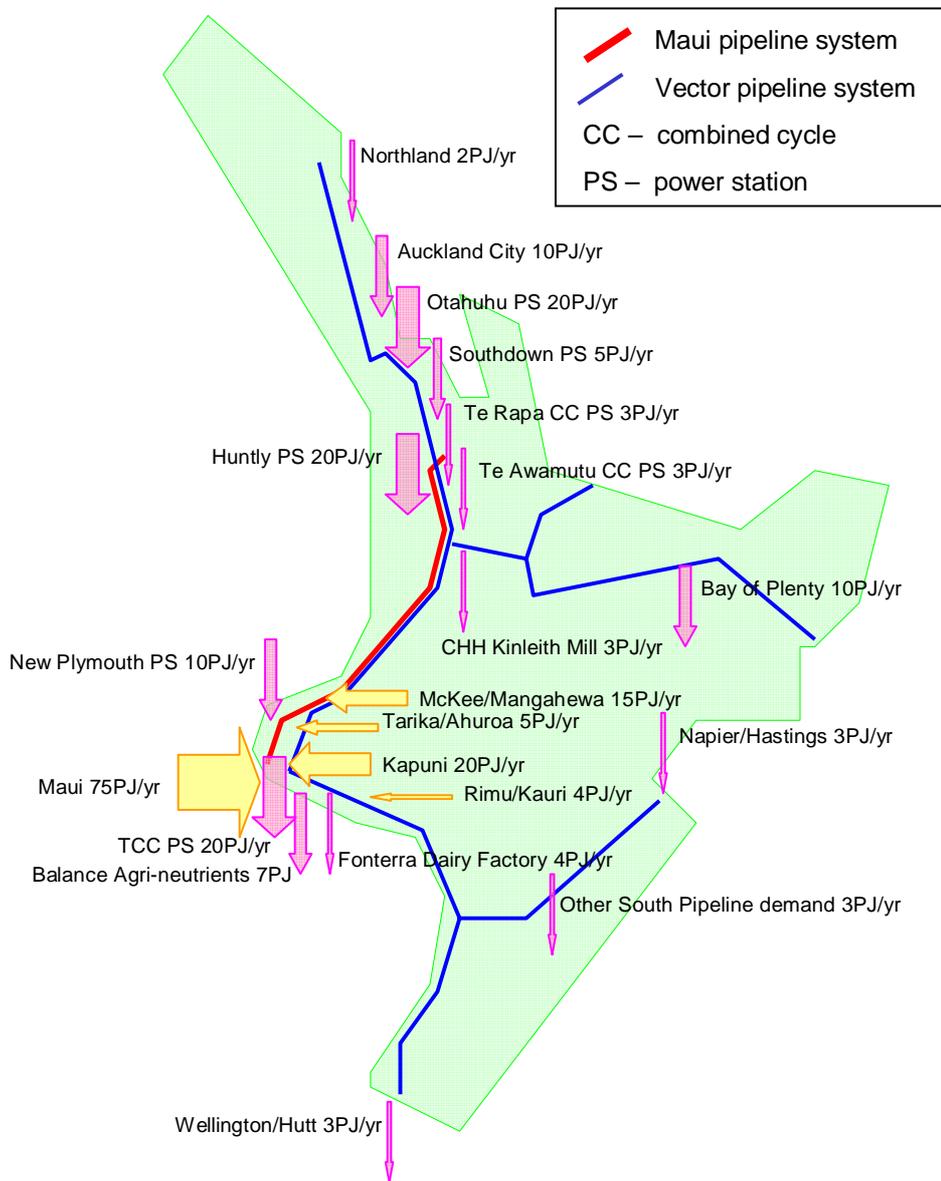
- Shell, through its interest in the MDL pipeline;
- OMV, through its interest in the MDL pipeline;

- Todd, through its interest in the MDL pipeline and the (closed access) Kapuni to Hawera pipeline;
- Swift Energy New Zealand Limited (Swift) through its ownership of the (closed access) Waihapa to New Plymouth pipeline; and
- Vector, through its ownership of various transmission pipelines.

### Location of major gas supply and demand

Another view of the market is provided by considering the major sources of supply and demand. Figure 3 illustrates the current supply/demand balance. Supply is brought into the pipeline systems in and around the Taranaki region. Demand is predominantly in and around Auckland, with relatively little demand at the extremes of the Vector pipelines.

About two-thirds of the demand arises from electricity generation. Of the remaining third, about 40PJ is commercial/industrial (excluding electricity generation) and 6PJ is residential.



**Figure 3: locations of gas supply and demand**

**Physical description of transmission infrastructure**

1.5 The two major gas transmission systems providing open access to parties wishing to transport gas (shippers) are the MDL pipeline and the Vector (previously NGC) pipeline system.

- 1.6 The MDL pipeline – described in table 3 - is a large pipeline, mostly 750mm(30inch) diameter, which predominantly carries Maui Gas from its landfall at Oaonui up to Huntly.

Pipeline Segment	Diameter	Length	Max. Working Pressure
	(mm)	(km)	(bar)
Oaonui – New Plymouth	850	44	72
New Plymouth – Huntly	750	247	72

**Table 4: the MDL Pipeline**

- 1.7 The Vector transmission pipeline system – described in table 3 - comprises a 200mm diameter pipeline which runs from Kapuni to Huntly, for the most part immediately alongside the MDL pipeline, and a number of pipelines which radiate outwards from this backbone. The three major radial arms are:

- the South pipeline, running from Kapuni down to Wellington and across to Hawkes Bay;
- the Bay of Plenty Pipeline, running from Pokuru to the Bay of Plenty and Gisborne; and
- the North pipeline, running from Huntly to Auckland and on to Whangarei.

- 1.8 In comparison to the MDL pipeline the Vector system is generally long and “stringy”, comprising smaller diameter pipelines which reduce in size as they radiate outwards.

Pipeline Segment	Diameter (mm)	Length (km)	Max. Working Pressure (bar)
Kapuni – Huntly	200	267	86
South Pipeline	200-80	410	86
Bay of Plenty Pipeline	300-80	532	86
North Pipeline	350-150	374	86
Others	500-50	717	66-86

**Table 5: the Vector Pipeline System**

- 1.9 In addition there are a number of transmission pipelines which are either gas gathering pipelines (i.e. upstream of gas processing facilities) or private pipelines. Although the latter have not been declared open access, it is understood that they are generally available to third parties who are able to negotiate access arrangements with their owners.

## Appendix 5: Stakeholders Interviewed

Carter Holt Harvey
Contact Energy
e-Gas
Gas Net
Genesis Energy
Greymouth Petroleum
Maui Contracts Management Limited (MCML)
MDL Commercial Operator
Mighty River Power
NZ Steel
Nova Gas
OMV Exploration & Production
Powerco
Shell
Swift Energy
Todd Energy
Vector Retail
Vector System Operator
Vector Transmission
Vector Wholesale
Wanganui Gas

## Appendix 6: Glossary of Terms

Term	Meaning
allocation	the determination of gas title quantities at a welded point
allocation agent	person appointed by shippers to determine allocation quantities at a gate station
authorised quantity	a booked capacity service which is not explicitly firm but gives a shipper higher priority for service continuity during curtailment (MDL pipeline only)
balancing gas	gas purchased or sold by a pipeline operator for the purpose of balancing (managing linepack) on a pipeline
balancing charges	the allocation of balancing costs to shippers and/or WPs
balancing costs	the costs to a pipeline operator associated with balancing gas
balancing pool	a pipeline or set of pipelines for which balancing is undertaken and balancing costs and charges are calculated
balancing service	the provision by a pipeline operator to a shipper of a quantity of balancing gas or linepack to make good any mismatch
booked capacity	a capacity service that must be reserved and paid for some time in advance – typically at the start of the gas year
capacity service	the transporting of a shipper's gas along a pipeline, between specified welded points
capacity trading	the trading of booked capacity between shippers
capacity transfer	the process of a shipper exchanging – through the pipeline operator - booked capacity on one pipeline for booked capacity on another pipeline (VT pipelines only)
code	a document containing behavioural requirements and principles for all participants in a particular gas industry sector: eg pipeline owners (cf "operating code")
Commerce Act	Commerce Act 1986
commercial operator	pipeline operator responsible for agreeing, managing and settling agreements (ie TSAs and ICAs) on a pipeline
common carriage	a spot capacity service which is available without limit or notice to all shippers, but may be subject to curtailment (MDL pipeline only)
contingency	an unplanned outage of producer or pipeline assets
curtailment	the process, undertaken when demand for spot capacity exceeds physical capability, under which nominations are scaled back by the pipeline operator (MDL pipeline only)
<i>ex ante</i>	before the gas day
<i>ex post</i>	after the gas day
firm capacity	a capacity service which is always available except under force majeure conditions
flow-on-delivery	an allocation protocol under which allocated quantities for a shipper at a welded point are deemed equal to the aggregate of allocated quantities

Term	Meaning
	for that shipper at all welded points downstream of that point
flow-on-nomination	an allocation protocol under which allocated quantities are deemed equal to nominated quantities
Gas Act	Gas Act 1992
gas day	the day on which gas flows; real-time
gas quality	the pressure, composition and odourisation of gas in a pipeline
Gas Supply Agreement	An agreement which governs the terms of a gas transfer
gas title	deemed ownership of gas at a welded point
gas transfer	the transfer of gas title between parties at a welded point
gas transfer agent	a person appointed by shippers to determine gas transfer quantities at a VT pipeline receipt point
gas transfer agreement	an agreement between two or more shippers at a VT pipeline receipt point and their appointed gas transfer agent, in accordance with the gas transfer code, which governs the determination of gas transfer quantities at that point;
gas transfer code	a code which requires all shippers with title to gas at a VT pipeline receipt point to enter into a gas transfer agreement with all other shippers at that point
gas transfer rules	numerical formulae or algorithms for determining gas transfer quantities
gate station	an interconnection point between a transmission pipeline and a distribution network
imbalance	the aggregate of shipper mismatches within a balancing pool
Information Memorandum	a document produced annually by a pipeline owner, pursuant to the NZPAC, which describes processes undertaken by operators pursuant to TSAs or ICAs (VT only)
interconnection agreement	An agreement between the two interconnected welded parties at a welded point which governs the terms of that interconnection
interruptible capacity	a booked capacity service that can be temporarily withdrawn by the pipeline operator under certain circumstances and conditions
legacy expiry	the date on which the last GJ of legacy gas is delivered
legacy gas	gas sold by the MMCs under the Maui Gas contract, Settlement and Umbrella agreement or Methanex 20/20 agreement
legacy rights	the special rights or exemptions that apply only to those who have title to or custody of legacy gas at a welded point, as set out in section 3 of the MPOC
legacy shipper	a shipper of legacy gas
linepack	the gas stored in a pipeline
MDL producer	a producer connected to the MDL pipeline
MDL shipper	a shipper on the MDL pipeline
mismatch	the difference between aggregate receipt quantities and aggregate delivery quantities for a shipper within a balancing pool
nomination	the amount of gas that a shipper requires a pipeline to receive or deliver

Term	Meaning
	at a welded point, as notified <i>ex ante</i> to the pipeline operator
OI tolerance	the maximum level of operational imbalance allowed before balancing charges apply
operational balancing arrangement	An arrangement between two interconnected welded parties at a welded point which provides that the flow-on-nomination protocol shall be used for allocation, and which governs the terms for managing operational imbalances, at that point
operational imbalance	The difference between metered and scheduled gas quantities at a welded point
operating code	a document containing the terms for standard contracts: particularly TSAs and ICAs (cf “code”)
operating procedure	a document describing the processes that a pipeline operator or agent will follow in order to provide a pipeline service
operator	a pipeline operator (unless otherwise stated)
overrun	use of capacity service in excess of the booked amount (VT pipelines only)
parallel pipeline	the VT pipeline which runs adjacent to the MDL pipeline from Waitara to Huntly
pipeline	open-access transmission pipeline (unless otherwise stated)
pipeline operator	the person appointed by a pipeline owner to operate a pipeline
Reconciliation Code	a code which governs the allocation of quantities at a gate station
renomination	a change to a nomination which may be notified to a pipeline operator on the gas day or, in the case of legacy gas, <i>ex post</i>
retailer	a shipper supplying gas to customers on a distribution network
Rules	(when capitalised) provisions which have statutory force pursuant to the Gas Act
running mismatch	the amount of mismatch accumulated over time
scheduled quantity	the aggregate of nominations at a welded point
shipper	a person whose gas is transported through a pipeline
spot capacity	a capacity service that can be used without notice or at short notice
standard contract	a contract containing terms which are common to all or most other current contracts of the same type
supply chain	the chain of gas custody, from a producer to pipeline owner(s) to the customer (and associated operational processes)
system operator	pipeline operator responsible for managing title tracking processes on a pipeline
technical operator	pipeline operator responsible for managing physical balancing and transportation on a pipeline and providing technical advice to other operators
title chain	the chain of gas title, from producer to shipper(s) to customer
title tracking	the process of determining gas transfer quantities along the title chain
Transmission Services Agreement	An agreement between a pipeline owner and a shipper which governs the terms of capacity and balancing services provided to the shipper

Term	Meaning
VT producer	a producer connected to a VT pipeline
VT shipper	a shipper on a VT pipeline
welded party	the owner of the assets that are physically connected to a pipeline at a welded point: this may be another pipeline owner
welded point	a point of physical interconnection between a pipeline and gas receipt or delivery infrastructure, including treatment plants, power stations, or other pipelines.
wholesaler	a gas trader or shipper who buys gas from a producer and sells it to other shippers or retailers

## Appendix 7: List of Acronyms

Acronym	Meaning
AQ	Authorised Quantity
CO	Commercial Operator
DB	Distribution Business
DSA	Distribution Services Agreement
GSA	Gas Supply Agreement
GTC	Gas Transfer Code
ICA	Interconnection Agreement
IM	Information Memorandum
MDL	Maui Development Limited
MMC	Maui Mining Companies
MPOC	Maui Pipeline Operating Code
NGOCP	National Gas Outage Contingency Plan
NZPAC	New Zealand Pipeline Access Code
OBA	Operational Balancing Arrangement
OI	Operational Imbalance
RPO	Reasonable Prudent Operator
SO	System Operators
STOS	Shell Todd Oil Services Limited
TO	Technical Operator
TSA	Transmission Services Agreement
VT	Vector Transmission (previously NGC Transmission)
VTOC	Vector Transmission Operating Code
WP	Welded Party (NB not welded point)