Draft Recommendation on 13 October 2011 MPOC Change Request

Date issued: February 2012
Submissions close: 13 March 2012

GAS INDUSTRY COMPANY LIMITED

About Gas Industry Co.

Gas Industry Co is the gas industry body and co-regulator under the Gas Act. Its role is to:

- develop arrangements, including regulations where appropriate, which improve:
  - the operation of gas markets;
  - access to infrastructure; and
  - consumer outcomes;
- develop these arrangements with the principal objective to ensure that gas is delivered to existing and new customers in a safe, efficient, reliable, fair and environmentally sustainable manner; and
- oversee compliance with, and review such arrangements.

Gas Industry Co is required to have regard to the Government's policy objectives for the gas sector, and to report on the achievement of those objectives and on the state of the New Zealand gas industry.

Gas Industry Co's corporate strategy is to 'optimise the contribution of gas to New Zealand'.

Executive summary

Maui Development Limited (MDL) has requested a change to the Maui Pipeline Operating Code (MPOC) to improve pipeline balancing arrangements. Its proposal aims to better target the costs of balancing to the 'causers' of those costs; put downward pressure on balancing costs; and meet the efficiency enhancing objectives of the Gas Act. MDL says (in section 2.4 of the change request) that it:

> …considers that the Application contains only and all those changes required to introduce a B2B [back-to-back] system in a workable fashion – no more, no less.

The change request essentially represents the next (and expected) proposal from the industry to improve balancing arrangements, following some years of work and requests that the industry be allowed to lead developments.

Gas Industry Company Ltd. (Gas Industry Co) has received submissions and cross submissions on the change request. The change request and other documentation can be found on Gas Industry Co's website – http://gasindustry.co.nz/work-programme/mpoc-change-request-13-october-2011.

Section 29 of the MPOC assigns Gas Industry Company Limited (Gas Industry Co) a role in respect of any proposed amendment to the MPOC (change request). That role is to consult on the change request with the gas industry and make a recommendation to MDL either 'supporting' or 'not supporting' it. Gas Industry Co evaluates any proposed change having regard to the objectives of Section 43ZN of the Gas Act. A change request proceeds only where required by law or where Gas Industry Co makes a written recommendation to MDL supporting the change request. Gas Industry Co cannot reject a change request because it believes it is not ideal, or that there may be a better alternative, or that there are additional things that could be done to improve balancing arrangements. Our scope to recommend modifications to the change request is limited to minor and technical matters.

Gas Industry Co's assessment is that the proposal will better achieve Gas Act objectives than current arrangements and, in particular, is likely to enhance efficiency. Particular points are:

- The proposal would move balancing arrangements a step closer to 'causer pays' and to international practice (for example, as set out in the Framework Guideline for Gas Balancing in Transmission Systems developed by the European Regulators Group for Electricity and Gas).
- As reflected in submissions, the change would not provide a complete answer to balancing issues and will have flow-on effects, including to the Vector transmission system, which should be addressed. Accompanying this draft decision is an industry communication that discusses actions over the next 12 months aimed at further improving balancing arrangements.

Gas Industry Co's draft recommendation to MDL therefore supports the proposed change request.

Gas Industry Co invites submissions on this draft recommendation. Submissions are due by 5pm, Tuesday 13 March 2012.

Contents

1 Introduction

1.1 Purpose

This paper presents an analysis and draft recommendation in respect of the Maui Pipeline Operating Code (MPOC) change request submitted by Maui Development Limited (MDL) on 13 October 2011 (October 2011 Change Request), including consideration of the costs and benefits of proposed change.

The October 2011 Change Request, together with submissions and cross submissions and a version of the MPOC containing all proposed revisions (including the corrected drafting errors referred to in Section 2.2) are available on Gas Industry Co's website. The analysis and draft recommendation set out in this paper relate to the version of the MPOC containing the corrected drafting errors. Gas Industry Co does not consider these errors to be material, but welcomes comment on this in submissions on this draft recommendation.

1.2 Background

Context

Balancing arrangements have been under review since the inception of the Maui Pipeline Operating Code in 2005. Transmission Pipeline Balancing has been the subject of extensive industry discussion since then and some improved arrangements have been introduced, notably:

1. In 2007, Vector introduced the Vector Transmission Code (VTC) containing balancing and peaking pool (BPP) arrangements designed to pass balancing costs through to Vector shippers;

2. In 2009, MDL introduced a Balancing Gas Exchange (BGX) – an online platform to facilitate the trading of Balancing Gas on the Maui Pipeline (several BGX upgrades have occurred since then); and

3. MDL has continued to evolve its Balancing Gas standard operating procedure, first made public in 2007.

However, although the shortcomings of the balancing arrangements have been thoroughly analysed and debated, and although there is broad consensus on what these shortcomings are and how they could be improved, the basic balancing arrangements have not changed. The most recent efforts to reform the arrangements were:

- In 2009, Gas Industry Co led a comprehensive and concentrated industry initiative known as the Industry Code Development (ICD) process which ultimately failed to agree on how to reform the codes;

- Also in 2009, Gas Industry Co proposed to introduce regulations to achieve a unified balancing regime over both the Maui and Vector pipelines. That proposal is on hold. Gas Industry Co has undertaken to report to the Minister, by February 2012, on what improvements the industry has made to balancing arrangements;

- On 17 December 2009, MDL submitted an MPOC change request which proposed extensive revisions to the MPOC including balancing improvements (December 2009 Change Request). That change request was finally not supported by Gas Industry Co because *'while the assessment of the net benefit of the December 2009 Change Request is finely balanced, the overall conclusion is that the overall net benefit is not sufficiently certain for Gas Industry Co to support the December 2009 Change Request'.* We suggested that MDL repackage the change request so that proposed changes related to a single function, such as back-to-back (B2B) balancing.

MDL has now developed a more focused change request intended to introduce a B2B balancing arrangement that will target balancing costs to pipeline users responsible for causing those costs. It is this change request that is evaluated in this report.

In summary, although significant resources have been applied to understanding the issues and designing improvements to balancing arrangements over a number of years, few changes have occurred.

Gas Industry Co's role under the MPOC

Section 29 of the MPOC assigns Gas Industry Co a role in respect of any proposed amendment to the MPOC (change request). Gas Industry Co's role is to consult on the change request with the gas industry and determine whether or not to support it. Gas Industry Co evaluates any proposed change having regard to the objectives of Section 43ZN of the Gas Act. A change request proceeds only where required by law or where Gas Industry Co makes a written recommendation to MDL supporting the change request. MDL has sole discretion to reject a recommendation if it considers the change would materially adversely affect its business, or would require MDL to incur a capital expenditure that may not be recoverable.

Gas Industry Co has agreed a Memorandum of Understanding (MoU) with MDL describing how its role in relation to change requests will be performed. The MoU sets out a process under which Gas Industry Co receives a change request; calls for submissions; issues a draft recommendation; considers further submissions; and makes a final recommendation to MDL. The MoU also provides that Gas Industry Co will have regard to the objectives specified in Section 43ZN of the Gas Act when performing its role, and prepare an analysis of the issues under consideration, including an assessment of the costs and benefits. For further information (including a copy of the MoU) please refer to Gas Industry Co's website at www.gasindustry.co.nz.

Gas Industry Co's contractual role under the MPOC is different to Gas Industry Co's role under the Gas Act. Whereas our Gas Act role requires the consideration of all practicable options before making a recommendation to the Minister, the MPOC role is more constrained. Importantly, the

MPOC role does not permit Gas Industry Co to reject a change request because it believes it is not ideal, or that there may be a better alternative, or that there are additional things that could be done to improve balancing arrangements. Our scope to recommend modifications to the change request is limited to minor and technical matters.

Previous Balancing Change Request

The October 2011 Change Request is the second change submitted by MDL proposing changes to balancing provisions in the MPOC. As noted above, on 17 December 2009, MDL submitted a change request that proposed extensive changes to the MPOC.

For additional background on the 17 December 2009 MPOC Change Request, please see Appendix C.

Current change request

The October 2011 Change Request proposes to implement a B2B balancing arrangement in the MPOC. This responds to Gas Industry Co's suggestion (from the Final Recommendation on the 17 December 2009 change request) that change requests should be narrowly focused. Most notable among the proposed amendments are:

- Introducing principles to make the role of the Balancing Agent transparent;
- Publishing new information on OATIS and the BGX including when the Balancing Agent enters into a balancing transaction, and real-time metering information at certain locations;
- Removing Transmission Pipeline Welded Parties' (TPWP)[1] ability to nominate Balancing Gas during the post-Intra-Day cycle;
- Replacing the current Imbalance Limit Over-run Notice (ILON) process with B2B balancing arrangements;
- Removing the Balancing Agent's ability to claim against the Incentives Pool (IP);
- Introducing a peaking charge that will be triggered whenever Balancing Gas has been called, or whenever Line Pack falls below a certain threshold; and
- Revised peaking limits and Running Operational Imbalance (ROIL) limits to better allocate balancing costs to causers.

On 17 October 2011, Gas Industry Co notified industry participants of the change request and invited submissions. Eight submissions were received. These submissions are summarised in Appendix A to this draft recommendation.

On 2 December 2011, Gas Industry Co notified industry participants that it had decided to invite cross-submissions. This decision was influenced by discussion with submitters confirming that the October 2011 Change Request was not urgent, and that submitters wished to have an opportunity to respond to questions raised in other submissions and correct statements they believed to be

[1] The only current TPWP is Vector.

wrong, misleading or based on misunderstandings. Five cross-submissions were received. These cross-submissions are summarised in Appendix B to this draft recommendation.

Capitalised terms used in this recommendation have the same meaning given to those terms in the MPOC, unless stated otherwise. A Glossary of terms is provided at the end of this report.

1.3 Invitation for submissions

Gas Industry Co invites submissions on this draft recommendation.

Submissions are due by 5pm, Tuesday 13 March 2012. Please note submissions received after this date may not be considered.

Gas Industry Co will acknowledge receipt of all submissions electronically. If you do not receive electronic acknowledgement of your submission within two business days, please contact Jay Jefferies on 04 494 2469.

Gas Industry Co values openness and transparency, and usually places submissions on our website. If you intend to provide confidential information in your submission, please discuss this first with Ian Wilson at Gas Industry Co (04 494 2462).

2 Proposed changes

2.1 Overview of changes

In section 2.4 of the October 2011 Change Request MDL notes that:

> …the Applicant considers that the Application contains only and all those changes required to introduce a B2B system in a workable fashion – no more, no less.

Gas Industry Co commends MDL on the care it has taken to focus the application. The December 2009 Change Request included proposed changes that did not relate directly to balancing[2], and that were not central to achieving B2B balancing[3]. This made it complex to analyse and significantly influenced Gas Industry Co's final decision not to support the change request.

In contrast, we found the October 2011 Change Request narrowly focused. In essence, it proposes to replace the Imbalance Limit Overrun Notice (ILON) and related arrangements that allow for a high degree of 'socialisation' of balancing costs, with one that directs those costs to the parties who caused them. Where the Balancing Agent needs to sell or buy gas to manage Line Pack, a back-to-back transaction would then buy/sell that gas (to the maximum extent possible) from/to Welded Parties with excess imbalance positions.

2.2 Correction of drafting errors

In its 31 January 2012 cross-submission, MDL acknowledged a few drafting errors in the MPOC version accompanying the October 2011 Change Request. We have reviewed these and do not consider that they materially affect the change request. This Draft Recommendation evaluates the change request inclusive of these corrections and an amended MPOC has been provided by MDL for reference. The amended MPOC can be found on Gas Industry Co's website.

2.3 Structuring the change request for evaluation

To aid the analysis we consider the October 2011 Change Request as several inter-dependent components. Table 1 shows each of these components and references the associated MPOC changes.

Section 3 describes the current and proposed arrangements for each component of the October 2011 Change Request, and discusses how they compare.

Section 4 establishes the evaluating criteria.

[2] For example, some proposed changes related to Maui legacy arrangements, indemnities, curtailment priorities, and a range of minor and technical matters.
[3] For example, the proposed introduction of a Tariff 3 and 'pay now, dispute later' provisions.

Section 5 evaluates the costs and benefits of the October 2011 Change Request using the evaluation criteria.

Section 6 draws the analysis together in an overall evaluation.

Section 7 is Gas Industry Co's draft recommendation on the October 2011 Change Request.

Appendix A provides a summary of submissions on the October 2011 Change Request.

Appendix B provides a summary of cross-submissions on the October 2011 Change Request.

Appendix C provides background on the December 2009 Change Request.

Table 1 Structure of October 2011 Change Request for evaluation

Component	Proposed MPOC change	Effect/Purpose
MDL and Balancing Agent (BA) roles and responsibilities	3A (balancing principles)	Clarifying roles and processes.
Balancing Gas cash outs	4.3 (information)	Removing requirement to publish ILONs because they would no longer be issued. Also recognising that Accumulated Excess Operational Imbalance (AEOI) would be the basis for settlement in more circumstances, and that it only need be posted by mid-day on the following day.
	4.4 (information)	Requires disclosure of a range of Balancing Gas transaction information on the BGX.
	6.3 (title and risk)	Provides for the transfer of control and risk of cash-out quantities
	12.10–12.13 (operational imbalances) deleted and replaced with new clauses (see below)	Replaces arrangements that permitted MDL to issue an ILON notice requiring a person with AEOI to correct its position by a stipulated time.
	12.10-12.11	New provisions requiring transfer of title of Balancing Gas at Physical Welded Points where a Welded Party has AEOI at 2400hrs on a day when balancing actions are taken. Those Welded Parties will be required to buy/sell the Balancing Gas bought or sold by the BA on a pro-rata basis, but not exceeding their individual AEOIs. 12.10 deals with the Balancing Gas Puts and 12.11 with Balancing Gas

Component	Proposed MPOC change	Effect/Purpose
		Calls. Cash-out prices will be calculated at the average of prices paid or received for Balancing Gas.
	12.12	Allows for the cash-out of a Welded Party at a Notional Welded Point who has positive or negative AEOI. Cash out prices will be the average of prices paid or received for Balancing Gas, or, if no balancing actions were taken, the Positive or Negative Mismatch price (as appropriate).
	12.13	Provides for the wash up of any AEOI outstanding on the day when an interconnection agreement with a Welded Party terminates.
Peaking	13.4 (peaking)	Allows for a Welded Party to be charged a Peaking Charge in certain circumstances. The Peaking Charge is the average buy and sell price spread for the day times the average amount by which the peaking limit was exceeded on three consecutive hours.
	Schedule 7 (minimum tolerances)	Sets new Peaking (hourly) and ROIL limits.
Removal of TPWP's ability to nominate Balancing Gas during the post Intra-Day Cycle	8.1 & 8.17 (mismatch) 9.10 (post intra-day cycle)	Removes arrangements that allow TPWP as a Maui Pipeline Shipper to nominate Balancing Gas at any time during the day it is shipped.
Incentives Pool	14	The Balancing Agent will no longer be able to claim against the Incentives Pool. Also, revisions adjust the sole liability of a Welded Party as a result of B2B and peaking changes.
Supporting Changes		
Definitions	1.1 (definitions)	New and revised definitions to support other changes.
Billing	19.5 (fees and charges)	Adjusted to reference Mean Call Price where appropriate.
	19.7 (fees and charges)	Adjusted to reference Mean Put Price where appropriate.
	21.4 (invoicing and payment)	Allows for the inclusion of peaking charges and cash-out gas sales and purchases.

3 Comparison of proposed changes with current arrangements

A complete overview of the existing MPOC balancing regime can be found in Section 2.2 of Gas Industry Co's *Transmission Pipeline Balancing Research Paper*, April 2008, available from Gas Industry Co's website. In this section we assume the reader is familiar with the general operation of the existing regime and only discuss those aspects that are relevant to the October 2011 Change Request.

3.1 MDL and Balancing Agent Roles and Responsibilities

Current arrangements

MDL appoints the Balancing Agent from time to time to manage Line Pack (1.1).

Regardless of any other provision, MDL, Shippers and Welded Parties are required to act as Reasonable and Prudent Operators (RPOs). MDL shall provide transmission services (2.4) and is also required to:

- Receive, transmit and deliver approved nominations (2.5(b));
- Maintain certain pressures (2.20 and 18.2); and
- Use reasonable endeavours to provide Maui Pipeline capacity consistent with its capacity forecast (2.5(c)).

MDL does not provide storage services, other than to maintain a Contingency Volume (2.8).

Proposed arrangements

The current arrangements described above are unchanged, but are clarified and added to by the new section 3A Balancing Principles, as discussed below.

MDL commits to appoint a Balancing Agent as its agent (3A.1).

The Balancing Agent's role includes buying Fuel Gas, buying and selling Balancing Gas and entering into Cash-out Transactions to manage Line Pack, and any other activities specified in MDL's standard operating procedures.

The proposed amendments specify MDL's role in relation to the Balancing Agent's functions. MDL is required to:

- Publish quantities of Fuel Gas bought by the Balancing Agent, and details of all Balancing Gas transactions (3A.3);
- Instruct the Balancing Agent to:
  - buy Balancing Gas at the lowest available price and sell it at the highest available price (s3A.4(a)(i));
  - have the Balancing Gas Shipper use the Balancing Gas Receipt and Delivery Points[4] (s3A.4(a)(ii));
  - transact Balancing Gas on an arm's length basis (s3A.4(a)(iii));
  - ensure disclosure of the process for buying and selling Balancing Gas, and all Balancing Gas transactions (s3A.4(a)(iv));
  - publish standard terms and conditions for buying and selling Balancing Gas (s3A.4(b)); and
  - maintain the BGX (s3A.4(c)).

Discussion

Although the proposed arrangements are substantially already in effect, we believe that including section 3A in the MPOC does provide contractual certainty and a level of transparency that is not currently present. In particular, we consider that that it is valuable that section 3A sets out the principles that:

- the Balancing Agent is MDL's agent;
- Fuel Gas is not to be treated as Balancing Gas;
- Balancing Gas transactions are published;
- the Balancing Agent is to use reasonable endeavours to buy and sell Balancing Gas at least cost[5], at arm's length, and under disclosed terms.

Relative to the current MPOC, the proposed changes increase MDL's obligations to the balancing market.

3.2 Balancing Gas cash-outs

Current arrangements

The current arrangements require each Welded Party to use reasonable endeavours to manage gas flow so that Running Operational Imbalance (ROI) tends towards zero over a reasonable period of time (12.9).

[4] The proposed amendment defines Balancing Gas (Delivery) Point as a virtual Delivery Point, and Balancing Gas (Receipt) Point as a virtual Receipt Point.

[5] We use the shorthand 'least cost' here and elsewhere in this document to refer to least economic cost, ie the Balancing Agent would buy gas to make up a negative imbalance at the lowest price, and sell gas to reduce a positive imbalance at the highest price.

MDL acts as a Reasonable and Prudent Operator (RPO) to maintain total Line Pack sufficient to deliver approved nominations and to provide flexibility up to the amount of posted Daily Operational Imbalance Limits (DOIL) and Peaking and Contingency Volumes (18.1).

Where a Welded Party's ROI exceeds its ROIL at a Welded Point, MDL may, at its sole discretion, give an ILON to that Welded Party (12.10).

After the ILON notice period MDL may, at its sole discretion, cash-out some or all of any remaining excess ROI (12.11), regardless of whether or not it has taken any balancing actions.

A Welded Party may be unable to take its Scheduled Quantity or may be curtailed because of another Welded Party being outside tolerance. In this case, the Welded Party may make a claim on the Incentives Pool at the daily incentive price (12.16).

The Balancing Agent may make a claim on the Incentives Pool, within limits, to meet the costs of buying Balancing Gas (14.4).

Welded Parties indemnify MDL for direct costs incurred by the Balancing Agent obtaining gas supplies outside of its usual supply arrangements to replace Welded Party AEOI (12.13(c)).

Where a Welded Party is interrupted because, for example, MDL is performing maintenance, or a Force Majeure Event occurs (15.1 and 15.2), and Contingency Volume is used, the user is responsible for correcting any resulting imbalance or mismatch 'as soon as reasonably practicable' (15.9).

Figure 1 shows how monthly balancing costs have been allocated between parties with Incentives Pool Debits and socialised through the tariff since January 2009. The figure shows that in most months a substantial proportion of the balancing costs (57%, on average) are socialised.

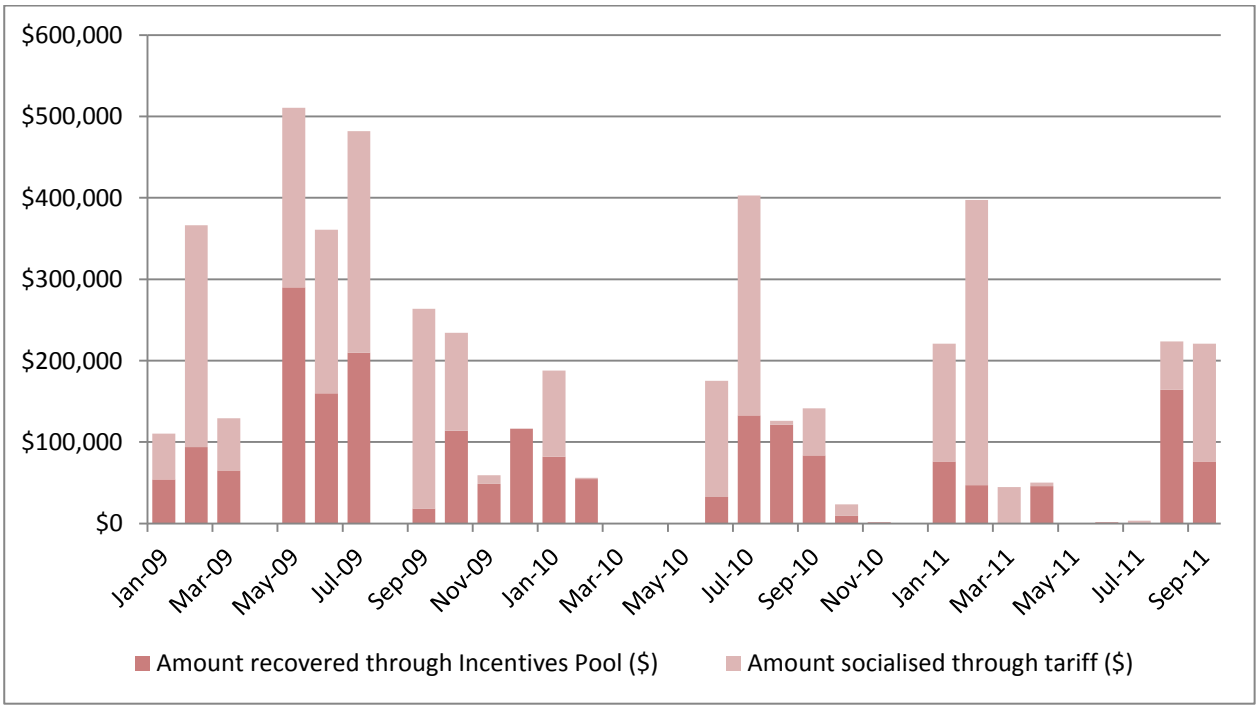

Figure 1 – Allocation of Monthly Balancing Calls

Proposed arrangements

Under the proposed amendments, a Welded Party is still required to use reasonable endeavours to tend ROI towards zero over a reasonable period of time (12.9). However, ILONs will no longer be issued and parties with AEOI will be automatically cashed out at the end of a day when the Balancing Agent has taken balancing actions.

The proposed arrangements leave MDL's obligation to act as a RPO to maintain total Line Pack sufficient to deliver approved nominations (18.1) unchanged. However, the proposed new section 3A explains how this obligation would be managed by the Balancing Agent.

Discussion

Under the current balancing arrangements a pipeline user can cause (wholly or in part) a balancing action to be taken, but avoid the cost of that action. Where a Welded Party's ROI exceeds tolerance levels (currently set at the DOIL), MDL may issue an ILON to notify the Welded Party to return or take away the excess gas within a certain time. ILONs are issued on the day following an excess imbalance and generally allow a further day to correct the position. Before this notice period expires, the Welded Party can correct its imbalance and avoid paying MDL the cost of any balancing action it may have caused.

The misallocation of costs in the above situation can be made worse if, in correcting its imbalance on a pipeline that the Balancing Agent has already balanced, the Welded Party causes the Balancing Agent to take a further balancing action in the opposite direction. Clearly these arrangements are inefficient since they allow a Welded Party to capture private benefits (by using flexibility provided by Balancing Gas transactions) that create costs which are substantially carried by other system users.

In addition, under current balancing arrangements, a Welded Party may be cashed out when no balancing action is taken. Where there is no underlying balancing action the Balancing Agent must settle the cashed out gas through additional balancing transactions or cash-outs at a later time. Cashing out users where there is no underlying balancing action can result in more Balancing Gas transactions and cash-out transactions than are needed, and encourages user behaviour based on incentives that do not arise from real costs. These outcomes are also inefficient.

Under the proposed change the consequences of being in imbalance will be more certain because:

i) If the system is not under stress, no balancing actions will be taken, and no costs will flow;

ii) If the system is under stress, and balancing actions are taken, the costs will first flow to those most likely to have created the need for balancing, Welded Parties with AEOI; and

iii) There will be less 'socialisation' of costs because:

   a. The tolerance threshold for AEOI is to be reduced

b. Welded Parties with AEOI are not given a grace period as the current ILON arrangement allows for.

In addition, the proposed introduction of section 3A improves transparency on how the Balancing Agent is managing Line Pack, further reducing uncertainty.

The proposed arrangements are likely to result in costs being more accurately targeted towards causers, leading to behaviour that should minimise balancing costs. Each Welded Party would have an incentive to be aware of the consequences of its imbalance on the whole system, and would no longer be able to assume that the costs of its actions would be 'socialised' among other system users.

While the arrangements will likely lead to users more actively monitoring their balance positions, and incurring the cost of doing so, such monitoring is integral to a regime where users are responsible for managing their balance positions, as required by the MPOC and VTC[6].

A relatively minor residual concern Gas Industry Co has is that unaccounted-for-gas (UFG) arising from metering error can either accumulate as Operational Imbalance (OI) or lead to balancing actions[7]. Gas Industry Co believes that UFG should be a socialised cost of system operation, rather than falling on parties with AEOI at the time balancing actions are taken. This is a matter that could be addressed in MDL's Maui Balancing Gas Instruction (one of its standing operating procedures), and we encourage MDL to consider this. However, in respect of the current analysis, we do not believe that the treatment of UFG under the October 2011 Change Request is any better or worse than at present.

3.3 Peaking

Current arrangements

The current arrangements require each Welded Party to act as an RPO to flow gas within its Peaking Limits, unless it has MDL consent to exceed these for operational reasons (13.2). Exceeding the Peaking Limit creates an exposure to an Incentives Pool Claim (13.3). There is relief for Force Majeure Events, contingent events, and maintenance (13.4).

The Peaking Limits apply to hourly deliveries. Currently the limits must be the maximum that is reasonably practical (13.1), and no less than the limits set out in Schedule 7. Schedule 7 currently only sets limits for Large Stations.

Proposed arrangements

The proposed arrangements are substantially the same as current arrangements apart from the changes noted below.

[6] The alternative is a centralised balancing regime where a balancing agent stands ready to correct any imbalance, not just the residual imbalance resulting from estimation and timing errors.

[7] For example, assume that all Welded Point meters are accurate except for one Delivery Welded Point which, say, is running slow. Suppose that the Welded Party correctly nominates the amount of gas that it will physically pump through the slow meter. In this example the pipeline will remain in physical balance but the Welded Party will build up an OI equivalent to the amount of UFG. If that OI builds up to an AEOI then, on the next occasion that a balancing action is taken, that Welded Party will be exposed to balancing costs that it did not cause.

The proposed arrangements extend the Schedule 7 Peaking Limits coverage from Large Stations to apply to all stations. In addition it is proposed to reduce the absolute GJ peaking limits at some of the Large Stations.

The proposed arrangements introduce a Peaking Charge. The charge would not apply in situations where, on that day:

- The Incentive Pool Trustee has invoiced the Welded Party for Incentives Pool Debits incurred; or
- Line Pack is above the low Line Pack threshold; or
- No balancing actions were taken.

Otherwise, a Peaking Charge will apply to the aggregate amount that a moving three-hour average exceeds the peaking limit in each hour. The charge will be the difference between negative and positive mismatch prices[8].

Discussion

Under the proposed change Parties who peak beyond the (revised) limits are exposed to Incentives Pool Claims, as currently. This exposure would be marginally increased because of the extended and tightened Peaking Limits (as set out in Schedule 7).

However, the major effect of the proposed change is to introduce an incentive charge (some may prefer to call it a penalty charge) on Parties who are outside their peaking limit on a day when balancing action is taken. This recognises the potential for peaky users to cause balancing actions.

From an efficiency perspective, possible objections to the charge are that:

1. The peaking may not have contributed to the need for a balancing action;
2. Where the peaking did contribute to a balancing action, the charge is not cost reflective.

In relation to (1), we support the general principle that charges should reflect costs and be borne by causers, rather than being a penalty that does not reflect a particular cost. However, to accurately allocate costs to hourly peaks, balancing reconciliations would need to occur on an hourly rather than a daily basis. Most open access gas pipelines reconcile daily because of the practical difficulties of hourly settlement, and because pipelines generally have some Line Pack flexibility. Nonetheless, such regimes usually have hourly peaking limits in recognition of the potential costs peaking may cause. This is the approach MDL is advocating. Rather than allocating cost to peaks, the proposal is to set a penalty charge to discourage peaks. (The full cost of balancing actions on a day would be charged to parties with AEOI, to the maximum extent possible, regardless of whether or not peaking charges applied on that day.)

In relation to (2), the penalty charge does attempt to reflect the cost of peaking if an hourly balancing regime did apply. It does this by:

[8] *'…These prices will reflect the Balancing Agent's costs in accessing and disposing of Gas. If a liquid Gas market develops, these prices will reflect the buy and sell spot prices in that market.'* (MPOC Section 11.10)

1. Not charging any peaking penalty unless a balancing action is taken or the low Line Pack threshold is breached; and

2. Applying a charge that is linked to the cost of balancing.

While these measures are not ideal, we believe that they are a reasonable compromise, recognising that a full hourly allocation of balancing costs is likely to be impractical, and probably uneconomic.

Some submitters have suggested that the peaking arrangements would be better if they did allocate some balancing cost (and associated gas title) in peaking situations. While this warrants further consideration, we note that such an approach may 'muddy the waters' by creating OI in situations where the peaking party would otherwise have been in balance over the day.

MDL has addressed these issues on page 4 of its cross-submission. It notes that:

> MDL has proposed a very moderate incentivisation mechanism which applies only in circumstances where a large pipeline imbalance already exists.

We think MDL's approach is reasonable.

3.4 Removal of TP Welded Party extra Balancing Gas scheduling rights

Current arrangements

Under the current arrangements a TP Welded Party (currently Vector) may use the Maui Pipeline for transmitting Balancing Gas. The transmission of such Balancing Gas has priority use of Maui Pipeline capacity over other gas. Furthermore, once Balancing Gas nominations are approved, they cannot be displaced by other Intra-Day Nominations, or by holders of Authorised Quantities (AQ). Nominations for Balancing Gas can also be made retrospectively.

Proposed arrangements

The proposed arrangements remove all TP Welded Party rights in relation to Balancing Gas, including the ability to schedule Balancing Gas outside the standard nominations cycle, and for that gas to have priority transportation over all other gas.

Discussion

Under the proposal, any transmission of Balancing Gas through the Maui Pipeline to or from a TP Welded Point needs to be under the terms of a standard transmission services agreement with MDL. Vector would no longer have special rights as a TP Welded Party to schedule Balancing Gas. If Vector wished to secure priority treatment for the transport of Balancing Gas on the Maui Pipeline it would need to do so by securing AQ rights. However, this would not allow Vector to make nominations outside the Maui Pipeline Intra-Day Cycles, as it can under current arrangements. The implications are that Vector's ability to operate an independent balancing market is reduced.

Vector has never used the Post Intra–Day Cycle functionality since the beginning of the open access arrangements on the Maui Pipeline. Effectively, other than occasionally buying gas to cover its compressor fuel needs and UFG, Vector does not engage in active buying and selling of Balancing Gas to balance its pipelines. Rather, it relies on the use of compressors at pipeline receipt points to

maintain Line Pack; effectively 'following the demand'. Vector is right to do this because attempting to actively manage the balance when there is relatively little Line Pack in its pipelines would likely lead to operational problems and user interruptions. The best strategy for Vector is likely to be to rely on there being sufficient Line Pack in the Maui pipeline to balance the demand off the Vector pipelines, without actively intervening to manage the Vector pipeline Line Pack.

Because Vector has never made a nomination for Balancing Gas, it is difficult to assess what value the ability to make a nomination might have; or how that value might change as a consequence of the October 2011 Change Request. However, as discussed above, it seems unlikely that Vector will begin to actively trade Balancing Gas, so we assess the loss of Balancing Gas scheduling rights as being minor.

MDL considers that the special arrangements for Vector were originally intended as a transitional arrangement, and not intended to give Vector an enduring advantage over other Welded Parties. We do not have a view on this, and prefer to focus on whether the arrangement is necessary or not.

3.5 Incentives pool

Current arrangements

The Incentives Pool provides a system of liquidated damages (14.1), which is the sole and exclusive remedy for any inability of a Welded Party to take full Scheduled Quantity on a day (14.5). Welded Parties incur liability to the Incentives Pool to the extent flow exceeds Peaking Limits (13.3) or daily imbalance depletes Line Pack in excess of the DOIL (12.7). However, such Welded Parties are only required to make payments into the Incentives Pool when a claim is made against the Incentives Pool[9].

In addition to Welded Parties, the Balancing Agent can also claim against the Incentives Pool to meet the costs of buying Balancing Gas (14.4).

Proposed arrangements

Under the proposed amendments the Balancing Agent will no longer be able to claim against the Incentives Pool. In other respects the Incentives Pool arrangement remains essentially intact. The Pool would continue to provide a liquidated damages arrangement for Welded Parties who suffer damage when other Welded Parties have exceeded their Peaking Limits or their DOIL.

Discussion

It appears that Welded Parties would not lose any rights as a result of the proposed change.

[9] This is achieved by defining the Incentives Pool Debit Price as zero if there are no Incentives Pool Claims in respect of the Day.

4 Evaluating the proposed changes: approach and criteria

In our July 2009 Transmission Pipeline Balancing Second Options Paper (the Second Options Paper), Gas Industry Co established a set of evaluation criteria to assess the four options presented in that paper. The criteria were developed as a logical exposition of the Gas Act and Government Policy Statement on Gas Governance (the GPS) objectives in the context of balancing. The criteria were divided into three categories: efficiency, cost, and governance.

We used this criteria to evaluate the December 2009 Balancing Change Request. For consistency with previous analyses, we will use criteria previously established to evaluate the October 2011 Change Request.

Below we describe each criterion in greater detail and explain how it is interpreted in the context of the October 2011 Change Request.

4.1 Efficiency

Productive efficiency

Gas Industry Co believes balancing arrangements should, over time, result in gas being supplied at least cost. In the context of the October 2011 Change Request, least cost would mean the Maui Pipeline is balanced at minimum total cost to all participants.

The analysis considers whether the balancing arrangements contained in the October 2011 Change Request have features that will improve productive efficiency.

Allocative efficiency

Balancing arrangements are allocatively efficient if they provide the 'right' amount of service to the right users. In the context of the October 2011 Change Request, allocative efficiency would be achieved when:

- The marginal price of the residual balancing service equals the marginal cost to the provider of that service (the Balancing Agent); and
- The marginal price of Balancing Gas equals the marginal value of that gas to the supplier.

Security

Balancing ensures Line Pack remains within the limits necessary to support an uninterrupted transport service. If Line Pack is outside these limits, deliveries or receipts may need to be curtailed.

A natural tension exists between productive efficiency and security. For example, security would be improved if the thresholds for taking balancing actions were reduced, allowing the Balancing Agent to purchase Balancing Gas more frequently. But this would add to costs and reduces productive efficiency.

User risks

Imposing balancing costs without notice creates risks for users because the quantity and price of imbalances are uncertain. At the extreme, higher risks might lead to market players to question whether the rewards are sufficient to justify continued participation in the market. Higher risks might also lead to higher retail margins and hence higher retail prices.

4.2 Cost

The direct cost of balancing is discussed above under the productive efficiency criteria. Here we consider overhead and transaction costs. For example, costs related to IT development, and transaction costs associated with managing balancing risks.

4.3 Governance

Governance has been a persistent concern in Gas Industry Co's analysis of balancing arrangements. As noted in previous papers, our responsibility is to be confident balancing is not only efficient, but also that governance arrangements provide stability and longevity.

5 Evaluation of the costs and benefits of the balancing changes

5.1 Efficiency

Productive efficiency

The current arrangements involve substantial sharing of balancing costs through the transport tariff, so parties who cause a balancing action will not meet the full cost of that action. This distortion is likely to result in sub-optimal behaviour, leading to higher costs. For example, a party who could have balanced its own position at less cost than the Balancing Agent may not do so because it would be cheaper (for that party) to let the cost of the balancing action be spread across all users.

The October 2011 Change Request promises to provide improved targeting of costs. Parties who cause the Balancing Agent to take balancing actions will likely meet the full cost of those actions. A party in this situation is likely to balance its position if it can do so at lower cost than the Balancing Agent. The proposed change will therefore provide an incentive for parties to find the least cost options. This will tend to reduce costs; thereby improving productive efficiency.

Balancing costs Vector receives (as TPWP) from MDL will be passed through to Vector shippers by means of the Balancing and Peaking Pool (BPP), as at present. However, Vector shippers will have a greater reason to balance at least cost to the system as a whole, as explained in the previous paragraph. Of course not all Vector shippers are well placed to manage their positions. In particular, under current allocation arrangements, mass market shippers do not know the daily balance positions that will be used to allocate costs through the BPP until the middle of the following month. While this is not ideal, it would be a continuation of the current situation and should not make productive efficiency outcomes any worse.

We note that further improvements in productive efficiency could be achieved. For example, Vector has pointed out in its submission that competition could be improved if the BGX is opened to parties not directly connected to the Maui pipeline. We agree, but we must assess any change request as it is, and not as we might wish it to be.

Vector also notes that the October 2011 Change Request does not guarantee that gas is purchased only when necessary since the thresholds are in the Standard Operating Procedures, not in the MPOC. We agree, but our assessment relates to whether there is an improvement over the status-quo, and the change does not alter MDL's ability to change its SOPs.

Mass-market shippers have also noted that they would be better able to manage their positions if delivered quantities could be determined on the day after gas flow (D+1) rather than in the following month. While we agree that the introduction of D+1 for mass market shippers is likely to further improve productive efficiency, we do not consider that the absence of D+1 should hold up other improvements to the balancing regime.

Some submitters have pointed out that implementing the October 2011 Change Request is likely to increase the level of monitoring, and hence the cost of balancing. This matter is addressed in Section 5.2, under the Operating Cost heading.

Allocative efficiency

Section 12.11 of the existing MPOC allows MDL to cash-out a Welded Party which has not responded to an ILON notice. The price for such cash-outs must have been posted on the MDL information exchange (MDL IX) at least one day before, so it will necessarily reflect the cost of a related balancing action. In addition, the cash-out does not need to have an underlying balancing action. Because price signals and cash-out quantities are unlikely to reflect the cost of balancing, behaviour based on ILON cash-outs is unlikely to be allocatively efficient.

In contrast, the proposed arrangements give users the choice of balancing their position (within tolerance) or meeting the actual cost of the Balancing Agent doing so (if a balancing action is necessary). They would no longer have the opportunity to cause a balancing action and then balance their own position at a later date (within the ILON notice period of grace), leaving others to meet the cost of the balancing action. We believe that the 'choice' of self-balancing a user currently enjoys under the ILON notice is inherently inefficient since it is possible for that user to avoid the costs it has caused. By removing this option to avoid responsibility, and allocating the costs of any balancing action to those users whose imbalances gave rise to that balancing action, we believe that allocative efficiency will be enhanced.

Security

We do not consider that the proposed changes would affect the setting of the Line Pack thresholds for taking balancing actions. Also, although we anticipate that implementing the change will improve user balancing behaviour (because users will face the consequences of balancing actions they cause) this should not reduce the number of times when Line Pack is outside the thresholds since that is under the control of the Balancing Agent. We therefore assess the effect on Security as neutral.

User risks

In terms of cash-out risk, Gas Industry Co notes that users are currently exposed to costs even where no Balancing Gas has been bought or sold and the Incentives Pool debits are linked to uncapped electricity prices. The proposed changes would limit cash-out risk to days when balancing actions are taken, and the price will be the average price obtained on the BGX, admittedly still uncapped.

In addition, the reduction in cross subsidies will improve the incentives on individual Welded Parties to manage their imbalance and participate in the balancing market to hedge their risk. Greater participation in the balancing market should lead to more efficient clearing prices.

However, some aspects of the change would tend to increase user risk. Currently a user with AEOI knows at least a day in advance the price at which it will be cashed-out. It also has at least a day of 'grace' before being cashed-out, allowing it to self-balance at a lower cost if it chooses to. By contrast the new arrangements provide for no-notice cash-out of AEOI on the day a balancing action is taken. And since no price caps apply to BGX transactions, this cost may be high.

The proposed change would also reduce the tolerance that would apply before users are cashed-out. However, the inherent Line Pack flexibility, which is being used to the benefit of all users, is unchanged. So the reduction in tolerances should not cause more balancing actions, but may increase the range of parties responsible for an allocation of the costs of those actions.

Welded Parties who have access to real time gas flow information and who can control their gas flows can readily assess their risk and exposure to cash outs. However Vector, as a TPWP, does not directly control gas flows at its interconnection points. Those flows are determined by downstream gas demand. If the change is implemented, and assuming that the VTC properly allocates balancing costs to Vector shippers, Vector shippers will become more accountable for their balance positions. Shippers to major end users with real time gas flow information can readily manage this risk, but shippers supplying mass market end-users do not know their balance positions until initial allocations are available in the following month. Implementing the change would not alter this, but since it will expose these retailers to a targeted rather than a spread cost allocation, it can be argued that they will face increased risk (ie the volatility of possible outcomes would increase). This risk can be mitigated through improved forecasting, the introduction of more timely allocations (D+1), and participation in the balancing market.

In essence, while the current high level of cost spreading is inherently inefficient, it generally results in a lower financial risk. We consider that increased volatility of financial outcomes is inherent in moving to a causer pays regime. The resulting risks are not as unreasonable as the current situation where Parties who have not caused balancing actions are burdened with balancing costs. Vector considers the October 2011 Change Request to be unfair because it claims that its financial risk is increased. However, Vector also acknowledges that the financial risk can be mitigated through changes to the VTC to address the problems it has identified. This suggests that it is not open to Gas Industry Co to reject the change request due to the financial risk issue. Instead, Gas Industry Co considers that Vector and the industry can work together to harmonise the balancing aspects of the MPOC and VTC so as to ensure the efficiency gains inherent in the change request will be fully achieved.

5.2 Cost

Agreement cost

The costs of reaching agreement (such as preparing the October 2011 Change Request and running the consultation process) are largely sunk or committed.

Implementation cost

Implementing the October 2011 Change Request would alter how MDL manages balancing and may involve some restructuring of business processes. However, MDL's cross-submission (p5, Implementation costs) states that

> From MDL's perspective the cost of implementing the Balancing CR is low. There are no required system changes to OATIS or the BGX, and MPOC changes have already been drafted. MDL has been careful not to introduce any new concepts that would require significant changes to documents relying on MPOC definitions.

The October 2011 Change Request would also alter how system users manage their responsibilites to balance. In particular, some users (particularly those who are likely to be the causers of balancing actions) will wish to tighten up the monitoring of their balance positions. For shippers supplying large end users this will involve more regular monitoring of downstream deliveries. For shippers supplying mass market end users it could involve developing better estimation algorithms and/or increasing efforts to allocate delivery quantities on the day after gas flow (D+1). Shippers may also wish to become more active in the Balancing Gas market, and incur the administrative costs of such trading activities.

Operating cost

After implementation, the operating cost associated with the balancing market and cash-out processes may change for the Balancing Agent and users.

For the Balancing Agent the process for buying and selling Balancing Gas is the same as the status quo, but it would be expected that, because of the stronger incentives on each user to maintain a balanced position, the Balancing Agent will need to take fewer residual balancing actions. However, we consider that the variable cost of each balancing action is likely to be small relative to the fixed costs of the Balancing Agent monitoring the pipeline, and having standing arrangements in place to buy and sell Balancing Gas. We therefore do not consider that there will be a significant change to Balancing Agent operating costs. This view is supported by MDL's submission.

Both the MPOC and the VTC require pipeline users to maintain balanced positions, these obligations to balance are unchanged by the October 2011 Change Request. Users should currently have systems in place to comply with these obligations. However, since October 2011 Change Request will ensure that users who cause a balancing action face the full cost consequences, there is a greater incentive to be vigilant. This greater incentive could potentially increase investment in information systems and operations (this is discussed in Section 5.1, User Risks).

Because the cost of increased monitoring arises from an existing obligation, we do not think it should be counted against the proposed change. It is a cost that is inherent in the original conception of the pipeline access arrangements, but which poor cost allocation practices have allowed some users to avoid.

5.3 Governance

Transparency and non-discrimination

The October 2011 Change Request proposes new obligations to disclose information. The proposed changes in section 3A also provide greater clarity on the role of the Balancing Agent. This includes an obligation for MDL to require the Balancing Agent to buy and sell gas at arm's length (3A.4(a)(iii)). This obligation is similar to the arm's length operating commitment in Schedule 4, section 8.1, but is specific to the operation of the BGX. MDL is also obliged to require the Balancing

Agent to disclose the process for entering bids to buy and sell Balancing Gas, and publishing all Balancing Gas transactions entered into.

While most of these disclosures are already being made, we think the introduction of a formal commitment to do so in the MPOC is significant and beneficial.

Gas Industry Co considers the proposed recognition in the MPOC of the difference between Fuel Gas and Balancing Gas is also an improvement (3A.2) on the status-quo (although we are disappointed that there is no mention of how unaccounted-for-gas will be dealt with.).

Therefore the October 2011 Change Request proposes significant improvements to transparency.

Adaptability

The October 2011 Change Request leaves the MPOC change request process unchanged. Therefore, the effect on Adaptability is neutral.

Enforcement

The October 2011 Change Request should not alter the proper enforcement of rights and obligations or handling of disputes. Therefore, the effect on Enforcement is neutral.

Balance

The deletion of Vector's preferential rights to transport gas may disadvantage it, but Vector has never used the facility.

Users have the same obligations to maintain balance positions, but the incentives to do so have increased.

Stability

Current balancing arrangements involve a high level of cost misallocation. Misallocation occurs either through charging costs to the wrong user, or socialising costs in situations where the ILON process has permitted the causer to avoid responsibility. As the arrangement is inherently unfair and inefficient, it must also be unstable.

In addition, the proposed change would move the balancing arrangements towards international practice. For example the European Regulators Group for Electricity and Gas (ERGEG) Framework Guideline for Gas Balancing in Transmission systems (Ref: E10-GNM-13-03, 10 March 2011), Section 7.2 provides that:

> The network code shall require TSOs to charge separately imbalance charges from other transmission charges. Imbalance charges shall be reflective of the costs incurred by the TSO in buying gas and balancing services (or the revenues received by the TSO in selling gas) to the extent this is possible. Imbalance charges shall be levied on the network users that were out of balance at the end of the balancing period. Only costs incurred by TSOs from undertaking balancing activities that are not directly attributable to a network user causing imbalances may be shared across all network users. Imbalance charges shall be targeted on the network users contributing to the imbalance and therefore shall not include other charges.

The same Framework Guidelines note the importance of system users having the information necessary to balance. It can be argued that shippers carrying gas to the mass market do not currently have this information[10]. Some submitters argue that more timely reconciliation data (D+1) is a necessary prerequisite to supporting the October 2011 Change Request. D+1 is a matter currently under consideration in the context of Gas Industry Co's review of the Gas (Downstream Reconciliation) Rules 2008. However, while it would be desirable to have a D+1 regime in place, we do not consider it a necessary prerequisite. It does not seem unreasonable that shippers to the mass market should bear the risks arising from the uncertainty of mass market data.

On balance, we consider that proposed change will be more stable than current arrangements.

Gas Act and GPS objectives

As explained in Section 4, the evaluation criteria used in this report – efficiency, cost and governance – were developed as a logical exposition of the Gas Act and GPS objectives in the context of balancing. However, for completeness it is worth returning to the original objectives to make a high level check that they have either been covered, or are not affected by the proposal.

Table 2 Coverage of Gas Act and GPS Objectives

Objective	Effect of Implementing October 2011 Change Request
Gas Act Objectives	
• '…ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner'.	
	The substantive effect of the proposed change is to better allocate responsibility for balancing cost to the causers of those costs. The current arrangement, where a system user's actions can produce an economic cost that is not fully borne by that user, is a negative externality (in economic terms), the removal of which will tend to enhance efficiency. We do not consider that the proposed change would significantly affect safety or reliability.
• 'the facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements'	
	No significant effect.
• 'barriers to competition in the gas industry are minimised'	
	The proposal provides an additional incentive for users to balance their receipts and deliveries if they can do so more cheaply that the Balancing Agent. This should increase competition for providing the balancing function.
• 'incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced'	
	No significant effect.
• 'delivered gas costs and prices are subject to sustained downward pressure'	
	While we expect the proposal to reduce balancing costs, users may incur additional costs if they decide that additional monitoring of their balance position is required.
• 'risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties'	

[10] Although they do have their own estimation algorithms, and historical allocation information, that would allow them to estimate their demand positions.

Objective	Effect of Implementing October 2011 Change Request
	While there is no significant effect on the overall security of supply, the proposed change alters the allocation of risk. In particular, it would make those responsible for balancing costs responsible for those costs. In relation to peaking, we recognise that Vector is likely to be exposed to more cost, but this can and should be dealt with through changes to the VTC to allow that cost to flow through to the Vector Shippers who are responsible for the peaking.
• 'consistency with the Government's gas safety regime is maintained'	
	No effect.
GPS Objectives (Paragraph 12 of the GPS adds five additional objectives to which Gas Industry Co must have regard.)	
• Energy and other resources used to deliver gas to consumers are used efficiently.	
	The efficiency of appliances is not affected by the proposal.
• Competition is facilitated in upstream and downstream gas markets by minimising barriers to access to essential infrastructure to the long-term benefit of end users.	
	As discussed above, it is anticipated that competition in the market for Balancing Gas will increase if the proposal is adopted.
• The full costs of producing and transporting gas are signalled to consumers.	
	To the extent that current arrangements lump costs into the transportation tariff, consumers will generally not see the cost of Balancing Gas. The proposal does not directly allow for consumers to face the cost of balancing – only system users. However, it would be expected that if system users face the full costs of balancing, they would wish to reflect those costs through to their customers, the gas consumers.
• The quality of gas services where those services include a trade-off between quality and price, as far as possible, reflect customers' preferences.	
	Balancing is a 'gas service' that encompasses the primary balancing performed by individual system users, and the residual balancing provided by the Balancing Agent. The 'quality' of that service would be the extent to which it avoids interruption of gas supplies. As we discussed in section 5.1, under the heading Security, we do not expect that implementing the change would affect the number of interruptions.
• The gas sector contributes to the Government's climate change objectives as set out in the New Zealand Energy Strategy, or any other document the Minister of Energy may specify from time to time, by minimizing gas losses and promoting demand-side management and energy efficiency.	
	Demand-side management will only be effective where the true costs of supply are passed through to consumers. Implementing the change request would reduce cost sharing, so should contribute towards improved demand responsiveness.

6 Conclusion

6.1 Summary evaluation

Table 3 presents a summary of Gas Industry Co's evaluation of the October 2011 Change Request.

Table 3 Evaluation of October 2011 Change Request

Evaluation of October 2011 Change Request		
Category	**Criterion**	**Summary**
Efficiency	Productive	Current arrangements: • permit a user to avoid cost by balancing its own position after causing a balancing action; • allow cash-out without an underlying balancing action; and • both of the above could result in additional transactions being taken, over the efficient level. The October 2011 Change Request: • proposes no-notice cash-out, which should ensure balancing actions occur less often (providing operating instructions handle operational gas, mismatch and thresholds for balancing actions efficiently) (although we are disappointed that the treatment of unaccounted-for-gas was not addressed.)
	Allocative	Current arrangements: • use forecast cash-out prices that are unlikely to reflect market prices, so balancing decisions are not based on relevant prices. The October 2011 Change Request: • mandates pay-as-bid clearing, and B2B average price cash-outs, allowing balancing decisions to be based on market prices (although the arrangements are as efficient as marginal price clearing and cash-out).
	Security	No change.
	User risks	Current arrangements: • permit significant socialisation of costs because the ILON process allows the causer an opportunity to avoid costs. The October 2011 Change Request: • provides for cash-outs to occur only on days when there is a balancing action; contributing imbalances are cashed-out without notice, potentially reducing the frequency of cash-out; but • the volatility of balancing costs is likely to increase since costs that are currently spread will be targeted to specific users.

Evaluation of October 2011 Change Request		
Category	**Criterion**	**Summary**
Cost	Agreement	Costs largely 'sunk', and therefore irrelevant.
	Implementation	MDL believes that the cost of implementation the October 2011 Change Request will be 'low'. There are no required system changes to OATIS or the BGX, and MPOC changes have already been drafted. MDL has been careful not to introduce any new concepts that would require significant changes to documents relying on MPOC definitions. However, users may wish to implement better monitoring arrangements, estimation algorithms, and/or participate in the balancing market. All such activity changes will involve implementation costs.
	Operating	Some likely increases in the costs of system users managing their balance positions.
Governance	Transparency and non-discrimination	The October 2011 Change Request: • introduces new obligations to disclose information; and • distinguishes between Fuel Gas and Balancing Gas.
	Adaptability	No change.
	Enforcement	No change.
	Balance	The deletion of Vector's preferential rights to transport gas may disadvantage it. The incentives for users to maintain balanced positions have increased.
	Stability	The October 2011 Change Request moves arrangements closer to international practice so are likely to improve stability.

6.2 Overall evaluation

Drawing the threads of the Section 5 analysis together, the main conclusions in respect of the efficiency, cost and governance criteria are that implementing the October 2011 Change Request will:

- **Improve the efficiency of balancing arrangements.**
  Current arrangements involve a high degree of cost socialisation, poor price signalling, charges not directly related to underlying transaction costs, and poor accountability for costs and title. All of these matters are improved by the change request. While user risks are expected to increase, this is a natural consequence of greater cost accountability.

- **Potentially increase costs, but if so, to a level that is appropriate to the contractual obligations that already exist.**
  Because users will face the cost consequences of balancing actions they are likely to allocate more resources to managing their balance positions. However, we note that their contractual obligation to balance has not increased. Users should already be exercising that increased level of diligence but, given the current poor accountability for costs, the incentives to do so are weak.

- **Generally enhance governance.**
  In particular, transparency and stability will be improved. Although Vector's existing preferential rights to transport Balancing Gas will be extinguished, we consider it very unlikely that Vector

would ever wish to actively perform a balancing role given the physical characteristics of the transmission systems.

Gas Industry Co's overall evaluation therefore supports the October 2011 Change Request. In addition, the 'causer-pays' principle which underlies the October 2011 Change Request is in line with international practice, and is a principle endorsed by industry participants (eg in the series of workshops that followed the 2006/2007 Maui pipeline over-pressure events[11]).

[11] See p4 of the Aretê Consulting's Maui Pipeline Industry Forum – Over Pressure Issues Meeting Report, 7th June 2007. The report can be found in Gas Industry Co's April 2008 paper entitled Transmission Pipeline Balancing.

7 Draft recommendation

Gas Industry Co supports the October 2011 Change Request.

8 Next Steps

The next steps are outlined in table 4 below.

Table 4 Next steps

Item	Date
Close of submissions on draft recommendation	13 March 2012
Gas Industry Co makes recommendation to MDL	17 April 2012

Glossary

Note: Definitions obtained from the MPOC are shown in *italics*.

AEOI	'Accumulated Excess Operational Imbalance'. A defined term in the MPOC for amount of OI in excess of tolerance.
Balancing	The management of Line Pack to ensure that it remains within acceptable operational limits.
Balancing Agent	Defined by the MPOC as *'…the balancing agent appointed by MDL from time to time to manage the Line Pack.'* The October 2011 Change Request does not propose changing this definition.
Balancing Gas	Defined in the current version of the MPOC as *'…Gas used to manage line pack on a Transmission Pipeline.'* The October 2011 Change Request proposes changing this to *'… Gas purchased as part of a Balancing Gas Call, or sold as part of a Balancing Gas Put, by MDL.'*
B2B balancing	'Back to back balancing' refers to arrangements that allocate gas transactions taken by the Balancing Agent among Welded Parties with imbalance positions outside tolerance.
BGX	'Balancing Gas Exchange', an online platform that facilitates the trade of Balancing Gas on the Maui Pipeline.
BPP	'Balancing and Peaking Pool'. A mechanism in the Vector transmission regime to ring-fence and allocate balancing costs via a trust account.
Cash-out	A forcible sale or purchase of gas by the TSO to resolve an outstanding imbalance position.
Contingency Volume	Defined in the current version of the MPOC as *'… the quantity of Gas which is maintained by MDL in the Maui Pipeline as part of the Line Pack and is designated for use in a Contingency Event, Maintenance, or a Force Majeure Event in accordance with this Operating Code.'* The October 2011 Change Request does not propose changing this definition.
Damages	The loss to a user's business caused by another user breaching its obligations. A damages claim is a claim for compensation for costs incurred.
Delivery Point	Defined by the MPOC as *'…a Welded Point to which a Shipper nominates to have Gas transported.'* The October 2011 Change Request does not propose changing this definition.

DOIL	'Daily Operational Imbalance Limit' is a defined tolerance in the MPOC for acceptable DOI.
GPS	'Government Policy Statement'.
ILON	Defined in the current version of the MPOC as *'…a notice given by MDL to a Welded Party under section 12.10 requiring that Welded Party to reduce its Accumulated Excess Operational Imbalance to zero, and which states the quantity of, and a time period for reducing, that excess.'* The October 2011 Change Request proposes to delete this definition and all references to ILONs in the MPOC.
Imbalance	Generically this means the flows into the pipeline do not match the flows out of the pipeline. This can be 'operational imbalance' in the MPOC which is the difference in scheduled flows and actual flows at an interconnection point. This can also be the difference between shipper receipt and delivery quantities in both the MPOC and VTC (where it is called 'mismatch'). A positive imbalance is one that increases Line Pack and a negative imbalance is one that decreases Line Pack.
Incentives Pool	Defined by the MPOC as *'…the pool of money held on trust and administered by the Incentives Pool Trustee, into which all Incentives Pool Debits are to be paid and out of which Incentives Pool Claims are to be paid.'* The October 2011 Change Request does not propose changing this definition. The Incentives Pool is essentially a liquidated damages arrangement that permits a Welded Party, who suffers damage as a result of another Welded Party being out of balance, to claim liquidated damages.
Line Pack flexibility	Flexibility in the level of Line Pack over and above that needed to transmit scheduled gas and set aside for security of supply, which is Line Pack flexibility potentially available for balancing.
Line Pack	Defined by the MPOC as *'…the total quantity of Gas in the Maui Pipeline at any time.'* The October 2011 Change Request does not propose changing this definition.
MDL	Defined by the MPOC as *'Maui Development Limited.'* The October 2011 Change Request does not propose changing this definition.
MPOC	'Maui Pipeline Operating Code', the current version of which is dated 1 September 2011.
OATIS	'Open Access Transmission Information System'. The information system and internet site used to manage the day to day operations of open access on the Maui and Vector pipelines.

OI	'Operational Imbalance'. The MPOC defines OI as being the difference between the actual quantity of gas that flowed through a welded point on a day and the scheduled quantity for that day.
Peaking Charge	An incentive/penalty charge proposed to apply to Welded Parties whose demand peaks outside proposed Schedule 7 limits, and calculated in accordance with a proposed Section 13.4.
Receipt Point	Defined by the MPOC as *'…a Welded Point from which a Shipper nominates to have Gas transported.'* The October 2011 Change Request does not propose changing this definition.
ROI	'Running Operational Imbalance'. A defined term in the MPOC for the aggregate of imbalance at a welded point over time and therefore represents the total gas parked or loaned from the pipeline at that point. The October 2011 Change Request does not propose changing the definition.
ROIL	'Running Operational Imbalance Limit'. A defined term in the MPOC for tolerance of ROI, outside of which MDL may notify the welded party to take away or return the excess imbalance (see ILON). The October 2011 Change Request does not propose changing the definition.
RPO	'Reasonable and Prudent Operator'. A defined term in the MPOC referring to a standard for performance equal to or better than good industry operating practice relative to recognised international practice. The October 2011 Change Request does not propose changing the definition.
Shipper	A pipeline user that has contracted for the TSO to transport gas (see TSA).
tolerance	An amount of the peak daily flow, DOIL or ROIL (depending on the context) as set in Schedule 7 of the MPOC, below which Welded Parties can operate without consequences.
TSA	'Transmission Service Agreement'. The contract between a shipper and the TSO to transport gas.
UFG	'Unaccounted-for-Gas'. This is a change in Line Pack that cannot be identified to a user, and represents the inherent errors in metering gas.
VTC	'Vector Transmission Code'.
Welded Party	Defined by the MPOC as *'…the person named as a welded party in a valid and subsisting ICA.'* The October 2011 Change Request does not propose changing this definition.

Appendix A Summary of submissions on the October 2011 Change Request

Gas Industry Co's contractual role under the MPOC is limited to making a recommendation to supporting a change request (or not). It does not provide for conditional support. All Gas Industry Co's comments below should be read with this in mind.

Submitter	Submitters comment	Gas Industry Co comment
Contact	**Overall:** Contact does not support the October 2011 Change Request in its current form but is willing to offer commitment to assist progress with balancing improvements.	• We welcome Contact's offer to help progress balancing initiatives.
	Broadly: There must be a commitment from all Parties that further progress will be made before the October 2011 Change Request is approved. Contact recommends progressing: • Greater transparency on Vector's Frankley Road pipeline; • Introduction of nominations on the Vector Pipeline or Remote Welded Points to allow for greater transparency and control for those large users (which will result in less socialisation of costs to other users); and • Balancing Gas trading available to all interested parties.	• In the narrow context of our role in considering MPOC change requests we cannot make a decision conditional. However, we agree with Contact that there are matters that should ideally be addressed before the proposal is put into effect. [Refer to cover note which discusses the October 2011 Change Request in the context of our broader regulatory role.]
	Specifically: <u>New section 3A – Balancing Principles</u>	
	• Fuel Gas should be tendered for rather than treated like Balancing Gas.	• We agree that it may be confusing to deal with Fuel Gas in a section (3A) headed 'Balancing Principles'. However we do not see why MDL should not contract the Balancing Agent to buy the pipeline's Fuel Gas. (Although we recognise that if the gas is purchased through the BGX it is currently only Welded Parties who can bid to supply it.)
	• There needs to be a section covering MDL's management of UFG.	• We agree that it would have been better if MDL had described how UFG will be treated.
	• Would like to see Vector Shippers having access to BGX. If this increases	• We would also like to see the balancing market open to as many participants as

Submitter	Submitters comment	Gas Industry Co comment
	trading activity, the introduction of BGX2 may be justified.	possible.
	<u>New information published on OATIS and the BGX under s4</u>	
	• Agree with the proposal to provide more **information** and believe this should also include the Standard Terms and Conditions for Fuel Gas purchases and UFG calculations/monitoring.	• We agree that transparency is desirable.
	<u>Removal of TP WP ability to nominate Balancing Gas during the post Intra-day Cycle</u>	
	• Agree	• Noted.
	<u>Removal of current ILON process and corresponding introduction of B2B provisions</u>	
	• Agree but believe MDL must also provide access to all shippers to Balancing Gas trading and the availability of tools on the Vector pipeline to manage imbalance positions.	• We agree that access to the Balancing Gas market and other arrangements (like remote welded points) would reduce Vector Shipper risk.
	<u>Removal of BA's ability to claim against the IP</u>	
	• Agree	• Noted
	<u>Introduction of peaking charges</u>	
	• Agree provided that transfer of title to the peaking gas is also introduced. Until evidence is seen that peaking has a material effect on the transmission system, Contact believes it should not be such a punitive charge.	• We consider the comments on title transfer made by MDL in its cross submission are relevant. A Welded Party may exceed its peaking limit without having an overall imbalance across the day. So cashing out such a peak would create imbalance which the Welded Party would then have to resolve. We think transferring title would add complexity for little benefit.
	• One of the main issues with peaking charges lies in the transfer of those penalties to causers on the Vector Pipeline. The causers have little chance of being properly identified. There needs to be either a nominations scheme on the Vector pipeline or the implementation of remote WPs for large users so that they have the same rights and obligations as Maui WPs and can therefore provide visibility to behaviour along with the tools to	• We agree that a nominations regime on Vector's pipeline or remote WPs of large users would likely address the allocation of peaking charges to Vector shippers. The Balancing and Peaking Pool set out in the VTC is intended to transfer peaking charges to Vector shippers. If that mechanism is not effective then it should be changed by Vector.

Submitter	Submitters comment	Gas Industry Co comment
	mitigate peaking. <u>Revised peaking limits and ROILS</u> • Agree provided the other mechanisms discussed in submission are also implemented.	 • Noted.
Genesis	**Overall:** B2B will be beneficial provided that an effective gas trading platform is introduced. Support for the October 2011 Change Request is therefore conditional on MDL implementing its BGX2. Only with BGX2 will shippers be able to manage their imbalance positions. Recommend the development of the trading platform (BGX2) be undertaken during the six month period that MDL has specified for Vector to undertake the necessary changes to the VTC.	• We agree that access to a Balancing Gas trading platform will allow better risk management for Vector shippers, and support the suggestion that further work should be done to achieve this, ideally before the October 2011 Change Request is put into effect. [Refer to cover note.]
	Supports: • Removing the incentives pool • Introducing section 3A Balancing Principles • Publication of new information on OATIS and BGX • Removal of TP WP's ability to nominate Balancing Gas during the post intra-day cycle • Removal of ILON and replacement with B2B • Removal of the Balancing Agent's ability to claim against the incentives pool	 • We note the support for these itmes.
	<u>Peaking charges</u> • There are two major flaws with the proposed peaking arrangements:	
	1.Peaking charges are not conditional on there being a balancing transaction on the day; and	• The proposed section 13.4 exposes a Welded Party to Peaking Charges where: ○ it has exceeded the Peaking Limit; and ○ it has not been invoiced by the Incentives Pool Trustee; and ○ Either: o there has been a Balancing Action; or O Line Pack has fallen below the Low Line Pack Threshold.

Submitter	Submitters comment	Gas Industry Co comment
	2.The process does not incorporate a transfer of Balancing Gas title so it remains a penalty payment	• We agree that allocating Balancing Gas to peaking seems a reasonable alternative to a peaking incentive/penalty, and more in keeping with the B2B concept. However, cashing out such a peak would alter the WP's imbalance position, and that may cause more problems than it is worth.
	• Recommend further work towards a peaking arrangement with four key elements: 1.There is a breach of Low Line Pack Threshold 2.There is also a balancing call gas transaction on the day 3. receipt welded points have a peaking tolerance of 75 percent and incur a peaking charge in the event that gas injections into the pipeline are below this level; and 4. the extent of the peaking charge is limited to the extent of any unallocated call Balancing Gas and includes a transfer of this gas.	• We agree that a peaking penalty is a crude incentive that could be improved, but our MPOC role does not allow for us to consider alternatives to the change request. We note that peaking penalties are a common feature of other gas pipeline access regimes.
Greymouth	**Overall:** Balancing costs are minor ($2m/year) so cost mis-allocations will be much smaller. Also introducing B2B will incur costs, so is not justified. There are more pressing issues to address. The industry is comfortable with a degree of cost socialisation.	• Greymouth has presented an elegant and thoughtful argument, but there are aspects we question. In particular: ○ The current [relatively low] balancing charges are not necessarily a good indicator of future charges. ○ The increased cost that would result from the change request (mostly the costs of users managing their balancing positions more diligently) arises from the obligation to maintain balanced positions. The proposal does not change this obligation, it only make the consequences of a breach cost reflective. We believe that users already have an obligation to meet the costs of managing their balance positions. ○ The efficiency loss from the mis-allocation of costs can far exceed the amount of the misallocation. There are both static and dynamic efficiency effects to take account of. Mis-pricing in one market influences outcomes in related markets. Also, the incidence of economic harm resulting from the cost misallocation will not be spread evenly across all users. Some users may gain and other lose. ○ Gas Industry Co must consider all

Submitter	Submitters comment	Gas Industry Co comment
		MPOC changes put before it, and cannot choose to withhold its support because other issues may be more pressing.
	• Greymouth doubts the industry will benefit from greater certainty of balancing charges because Vector's mass-market shippers will still not know their balance positions until deliveries are determined in the subsequent month.	• We agree that Vector's mass market shippers will remain uncertain about whether or not they have been cashed out until allocations are made in the following month. Gas Industry Co will be considering the feasibility of implementing D+1 as part of its review of review of the Gas (Downstream Reconciliation) Rules 2008.
	• The cost of removing the ILON process exceeds the benefit.	• The costs appear to be minimal (if we do not count the cost of increased management of balance positions because that is inherent in the current obligation to balance). The benefit is unambiguously positive, but very difficult to estimate in numerical terms[12].
	• Greymouth supports the removal of the BA's ability to claim against the Incentives Pool which would make the current excess peaking and excess daily imbalance charges obsolete.	• Noted.
	Disagree with:	
	• Balancing Agent being responsible for Fuel Gas purchases – as this confuses purpose its functions and limits the range of vendors (to those with access to the BGX).	• We note Greymouth's views, and agree that Fuel Gas could be purchased in a different way to allow a wider range of suppliers to bid.
	• No explicit treatment of UFG – questions why UFG shouldn't be treated as TSO ROI.	• We agree that if the treatment of UFG is not expressly determined it will accumulate as imbalance so that the aggregate imbalance in the pipeline will no longer reflect its physical balance position. This could be avoided if UFG became TSO ROI, as Greymouth suggests.
	• Proposed section 3A.4(c) – best endeavours should be taken to publish crucial information rather than reasonable endeavours (proposed).	• We consider that there is no material difference between reasonable and best endeavours, but note Greymouth's view.

[12] The benefit will be a function of the availability and elasticity of Balancing Gas, including an assessment of the supply functions of alternatives, such as storage and interruptibility; the degree to which users trade Balancing Gas on the market or privately now, and in the future;and the aggregate quantum of balancing required. Both static and dynamic efficiency effects would need to be considered.

Submitter	Submitters comment	Gas Industry Co comment
	• Proposed sections 3A.4(c)(vi) and 4.4 of the MPOC are examples of MDL passing on increased costs – this is contrary to s43ZN(b)(iv) of the Gas Act.	• We consider that auditing Balancing Gas transactions is a necessary and legitimate expense of the pipeline business.
	• The current s4.3 of the MPOC is superior to the proposed change because, under the change, WPs will only know by 12pm the next day of cashed-out quantities rather than knowing immediately after settlement.	• Under B2B the Balancing Gas is allocated on the day the Balancing Action is taken, so there is inherently no notice. The concept of B2B is that those responsible for Balancing Actions being taken are immediately allocated their share of the Balancing Gas.
	• There are a number of issues with proposed sections 12.10 and 12.11:	
	○ Previously the grace period to correct imbalance was extended from a minimum of 1 day to a minimum of 7 days in the event of a FM or contingency event. This protection has been removed;	• Giving a notice period in the event of FM or contingency would be inconsistent with B2B. We agree that the proposed change is worse than the status-quo for those who could previously avoid the cost of their actions, but we do not accept that this is efficient behaviour.
	○ MDL's ROI position must not be excluded otherwise they will receive a 'free ride' on UFG;	• We agree that it would be better if 'MDL's ROI position' was included.
	○ Cash-out gas appears to already be included in ROI, so there is no need for section 12.10(b)(v) and 12.11(b)(v) to make the adjustment again.	• We think that the current wording works. In the definition, ROI for Day n is calculated (i.e., finally determined) on the first minute of Day n+1. In sections 12.10-12.13, the cash outs happen on the last minute of Day n. So the ROI for Day n is determined on the first minute of Day n+1 and is the ROI for Day n-1 adjusted according to all of the cash outs that are settled, trades made and movements in OI during Day n.
	○ these sections refer to MDL taking balancing actions yet the BA may or may not be MDL as per the proposed section 3A.1.	• The Balancing Agent is defined as being an agent of MDL.
	• In relation to schedule 7 it appears that	
	○ There has been an extreme tightening that will trigger Balancing Actions and contingency events.	• Critical contingencies are triggered according to the Gas Governance (Critical Contingency Management) Regulations 2008. Schedule 1 of that regulation sets out the critical contingency threshold limits. These are unaffected by the proposed changes, so

Submitter	Submitters comment	Gas Industry Co comment
		we do not think they would result in critical contingencies being triggered any sooner.
	○ MDL has not allocated all its available flexibility but '… has a minimum of 10TJ of free flexibility just for itself…'	• Schedule 7 only determines how much of a Welded Party's ROI will be AEOI. It does not relate to when balancing actions will be taken. That will continue to be determined outside the MPOC in MDL's Operating Procedures.
	○ Greymouth needs +/- 2.5TJ ROIL flexibility, more than the 1TJ provided by MDL. The result will be increased compliance costs for Greymouth and its customers.	• The ROIL limit determines the threshold beyond which costs will be allocated to Welded Parties (rather than being socialised). Welded Parties who are better able to control their AEOI will be exposed to less balancing risk. We believe that this puts the correct incentives on Welded Parties.
MGUG	**Overall:** In order for unqualified support for the October 2011 Change Request, there needs to be simultaneous adjustments to the MPOC and the VTC.	• We agree that this would be ideal. However cost reflective balancing has been discussed for many years, and the MPOC changes has been signalled for several years. The VTC may not change until the MPOC change is imminent.
	General:	
	• Supportive of MDL's attempt to reduce balancing costs and that a mechanism to provide an incentive to causers is more likely to be successful than continuing to socialise costs across the network.	• Noted.
	• Concerned about the uncertainty the October 2011 Change Request causes for operations at individual metered sites.	• There will be some uncertainty about the effects of the change, particularly until VTC changes are agreed. However we believe that cost reflective balancing will ultimately be more efficient.
	• Larger users concerned about the removal of the post intra-day nomination cycle as this is frequently the only mechanism to address operational upsets that occur after the last intra-day nomination period has passed.	• MDL has commented on this in its cross submission. We suggest that it should be addressed outside the consideration of the October 2011 Change Request.
	• If a coordinated change (MPOC + VTC) is not feasible then MGUG suggests an alternative method as suggested by NZ Steel in 2009.	• We agree that coordinated MPOC and VTC change would be ideal and believe that this would be possible in the time available before implementation.

Submitter	Submitters comment	Gas Industry Co comment
Methanex	**Overall:** Methanex is willing to support the October 2011 Change Request provided that further amendments and conditions are implemented:	
	• MDL implements its BGX2 platform;	• We agree that wider access to a balancing market is desirable.
	• There is an amendment to the MPOC requiring MDL to aggregate operational imbalances between multiple WPs in circumstances where those WPs all deliver gas to a single point user;	• We understand that this is an issue specific to Methanex that requires an OATIS and MPOC changes to implement. We therefore consider that it is best addressed by direct negotiation with MDL in the first instance.
	• Eliminate the potential for double up on charges (excess daily imbalance and AEOI);	
	• Resolve Cash Outs and Peaking Charges incurred due to metering issues.	• We agree that this should be clarified.
	Specific comments: • With the introduction of B2B there is merit to increasing the number of Intra-Day Cycles to five or six to adjust the timings of the Cycles and make Intra-Day Nominations more practical. This is not a necessary amendment for Methanex's support of the October 2011 Change Request but is worth further consideration.	• MDL has commented on this in its cross submission. We suggest that it should be addressed outside the consideration of the October 2011 Change Request.
	• There seems to be a referencing error in Section 8. The reference to 'section 8.31' should read 'Section 8.30'	• MDL has now corrected this.
	• There seems to be a drafting error in Schedule 7 as a number of WPs set out in the list for ROIL have been left off the list for DOIL.	• This only has relevance for the Welded Party to Welded Party claims on the Incentives Pool. Welded Party to Welded Party claims are untouched by the proposal. We understand this is because, although never used, some parties still wish to retain this feature, and MDL considered that any change might bring the structure into question. Thus the DOILs are unchanged from status quo.
Mighty River	**Overall:**	

Submitter	Submitters comment	Gas Industry Co comment
Power	• Significant changes to balancing arrangements need to be part of a co-ordinated program of changes on both the Maui and Vector transmission systems (as previously stated by MRP)	• We agree that coordinated changes would be ideal. We understand that some changes to the VTC are occurring and we would expect that if the October 2011 Change Request is approved others would follow. However cost reflective balancing has been discussed for many years, and the MPOC changes has been signalled for several years. The VTC may not change until the MPOC change is imminent.
	• Note that Vector is not in a position to implement B2B on their transmission system. That would require the development and implementation of a daily allocation arrangement on the Vector Transmission System.	• As with VTC changes, we believe that improved allocation arrangements would ideally be co-ordinated with the MPOC change.
	• MRP and other shippers have for some time been urging the GIC to make the development of a daily allocation arrangement a priority.	• Gas Industry Co will be considering the feasibility of implementing daily allocations as part of its review of the Gas (Downstream Reconciliation) Rules 2008.
	• A lack of B2B on Vector system means MDL will cash-out balancing transactions on the day while Vector will not be able to pass these costs onto shippers until the interim allocation the following month. This means shippers will not be able to accurately adjust their running mismatch positions to account for cash-outs until BPP positions are posted in the middle of the month following the month when balancing transactions are completed.	• We agree that Vector mass market retailers would not know how much Balancing Gas they had been allocated until the following month, and that improved allocation arrangements would ideally be co-ordinated with the MPOC change.
	• Lack of accurate mismatch information increases a shipper's risk as management of its mismatch position is based on its own best estimates rather than accurate information. The cost of this risk will be passed onto customers.	• We agree that where balancing actions are caused because retailers do not have information of their mass market balance positions, the costs will be carried by mass market customers. Improvements are under consideration as discussed above.
	• MDL has not indicated that it will make changes to BGX to enable all shippers (including on the Vector system) to participate. MRP urges MDL to complete these changes prior to or alongside any move to B2B.	• We agree that improved access to the balancing market is desirable.

Submitter	Submitters comment	Gas Industry Co comment
	• MRP believes the 'reasonable endeavours' standard for the BA to publish and maintain information is unnecessary, a requirement just to publish and maintain this information is sufficient.	• Noted.
	• MRP only supports a reduction in tolerances if this was part of comprehensive B2B on both the Maui and Vector systems.	• Noted.
Shell	**General comments:**	
	• CR is a step in the right direction.	• Noted.
	• Incentives for balancing under the CR are not as strong as they need to be – strong incentives for balancing are important for supporting the development of an efficient and transparent gas market.	• Noted. The effectiveness of the incentives can be reviewed once some operating experience is gained.
	• Wide tolerances and the subsequent weak incentives to balance result in higher costs including: Maui shippers incurring higher balancing costs through the tariffs; increases in the risk and associated costs of a Contingency Event; and increases in costs of parties coping with high transient backpressures on producing facilities.	• We consider that, providing the balancing agent is able to source sufficient Balancing Gas on the BGX, the risk of a Contingency Event should not be increased by wide tolerances and weak incentives. However, we otherwise generally agree with the comments.
	<u>Peaking charges</u>	
	• The contingent nature of peaking charges reduces the incentives for parties to seek their gas flexibility requirements from the gas market during normal daily operation	• We agree that the incentive not to peak is much stronger when it appears that a balancing action is likely. We understand that this will be reviewed once some operating experience of the regime is gained.
	• The elimination of charges related to the Premium Fuel Value means the charges will not reflect the maximum amount customers would be willing to pay for Line Pack.	• Noted.
	• The proposed pricing of peaking has a certain self-defeating nature because if the market becomes more efficient then the peaking charges will be lower.	• Noted.

Submitter	Submitters comment	Gas Industry Co comment
	• Shell prefers that peaking charge prices continue to be based on the Premium Fuel Value and that the charges should apply at any time a user takes gas from the pipeline outside tolerance.	• Noted.
Vector	**Overall:** • In Vector's view, the October 2011 Change Request would not meet many elements of Gas Industry Co's evaluation criteria. Nevertheless, Vector is willing to support the October 2011 Change Request subject to the adoption of some additional clauses	• Noted.
	• The October 2011 Change Request would create a material adverse effect on Vector's transmission pipeline business and would compromise the compatibility of open access on MDL and Vector's systems.	• Ideally VTC changes can be implemented before the proposed MPOC changes come into effect. We note from MDL's cross-submission that it is optimistic that its discussions with Vector will address any 'interoperability' issues. However, we also note MDL's caution that contractual issues between MDL and Vector may prevent implementation of the October 2011 Change Request.
	• Vector's support for the October 2011 Change Request is conditional on the following being worked on between Vector and MDL or included in the change request: ○ Vector will only pay balancing costs to MDL to the extent that Vector is paid by the causers of the balancing cost; ○ Acknowledgement that all balancing costs are caused by users of the pipeline downstream of TP WPs (not the TP WP itself); ○ Removal of the peaking mechanism; ○ Implementation of a VTC change request effective from the same date as the October 2011 Change Request to ensure the open access regimes remain compatible at all times;	• While we recognise that Vector, and other affected parties, have wish lists of preferred conditions, we cannot make our support of a change request conditional.

Submitter	Submitters comment	Gas Industry Co comment
	○ The successful implementation of changes to Non-Code Agreements effective from the same date as the October 2011 Change Request to ensure ongoing compatibility of the open access regimes.	

Appendix B Summary of cross-submissions on the October 2011 Change Request

Cross-submissions provide an opportunity to comment on any matter raised in the submissions, and should be limited to matters raised in submissions.
Also, as noted in Appendix A, Gas Industry Co's contractual role under the MPOC is limited to making a recommendation to supporting a change request (or not). It does not provide for conditional support. All Gas Industry Co's comments below should be read with this in mind.

Submitter	Submission point	Comments
Genesis	• Supports suggested discussions between Vector and MDL to progress the October 2011 Change Request and for Gas Industry Co to facilitate where possible.	• Noted.
	• Is willing to offer its assistance to both Vector and MDL to help progress this work.	• Noted.
Greymouth	• Agrees with Contact that balancing needs further thought before a solution is implemented, if necessary. Also agrees that Fuel Gas and UFG should be treated separately.	• Noted.
	• Queries how GIC's evaluation of the change against the status-quo would be affected if changes in the status-quo occurred during the evaluation process.	• If a change that would significantly influence the analysis occurred during the evaluation process, Gas Industry Co would take it into account and, if necessary, call for further submissions.
	• Queries whether GIC's evaluation should consider likely market developments (for example BGX2).	• Likely market developments are a consideration for Gas Industry Co. For example, our support for the proposed change is strengthened by our belief that it is one component of improved balancing arrangements that will encourage other improvements to be made (such as improved gas trading, improved allocation information, extended nominations, improved Line Pack management etc.). We also believe it will make balancing more robust in the face of other changes (such as the commissioning of new peaker facilities, as MDL refers to).

Submitter	Submission point	Comments
	• Considers MGUG's support for reducing balancing costs does not recognise the increased costs that proposed change would bring.	• Noted.
	• Agrees with MGUG's concerns about potential uncertainties on the Vector system particularly for direct-connects in the event a virtual welded point concept is adopted in future.	• Noted.
	• In response to Shell's point about there being wide tolerances on the Maui pipeline with the result being reduced incentives to balance, Greymouth reiterates from its initial submission that it considers a more important issue to be maximising the level of aggregate flexible Line Pack provided to MPOC parties. The October 2011 Change Request proposes tightening tolerances that would not improve on the status quo.	• Noted.
	• Considers that Methanex's suggestion that Gas Industry Co's support for the change should be conditional (on MDL implementing BGX2) is inconsistent with the change request process.	• This was a matter Gas Industry Co consulted on in 2010 in relation to MDL's previous balancing change request. We concluded: *In regard to our concern about the difficulty of reaching an unconditional approval of the whole December 2009 Change Request, submitters generally considered that Gas Industry Co could only approve, or not approve, a change request. Approval could be conditional only to the extent of correcting minor and technical errors. We have since sought legal advice on this matter and our advisors confirmed the views of most submitters*. (p2, MPOC 17 December 2009 Change Request Draft Recommendation, May 2010)
	• Is concerned that Shell's call for stronger primary balancing incentives (than those proposed in the October 2011 Change Request) does not fully recognise the small size of the New Zealand market.	• Noted.

Submitter	Submission point	Comments
	• Does not agree with a number of other Shell views. In particular Greymouth does not agree that: current tolerances are too large, or cause higher costs; high transient backpressures increase costs for producers; the risk and cost of a contingency event could be higher as a result of weak balancing incentives.	• Noted.
	• Generally supports Vector's opposition to the October 2011 Change Request, but notes the difficulty of defining, and achieving, 'comparability' with the VTC.	• Noted.
	• Generally believes that the October 2011 Change Request may be 'over-engineered' in relation to the scale of the balancing problem.	• Noted.
	• Believes that a thorough analysis of the costs and benefits is necessary before a decision is taken.	• Noted.
MDL	• Having considered the submissions, MDL continues to believe that targeting the costs to the causers of balancing transactions will place downward pressure on the costs of balancing and better allocate the limited flexibility of the Maui pipeline.	• Noted.
	• MDL indicates that most of the work on BGX2 has been done however difficulties have arisen with respect to the ownership and governance structure of the exchange.	• Noted.
	• Disagree with submitters that title transfer should be incorporated into peaking charges because peaking charges relate to an obligation to keep the flow of gas reasonably constant through the day. A title transfer would ultimately need to be matched by another market transfer transaction by the Balancing Agent and the price adjusted accordingly.	• Noted.
	• The peaking charge in the October 2011 Change Request is calculated as the Negative Mismatch Price less the Positive Mismatch Price; thus the peaking party does not pay the spot price but instead pays the spread. This calculation assumes that title will not pass.	• Noted

Submitter	Submission point	Comments
	• MDL suggests that limiting peaking charges to unrecovered amounts would result in unpredictable balancing cost recovery for MDL. Pipeline users should not be concerned about MDL profiting from peaking charges as income from these will come within MDL's overall revenue cap.	• Noted.
Mighty River Power	• Agrees with other submitters that peaking charges should only apply if a balancing transaction to purchase gas has occurred. • Agrees with other submitters that title to Balancing Gas purchased for a peaking event should transfer from the Balancing Agent to shippers who pay for it. • Agrees with Contact that purchasing of Fuel Gas is a not a function of pipeline balancing.	• Noted. • Noted. • Noted.
Vector	• If there is sufficient support, Vector will convene a working group of interested parties to consider how a nominations framework could work on the Frankley Road pipeline.	• Noted.

Appendix C Background: December 2009 Change Request

Overview of December 2009 Change Request

Gas Industry Co posted the December 2009 Change Request on its website on 21 December 2009 and invited submissions. Eight submissions were received.[13]

The December 2009 Change Request related mostly to balancing arrangements on the Maui Pipeline. In particular, it proposed replacing current balancing arrangements with a 'back-to-back' arrangement. The proposed arrangement aimed to recover balancing costs from the pipeline users most responsible for those costs being incurred (the 'causers'). However, the December 2009 Change Request also included a range of subject matter only tenuously related to the main issue being considered.

Submissions on the December 2009 Change Request: suggested improvement

Many submissions advocated improvements to the December 2009 Change Request. However, Gas Industry Co's role in relation to MPOC changes is a limited one. Under the MOU, Gas Industry Co can consider the proposed change only as submitted, assessing it against the status quo. (This contrasts with Gas Industry Co's role under the Gas Act, which requires the consideration of all practicable options before making a recommendation to the Minister.) Therefore Gas Industry Co cannot reject a change request because it believes there might be a better alternative. In addition, we must treat change requests as a single change; that is, we must consider a change request as a whole—approval may be conditional only to the extent of correcting minor and technical errors.

Status update paper: March 2010

In March 2010, Gas Industry Co issued a 'status update'.[14] The update provided a summary of submissions on the December 2009 Change Request, considered issues related to processing the request, and sought feedback on these matters. Amongst other matters, the status update noted Gas Industry Co might find it difficult to approve the December 2009 Change Request, considering its wide scope.

Minor and technical amendments to the December 2009 Change Request

Gas Industry Co asked MDL to offer a forum for more discussion of the December 2009 Change Request. MDL agreed and held a workshop on 1 April 2010. MDL subsequently made minor and technical amendments to the December 2009 Change Request. On 21 April 2010, MDL circulated an amended copy of the December Change Request.[15]

[13] The December 2009 Change Request and submissions are available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780

[14] The *Status Update* is available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780

[15] The revised December 2009 Change Request is available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780

Draft Recommendation on December 2009 Change Request

On 7 May 2010, after having considered submissions on the December 2009 Change Request, Gas Industry Co published its Draft Recommendation in support of the proposed amendments.[16] A brief summary of the analysis and conclusions of that paper is set out below.

Evaluation method

In the Draft Recommendation we noted that the wide scope of the December 2009 Change Request made it difficult to perform the overall analysis, and present it coherently. To make the evaluation more manageable, we divided the proposed amendments into two categories: those that relate to balancing and those that do not. We applied different criteria for evaluating the balancing-related and non-balancing-related changes. The balancing criteria were developed through Gas Industry Co's balancing workstream for the evaluation of balancing options; the criteria were consistent with the objectives of the Gas Act, but tailored to the context of balancing. The criteria for evaluating the non-balancing changes were based on the broader objectives of the Gas Act and the GPS.

Assessment of balancing changes

Overall, we assessed the proposed changes as improving balancing arrangements. However, we were concerned about the level of discretion left to MDL and its Balancing Operator. We were also concerned the proposal introduced back-to-back cash-out without introducing price caps or giving users the ability to hedge price risks (by the use of marginal pricing). We assessed the balancing aspects of the change request as improvements.

Assessment of the non-balancing changes

In relation to the non-balancing aspects of the change request, Gas Industry Co had no concerns about the changes related to the Maui legacy arrangements or the minor and technical changes. We assessed both against the Gas Act objectives as improvements.

However, we were concerned about some of the 'other' non-balancing changes, which could erode the benefit of the change request. For example, one proposed change means MDL no longer accepts liability for the consequences of shipping gas into the Vector system for Shippers who do not have Gas Transfer Agreements and Transmission Services Agreements with Vector. We were concerned the liability changes might reduce the incentives for MDL to work with Vector to ensure their regimes align.

Overall assessment

Overall, we considered the proposed changes would provide a net benefit, and therefore our draft recommendation supported the December 2009 Change Request.

Submissions on the December 2009 Change Request Draft Recommendation

Gas Industry Co received seven submissions on the December 2009 Change Request Draft Recommendation.[17] Many submitters noted it would be more efficient if Vector Transmission Code

[16] The Draft Recommendation is available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780

(VTC) and MPOC changes were considered together. However, neither the MPOC nor the VTC provide for this. We considered that we were unable to reject a proposed change request for the MPOC because it was not 'packaged' with corresponding changes to the VTC.

While an MPOC change request is not required to be consistent with the VTC, we think their inter-relationship is a relevant factor when determining the overall benefit (or otherwise) of the December 2009 Change Request. Vector's submission highlighted that, without changes to the VTC, the realisation of the net benefits of the December Change Request is uncertain. Gas Industry Co considered it appropriate to make its own assessment of the likelihood of consequential changes to the VTC, and the risk of obtaining the benefits associated with the December Change Request. We might consider, for example, whether:

- Vector or any of its shippers would be motivated to propose a change to the VTC;
- Shippers and/or Vector would be likely to support the VTC change request; and
- Gas Industry Co is likely to approve the change request if the VTC appeal process was invoked.

Draft Final Recommendation on December 2009 Change Request

Gas Industry Co published a draft Final Recommendation on 2 July 2010.18 The draft Final Recommendation reversed the original decision and did not support the December Change Request. A brief summary of the analysis and conclusions of that paper is set out below.

Because the draft Final Recommendation was different from the Draft Recommendation, Gas Industry Co called for submissions (as required under the MOU). Six submissions were received.[19]

Evaluation method

Several submitters on the Draft Recommendation were concerned about Gas Industry Co's evaluation method, which used quantitative scoring. In our draft Final Recommendation, we instead used qualitative evaluation and described our assessment in words. In addition, we applied the same evaluation criteria to the balancing and non-balancing changes.

Final evaluation of balancing and non-balancing changes

Table 2 in the draft Final Recommendation set out Gas Industry Co's final assessments of the marginal benefits of the December 2009 Change Request (p23). It noted what factors we had not fully considered in the Draft Recommendation (that is, the factors that caused us to reassess the marginal benefits).

As predicted at the outset, the scope of the December 2009 Change Request made it difficult for Gas Industry Co to unconditionally approve the whole package. Having considered submissions on the Draft Recommendation, we remained of the view that some aspects of the December 2009 Change Request have the potential to significantly improve balancing arrangements. However, we were also concerned that some aspects may cause significant problems.

[17] The submissions on the Draft Recommendation are available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780
[18] The draft Final Recommendation is available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780
[19] The submissions on the draft Final Recommendation are available here: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1780

Among the significant improvements is the introduction of:

- a form of back-to-back cost allocation that could provide productive and allocative efficiency improvements; and
- new obligations to disclose information, audit Balancing Gas transactions, consult on Standard Operating Procedures (SOPs), and distinguish between operational and Balancing Gas, all of which improve transparency and non-discrimination.

Our concern arose mostly from changes to the balance of risk, particularly where the changes seem unnecessary to provide for the improvements proposed. We were also concerned about the misalignment of the MPOC and VTC that would arise from the proposed changes.

Overall assessment

Gas Industry Co recognised the December 2009 Change Request had the *potential* to result in an overall net benefit. However, the uncertainty as to whether those benefits would be achieved (without corresponding changes to the VTC) in our view reduced the value of the December 2009 Change Request. Gas Industry Co's concerns were compounded by the complexity and broad nature of the changes proposed. While the assessment of the net benefit of the December 2009 Change Request was finely balanced, we concluded the overall net benefit is too uncertain for Gas Industry Co to support the December 2009 Change Request.

Final recommendation on December 2009 Change Request

After carefully assessing the submissions on the draft Final Recommendation, we considered that they contained no material that would cause us to change our view in the draft Final Recommendation. We therefore confirmed that we did not support the December 2009 Change Request.