



Transmission Pipeline Balancing Second Options Paper- Analysis of Submissions

October 2009





About Gas Industry Co.

Gas Industry Co was formed to be the co-regulator under the Gas Act.

As such, its role is to:

- recommend arrangements, including rules and regulations where appropriate, which improve:
 - the operation of gas markets;
 - access to infrastructure; and
 - consumer outcomes;
- administer, oversee compliance with, and review such arrangements; and
- report regularly to the Minister of Energy and Resources on the performance and present state of the New Zealand gas industry, and the achievement of Government's policy objectives for the gas sector.

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Contents

1	Introduction	1
1.1	Background	1
1.2	Submissions received	1
1.3	Structure of this paper	2
1.4	Next steps	2

2	Overview of submissions	4
2.1	Contact	4
2.2	Genesis	4
2.3	Greymouth	5
2.4	MDL	5
2.5	MRP	6
2.6	Multigas	6
2.7	New Zealand Steel	6
2.8	Nova	7
2.9	OMV	7
2.10	Vector	8

3	Objective and Scope	9
	What the Second Options Paper said	9
	What submissions said	11
	Gas Industry Co comment	13

4	Evaluation criteria	15
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What the Second Options Paper said	15
What submissions said	16
Gas Industry Co comment	16

5	Reasonably practicable options	18
5.1	Identification of additional options	18
5.2	Contracts based option	20
5.3	Prescriptive regulation option A	23
5.4	Prescriptive regulation option B	26
5.5	Participative regulation option	28

6	Evaluation and Next steps	33
6.1	Evaluation and assessment of options	33
6.2	Gas Industry Co's preferred option	35
6.3	Next steps	36

7	Optional questions	38
7.1	Curtailment and damages	38
7.2	Linepack and thresholds	39
7.3	Tolerances	41

Appendix A	Analysis of MDL proposed work programme	43
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Glossary	46
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1

Introduction

1.1 Background

Pipeline balancing is the management of the inventory of gas in a pipeline, known as linepack. Effective pipeline balancing is essential to the safe and efficient transport of gas in a pipeline and is therefore a key element of open access.

Concerns about the current balancing arrangements became a key feature of the Gas Industry Company Limited's (Gas Industry Co) June 2006 Transmission Access Review. Since then, and as required by the Gas Act,¹ Gas Industry Co has followed an extensive review and consultation process. This process led Gas Industry Co to conclude that the Gas Act objectives were unlikely to be achieved solely through industry agreements. In the Transmission Pipeline Balancing Options Paper (Options Paper), released in December 2008, Gas Industry Co proposed an alternative option comprising various Gas Industry Co led initiatives, partially implemented through regulation, to address the issues.

Submissions received on the Options Paper, discussions with industry participants, and changes that occurred since release of the Options Paper, convinced Gas Industry Co that further analysis was required. A Transmission Pipeline Balancing Second Options Paper (Second Options Paper) was released in July 2009. The Second Options Paper presented four reasonably practicable solutions to improve the existing New Zealand balancing market. After careful evaluation of all these options, Gas Industry Co concluded that a 'participative regulation option' would best meet the Gas Act and GPS objectives.²

Gas Industry Co invited submissions on the Second Options Paper to be made by 17 August 2009. This paper is an analysis of the submissions received.

1.2 Submissions received

Submissions on the Second Options Paper were received from:

- Contact Energy Limited (Contact);

¹ Section 43L of the Gas Act requires Gas Industry Co, before making a recommendation for gas governance rules or regulations, to 'ensure that the objective of the regulation is unlikely to be satisfactorily achieved by any reasonably practicable means other than the making of the regulation (for example, by education, information, or voluntary compliance)'.

² All related documents can be found on Gas Industry Co's website: www.gasindustry.co.nz

- Genesis Energy Limited (Genesis);
- Greymouth Gas Limited (Greymouth);
- Maui Development Limited (MDL);
- Mighty River Power Limited (MRP);
- Multigas New Zealand Limited (Multigas);
- New Zealand Steel Limited (New Zealand Steel);
- Nova Gas Limited (Nova);
- OMV New Zealand Limited (OMV); and
- On Gas Limited, Vector Gas Contracts Limited, and Vector Gas Limited (Vector).

The submissions are available on Gas Industry Co's website www.gasindustry.co.nz.

Gas Industry Co thanks those involved in compiling these submissions.

1.3 Structure of this paper

This paper begins with a summary of submissions. The remainder follows the layout of the Second Options Paper. Each section briefly reviews what was said in the Second Options Paper, what submitter's views were, and gives Gas Industry Co's response to those views.

A glossary of terms is listed at the end of this paper.

1.4 Next steps

The Statement of Proposal on Transmission Pipeline Balancing (Statement of Proposal) will coincide with the release of this analysis of submissions on the Second Options Paper. In addition to proposing that the participative regulation option be pursued, the Statement of Proposal outlines the Industry Code Development (ICD) process that will run in parallel to the development of the regulations. The process is aimed at minimising the scope of the regulations, while targeting a more unified balancing regime. The ICD process will differ from the contracts based option presented in the Second Options Paper in that it involves Gas Industry Co leading the process rather than responding to an industry led process. Submissions on the Statement of Proposal are due on Friday 30 October 2009. Gas Industry

Co will continue to progress its preferred option, including the development of regulations, and the ICD process with the aim of making a recommendation to the Minister of Energy and Resources in December 2009.

2

Overview of submissions

2.1 Contact

Contact agreed that action is necessary to address certain balancing issues. However, it considered that rather than pursuing a regulatory option, the issues should be dealt with in a way that builds on industry experience, contractual arrangements and existing systems.

Contact also considered that Gas Industry Co needed to address issues previously identified as 'high priority', these include:

- allocation of all gas deliveries at the start of the day following the allocation of balancing charges (D+1);
- establishment of a single balancing regime, including the allocation of balancing charges; and
- availability of balancing tools such as the opportunity to renominate.

Contact thought the best way to deal with balancing issues is through the establishment of a comprehensive change process. It believes Gas Industry Co should focus on this and support the industry on such initiatives rather than diverting resources to drafting regulations.

2.2 Genesis

Genesis considered that it was likely to be unnecessary and risky if balancing arrangements were transferred from pipeline codes into regulations to the extent proposed in the Second Options Paper. It recognised that Vector is upset with the existing commercial arrangements but did not believe this was sufficient cause to end existing code arrangements.

Genesis noted that MDL had made considerable progress toward improving balancing since the expiry of legacy arrangements and felt that a shift to a regulatory process would be disruptive and unlikely to lead to better outcomes or lower cost. It would be better to allow the industry-led code change process to take its course.

Further, Genesis pointed out the benefits of retaining balancing arrangements in the Maui Pipeline Operating Code (MPOC) including: the preservation of flexibility; maintaining a close operational alignment between changes to codes and OATIS; and maintaining regulatory oversight through Gas Industry Co's role in the change process.

Genesis noted that it was likely MDL would improve balancing through MPOC changes within a satisfactory timeframe. If tangible signs of progress were not seen before the end of the year, then the next best route would be to pursue the participative regulation option.

In the interim, Genesis considers Gas Industry Co's resources would best be spent on leading work on D+1, reviewing tolerances, resolving the large amounts of downstream unaccounted for gas (UFG), and progressing work on interconnection arrangements.

2.3 Greymouth

Greymouth considered that Gas Industry Co had correctly identified the participative regulation option as the preferred option. It felt that the option's quicker timeframe was attractive as Greymouth would like the current incentives pool arrangements removed as soon as possible.

However, as a caveat to its support, Greymouth felt that Gas Industry Co's objective needed to be re-worked to ensure improvements would be realised. Otherwise the project should be stopped. It wished the objective would be re-worked to ensure that regardless of who writes the balancing policy, the balancing framework is effective, costs are not socialised, and the industry gets value for money.

2.4 MDL

MDL noted that the experience gained since the removal of legacy provisions from the MPOC made it clear that work was needed in three areas to increase efficiency and effectiveness:

- the arrangements for sourcing and purchasing balancing gas;
- the instructions that govern when and how balancing gas is to be used; and
- the arrangements for allocating and collecting the costs of balancing gas.

Further, MDL pointed out that its work in these areas would ensure balancing arrangements meet the majority of the objectives set by Gas Industry Co. Appendix A of this paper contains Gas Industry Co's analysis of MDL's proposed work programme.

MDL also felt there is little future in trying to develop detailed balancing regulations and indicated that the prescriptive regulation options are likely to be expensive, inflexible, and cumbersome. Regulations should only cover areas where adequate solutions cannot be reached by an alternative means.

2.5 MRP

MRP noted that it generally supported the participative regulation option; however, it has concerns that the proposed solution will be costly to develop and operate. It considered that a substantive cost benefit analysis had not been undertaken, but should be before Gas Industry Co proceeds with one of the four options.

MRP also felt strongly that a number of balancing principles will not be achieved until shippers have daily allocation information to better manage balancing risks. A daily allocation work stream should run in parallel to the balancing one and should be completed by the time the single Balancing Agent regime is ready to be implemented. If daily allocations cannot be achieved, an alternative process for balancing should be designed for the mass-market.

2.6 Multigas

Multigas considered that Gas Industry Co had gone to great lengths to understand the balancing regime, but failed to appreciate the 'effects' options would have on parties.

Multigas noted its overall agreement with Gas Industry Co but was concerned about such matters as: the adequacy of the cost-benefit analysis; who was best to perform the Balancing Agent function; the informational disadvantage of mass market shippers relative to TOU shippers; and interoperability between the Maui and Vector systems.

It recommended a 'twin system' solution, effective for both mass-market shippers and TOU shippers, developed by a forum representative of all interest groups.

Multigas suggested Gas Industry Co take a holistic approach to deliver practical and effective commercial outcomes. It considered the ultimate objective should be to reinstate confidence that natural gas is a valuable, viable resource, and a stable and economical primary fuel option.

2.7 New Zealand Steel

New Zealand Steel expressed its support for Gas Industry Co's recommendation to adopt the participative regulation option and considered Gas Industry Co had fully assessed views submitted on the Options Paper in developing a new set of options.

New Zealand Steel noted that, since the removal of legacy arrangements, it has become apparent that the existing balancing arrangements do not meet the service standards and economic efficiency goals of Gas Industry Co.

New Zealand Steel would also like to see a review of the frequency and actual timing of current intra-day nominations cycles.

It also noted that some flexibility must be allowed for end-users with unpredictable demand. New Zealand Steel encouraged Gas Industry Co to continue to engage with end-users to ensure changes recognise the needs of all stakeholders.

2.8 Nova

At a high level, Nova believes the most effective and lowest cost option would be to improve the current contractual arrangements rather than replacing them with regulations. However, it considers that industry participants may lack the motivation to pursue changes as the benefits of doing so are relatively marginal when compared to their other commercial activities.

Prior to pursuing a regulated approach, Nova considers industry should be given three months to commit to a process of pursuing code changes and if this were unsuccessful, the proposed participative regulation option should then be progressed. It noted that recently some progress had been made towards realising the virtual welded point concept and back-to-back cash-out of balancing gas costs.

2.9 OMV

OMV expressed its disappointment with Gas Industry Co's narrow view of balancing and considered that, unless all issues are addressed, industry would continue to be faced with onerous ongoing disputes.

At a minimum, OMV felt the balancing work stream should include:

- D+1;
- a review of tolerances;
- a requirement for shipper nominations across all gas transmission pipelines; and
- access to metering data at all Vector stations for those using them.

OMV considers that the issues need to be addressed concurrently with the objective of having an integrated balancing regime in order for it to be effective. It wished to see an evolutionary process facilitated by Gas Industry Co with changes implemented by the existing change processes as this would deliver results more quickly and at a lower cost.

2.10 Vector

Vector regards balancing as one of Gas Industry Co's most important work programmes and believes it is important that a timely recommendation to the Minister is achieved. It noted that the current regime is not operating effectively and that the key reforms required include: the implementation of a single balancing regime; a single Balancing Agent; and obligations that ensure shippers have primary responsibility to balance their inputs and off-takes. Further, Vector pointed out that the regime must also adhere to the 'causer-pays' principle and place incentives on the correct parties to make investment in tools to better manage their positions.

Vector believes that the participative regulation option would be positive but that a number of elements of the proposed regulations will need to be changed before it could be adopted. Despite this, Vector felt the option is attractive as it allows for Gas Industry Co to act as a back stop in the event parties are unable to agree. Further, it provides a deadline and can accommodate the necessary key changes. Most importantly, Vector noted that it provides for a single balancing policy overseen by an independent Balancing Agent upheld by regulations. However, the option requires other industry participants to show a willingness to engage in the process, therefore the success or otherwise of the option hinges on this.

3

Objective and Scope

What the Second Options Paper said

Objective

In light of recent industry changes and feedback from participants on the Options Paper, Gas Industry Co determined that a revised objective reflecting the targeted nature of the regulatory intervention was necessary.

When considering the most helpful regulatory objective for the current work, we began by adapting the previous objective to acknowledge the suggestions made in submissions, and recognise the overall objective of proposing arrangements for managing pipeline imbalance. This resulted in a very wordy objective, loaded with meaning, but rather difficult to grasp.

To provide a more understandable objective we chose to keep it simple, but then to acknowledge the factors that are important to achieving that objective in the evaluation criteria. The objective proposed was as follows:

To provide an efficient, single balancing arrangement for managing pipeline imbalance.

Scope

A broad view of balancing would encompass many aspects of the commercial and technical operation of the pipelines. However, the current focus is on the management of pipeline imbalance³ between linepack limits through the buying and selling of balancing gas. In the Second Options Paper the term 'balancing market' refers to an on-the-day market where users may buy or sell balancing gas. To reflect this, and based on views expressed in previous submissions that a wholesale approach was not warranted, it was determined that a targeted approach should be pursued.

The targeted 'in scope' items of the proposed regulatory options and the 'out of scope' items were provided in a table which is replicated below.

³ Pipeline imbalance is also commonly referred to as 'residual' or 'aggregate' imbalance; that is, the imbalance that remains when all individual user imbalances are added together.

Inside the scope of proposed regulatory options

The management of individual user imbalance, including requiring each user to:

- maintain a balanced position; and
- accept a share of a balancing gas trade where the user has failed to balance and has contributed to the need for the balancing action.

The management of pipeline imbalance, including:

- requiring a single Balancing Agent to manage linepack on both the Maui and Vector pipelines;
- describing the role and responsibilities of the Balancing Agent;
- requiring the Balancing Agent to:
 - procure balancing gas on an open market;
 - use back-to-back cash-out; and
 - disclose GJ and \$ linepack transactions.
- defining the use of curtailment where there is insufficient balancing gas available, including the potential for damage claims if necessary;
- requiring TSOs to co-operate with the Balancing Agent and provide it with access to information and systems necessary to perform its role.

The management of disputes and policy changes, including:

- a requirement that all disputes are referred to the Rulings Panel; and
- a balancing policy establishment and change process (for the participative regulation option).

Outside the scope of proposed regulatory options

Matters that Gas Industry Co is continuing to work on with the industry include:

- investigating the potential to improve balancing by allocating on-the-day-after gas flow (known as 'D+1 allocation');
- investigating extended nominations; and
- reviewing tolerances.

Matters that Gas Industry Co will review in future include:

- upstream allocations (also known as 'title tracking').

Matters that are not currently priority issues:

- scheduling of gas flows;
- the transmission service nomination cycle;
- the trading of tolerances and imbalances;
- wholesale or retail trading of gas;
- capacity booking; and
- time-of-use metering requirements.

Source: Second Options Paper, p10, table 2.

Gas Industry Co noted that outside of the options considered in the Second Options Paper we would continue to work on other aspects of balancing, such as investigating tolerances and the potential to improve balancing by allocating gas deliveries on-the-day-after gas flow (known as 'D+1 allocation'⁴).

If other aspects of balancing prove to be an impediment to achieving the objectives of the Gas Act and GPS, they will be considered in future Gas Industry Co work.

What submissions said

Objective

In general, submitters felt the regulatory objective identified by Gas Industry Co was appropriate. Three submitters (Contact, Greymouth and Nova) suggested alternatives or amendments to the proposed objective.

Contact felt the objective should reflect the objectives of regulations set out in the Gas Act and GPS as well as the purpose of this work. Further it noted that despite early statements by Gas Industry Co in the Second Options Paper that the objective is to address high priority balancing issues, the definition of the objective evolves into simply management of residual imbalance. Contact also cautioned that the objective could be seen as prejudging a particular outcome by including the word 'single'.

In its submission Nova pointed out that the objective was appropriate but like Contact, Nova believes it should not mandate that the balancing arrangement needs to be made singular. It felt that effectively this creates a monopoly service provider reducing both incentives to pursue change and to minimise costs. It suggested that the word 'single' be removed from the objective to allow for competition, innovation, and evolution of balancing gas service provision.

Greymouth felt the objective was on the right track but suggested a slight revision to ensure it communicates the correct message to whomever develops the balancing policy as well as to provide a reference to minimising the socialising of costs.

Four submitters (MDL, MRP, New Zealand Steel, and Vector) agreed that the objective was appropriate. Vector went further and noted its support of the inclusion of the terms, 'efficient' and 'single balancing arrangement'.

⁴ It is important to note that a D+1 allocation process will not remove the need for a residual balancing role, even if it may reduce its size. In addition it will take some time to determine the cost and practicality of D+1 allocations, with little expectation that the process would change any conclusions in this paper.

Scope

Contact felt that there was little justification in section 4 on why Gas Industry Co feels it necessary to refocus its efforts, giving no indication of how it intends to progress other matters previously identified as 'high priority' including: D+1; the establishment of a single balancing regime, including the allocation of balancing charges; and availability of balancing tools such as the opportunity to renominate.

Contact felt that the proposed regulations should comprehensively address balancing or if that is not possible at this time, the scope of the proposed regulations should be clearly limited to addressing residual balance and would not address users' obligation to balance. Otherwise, if the obligation is included, the tools for users to manage their positions must also be.

Both Nova and Vector noted preference that if the obligation to balance is included that the consequences of imbalance be included as well. Nova felt that the consequences should be clearly articulated and limited to: the costs of balancing allocated by pipeline arrangements; and the settlement of orders as determined by the independent expert under the Gas Governance (Critical Contingency Management) Regulations 2008. Vector proposed that the obligation to balance should be at least 'all reasonable endeavours' if not 'best endeavours' with the consequence of not achieving balancing then laid out.

Further, Nova felt this obligation could prevent the development of an 'on the day' spot market for gas as the scope and flexibility of the market will be quite limited if only used for buying and selling balancing gas. Vector also cautioned against limiting the scope as it believes the development of an effective balancing regime cannot be pursued in isolation.

Both Contact and MDL would prefer that Gas Industry Co focus its efforts on exploring D+1, opportunities to renominate, and tolerances. MDL noted that the level of tolerances allowed for on the Maui pipeline is excessive and should be reduced.

On a whole OMV was disappointed with the narrow focus of the proposed balancing solution. It believes that unless all issues are addressed, the industry will continue to be bogged down with ongoing disputes. OMV expressed that at a minimum: D+1; a review of tolerances; the requirement for shipper nominations across all gas transmission pipelines; and the communication of information and meter reading for welded points on the Vector system should be addressed.

Both Greymouth and New Zealand Steel agreed with the scope but felt additional items should be included. New Zealand Steel felt the frequency and actual timing of the current intra-day nomination process needs reviewing due to its link to the requisite balancing market; whereas Greymouth felt that the ongoing funding of the Balancing Agent and an indication of retention or removal of the incentives pool should both be incorporated. Greymouth noted its support for the removal of the incentives pool.

MRP agrees with the scope noting it was pleased to see the inclusion of the development of an open and transparent market. It felt that the MDL Balancing Gas Exchange (BGX) is a welcome addition but has restrictions on who can participate. It also pointed out that Gas Industry Co does not make it clear whether the current transmission system zoning will be retained or whether a 'single transmission system' concept will be introduced. MRP support the latter.

In its submission, Multigas asked that Gas Industry Co review the possibility of interconnectivity between the two pipelines, the management of mismatch and the party that would undertake role of the Balancing Agent.

Gas Industry Co comment

Objective

Gas Industry Co commends participants for presenting alternative objectives, however we consider that the one we have established is still the most appropriate for the purposes of achieving the desired outcomes. The suggestions by Contact and Greymouth both relay the correct message but are, in our view, overly wordy; our aim was to keep the objective simple and achievable.

We see merit in suggestions to remove the word 'single' and consider the word 'unified' is more appropriate as it more clearly reflects what can actually be achieved. In the Statement of Proposal we have replaced the word 'single' with 'unified'. However, Gas Industry Co remains strongly of the view that a single Balancing Agent overseeing both pipelines will be the most effective solution. From an economic perspective, we understand Nova's arguments to avoid mandating a 'single' Balancing Agent; however, we think the small size, depth, and complexity of the New Zealand gas market means that it is unlikely another service provider would consider it attractive. Further, we maintain that that one agent would avoid potential duplication of efforts to manage the same event as well as the ability to pool available capacity as opposed to splitting offers for the provision of balancing between balancing markets. Our preference is to ensure the Balancing Agent is subject to a review process and if necessary, an audit. Further, we consider that Gas Industry Co should have the ultimate right to replace the Balancing Agent if it is not performing its functions in accordance with the regulations.

Scope

We acknowledge views that the scope Gas Industry Co proposed was too narrow. However, too wide a scope would be untenable given existing industry and Gas Industry Co resources. Further, a wide regulatory scope also runs the risk of encompassing items outside the ambit of the Balancing Agent's functions. Therefore, we remain of the view that a targeted approach is best; this is consistent with views expressed in past submissions. Gas Industry Co has carefully defined the scope to include the management of pipeline linepack and allocation of balancing gas and associated costs.

As noted in the Second Options Paper, we are continuing to work on other aspects of balancing and our decision to not include them in the scope does not lessen their importance. To clarify, Gas Industry Co itself has not identified issues such as D+1 and nominations as 'high priority'. Gas Industry Co considers that Contact must be referring to its own views and possibly the view of other industry participants. In our Analysis of Submissions on the Options Paper, we noted that we had not yet formed an opinion on whether daily allocation is effective, efficient, and passes the test of a cost benefit analysis. We also considered that submitters' views that it should be progressed in priority to other work streams due the potential benefit was unjustified.⁵

Despite this, we continue to acknowledge that D+1 options need to be investigated. Gas Industry Co has begun work.

Turning to the allocation of balancing charges, and whether the allocation method should be the same for all system users or occur in two stages as at present. The proposed regulations provide for the allocation mechanism to be determined by TSOs (or Gas Industry Co, if the TSOs cannot agree) in a balancing policy. This means there is a possibility for the regime to develop into a single stage allocation, where the same rules apply on both MDL and Vector pipelines.

Gas Industry Co notes that these issues have been identified in the draft agenda for the ICD process. We consider it will be important to discuss the above issues, as well as possible options for the provision of other balancing tools including opportunities to renominate to see whether other participants agree with Contact's view that they are indeed 'high priority'.

Several participants cited difficulties with the inclusion of an obligation on users to balance. We acknowledge that the MPOC and Vector Transmission Code (VTC) put balancing obligations on users and we do not wish to add to those obligations. Rather any regulations should focus on the consequences of failing to balance: the risk of automatic cash-out if a balancing action is taken.

MRP pointed out that Gas Industry Co had not specified what transmission system zoning would look like. For the contracts based option and the participative regulation option, it would be up to TSOs to decide (under the participative regulation option, consultation with industry participants on this matter would be required). For the prescriptive regulation options, the transmission system zoning would need to be determined.

⁵ Transmissions Pipeline Balancing Options Paper Analysis of Submissions, p36.

4

Evaluation criteria

What the Second Options Paper said

In section 3 of the Second Options Paper we developed a set of evaluation criteria to be used for evaluating the balancing options presented. The criteria identified were intended to assess whether the regulatory objective would be achieved in a manner that was compatible with the objectives set out in the Gas Act and GPS. The criteria are listed in the table below.

Table 1 Evaluation criteria

Category	Criterion	Meaning
Efficiency	Production	maximise productive efficiency
	Allocation	maximise allocative efficiency
	Security	maximise security of gas transportation
	Risks	ensure user risks are reasonable and manageable
Cost	Agreement	minimise cost of agreeing arrangements
	Implementation	minimise cost of implementing arrangements
	Operation	minimise cost of operating arrangements
Governance	Transparency	ensure transparency and non-discrimination
	Adaptability	ensure arrangements able to adapt to future circumstances
	Enforcement	ensure effective enforcement and dispute resolution
	Balance	ensure balance between stakeholder interests
	Stability	ensure stability of regime

Source: Second Options Paper, p16, table 3.

Following the table each criterion and the reasons for its inclusion was explained. We also reviewed previous evaluation criteria used in Gas Industry Co's balancing papers (the Issues Paper and Options Paper) and cross-referenced the criteria against these to confirm consistency and avoid omissions.

What submissions said

Greymouth, MDL, New Zealand Steel and Vector all noted agreement with the chosen evaluation criteria.

MRP also noted its support stating that the production efficiency criterion is very important when considering the overall efficiency of balancing arrangements as a strong emphasis on it would assist in minimising barriers, managing supply risks and improving price signals.

Contact pointed out that the Gas Act sets out comprehensive criteria that Gas Industry Co must apply when assessing proposals. Contact found it difficult to understand why Gas Industry Co was assessing options against another set of criteria even if they share common features. It felt this 'indirect' assessment would result in loss of detail of the GPS and Gas Act criteria which seemed inappropriate. It also noted that the Gas Act does not prevent Gas Industry Co from doing this, but the primary assessment of all Gas Industry Co proposals must be against Gas Act and GPS objectives.

Further Contact noted the wide acceptance of the ERGEG balancing principles as a useful framework for assessing proposals.

Gas Industry Co comment

Like MRP, Gas Industry Co also acknowledges the importance of production efficiency as well as other types of efficiency.

In section 3.3 of the Second Options Paper, Gas Industry Co cross-referenced the evaluation criteria against the objectives found in the Gas Act and GPS. The comparison showed that each criterion used mapped onto at least one objective; therefore, we do not agree with Contact the detail has been lost. Rather we consider the criteria clarify how we interpret each Gas Act objective in the particular policy context under consideration: balancing. For example, the objective to 'promote falling delivered gas costs' maps onto five criteria. We also consider that by grouping the criteria into three categories- efficiency, costs and governance, we provide a more comprehensive framework for analysis of the options.

Contact also questioned why we have not used the ERGEG principles given the wide acceptance of them. In earlier consultation papers most submitters agreed they were useful, but the majority cautioned against using them as in the context of the New Zealand market as they were developed

with a much larger market in mind. Gas Industry Co still considers the ERGEG principles useful and in section 3.4 of the Second Options Paper we chose to compare them against the evaluation criteria to ensure that all features of the ERGEG principles were being considered. However, in light of submitters' concerns about applicability, we considered that using them as the only criteria to assess options for the New Zealand balancing market would be inappropriate.

5

Reasonably practicable options

5.1 Identification of additional options

What the Second Options Paper said

The Gas Act requires Gas Industry Co to identify all reasonably practicable options before recommending rules or regulations to achieve an objective. In section 4 we described how those options had been identified and discussed the features we expected them to have.

The consultation process and the changes that have occurred in gas balancing arrangements since the Options Paper was released resulted in Gas Industry Co further deliberating on practicable options for pipeline balancing. Our deliberations covered:

- the industry's various perspectives on the best solution to pipeline balancing issues including differing views on the 'hybrid' solution;
- input from the Transmission Pipeline Balancing Advisory Group (TPBAG);
- the degree to which recent changes in balancing arrangements can be considered efficient, and whether governance arrangements ensure long-term stability; and
- our obligations to ensure outcomes are consistent with objectives under the Gas Act and the GPS.

In taking all these considerations into account, it became evident that the practicable options for resolving balancing issues fell into four approaches; they are outlined in the table below:

Table 2 Reasonable practicable options

Option	Description
Contracts Based Option	An option involving a mixture of TSO initiatives, user input, and Gas Industry Co influence, described in contractual arrangements.
Prescriptive Regulation Option A	An option comprising a single balancing regime, with a single Balancing Agent reporting to Gas Industry Co, fully prescribed in regulation.

Option	Description
Prescriptive Regulation Option B	An option comprising a single balancing regime, with current customary arrangements including the MDL Commercial Operator as the single Balancing Agent reporting to Gas Industry Co, fully prescribed in regulation.
Participative Regulation Option	An option which permits TSOs to develop a single balancing policy that meets criteria specified in regulation.

Source: Second Options Paper, p31, table 8.

What submissions said

Greymouth, MRP, New Zealand Steel, Nova, and Vector all agreed with Gas Industry Co's identification of the need to consider alternative options. New Zealand Steel felt Gas Industry Co had fully considered views on the Options Paper to develop the alternative options. Vector agreed with the approach of identifying practicable options for consideration and evaluating them against pertinent criteria. It felt that this will lead to the design of a suitable framework that is more appropriate at this stage than identifying and assessing the detailed elements that make up a balancing regime.

Contact agreed that additional deficiencies in the balancing arrangements have emerged since the Options Paper, citing that deficiencies in the MPOC and VTC balancing gas allocation mechanisms were exposed after the termination of legacy arrangements. However, it felt the identification of new issues does not diminish concerns with the issues previously identified. Because of the complexity of the codes, Contact believes there is an ongoing need to amend and adjust arrangements as experience grows. Given this ongoing need for change, Contact was surprised Gas Industry Co contemplates one last chance to fix arrangements before it regulates.

Genesis also considered that the industry-led code change process should be allowed to take its course. It felt a shift to a regulatory process would be disruptive and not likely to lead to better outcomes or lower cost. Like Contact, Genesis recognised the long term advantages to retaining balancing arrangements within the MPOC including: flexibility; maintaining close operational alignment between changes to codes and to OATIS; and allowing for regulatory oversight through Gas Industry Co's role in the code change process.

MDL would prefer an approach that examined what could be achieved under the contracts option and that then resorted to regulation only for those areas (in any) where a contracts solution was clearly not adequate.

Gas Industry Co comment

We strongly agree with Contact's view that the identification of new issues does not diminish those previously identified. In section 1 of the Second Options Paper, Gas Industry Co outlines the balancing

issues first canvassed in the Issues Paper. Those issues have not lost any importance, although they have been reformulated as our understanding of the issues has improved. Gas Industry Co's goal was to ensure each was addressed in the development of options. The recent changes that have given rise to new concerns have only highlighted the need to find a suitable and timely solution.

Gas Industry Co acknowledges that a perceived attraction of the codes is that they may to be more flexible and we agree that is a desirable attribute of any regime that contains elements that are likely to evolve. The identification of the contracts based option recognises that there is a possibility that changes to balancing arrangements could be achieved through the codes alone. The regulated options in the paper also recognise that there would be a need to review and change regulations and/ or the balancing policy. The prescriptive regulation options would be more restrictive in this area as changes to the regulations would require a recommendation to the Minister. The balancing policy in the participative regulation option seeks the middle ground, as changes to the balancing policy would be less onerous due to being determined by Gas Industry Co.

We consider that the contracts based option would fulfil MDL's suggestion, that is, to only regulate for those areas necessary (if any). If the contracts based option was pursued, Gas Industry Co would at a later date review arrangements to see whether they fulfilled our regulatory objective and those of the Gas Act and GPS. This review would need to consider any improvements and reassess whether the market failures first identified were still present.

In order to address these suggestions to only regulate for areas identified as necessary, Gas Industry Co, as noted in section 1.4, is facilitating the ICD process. The Statement of Proposal contains more on this process.

5.2 Contracts based option

What the Second Options Paper said

A contracts based solution could emerge from a mixture of TSO initiatives, user input, and Gas Industry Co influence. Primarily it would be implemented through changes to the MPOC and VTC. Gas Industry Co has no contractual right to initiate MPOC or VTC changes, but would try to influence the parties to propose changes leading towards a solution that satisfied our regulatory objective as well as met Gas Act and GPS objectives.

This solution requires a commitment shared by all industry participants to achieve a negotiated solution that meets Gas Act and GPS objectives and our regulatory objective (that is, that seeks to achieve the same outcomes as the other options).

In simple terms, the process to implement this solution involves further industry negotiation⁶ to develop a coherent set of proposed MPOC and VTC changes. Once developed, these would be progressed through the MPOC and VTC change processes. After the changes had been in place for a while, Gas Industry Co would again review transmission balancing arrangements and, if objectives had not been met, begin the process to recommend regulations.

Under this contracts based option, it is assumed that the cost of providing a residual balancing service will be met by system users, as at present.

Some industry participants may consider a contracts based option unrealistic because:

- there are too many competing interests among industry participants for a multilateral solution to be negotiated and agreed;
- balancing has been an ongoing issue since Maui open access began in 2005, and to date progress achieved through changes to contracts and/or operating procedures have been slow, and has only partially resolved problems; and
- Vector has given notice that it wishes to discontinue the interconnection arrangement⁷ between it and MDL, which introduces further uncertainty.

Several factors would influence the outcome of the contracts based option:

- the re-negotiation of the current interconnection agreement between Vector and MDL;
- changes to the VTC; and
- changes to the MPOC.

Gas Industry Co noted in the first Options Paper that the existing contracts based arrangement might not meet the Gas Act and GPS objectives. This was mainly because the then current arrangements did not consistently direct costs to causers or reflect the marginal cost of balancing actions. Also, TSOs had no incentive to balance at least cost, or sufficient incentives to ensure neutrality in their service. We still consider these shortcomings are present, despite the improvements recognised in the introduction of the Second Options Paper. However, we acknowledge the possibility that a contracts based solution could develop to address them.

⁶ The industry has, to some extent, been involved in analysing and negotiating balancing issues since the inception of the MPOC development process in 2004, through to the current VTC re-negotiation.

⁷ The current operational balancing arrangement (OBA) is a feature of the interconnection arrangements between the two pipelines. Section 22.9 of the MPOC permits Vector (as a Welded Party) to terminate its interconnection agreement with MDL on 90 days' notice. If Vector did terminate, Vector and MDL would need to agree on alternative arrangements for interconnection.

What submissions said

Greymouth felt that in theory the option might be reasonably practicable, but in practice this is unlikely due to competing incentives. It believes that Gas Industry Co should be more concerned with whether this option is reasonably efficient and effective. This depends on how quickly the option can be achieved and the quality Gas Industry Co expects of the end result.

MRP noted general agreement with the assessment but felt the option could be more attractive if the deadlock breaking function was imposed earlier, making the implementation quarter four of 2010.⁸ It also suggested a requirement that any contract include the requirement for disputes to be dealt with via Gas Industry Co's compliance regime.

In its response, Contact pointed out that industry is likely to produce the least costly, most flexible, and more innovative solution, and should be allowed to address balancing issues before regulations are contemplated and a solution is forced on industry. However, Contact also noted that it is not easy for industry to develop and agree on changes to contractual arrangements as such a process requires funding and effective leadership, an area where Gas Industry Co could assist.

New Zealand Steel and Vector submitted that the contracts based option was not reasonably practicable. New Zealand Steel felt it would not achieve the objective in the most cost effective manner. Vector commented that it was merely a continuation of the status quo with targeted amendments and is unlikely to be progressed in an effective and timely manner. It felt this uncertainty provides strong rationale for Gas Industry Co to proceed with a regulatory option. To provide an example, Vector pointed out the difficulty experienced at recent VTC negotiations when discussing the possibility of adopting virtual welded points.

MDL and Nova both agreed with the inclusion of this option.

Gas Industry Co comment

Gas Industry Co notes participants' views that the contracts based option is unlikely to achieve the desired outcome. We agree with Greymouth that the speed of implementation is important and, based on the slow progress amongst industry participants to date, it could take quite some time to develop and agree on feasible solutions. Contact considers that this option is likely to be the least costly; however, Gas Industry Co is strongly of the view that the costs of delay must also be considered when assessing balancing options.

We are also strongly of the view that the risk of reaching a deadlock is much more likely under this option. How innovative or flexible the option is depends on participants negotiating power at the time. There is also the risk that individual participants commercial objectives are not aligned with regulatory ones.

⁸ Note that these references are to calendar years rather than financial years.

Again, as noted in section 1.4, Gas Industry Co is facilitating the ICD process to address views that a version of the contracts option should be pursued. The Statement of Proposal provides a complete overview of this process.

5.3 Prescriptive regulation option A

What the Second Options Paper said

Prescriptive regulation option A would allow for Gas Industry Co to appoint a Balancing Agent (which could be an existing TSO or a newly appointed service provider). The Balancing Agent would perform balancing functions across both pipelines under a single balancing regime and be required to report to Gas Industry Co.

The prescriptive regulation option A would include the balancing gas procurement and allocation mechanisms in detail including: balancing zones; tolerances; and interaction between the Maui and Vector systems. It would be necessary to make targeted amendments to the existing regime in order to implement the prescriptive regulation option.

Given the differences of opinion, the complexities of the system, and the potential for unforeseen affects on users' business systems and trading arrangements, the necessary analysis could take many months and still not provide a clear answer. Even after further detailed analysis, Gas Industry Co considers the preferred outcome is to retain the current core design and the changes that have already been identified by Gas Industry Co in the previous Options Paper.

It was proposed that the development and ongoing costs for this option would be recovered in a similar manner as the development fee and ongoing fees under the Gas Governance (Critical Contingency Management) Regulations 2008. This would involve the costs being recovered from every person who purchases gas directly from a gas producer.

Disputes with respect to the regulations would be covered under the Gas Governance (Compliance) Regulations 2008 and therefore heard by the Rulings Panel.

The timetable for the implementation of this option assumed that industry consultation on the design details would begin early next year, allowing the final recommendation to be sent to the Minister in the third quarter of 2010. If this option was to be adopted, the paper noted that the regulations would be gazetted in the first quarter of 2011. To the extent that any changes would need to occur to the MPOC and VTC as a result of regulations coming into effect, we would anticipate that any MPOC and VTC change requests necessary would be identified and progressed prior to the regulations being gazetted.

The outline of the prescriptive regulations were provided in Appendix B of the Second Options Paper and participants were invited to comment on them.

What submissions said

Vector noted its support for the prescriptive regulation options stating that regulatory approaches were most likely to deliver the objectives sought, especially on efficiency grounds, and would overcome the risks of industry disagreements or deadlocks, provide for greater certainty of enforcement, and be more transparent.

Greymouth and MRP agreed the prescriptive regulation option was reasonably practicable. In terms of the outline of the prescriptive regulations, MRP noted that there has to be an emphasis on production efficiency in order to provide the lowest cost outcome. Greymouth felt the outline of the regulations was generally appropriate but sought clarification on several aspects. It felt clarification was needed on the circumstances in which the Balancing Agent was able to call upon prudential requirements (noting it already provides them to the TSOs). Greymouth also pointed out that it supported management of linepack but questioned who should use curtailment provisions: the Balancing Agent or TSOs. Greymouth also felt it was unclear as to what was meant by the Balancing Agent being able to verify performance on accepted offers. Further, it did not support Gas Industry Co recovering losses through fees and strongly suggested that any Gas Industry Co recommendation to the Minister should avoid cost socialisation.

Nova noted that in general it supported the option, but had several comments on the design details. In terms of cost, Nova commented on the proposal to recover costs via a levy from shippers and noted that transmission tariffs should be reduced accordingly. Nova also stated its preference for the costs to be recovered from the TSOs, highlighting that this would fall under the ambit of the Commerce Commission. Nova further commented on the proposed marginal clearing pricing of balancing gas. It felt it was unnecessary given the residual nature of the balancing gas market and a pay on tender price is likely to be feasible and would provide results that are not radically different. It felt the consequences of non-performance of the Balancing Agent, balancing gas providers, and users should be spelt out.

Contact, MDL, and New Zealand Steel felt it was not a reasonably practicable option citing various reasons including that it was likely to be complex, inflexible, costly, and not provide a good outcome.

In terms of the outline of prescriptive regulations, Contact felt the outline did not address matters such as users' access to information and tools in order to manage their imbalance. It also noted that the role of the Balancing Agent and its relationship with the System Operator was unclear. Further, it pointed out that the outline appeared to contemplate the different allocation of balancing costs under the two regimes as well as the establishment of separate balancing zones. In Contact's view, the inclusion of maximum and minimum balancing gas prices is contrary to sourcing gas at prices that reflect real market values.

Gas Industry Co comment

We acknowledge the wide variety of views expressed, and note the concerns expressed regarding certain provisions in the draft outline of the prescriptive regulations.

We agree that the option would prove difficult to progress given the level of detail the regulations would need to comprehensively replicate the complexity of balancing arrangements. In part, this has made the prescriptive regulation options less attractive to Gas Industry Co and has helped convince us to progress the participative regulation option, as seen in the Statement of Proposal. Any concerns expressed by participants regarding the outline of the prescriptive regulations that pertain to the outline of the participative regulations are addressed below. Any determination is reflected in the draft regulations contained in the Statement of Proposal.

Greymouth asked for clarification as to when the Balancing Agent might be able to call upon prudential requirements. The situations where prudentials might be required are if a participant wants to buy or sell balancing gas on the balancing market, or for payment of a cash-out. The balancing market, under the participative regulations, would be open any person who meets and agrees to be bound by reasonable terms and conditions for the sale and purchase of balancing gas; this may include prudential requirements.

In terms of provisions regarding curtailment, Gas Industry Co has made the decision to remove them from the Balancing Agent's functions under the regulations. Reasons for doing so are included in section 7 of this paper.

To address Nova's concerns, Gas Industry Co considers that situations of non-performance for both users and balancing gas providers would result in the breach of the regulations with the consequences of such actions being determined through the compliance regime. In terms of 'non-performance' of the Balancing Agent, under the regulations there will be a number of checks and balances in place to ensure consequences are realised. These include provisions:

- for the ability of the industry body to appoint an independent auditor to carry out an audit of the Balancing Agent's performance;
- for the industry body to terminate the Balancing Agent in its role if dissatisfied with its performance; and
- that hold the Balancing Agent liable for any breach of its core functions under the regulations that it commits.

Gas Industry Co considers that the combination of these provisions adequately addresses any concerns of non-performance of the Balancing Agent

Non-performance of users and balancing gas providers, such as non-delivery would result in an alleged breach and enter into the compliance regime procedures.

We also note concerns regarding the efficiency of the proposed marginal clearing price and well as the inclusion of the maximum and minimum balancing gas prices. Gas Industry Co is still of the view that the marginal clearing price is the simplest and most efficient way to determine the price; further, it is aligned with the requirements of the Gas Act. In light of the concerns, we remain open to consider other views on the matter and this will be included as a topic for discussion at the ICD process meetings. However, the draft regulations in the Statement of Proposal contain provisions for marginal clearing prices. The same is true for maximum and minimum balancing gas prices.

Throughout its submission, Contact expressed concerns regarding the Balancing Agent's role in relation to the System Operator. We note under the participative regulation option, these concerns will be addressed under the balancing policy, which would establish such relationships and lines of communication.

5.4 Prescriptive regulation option B

What the Second Options Paper said

Prescriptive regulation option B is the same as prescriptive regulation option A except that, rather than Gas Industry Co appointing a Balancing Agent (which could be an existing TSO), the current customary arrangements are locked in place under regulation.

The customary arrangements involve MDL balancing its pipeline, and Vector balancing its pipelines through its interconnections with the Maui pipeline. The MDL Commercial Operator would therefore be confirmed in the role of the single Balancing Agent.

Ongoing costs would include the costs of performing the Balancing Agent functions, including the net results of balancing gas trading activity (including recovery of any bad debts). These costs would also be recovered through pipeline tariffs, as at present.

Like Option A, disputes with respect to the regulations would be covered under the Gas Governance (Compliance) Regulations 2008 and therefore heard by the Rulings Panel.

Since Option B does not involve setting up a new Balancing Agent, it was anticipated that progressing balancing arrangements under Option B would occur slightly quicker than Option A. It assumes that industry consultation on the design details would begin early next year, allowing the final recommendation to be sent to the Minister in the second quarter of 2010. The regulations would be gazetted in the last quarter of 2010. To the extent that any changes would need to occur to the MPOC and VTC as a result of regulations coming into effect, we would anticipate that any MPOC and

VTC change requests necessary would be identified and progressed prior to the regulations being gazetted.

It was also noted that if this Option A were pursued, the regulations would be in the form of those provided in Appendix B of the Second Options Paper, amended to reflect this option.

What submissions said

Contact, MDL, New Zealand Steel, and Nova all disagreed with the identification of the prescriptive regulation option B as a reasonably practicable option. Both Contact and MDL noted it was slightly better than A as it was likely to be a lower cost option. Nova felt there were too many issues with delegated authority for this option to work.

Conversely, Vector felt that although it was a reasonably practicable option it was likely to be less efficient than prescriptive regulation option A. Vector prefers Option A above B as the Balancing Agent would be appointed by Gas Industry Co as opposed to MDL which, in its view, decreased the possibility of conflict.

Greymouth and MRP both agreed that it was reasonably practicable.

Gas Industry Co comment

Again, we note the wide variance of views on this option. Participants' views that the option was slightly better than Option A accords with the evaluation which also ranks it slightly better than Option A.

Vector, on the other end of the spectrum, has shown a strong preference for Gas Industry Co to be responsible for the appointment of the Balancing Agent. To clarify, this appointment could in fact be the existing Balancing Agent, the MDL Commercial Operator, but the contestability of the role would allow other service providers to be considered.

We note Nova's concern regarding delegated authority and agree that there would be many issues to address if the were pursued.

As noted in our comments on prescriptive regulation option A, we consider that progressing either of these options would prove difficult given the level of detail the regulations would need to comprehensively replicate the complexity of balancing arrangements. This has made the prescriptive regulation options less attractive to Gas Industry Co and has helped us reach the conclusion to progress the participative regulation option, as seen in the Statement of Proposal

5.5 Participative regulation option

What the Second Options Paper said

The participative regulation option involves regulations setting out the terms and conditions of a single balancing arrangement for open access pipelines. Pipeline owners and users would be bound into the arrangement. The regulations would require the TSOs jointly and in consultation with pipeline users, to develop a single 'balancing policy' setting out the detail of how they will comply with the terms and conditions and submit it to Gas Industry Co for approval. If the TSOs cannot agree on a balancing policy, or Gas Industry Co does not approve their balancing policy, Gas Industry Co can, under the regulations, specify the policy instead.⁹

The regulations would be designed to achieve a single balancing regime for open access pipelines with all components identified as necessary to improve balancing arrangements, while allowing TSOs some flexibility in the detail through the use of a balancing policy. The approval process of the balancing policy means that Gas Industry Co would have the final say as to whether or not the policy sufficiently satisfies the regulatory objective and meets the objectives in the Gas Act and GPS as reflected in criteria in the regulations. If, in Gas Industry Co's opinion, the policy does not comply the regulations would allow for Gas Industry Co to develop the policy.

Cost recovery mechanisms for the development and ongoing costs of the Balancing Agent would be detailed in the regulations.

Under the participative regulation option, there are two broad possibilities; Gas Industry Co could approve a TSO developed balancing policy, or Gas Industry Co could develop the balancing policy. In either case, it is expected that system modification costs would be funded by the TSOs and recovered through pipeline tariffs. Ongoing costs would include the costs of performing the Balancing Agent functions, including the net results of balancing gas trading activity (including recovery of any bad debts). These costs would also be recovered through pipeline tariffs, as at present.¹⁰

Disputes with respect to the regulations would be covered under the Gas Governance (Compliance) Regulations 2008 and therefore heard by the Rulings Panel.

It was assumed that under this option, the regulations would be gazetted mid-2010. It may also be possible that, as soon as this option was recommended to the Minister, TSOs could develop and consult on their balancing policy, so the balancing policy could be available for Gas Industry Co to approve as soon as the regulations came into effect. However, the timeline identified assumes there would be outstanding issues to resolve in relation to the policy, and that full implementation would

⁹ The regulations would be designed so that there are no perverse incentives which may cause the TSOs to favour the fallback position where Gas Industry Co determines the balancing policy.

¹⁰ It is important to note that the costs that can be recovered by the TSOs will be restricted in the regulations. In the case where a balancing policy is developed by Gas Industry Co, the possibility of having Gas Industry Co recover the costs of the Balancing Agent function, as in prescriptive regulation option A, was assessed. However, we did not want funding to be a factor when the TSOs considered the benefits of agreeing a balancing policy (as compared to Gas Industry Co developing the policy).

not occur until the fourth quarter of 2010. It was also assumed that some design would be undertaken after the recommendation is made to the Minister. We anticipate that MPOC and VTC change requests would be identified and progressed prior to the regulations being gazetted.

An outline of the participative regulations was provided in Appendix C of the Second Options Paper and participants were invited to comment on them.

What submissions said

The majority of submitters agreed with Gas Industry Co that the participative regulation option was reasonably practicable.

MDL felt it was the most practicable of the options that require regulation, but was not convinced that regulation was necessary. MRP expressed its support of the option but reiterated that there needed to be strong emphasis on production efficiency as noted in its response on the prescriptive regulation options.

Contact agreed that the option was reasonably practicable but noted that in reality it was little different from the contracts based option as both involve industry agreement followed by regulation if necessary. Contact also pointed out that the option was heavily reliant on TSOs and doubted that it would be possible for TSOs to agree on many aspects of the balancing policy. Due to this risk, Contact does not favour this approach. It also believes it would be more productive and efficient to assist the industry to address balancing issues through the contracts option rather than diverting resources to drafting regulations.

In its response, Vector pointed out that the participative regulation option was a step in the right direction. However, it thought it may not be effective as prescriptive regulation option A. Vector considered the success of this option relied on industry participants progressing solutions to achieve regulatory (as opposed to purely commercial) objectives.

Vector also had a number of concerns with the outline of the regulations. It expressed concern regarding the requirement in the proposed regulation for TSOs to indemnify the Balancing Agent for any unrecoverable amounts noting that it should instead come from the users who collectively cause the imbalance and also reap the benefits of the pipelines being balanced. Vector also expressed concern over the provision for TSOs to ensure the Balancing Agent carries out its functions, believing that this role would sit better with Gas Industry Co. Further, Vector submitted that the development and ongoing costs of the Balancing Agent should be recouped via a levy on industry participants given the fees charged are likely to be linked to the size and frequency of action taken. Since its primary obligation was to provide transmission services, Vector saw the requirement in the proposed regulations to 'cooperate...with a view to minimising the cost of balancing actions' as a constraint that may undermine its ability to transport gas. Further, given its primary obligations, Vector noted that it will operate its compressors as it deems appropriate and the regulations should not constrain this. Vector also expressed its concerns over the efficacy of marginal pricing, balancing gas contracts

containing a fixed fee component, and remaining balancing gas being allocated to the Balancing Agent.

In terms of the outline of the participative regulation option, Greymouth felt it was generally appropriate but expressed concerns with the timeframe, ownership of the balancing policy, the definition of balance, liabilities, and funding of the regime.

Nova referred to the issues it identified for the prescriptive regulation options as well as the issue of delegated authority under public law.

Gas Industry Co comment

We acknowledge the strong agreement with the inclusion of this option.

Contact is correct that it can be seen as being similar to the contracts based option as both require industry participants to reach agreement. However, we consider there are a number of differences between the options that are important to point out. First, under this option it is not proposed that all participants would need to reach an agreement. Only the TSO's would need to agree the balancing policy, but would also be required to consult on it. Also, unlike the contracts based option, there would be deadlines for reaching agreement, and a deadlock breaking mechanism in the event agreement is not reached.

Contact also noted the option was unfavourable due to the perception of a large amount of risk. Gas Industry Co disagrees with this as the TSOs will need to jointly develop a balancing policy and then undergo comprehensive consultation with participants on their balancing policy including formal submissions, with Gas Industry Co having the final say. Further, under this option participants would be able to submit changes to be made on the balancing policy. In our view these provisions would appropriately address any such concerns.

We consider the ICD process will address Contact's view that it would be more productive and efficient for Gas Industry Co to address balancing issues through a contracts option. The process should also satisfy MDL's concern that regulations should only cover those areas necessary (if any). By facilitating constructive, results-driven discussions on balancing arrangements amongst participants, the ICD process should settle the question of how much can be achieved through contract.

Further, we note the number of concerns expressed regarding the provisions in the outline of the regulations. Vector considered that users, rather than TSOs, should be responsible for indemnifying the Balancing Agent. We note this concern and remain open to consider other views on the matter, and consider that this topic could be discussed at the ICD process meetings. However, the draft regulations in the Statement of Proposal contain provisions for TSOs indemnifying the Balancing Agent. This also applies to concerns regarding contracts containing fixed fee components and leftover balancing gas being allocated to the Balancing Agent.

Vector also believes that Gas Industry Co, rather than TSOs, should be responsible for ensuring the Balancing Agent carries out its functions. Gas Industry Co considers that this responsibility sits better with TSOs as they are primarily responsible for monitoring the pipeline. In addition to this requirement, the draft regulations in the Statement of Proposal contain a number of checks and balances, including the ability for Gas Industry Co to initiate an audit of the Balancing Agent's performance and, if necessary, terminate the Balancing Agent's role if it considers it is failing to perform its functions in accordance with the regulations.

Gas Industry Co agrees that TSOs should have the ability to operate their compressors. Under the proposed regulations, the Balancing Agent itself will not have the ability to operate compressors beyond what might be specified in the policy (provided by the TSOs); but we maintain the view that the TSO's compressor operation policies should be made transparent, not be inconsistent with balancing actions, and that the Balancing Agent should be properly advised of when such actions are being taken.

Greymouth expressed concerns regarding ownership of the balancing policy. Gas Industry Co sees this being addressed amongst TSOs themselves and, if necessary, in contractual terms between themselves. We consider that by prescribing a 'joint' responsibility, the correct incentives are in place to ensure each TSO looks to achieve the best outcome.

To address concerns regarding the mechanism for recovering the costs of the Balancing Agent, Gas Industry Co has determined that the costs should be recovered in a similar manner to other gas governance arrangements, through market fees. There will be two types of market fees to recover incurred costs associated with the regulations. They are explained below:

- The establishment fee is a one-off fee that will be based on an initial estimate of the cost Gas Industry Co will incur when either assisting in the establishment of the Balancing Agent and balancing policy, or establishing both itself. As soon as practicable after the go-live date, Gas Industry Co will be required to calculate the actual establishment cost and either invoice TSOs for the deficit or credit them the surplus amount.
- The ongoing costs will comprise estimated ongoing costs that will be invoiced to TSOs on a monthly basis, with the annual fees determined at the end of each year of operation and a 'wash up' performed with either the over-recovered amount being returned or the under-recovered amount being invoiced by Gas Industry CO.

Both establishment and ongoing costs will be levied on the TSOs and calculated on a pro rata basis based on the amount of gas each has entering into and out of its transmission system from an interconnection point not with another TSO. It will be at the discretion of the TSOs how they recover these costs from users.

Gas Industry Co acknowledges Nova's concerns regarding delegated authority; however, under section 43S of the Gas Act, Gas Industry Co has the ability to 'provide for a person or persons to carry out functions in relation to those functions'. Further, clauses in the draft regulations have been drafted to ensure the tasks in the balancing policy are essentially administrative.

As noted earlier, concerns regarding marginal pricing will be part of discussions for the ICD process.

The draft regulations contained in the Statement of Proposal reflect decisions identified in the above discussion.

6

Evaluation and Next steps

6.1 Evaluation and assessment of options

What the Second Options Paper said

In this section, each option was evaluated against the set of evaluation criteria for balancing arrangements established in section 3 of the Second Options Paper.

Each option was evaluated against each criterion and assigned a numerical score representing its anticipated performance against this criterion: a scale from 1=poor to 5=excellent. The scores were then combined using an averaging process.

The overall results of the evaluation were also presented in this section as a base case and three sensitivity cases. The first sensitivity case showed how the results would change if efficiency is given a weight of five times that of cost and governance. The second and third sensitivity cases were similar, but put the five times weighting on cost and governance respectively.

The highest scores were obtained from the participative regulation option, particularly when governance outcomes are given a high weighting.

The contracts based and participative regulation options show the widest range of results, particularly when efficiency outcomes are given a high weighting. However, participative regulation option A also showed a very wide range where cost is weighted highly. We believed this reflected the potentially wide range of outcomes depending on whether Gas Industry Co appointed an existing service provider or another party as the Balancing Agent.

The participative regulation option rated best on governance, reflecting its ability to establish improved enforcement and transparency without sacrificing adaptability and stability. It also rated best on 'balance'. The contracts based option rated worst on transparency, reflecting a probability that existing concerns about transparency, enforcement, and balance will not be addressed. Prescriptive regulation option A rated slightly lower than Option B, reflecting a concern that the loss of 'stability' would more than offset a gain in transparency.

Overall the participative regulation option rated best, although there was a minor overlap between its rating range and the ranges for the contracts based and prescriptive regulation options. There is more potential 'upside' to the participative regulation option, reflecting the potential for the TSOs to develop a balancing policy with greater efficiency than the prescribed mechanism.

What submissions said

Contact and Greymouth did not agree with Gas Industry Co's approach to evaluating the options. Contact felt that it depended on assumptions about how well each will address balancing issues. It felt this was demonstrated by Gas Industry Co assessing the contracts based option as unknown for many criteria and yet still able to produce a quantified rating. In its view, to judge the outcomes before they are known is meaningless. Greymouth disagreed with the approach because there were not weightings to any category and no 'cold hard' numbers were provided. It felt a basic net present value assessment should have been undertaken. Greymouth further noted that it believed some of the rating had been skewed for Gas Industry Co to justify its preferred option.

MRP, New Zealand Steel, and Vector agreed with the approach and felt that the assessment was fair and reasonable. MRP pointed out that, while there could have been many arguments regarding valuations, the overall outcome was not unreasonable. Vector was pleased to see that the evaluation procedure included a sensitivity analysis.

MDL believed Gas Industry Co's assessment that the participative regulation option was the best of the regulatory options was appropriate, but reiterated its view that any regulation that is shown to be needed is carefully targeted to the specific area where the arrangements are inadequate. MDL, like Contact, noted the low score for the contracts based option is a result of the uncertainty. MDL pointed out that the work programme outlined in its covering letter would be helpful in resolving some of the uncertainty.

Nova's main concern with the assessment was the lack of a cost benefit analysis. At a high level, Nova believes the lowest cost and most effective option to improve balancing arrangements is through improving current contractual arrangements rather than replacing them with regulations. In Nova's view, the recent lack of development in the balancing arena is because the benefits are less than for other commercial activities. Further, it noted the limited industry resources available.

Gas Industry Co comment

Gas Industry Co considers the 'qualitative-quantitative' debate to be unhelpful. While it is tempting to think that dollar numbers will provide a more precise evaluation, putting a dollar value on such criteria as transparency or balance would be subjective (ie qualitative). Quantitative data is based substantially on qualitative judgements. Also, qualitative data can be expressed numerically (as we did in our evaluation), but this does not make it more valid. So the distinction between the approaches is not substantive and both are interdependent.

The analysis provided an explicit, clear, and transparent analysis that we believe to be sufficiently robust to identify the preferred option.

We recognise concerns regarding the wide range of scores assigned to the contracts based option, but note that the assessment had to be based on 'unknowns' since the outcome would not be prescribed for in regulations.

6.2 Gas Industry Co's preferred option

What the Second Options Paper Said

Given its overall superior rating and a strongly superior governance rating, Gas Industry Co noted its preference for the participative regulation option.

What submissions said

Contact did not agree that the participative regulation option was the best approach, noting again that it felt industry should concentrate resources on changes to the MPOC and VTC. Ultimately, if that fails, then Gas Industry Co should recommend regulations.

Greymouth felt Gas Industry Co has correctly identified the participative regulation option as the preferred option, but believes the objective must be re-worked to ensure that whoever writes the balancing policy provides an effective framework where costs will not be socialised and industry will receive value for money.

MDL agreed that the participative regulation option was the best of the regulatory options, but again noted its overall preference is first to examine what could be pursued under a contracts option and then resort to regulation only for those areas (if any) where a contracts solution was clearly inadequate.

While MRP agreed with the identification, it noted that it would be more confident if a quantitative cost benefit analysis had been undertaken. Further, MRP noted concerns that the only costs estimated were for the potential development of prescriptive regulation option A, with unquantified costs for the other options funded by tariffs.

New Zealand Steel agreed with the identification of the participative regulation option as the preferred option. Vector also recognised that the option scored best overall and, in particular, scores well against the criteria Vector regards as important. Further, Vector noted that the success of the preferred option hinges on industry working together to effectively achieve regulatory as opposed to commercial solutions, and all relevant material matters that an effect transmission balancing are addressed.

Nova noted that, in the absence of a contractual solution, the participative regulation option is the most appropriate.

Gas Industry Co comment

We note the wide acceptance of this option as the best regulated option presented, including views that, in absence of a contracts solution, it would be appropriate to pursue. To test the belief that more can be achieved by means of contracts, Gas Industry Co has decided to facilitate the ICD process. It will run in parallel to the regulatory process which will continue to refine the participative regulation option. The Statement of Proposal on Transmission Pipeline Balancing provides further discussion on how the ICD process may influence the recommendation that Gas Industry Co will make to the Minister at the end of the year.

6.3 Next steps

What the Second Options Paper Said

Section 11 outlined the next steps that would be taken. The following table was provided.

Item	Date
Issue Second Options Paper	17 July 2009
Second Options Paper Workshop	29 July 2009
Closing date for submissions on Second Options Paper	17 August 2009
Issue Second Options Paper Analysis of Submissions and Statement of Proposal	1 October 2009
Closing date for submissions on Statement of Proposal	30 October 2009
Issue Analysis of Submissions on Statement of Proposal and Recommendation to Minister	21 December 2009

Source: Second Options Paper, p77, table 29.

What submissions said

Greymouth noted agreement with Gas Industry Co's identified next steps.

MDL agreed subject to its views that regulation should be proposed only in areas where it is necessary.

Vector expressed agreement with the timeline, recognising that it is tight, but that Gas Industry Co needed to stick to it given both Ministerial expectations and the more general need to develop and implement improved arrangements in a timely manner.

MRP agreed, however felt a separate work stream to address balancing problems associated with downstream gas should run in parallel and be ready to be implemented at the same time.

New Zealand Steel also expressed support on the work programme but noted it would like to see more discussion on how Gas Industry Co thinks virtual welded points would operate in practice. New Zealand Steel also urged Gas Industry Co to continue to engage with end users.

In its response, Contact noted that it was unclear why Gas Industry Co would be making a recommendation to the Minister for adopting balancing regulations in December. It felt this only seemed necessary if the full details had been developed and assessed as required in the Gas Act and Contact did not think Gas Industry Co would be in a position to do that. Further it noted that the timeline ended 21 December but will undoubtedly continue beyond that date.

Gas Industry Co comment

Despite participants' concerns, Gas Industry Co believes it is on track for making a recommendation to the Minister at the end of the year. We are continuing to work on refining the draft regulations for the participative regulation option first presented in the Second Options Paper. As noted above, the outcome of the ICD process may influence the recommendation. Gas Industry Co will endeavour to keep participants informed throughout the process. We aim to issue a report on the achievements of the ICD process at the end of November.

7

Optional questions

7.1 Curtailment and damages

What the Second Options Paper said

Gas Industry Co included the use of curtailment¹¹ and a damages regime as inside the scope of the regulated options presented in the Second Options Paper. However, we had not yet formed a concrete view on whether either would be included. In Appendix A we included an optional question asking participants whether or not they supported the inclusion of curtailment and a damages regime.

Another question asked was whether or not the quantum of damages, if included in the regime, should be determined through the dispute resolution process (by the Rulings Panel) or predetermined as liquidated damages.

What submissions said

Contact felt that curtailment and obligations to pay damages belong to the set of tools available to manage balancing and failure to balance. To achieve an equitable outcome, it believes provisions for either would need to be included in all regulated options. However, given the residual scope, excluding curtailment and damages would not seem to significantly compromise the regulations. Contact also highlighted that the MPOC, VTC, and Gas Governance (Critical Contingency Management) Regulations 2008 all provide for curtailment and liquidated damages, so it is not clear there is a need for further provisions and any new arrangements would need to be consistent with the existing ones.

MDL noted that, in general, a close link needed to be maintained between balancing action and curtailment options as the transition from one mode to the other can occur in a very short period of time. It also believes that a damages regime can best be thought of as a damages limitation regime, as it removes the right to take legal action and replaces it with limited remedies. However, it felt provisions do not need to be made for such a regime in either regulations or codes.

¹¹ For clarity, curtailment for the purposes of this paper means an on-the-day instruction to reduce gas flow (ie an operational flow order) and does not mean a capacity constraint curtailment applied while approving nominations.

Nova believes it would be both inefficient and confusing to include a curtailment and damages regime. It cited that, under the current contractual arrangements, if insufficient balancing gas is available, and before the critical contingency arrangements take effect, there is a curtailment and liquidated damages regime that applies. Nova's preference is that, if insufficient balancing gas is available, the Gas Governance (Critical Contingency Management) Regulations 2008 come into effect.

Vector is of the view that curtailment and damages should ideally be addressed by the regulations in order to enhance the chances of compliance by users. Disputes to the Rulings Panel would also be more appropriately contained within the regulations as is the case under the Gas Governance (Compliance) Regulations 2008.

Contact, MDL, and Vector all felt that, if included, liquidated damages should be predetermined.

Gas Industry Co comment

Gas Industry Co agrees with Contact that given the residual scope, provisions for curtailment and damages are not needed. We also agree that if a liquidated damages regime were to be included in the scheme, the simplest form would be to have them predetermined. However, Gas Industry Co has decided that curtailment should sit with TSOs and transmission codes as it would lead to an overly complex regime, extending the residual scope, if it were to be included in the proposed regulations. This means that a damages regime would be no longer necessary in the proposed regulations. It is, however, important to note that TSOs will still, under the draft regulations, have obligations to publish their compressor operation policy as well as cooperate and coordinate with the Balancing Agent when exercising the use of compressors.

These changes will be reflected in the draft regulations found in the Statement of Proposal.

7.2 Linepack and thresholds

What the Second Options Paper said

In the outline of regulations, Gas Industry Co had not yet determined a process for setting and revising base linepack and thresholds. We asked for feedback from participants on how this might be achieved.

Another issue we identified in relation to linepack was how to define flexible linepack available to the Balancing Agent to ensure that it is a fair share of the flexibility available. In the outline of regulations, Gas Industry Co drafted this to be set as 'wide as practical' with any dispute to go to the resolution process. An alternative would be to establish a special purpose process for establishing the flexible linepack. Views were asked for on this provision.

What submissions said

Contact, MDL, and Vector all believed that setting base linepack, flexible linepack, and thresholds should be dealt with by the TSOs. Contact and Vector both consider that the TSO should submit proposals to Gas Industry Co, whereas MDL felt total flexibility is required in this area as pipeline circumstances do change.

Contact noted further that Gas Industry Co could assist the process by setting out objectives and matters TSOs should consider. For example, maximising users' access to linepack flexibility, but without creating significant risk or inability to deliver gas to users' entitlements, would be an important factor. A quantified approach could be taken such as setting the threshold so sufficient gas remained in linepack to supply expected gas requirements for a certain number of hours.

MDL felt that 'as wide as practicable' is a reasonable formulation for setting flexible linepack but cautioned that setting flexibility available to users too widely can result in pressures at distant welded points falling below plant design levels, pressure at receipt points rising to the point where gas cannot be injected and a generally increased likelihood of curtailment events. Further, MDL questioned whether outside bodies are able to accept the responsibility for contingent events if one were to occur.

Nova indicated its preference for a simple approach that provides participants with some certainty over what the thresholds are and what actions will be taken as those thresholds approach and are exceeded. Further, it noted that, given some of the uncertainties involved in linepack and pressure calculations, there seems to be only very marginal value in providing for a very complex dynamic process for setting thresholds.

Gas Industry Co comment

Gas Industry Co agrees with the TSOs' view that they need some autonomy over setting thresholds and linepack. We also agree with Nova that this process should be simple and provide participants with greater certainty.

In order to achieve these outcomes, Gas Industry Co has decided that for the participative regulation option the process for setting the upper and lower thresholds for the taking of balancing actions by the balancing agent will be set out in the balancing policy. However the regulations will require that the thresholds are set to give the maximum practicable flexibility for managing linepack. The target linepack will be the midpoint between the upper and lower thresholds. This decision is reflected in the draft regulations in the Statement of Proposal.

7.3 Tolerances

What the Second Options Paper said

Gas Industry Co included provisions for tolerances in the regulated options presented in the Second Options Paper. In our Analysis of Submissions on the Options Paper (p43) we said we would... 'review Maui tolerances, but seek all reasonable opportunities to avoid duplication of effort with MDL's own tolerance review'. As noted earlier, MDL has yet to provide Gas Industry Co with the details of its review. This does not change our position as we will still undertake a review of tolerances on the Maui pipeline. However, regardless of the outcome of that review, there are two standard positions held by Gas Industry Co with respect to tolerances. They are that:

- the sum of individual tolerances must not exceed the inherent balancing flexibility (because balancing costs will be socialised if it does); and
- tolerances can be an efficient means of allocating the inherent balancing flexibility of the pipeline, provided they can be traded.

In Appendix A, we asked an optional question on whether participants felt tolerances were necessary in the context of cash-outs being back-to-back with balancing transactions, and balancing actions having access to linepack flexibility.

What submissions said

Contact believes that all parties that contributed to an imbalance that resulted in a balancing action should contribute to the cost of the transaction. It considered that it is incorrect to determine that users within a tolerance at a receipt point or delivery point did not contribute to the need for a balancing action. Contact therefore believes there should be no provision for tolerances. It felt a more appropriate method would be to limit balancing transactions to situations when linepack moves outside thresholds allowing users to benefit from linepack flexibility. Further, in its view, a user's contribution to imbalance is best determined from running imbalance at the end of the day on which the balancing action occurred.

MDL's preference is for no tolerances, given the introduction of a back-to-back balancing regime and action to increase flexibility available to users as much as practicable.

MRP felt tolerances are required until problems with daily allocation are resolved as it is essential that the maximum flexibility in pipelines be maintained.

Nova considered it was difficult to make a judgement regarding tolerances until TSOs present their proposed arrangements for comment. However, Nova believes that tolerances are, in effect, an

allocation of linepack and, under current arrangements, are effectively tradable. It considers this to be an efficient outcome to the extent that it does not contribute to socialisation of balancing costs.

Vector submitted that tolerances should be dealt with in the same way as base linepack and flexible linepack, noting that all three components impact on each other and therefore should be subject to similar processes.

Gas Industry Co comment

Gas Industry Co noted in the Second Options Paper (p112) that, 'as long as the Balancing Agent has access to the linepack flexibility through appropriate thresholds and the cash-out is back-to-back with balancing gas costs, then tolerances are not strictly necessary, while adding significant complexity'. This is in line with MDL's view that the introduction of a back-to-back balancing regime would increase the amount of flexibility available to users, thereby decreasing the need for tolerances. We accept and support this view.

Gas Industry Co has not changed its view that tolerances can be an efficient means of allocating linepack flexibility, but is not averse to removing tolerances since that would avoid equity issues regarding the allocation of tolerances among users and the complexity of tolerance trading. Further, we agree with ERGEG principle 5 that tolerances weaken balancing incentives. Accordingly, tolerances will be removed from the draft regulations and the flexibility to be provided through balancing action thresholds. This change is reflected in the Statement of Proposal.

Appendix A Analysis of MDL proposed work programme

MDL identified a work programme outlining a number of changes it is progressing with the intention of improving balancing arrangements while meeting the objectives set by Gas Industry Co.

This appendix contains Gas industry Co's analysis and response to MDL's work programme.

First, we note our overall support for the progression of these changes, including MDL's commitment to improve the balancing market by:

- Increasing transparency:
 - of the balancing market (prices and gigajoule) amounts through the Balancing Gas Exchange (BGX); and
 - of the Balancing Agent (role and functions) through revised standing operating procedures (SOPs) and changes to the MPOC; and
- Exploring options to extend the balancing market by offering balancing services to Transmission Pipeline Welded Points;
- Investigating changes to the MPOC to better target costs to causers in a timely manner through the possible adoption of back-to-back cash-outs; and
- Considering the adoption of Gas Industry Co's Rulings Panel to provide for enforcement of the regime and the appropriate disputes resolution.

However, it remains difficult to assess the proposed changes until they are finalised. Further, there are a number of other areas that MDL's work programme does not cover that would be addressed under a regulated solution. We consider the areas that need more attention include:

- Achieving a unified balancing regime;
- Increasing transparency through:
 - Consulting on SOPs;
 - Disclosing how tolerances and thresholds are set; and

- Balancing Agent transparency (including disclosing the Balancing Agent’s contract and measures to assess the Balancing Agent’s performance).

These are discussed in turn below.

Unified balancing regime

The changes outlined would still not meet the key objective Gas Industry Co considers is necessary to resolve many of the issues: a unified balancing regime across both transmission systems.

The physical and contractual restrictions will continue to make it difficult for parties on the Vector Transmission System to participate in the balancing market. Further, Vector’s shippers would need to have the contractual ability to ship gas to a Transmission Pipeline Welded Point in order to be considered as a possible candidate. In order to promote productive efficiency, Gas Industry Co maintains the view that barriers to operating in the balancing market should be minimised and that the market should as open as possible. MDL has begun considering options to expand the market but does not go the full distance to consider how parties not physically welded to the Maui pipeline might be able to participate.

It remains our view that Vector and MDL need to work together to devise a unified policy for managing linepack across the New Zealand transmission system. Industry will continue to operate under a fragmented inefficient regime until this occurs.

Increased transparency

We support MDL’s commitment to finding ways to increase transparency. The recently released changes to the Balancing Gas Exchange included:

- BGX financial disclosures, which disclose GJ quantities, GJ price, total transaction costs, time of transactions, and a monthly summary of balancing transactions;
- BGX price index tracker, which tracks high, low, and average bid and offer prices and is updated at the end of each month; and
- operational imbalance data will now display the previous day’s data on the morning before the aggregate data is available.

Additionally, we also acknowledge other measures to increase transparency, which include the proposal to revise SOPs to help participants better understand the circumstances in which the Balancing Agent takes actions. However, as noted above, it is difficult for Gas Industry Co to

acknowledge the exact nature of the changes until they are seen. Further, we think there are areas in which greater transparency is needed; these are discussed in turn below.

Consultation on SOPs

We are of the view that participants should have an opportunity to submit feedback on the SOPs as these changes impact on the pipeline users just as much as the TSOs. Consultation should take place. Pipeline balancing is the activity of a community of users, it is important that all users' views are considered.

Under Gas Industry Co's preferred option, the participative regulation option, instructions similar to SOPs would be captured under the balancing policy. The balancing policy will undergo a complete consultation process with affected pipeline users.

Disclosing how tolerances and thresholds are set

We consider it important that there is clarity around what tolerances and thresholds are, and how they relate to each other, and are set and amended. We see no reason why this would not be achievable.

Although we have removed the provision of tolerances under Gas Industry Co's preferred option, the participative regulation option, we still consider the process by which they are set is important. The process for setting and amending thresholds, as well as the threshold themselves, will be set out in the balancing policy.

Balancing Agent transparency

The transparency of the Balancing Agent, including its functions and instructions for taking actions is one of the key aspects of an efficient balancing regime. As noted above, we are pleased to see that MDL has undertaken work to do so; however, it is difficult for Gas Industry Co to assess these changes until they surface.

In our view, greater transparency would include disclosing the Balancing Agent's contract, as well as measures to ensure regular reporting on the Balancing Agent's performance, and the ability to undertake audits. Gas Industry Co has included such measures in its regulated solution.

Notwithstanding the above, Gas Industry Co recognises that improvements are likely to be seen if the proposed changes are implemented.

Glossary

Balancing agent	The party with the responsibility for the 'residual balancing role'.
Balancing gas	Gas added to or removed from the transmission pipelines by the Balancing Agent in order to manage linepack.
Balancing market	The market on which a Balancing Agent buys or sells balancing gas.
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 forced trade with the Balancing Agent, used to correct part or all of a user's imbalance position.
CCMRs	Gas Governance (Critical Contingency Management) Regulations 2008.
critical contingency	A low pressure event that is sufficiently severe to invoke the CCMRs.
ERGEG	European Regulators Group for Electricity and Gas.
extended nominations proposal	A comprehensive solution to balancing problems proposal by Vector in its submission on the Issues Paper.
Gas Act	Gas Act 1992.
GPS	Government Policy Statement on Gas Governance issued under the Gas Act published 18 April 2008.
ICD	Industry Code Development.
ILON	Imbalance Limit Overrun Notice as defined and used in the MPOC.
industry body	The body appointed under section 43ZL of the Gas Act.
Incentives pool	A mechanism in the Maui transmission regime to ring fence and allocate damage costs via a trust account.

imbalance	In this report the term imbalance refers to the difference between receipts and deliveries on the pipeline and can be Operational Imbalance of the Maui pipeline or Mismatch on either the Maui pipeline or Vector pipelines.
Issues Paper	Transmission Pipeline Balancing Issues, August 2008, Gas Industry Co.
MDL	Maui Development Limited (an agent company for the Maui Joint Venture that owns the Maui transmission pipeline).
MDL Commercial Operator	'Maui Development Limited Commercial Operator'. An agent to manage the commercial arrangements of the Maui open access regime, including balancing services.
mismatch	The difference between a shipper's receipts and deliveries which is a form of imbalance.
MPOC	Maui Pipeline Operating Code.
NZGE	New Zealand Gas Exchange, the day-ahead gas trading platform currently under development by Gas Industry Co.
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
OFO	Operational Flow Order, an instruction to a user to curtail gas flow.
operating imbalance	The difference between scheduled quantities (gas entitlement) and actual flow at a welded point, which is a form of imbalance.
Options Paper	Transmission Pipeline Balancing Options, December 2008, Gas Industry Co.
residual balancing role	The role of managing linepack after the users have endeavoured to balance themselves, to ensure safe and reliable transmission services.
Second Options Paper	Transmission Pipeline Balancing Second Options Paper, July 2009, Gas Industry Co.

TOU	Time of use - generally used in reference to metering that records consumption on an hourly basis.
TPBAG	Transmission Pipeline Balancing Advisory Group.
transmission pipeline	High pressure pipelines used to transport natural gas which does not include distribution networks.
TSO	Transmission System Owner.
UFG	Unaccounted for Gas, a change in linepack where the source is not identified largely due to metering or estimation errors.
User	The users of the transmission services—either a shipper or Welded Party.
Vector	Vector Limited in its role as owner of the Vector transmission pipelines.
VTC	Vector Transmission Code.