



Statement of Proposal

**Allocation and Reconciliation of
Downstream Gas Quantities**

4 September 2007

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 key infrastructure; and
 - consumer outcomes;
- administer, oversee compliance with, and review such arrangements; and
- report regularly to the Minister of Energy on the performance and present state of the New Zealand gas industry, and the achievement of Government's policy objectives for the gas sector.

Authorship

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1 Executive Summary

Background

1.1 Effective arrangements for the accurate allocation and reconciliation of gas quantities are a key component of an efficient gas market. Every participant in that market needs to know how much gas is going into the pipeline system, who is taking what gas out, how much gas is unaccounted-for, and how that unaccounted-for gas will be allocated.

1.2 In response to:

- the Government's desire in the 2004 Government Policy Statement on Gas Governance ("GPS") for, amongst other things, the development of protocols and standards applying to balancing and reconciliation; and
- requests by industry participants,

Gas Industry Co undertook a review of allocation and reconciliation arrangements in the New Zealand gas industry with a view to recommending new arrangements.

1.3 The Gas Allocation and Reconciliation Team ("GART") was established in 2006 to assist Gas Industry Co with this review. The review included publication of, and receipt of submissions from industry participants on, two discussion papers that identified the issues with the current arrangements and considered options for improving them.

1.4 The current processes for allocation and reconciliation of downstream gas quantities are governed by the voluntary Reconciliation Code which was developed through the Gas House process in the late 1990s. Developments in the gas industry since that time mean that the Code has become outdated. Without an effective change mechanism to bring it up to date, the result has been inaccurate allocations of gas quantities and a lack of confidence in the allocation and reconciliation processes. The processes in the Code also lack transparency and are unenforceable. Gas Industry Co therefore considers that the introduction of fair, equitable and transparent processes is likely to assist competition in the gas market by increasing certainty and reducing the amount of unaccounted-for-gas ("UFG") in the system.

1.5 Having completed its review, and considered submissions from industry participants, Gas Industry Co's preferred option for new downstream allocation and reconciliation arrangements is to recommend rules to the Minister of Energy under the Gas Act 1992 ("Gas Act"). Gas Industry Co is required to consult on that preferred option prior to making a recommendation to the Minister.

The proposed rules

1.6 The proposed rules will:

- Implement a number of mandatory information quality measures;

- Provide for the appointment of a single downstream allocation agent by Gas Industry Co;
 - Establish that the month end daily allocation service will be performed using a global methodology on all gas gates to ensure that gas quantities and UFG are more fairly and accurately allocated across all retailers;
 - Provide for greater transparency through publication of a range of information, including UFG quantities;
 - Mandate clear, transparent governance structures and related processes;
 - Allow for the performance of audits and the establishment of a compliance regime; and
 - Provide for the granting of exemptions by Gas Industry Co where appropriate.
- 1.7 The proposed draft rules will apply to all parties involved in the supply of gas to consumers downstream of a gas gate, including meter owners, distributors, retailers and transmission system owners.

Legislative requirements

- 1.8 Prior to Gas Industry Co recommending rules to the Minister of Energy, it must first comply with the requirements of section 43L of the Gas Act. That section requires Gas Industry Co to, among other things, consult with those persons it thinks are “*representative of the interests of persons likely to be substantially affected*” by the proposed rules. For the purposes of that consultation, Gas Industry Co is required by section 43N(1)(d) of the Gas Act to publish a statement of the proposed rules which must contain:
- A detailed statement of the proposal;
 - A statement of the reasons for the proposal;
 - An assessment of the reasonably practicable options for achieving the regulatory objective, including the proposal, identified by Gas Industry Co under section 43N(1)(a); and
 - Other information Gas Industry Co considers relevant.
- 1.9 This paper constitutes a statement of the proposed rules required by section 43N(1)(d) of the Gas Act for the purposes of consultation.
- 1.10 Gas Industry Co believes the collective powers in the Gas Act allow it to recommend to the Minister the proposed draft rules for downstream allocation and reconciliation of gas quantities.

Conclusion

- 1.11 The key benefits of the proposal include:

- increased efficiency and reliability of allocation and reconciliation of gas quantities through improved mechanisms for provision of consumption data and fairer allocation methodologies;
- provision for more accurate identification and fairer allocation of UFG;
- greater transparency of the full costs of allocating and reconciling downstream gas quantities; and
- facilitation of retail competition and ensuring barriers to competition are minimised.

1.12 Gas Industry Co has concluded from its analysis that there is a positive net benefit under a wide range of input assumptions resulting from the proposed rules.

Next steps

1.13 Gas Industry Co invites submissions on this Statement of Proposal and any answers to the specific questions contained in Appendix 4 by 1 October 2007. After considering submissions on this Statement of Proposal, Gas Industry Co envisages making a recommendation to the Minister of Energy by December 2007, with a view to implementing the recommended rules by 1 October 2008.

Q1: *Do submitters have any general comments on the proposal or the process adopted by Gas Industry Co?*

2 Regulatory Objective

The Gas Act and GPS – general objectives and outcomes

- 2.1 In determining the objective of any proposed gas governance arrangements, Gas Industry Co must take into account the purposes and objectives stated in the Gas Act and the GPS.
- 2.2 The GPS sets out the Government’s objectives and outcomes for governance of the New Zealand gas industry, and its expectations for industry action. Under section 43ZO of the Gas Act, Gas Industry Co must have regard to those objectives and outcomes when making recommendations for gas governance rules or regulations. The Government’s overall policy objective for the gas industry, as stated in the Gas Act and the GPS, is:

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

- 2.3 Paragraph 5 of the GPS adds that, consistent with this overall objective, the Government is seeking certain specific outcomes which include:

- “(a) The facilitation and promotion of the ongoing supply of gas to meet New Zealand’s energy needs, by providing access to essential infrastructure and competitive market arrangements;*
- (b) Energy and other resources are used efficiently;*
- (c) Barriers to competition in the gas industry are minimised to the long-term benefit of end-users;*
- (d) Incentives for investment in gas processing facilities, transmission, distribution, energy efficiency and demand-side management are maintained or enhanced;*
- (e) The full costs of producing and transporting gas are signalled to consumers;*
- (f) Delivered gas costs and prices are subject to sustained downward pressure;*
- (g) The quality of gas services and in particular trade-offs between quality and price, as far as possible, reflect customers’ preferences;*
- (h) Risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties;*
- (i) Consistency with the Government’s gas safety regime is maintained; and*
- (j) The gas sector contributes to achieving the Government’s climate change objectives by minimising gas losses and promoting demand-side management and energy efficiency.”*

Specific allocation and reconciliation objectives

- 2.4 Paragraph 9 of the GPS sets out the Government's expectation that Gas Industry Co will develop and submit to the Minister for approval proposed arrangements, including regulations and rules where appropriate, providing for effective industry arrangements in certain areas. In relation to reconciliation, Gas Industry Co is to develop and propose arrangements for:

"...protocols and standards applying to wholesale gas trading, including quality standards, balancing and reconciliation.

.....

The establishment of consistent standards and protocols across distribution pipelines so that gas market participants can access distribution pipelines on reasonable terms and conditions.

The establishment of gas flow measurement arrangements to enable effective control and management of gas."

Purposes in the Gas Act

- 2.5 Section 43F of the Gas Act provides that regulations may be made for all or any of the purposes specified in section 43F(2). Those purposes include:

"(a) providing for the establishment and operation of wholesale markets for gas, including for -

(i) protocols and standards for reconciling and balancing gas;;

(ii) clearing, settling, and reconciling market transactions:

(iii) the provision and disclosure of data and other market information:

(iv) minimum prudential standards of market participation:

(v) minimum standards of market conduct:

(vi) arrangements relating to outages and other security of supply contingencies:...

.....

(c) prescribing reasonable terms and conditions for access to transmission or distribution pipelines: ..."

- 2.6 In order to reconcile and balance the quantities of gas purchased by retailers on the wholesale gas market, it is necessary to have processes for ascertaining the quantities that each of those retailers' customers have consumed downstream of the connection to the transmission system. For this reason Gas Industry Co considers that effective arrangements for allocation and reconciliation of downstream gas quantities come within the stated purposes in section 43F of the Gas Act.

- 2.7 Such processes are also required to allocate and reconcile upstream gas

quantities. Those processes are currently provided through industry arrangements such as the Maui Pipeline Operating Code and Transmission Services Agreements. Those arrangements are under review through a separate Gas Industry Co work stream.

Timeframes

- 2.8 The GPS sets the date for delivery of reconciliation arrangements as 31 March 2005. However, Gas Industry Co has, on behalf of the industry, agreed with the Minister of Energy to extend this deadline. The new dates for delivery of allocation and reconciliation arrangements are set out in Gas Industry Co's Strategic Plan issued pursuant to section 43ZQ of the Gas Act for 2008–2010.
- 2.9 The Strategic Plan for 2008-2010 sets the dates for the following activities to take place:
- Provide recommendation to Minister on downstream reconciliation arrangements by December 2007.
 - Implementation of new downstream reconciliation arrangements by October 2008.

Regulatory objective against which options are to be assessed

- 2.10 In its first discussion paper on allocation and reconciliation arrangements published in June 2006¹, Gas Industry Co reviewed the current arrangements for both upstream and downstream gas allocation and reconciliation and identified a number of problems with all of those arrangements.
- 2.11 Given the complexity of the processes involved, in its second discussion paper published in January 2007², Gas Industry Co proposed to focus on downstream arrangements while other work was undertaken in relation to a range of upstream issues.
- 2.12 In the January 2007 discussion paper, the objective of the review of downstream allocation and reconciliation arrangements was stated to be to recommend:

“arrangements for more efficient and accurate downstream allocation and reconciliation of gas quantities. Such arrangements should:

- *ensure the protocols and standards for reconciling and balancing downstream gas, and providing and disclosing of data and information, are safe, efficient, fair, and reliable;*
- *standardise data exchange protocols across the industry and ensure the correct data is communicated to all affected parties in a timely manner;*

¹ See *Options for Amending Allocation and Reconciliation Arrangements in the New Zealand Gas Industry*, June 2006 at www.gasindustry.co.nz

² See *Reconciliation of Downstream Gas Quantities*, January 2007 at www.gasindustry.co.nz

- *provide for consistent, transparent, and enforceable processes;*
- *facilitate retail competition and ensure barriers to competition are minimised;*
- *establish more transparency of the full costs of balancing and reconciling gas; and*
- *provide for more accurate identification and fairer allocation of the amount of unaccounted for gas.”*

2.13 In the submissions received on the January 2007 discussion paper, two submitters pointed out that it was not appropriate to include “safety” in the regulatory objective as allocation and reconciliation arrangements do not relate to gas safety. Gas Industry has therefore decided to delete any references to safety.

2.14 One of the key issues raised in the submissions was the proposal to limit the current review of reconciliation arrangements to the allocation and reconciliation of quantities downstream of the gas gate.

2.15 Given the level of concern expressed in the submissions on this issue, Gas Industry Co commissioned an investigation into the implications, if any, of excluding upstream allocation reconciliation arrangements from the current review.

2.16 In summary, the report prepared on the issue concluded that, despite the concerns expressed in the submissions, it was not possible to identify any issue which would require Gas Industry Co to reconsider its proposal to focus on downstream reconciliation arrangements. The report is discussed in more detail in paragraphs 5.95 to 5.97 below.

2.17 Gas Industry Co therefore continues to believe that, in the interests of making progress on improving downstream allocation and reconciliation, upstream allocation should be excluded and dealt with at a later date.

Conclusion on regulatory objective

2.18 Gas Industry Co considers that the appropriate objective against which the reasonably practicable options should be assessed for the purposes of section 43N of the Gas Act is to recommend to the Minister arrangements for more efficient and accurate downstream allocation and reconciliation of gas quantities. Such arrangements should:

- ensure the protocols and standards for reconciling and balancing downstream gas, and providing and disclosing of data and information, are efficient, fair, and reliable;
- standardise data exchange protocols across the industry and ensure the correct data is communicated to all affected parties in a timely manner;
- provide for consistent, transparent, and enforceable processes;
- facilitate retail competition and ensure barriers to competition are minimised;

- establish more transparency of the full costs of balancing and reconciling gas;
and
- provide for more accurate identification and fairer allocation of the amount of unaccounted for gas (together, the “regulatory objective”).

3 Legislative Framework

Powers under the Gas Act 1992

Specific powers for proposed downstream reconciliation arrangements

- 3.1 The Gas Act allows the Government to directly regulate gas industry participants to ensure effective outcomes for consumers of gas. Section 43F(2)(a) of the Gas Act provides that the Minister of Energy can recommend to the Governor-General the making of regulations for the purpose of providing for the establishment and operation of wholesale markets for gas, including for “protocols and standards for reconciling and balancing gas”.
- 3.2 In exercising the power to recommend rules or regulations to the Governor General under section 43F, the Minister of Energy may only make a recommendation if the recommendation implements the effect of a recommendation from Gas Industry Co (as industry body) and does not differ from that recommendation in any material way (section 43J(1)(b) of the Gas Act).
- 3.3 Gas Industry Co also has the power under section 43F(2)(c) of the Gas Act, to recommend rules or regulations “prescribing reasonable terms and conditions for access to transmission or distribution pipelines.”

Supplementary powers

- 3.4 In addition, section 43S of the Gas Act includes supplementary empowering provisions in respect of regulations or rules made under Subpart 1 of Part 4A of the Gas Act. Those provisions include the power to make rules or regulations to:
 - “(a) *provide for 1 or more persons or bodies or groups of persons to carry out functions in relation to those regulations or rules, and for matters concerning their establishment, constitution, functions, members (including their appointment, removal, duties, and protection from liability), procedures, employees, administration and operation, funding by industry participants and reporting requirements:*
 - (b) *provide for systems, processes and procedures (including dispute resolution procedures), and the keeping, supply and disclosure of information, in relation to any of the matters specified in this subpart:*
 - (c) *prescribe the form and manner in which information is to be disclosed:*
 - ...
 - (e) *prescribe when and for how long information must be disclosed:*
 - (f) *exempt or provide for exemptions (including provide for the revocation of exemptions), on any terms and conditions, of any person or class of persons from all or any of the requirements in regulations or rules made under this subpart:*

- (g) *provide for the supply of information for the purpose of administration and enforcement of this Act, and regulations and rules made under this Act:*
- (h) *provide for transitional provisions:*
- (i) *provide for any other matters contemplated by this Act or necessary for its administration or necessary for giving it full effect.”*

Conclusion on powers

3.5 In order to reconcile and balance the quantities of gas purchased by retailers on the wholesale gas market, it is necessary to have processes for ascertaining the quantities that each retailer’s customers have consumed downstream of the connection to the transmission system. The rules proposed in this paper provide for, amongst other things:

- Mechanisms relating to the estimation of residential consumer consumption, and the frequency and accuracy of meter reading for all consumers;
- Information to be supplied by retailers and transmission system owners to a single allocation agent appointed by Gas Industry Co;
- Methodologies for the allocation of gas, and the calculation and allocation of UFG, to retailers;
- Publication of data; and
- Audit and compliance processes.

3.6 Gas Industry Co believes the collective powers in the Gas Act support the proposed draft rules for downstream allocation and reconciliation set out in this Statement of Proposal.

Legal requirements when recommending rules or regulations

Section 43L consultation

3.7 Prior to Gas Industry Co recommending rules or regulations to the Minister of Energy under the Gas Act, it must first comply with section 43L(1) of the Gas Act. This section requires Gas Industry Co to:

- “(a) *undertake an assessment under section 43N; and*
- (b) *consult with persons the recommending body thinks are representative of the interests of persons likely to be substantially affected by the proposed regulations; and*
- (c) *give those persons an opportunity to make submissions; and*
- (d) *consider those submissions.”*

Section 43N(1) assessment

3.8 The assessment under section 43N(1) of the Gas Act, requires Gas Industry Co to:

- “(a) seek to identify all reasonably practicable options for achieving the objective of the regulation; and
- (b) assess those options by considering-
 - (i) the benefits and costs of each option; and
 - (ii) the extent to which the objective would be promoted or achieved by each option; and
 - (iii) any other matters that the industry body or the Commission considers relevant; and
- (c) 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); and
- (d) prepare a statement of the proposal for the purpose of consultation under section 43L(1).”

Section 43N(2) Statement of Proposal

3.9 A statement of proposal must, under section 43N(2) of the Gas Act, contain:

- “(a) a detailed statement of the proposal; and
- (b) a statement of the reasons for the proposal; and
- (c) an assessment of the reasonably practicable options, including the proposal, identified under subsection (1); and
- (d) other information that the industry body or the Commission considers relevant.”

3.10 This paper constitutes a statement of the proposal provided for the purposes of consultation as required by sections 43N and 43L of the Gas Act. The paper is structured as follows:

- A detailed statement of the proposal is set out in section 8;
- A statement of the reasons for the proposal, including the issues with the current arrangements identified by Gas Industry Co, is set out in section 5;
- The reasonably practicable options identified by Gas Industry Co for resolving those issues are set out in section 5; and
- Gas Industry Co’s assessment of the reasonably practicable options, including the proposal, is set out in section 7.

Rules and regulations

3.11 Section 43Q(1) of the Gas Act allows the Minister of Energy to make a rule for all or any of the purposes for which a gas governance regulation may be made.

3.12 Under section 43Q(2) of the Gas Act, in deciding whether to make a

recommendation for a rule, the Minister must only have regard to the following:

- “(a) the importance of the rule, including whether the rule has a material effect on the rights and interests of individuals:*
- (b) the subject matter of the rule, including whether the rule contains detailed or technical matters rather than matters of general principle:*
- (c) the application of the rule, including-*
 - (i) whether the rule applies principally to a particular group (e.g. industry participants) rather than the general public:*
 - (ii) whether the benefits of publication in accordance with section 43R rather than the Acts and Regulations Publication Act 1989 outweigh the costs of publication by that method:*
- (d) the expertise and rule-making procedures of the recommending body.”*

3.13 Given that the proposed allocation and reconciliation arrangements:

- govern the limited domain of processes for allocating and reconciling downstream quantities of gas between retailers;
- incorporate detailed and technical matters affecting gas supply and distribution;
- apply to retailers, distributors and meter owners only, who are all industry participants;
- are aimed at making allocation and reconciliation processes more efficient;
- will be readily accessible, at no charge and at all reasonable times, on both an internet site maintained by the Minister of Energy and on Gas Industry Co’s website making the cost of publication under the Act and Regulations Publication Act unwarranted; and
- have been drafted by Gas Industry Co, a co-regulatory body set up by the Government to undertake the specific task of regulating the New Zealand gas industry through rules or regulations where appropriate,

Gas Industry Co has concluded that it is appropriate that they should be implemented by way of rules rather than regulations.

4 Background

Why is downstream allocation and reconciliation necessary?

- 4.1 Effective and accurate arrangements for allocation and reconciliation of gas quantities are key components of an efficient gas market. Each participant needs to know how much gas is going into the system, who is taking what gas out and how much gas is unaccounted for.
- 4.2 Allocation is the process of determining the gas quantities for which individual parties are responsible. Downstream allocation requires the identification of the quantities of gas delivered by each upstream shipper who ships gas to a gas gate and the quantities received (and used) at that gas gate by each retailer who delivers gas to customers on the distribution network downstream of the gas gate.
- 4.3 The allocation to each retailer (and upstream to each shipper) is based on a range of information, including identifying which retailer is serving each customer, and meter readings or retailers' estimates (or "forecasts") of usage by particular customers or customer groups on the network.
- 4.4 The process of allocating quantities of gas to retailers is undertaken by an allocation agent specifically appointed to carry out that task.
- 4.5 The methodology for determining a gas allocation is complex. Allowance must be made for the fact that not all customer meters on the network can be read simultaneously at the end of each allocation period. This means that some estimation is necessary to identify how much gas has been used by certain customers during the relevant period. Allowance must also be made for the fact that not all gas recorded on gas meters can be accounted for in customers' actual gas usage. Unaccounted-for-gas or UFG includes, for example, metering errors, errors in the estimates of customer usage, accounting and registration errors, theft, and leakage of gas. UFG is discussed in more detail in section 6 of this paper.

Current allocation and reconciliation arrangements

- 4.6 The current downstream allocation and reconciliation processes are governed by the Reconciliation Code, which came into effect in July 2000 and requires all retailers and meter owners to comply with its provisions as part of network services agreements with various distributors. The Code is given legal effect through network services agreements entered into between distributors and retailers, and allocation agreements between the allocation agent and the parties requiring allocation services. In addition, industry participants may contractually agree different reconciliation processes.³
- 4.7 The Reconciliation Code specifies six allocation groups based on the availability of metering information, annual consumption, and whether the end user site has

³ A copy of the Reconciliation Code is available on Gas Industry Co's website at http://www.gasindustry.co.nz/Gas_Allocation.html

certain approved profiles (e.g. static deemed profile or dynamic deemed profile)⁴.

- 4.8 Under the Reconciliation Code, the allocation agent:
- must provide a month end daily energy allocation service;
 - may provide a day end estimated energy information service; and
 - may provide a month end monthly energy allocation service.
- 4.9 Under the month end daily energy allocation service, within a certain period of time from the end of a month, retailers are required to provide to the allocation agent the quantities of gas that their customers at each gas gate have used during that month based on actual meter reads or estimations of use. The allocation agent collates the quantities of all retailers, matches those quantities to the quantities injected at the gas gate from the transmission system, and calculates the difference. The quantities plus the difference are then allocated to each retailer using the allocation methodology specified for the gas gate. The difference is allocated as UFG.
- 4.10 The allocation agent is able to correct allocations at any time. Generally corrections should be included in the next allocation. However, the allocation agent has a discretion where the impact of the error is material. There is no clear, transparent process for the performance of error corrections.
- 4.11 The reconciliation year runs from 1 October through to 30 September. The Reconciliation Code states that the allocation agent will perform an annual reconciliation in October each year to verify the reasonableness of the estimating methodology and resulting estimates used in any allocation during the previous 12 months.
- 4.12 The Reconciliation Code provides for a choice of two allocation methodologies, “difference” and “global”. The default methodology is difference. Where global is more appropriate at a particular gas gate, the allocation agreement allows the nominated “incumbent” retailer to change at its discretion to the global method from the beginning of a month. However, Gas Industry Co understands that where incumbents have tried to change the methodology they have often received significant resistance from other industry participants to change. The allocation agent is also able to mandate a change to global where the agent determines that the change should be made having regard to the core principles in the Reconciliation Code.
- 4.13 Gas Industry Co understands that there are currently 78 shared gas gates in respect of which allocation and reconciliation services are provided. Of the distribution networks connected at those gas gates, Vector owns and operates 47, Powerco 27 and GasNet 4. Although a variety of allocation and reconciliation

⁴ A profile can be approved where there is a high degree of confidence that the profile will reflect the daily consumption. For example, if a customer only consumed gas on Wednesdays then an annual profile may be approved that only allocated gas to that customer on Wednesdays in that year.

services are possible under the Reconciliation Code, the most common service for a shared gas gate is a month end daily energy allocation service using the difference allocation methodology. The incumbency for each shared gas gate was determined at the commencement of the Reconciliation Code in 2000 and was assigned to the retailer with the most customers at that particular gate. The current incumbencies are:

- Genesis: 51 gas gates;
- Contact: 17 gas gates; and
- Energy Direct (NZ) (formerly Wanganui Gas): 4 gas gates.

- 4.14 Gas Industry Co understands that, although it is no longer the case that at all gas gates the incumbent is the largest retailer, the incumbencies for each gas gate have not changed since 2000.
- 4.15 At gates which use the difference method of allocation, the Reconciliation Code does not require the incumbent retailer to provide any consumption data. All other retailers provide consumption data for all their customers. Once the allocation agent has determined the quantities of gas used by all the non-incumbent retailers, those quantities are “scaled up” using the loss factor ascribed to the relevant gas gate by the distributor. Gas Industry Co understands that the loss factors currently being used by the allocation agent are the same factors that were provided by the distributors at the inception of the Reconciliation Code in 2000. Those loss factors are split by regions rather than specific gas gates. The balance of gas, including any UFG, is then allocated to the incumbent retailer. The issues created for the allocation of UFG by the difference methodology are discussed in more detail in section 6 of this paper.
- 4.16 There are 6 gas gates where a global method of allocation is used. At these gates the allocation agent uses a variation of the global method specified in the Reconciliation Code, which is commonly referred to as the “1 month UFG” method. Under the 1 month UFG method, the actual UFG is calculated for each gas gate and then allocated to all customer types. By contrast, under the global method specified in the Code, it appears that UFG is only allocated to customers in allocation groups 5 and 6. Gas Industry Co understands that the change to the 1 month UFG method was initiated by the allocation agent in response to particular issues at those gas gates which tend to have one large TOU customer supplied by a non-incumbent retailer and taking the bulk of the gas used at the gas gate.
- 4.17 A model allocation agreement is included in the Reconciliation Code for use by retailers and distributors. The model allocation agreement covers, amongst other things, the appointment of the allocation agent. This means that all parties to a particular agreement must agree on the appointment of the allocation agent. However, appointment of the allocation agent and execution of allocation agreements can be difficult. Gas Industry Co understands that the appointment for the reconciliation year beginning 1 October 2006 was very problematic, with retailers failing to reach unanimous agreement. Currently only one entity within New Zealand is offering downstream allocation and reconciliation services (Tom Tetenburg and Associates Ltd).

- 4.18 Part B of the Reconciliation Code sets out industry agreed arrangements for customer transfers between competing retailers. These arrangements will be replaced by the switching rules recommended to the Minister of Energy by Gas Industry Co on 31 May 2007.

5 Identification of Reasonably Practicable Options

- 5.1 Before making a recommendation to the Minister for rules or regulations, section 43N of the Gas Act requires Gas Industry Co to (amongst other things):
- Seek to identify all reasonable practicable options for achieving the objective of the regulation or rule;
 - Assess those reasonably practicable options by considering:
 - The benefits and costs of each option;
 - The extent to which the objective would be promoted or achieved by each option; and
 - Any other matters that Gas Industry Co considers relevant; and
 - Ensure that the objective of the regulation or rule is unlikely to be satisfactorily achieved by any reasonable practicable means other than the making of the regulation or rule (for example, by education, information, or voluntary compliance).
- 5.2 In this section of the paper, Gas Industry Co:
- Describes its review of the current downstream allocation and reconciliation arrangements;
 - Sets out the issues with the current arrangements; and
 - Sets out the reasonably practicable options that it identified to resolve those issues in the course of that review.
- 5.3 Gas Industry Co's full statement of the proposal for downstream allocation and reconciliation arrangements, including the decisions it has made in respect of each other options identified in this section, is set out in section 8 of this paper.

Review of current arrangements

- 5.4 Gas Industry Co's review of the current downstream allocation and reconciliation arrangements was initiated following feedback received from both the Switching and Registry Working Group ("SRWG") and industry participants.
- 5.5 The Gas Allocation and Reconciliation Team ("GART") was established to assist Gas Industry Co review downstream allocation and reconciliation issues. The Wholesale Market Working Group ("WMWG") and the current allocation agent have also been involved in discussions on potential improvements.
- 5.6 In summary, the review of downstream reconciliation arrangements undertaken by Gas Industry Co to date has included:

- numerous meetings of GART and discussions with other industry stakeholders, such as Tom Tetenburg and Associates Ltd;
- releasing discussion papers in June 2006 and January 2007, and consideration of the submissions received on them; and
- analysis of the preferred approach for resolving each of the issues identified with the current arrangements, including obtaining expert reports as required.

Issues with current arrangements

June 2006 discussion paper

- 5.7 The purpose of the June 2006 discussion paper was to review the current arrangements for downstream and upstream allocation and reconciliation, identify the issues with each set of arrangements, and outline some preliminary proposals for improvements for comment by stakeholders.
- 5.8 The key issues identified in the June 2006 discussion paper were:
- poor compliance and ineffective governance;
 - the need for all parties using a gas gate to agree on an allocation agent;
 - inequitable allocations of UFG to the incumbent retailer; and
 - misalignment between consumption data for TOU customers provided for month-end allocation and annual reconciliation.
- 5.9 Gas Industry Co proposed to proceed with addressing these issues in the immediate term, and take a longer term approach to some of the other issues once there was greater clarity around gas balancing mechanisms, wholesale market design and open access improvements.
- 5.10 The discussion paper also sought feedback on whether it was appropriate to codify the existing allocation and reconciliation arrangements into rules made by the Minister of Energy. It was suggested that rules might be the most efficient and effective solution to improve the most pressing reconciliation issues in the short term, while facilitating improvements in the longer term.
- 5.11 A total of nine responses were received from industry stakeholders. Respondents were generally in agreement that it was sensible to prioritise the issues into short and long term; however some respondents sought greater clarification on how these had been prioritised.
- 5.12 Most submissions stated that compliance with, and governance of, both upstream and downstream allocation arrangements was poor, leading to undesirable outcomes and potentially inequitable allocation of UFG. The lack of a suitable dispute resolution process was noted as a major contributing factor.
- 5.13 There was general agreement that the process for appointment of the allocation agent needed to be improved. Respondents recognised that, whilst not an issue at

present, there was significant potential for this to become an issue in future. Some respondents believed that Gas Industry Co should become the industry body responsible for appointing the allocation agent. However, others considered that this should only be considered as a fall-back position should industry participants not be able to agree who should perform this function.

- 5.14 There was mixed response to whether the “difference” allocation methodology was the best methodology to meet the needs of industry participants. Both major retailers, Contact and Genesis, indicated a desire for the industry to migrate towards a “global” method. However, there was less support from some of the other participants for this approach.
- 5.15 All submitters agreed that gas gate daily metered quantities should be published, however it was noted that some confidentiality issues may arise around this and that these need to be considered. The majority of submitters were clearly of the view that many of the current issues arise from poor data quality and that this needed to be remedied as soon as possible. General support was received for the proposal to introduce additional wash-up periods for consumption data, subject to agreement on the most appropriate time periods for wash-ups to occur.
- 5.16 There was general consensus that more frequent meter reads would result in better data quality and more efficient allocation and reconciliation processes for determining energy usage. Some submissions suggested that any future rules governing this should be closely aligned with the requirements for meter reads under the Electricity and Gas Complaints Commission scheme. In addition, where estimates regarding consumption levels were made, there was a common view that there was a need for strict accuracy criteria and a minimum percentage of historic read data in estimating energy usage moving forward. All submissions stated that benefits would be obtained from standardised data transfer formats.
- 5.17 All respondents agreed that the two main options identified by Gas Industry Co for making allocation and reconciliation arrangements mandatory (i.e. modification of existing contractual arrangements and rules under the Gas Act) should be considered.
- 5.18 In summary, the responses received on the June 2006 discussion paper broadly agreed with the analysis undertaken by Gas Industry Co which provided a foundation for the further analysis done, and recommendations made, in the January 2007 discussion paper.

January 2007 discussion paper

- 5.19 The January 2007 discussion paper only dealt with downstream allocation and reconciliation issues. Gas Industry Co’s analysis of the issues identified with upstream allocation and reconciliation arrangements in the June 2006 discussion paper suggested that it was premature to develop new upstream processes until other issues, such as the effects of the legacy arrangements, could be resolved.
- 5.20 In the January 2007 discussion paper, Gas Industry Co:

- Proposed an objective against which the proposed arrangements for downstream allocation and reconciliation should be measured for the purposes of section 43N of the Gas Act;
 - Undertook further analysis of the areas where the current arrangements are failing to appropriately meet that objective; and
 - Identified a number of detailed options to address those areas.
- 5.21 Copies of the submissions received on the June 2006 and January 2007 discussion papers are available on Gas Industry Co's website.⁵
- 5.22 In order to recommend rules for downstream allocation and reconciliation, Gas Industry Co is required to identify the reasonably practicable options for achieving the regulatory objective and assess how best they achieve that objective. The reasonably practicable options identified by Gas Industry Co to resolve each of the problem areas identified during the review are set out below. Gas Industry Co's assessment of those options, including the proposed rules, is set out in section 7 of this paper.

Reasonably practicable options identified

- 5.23 Having considered submissions on the June 2006 discussion paper, in the January 2007 discussion paper Gas Industry Co undertook further analysis of the problem areas identified with the current arrangements and identified a number of options for resolving those problems. A table setting out the problem areas, and the detailed options identified in the January 2007 discussion paper to resolve them, is attached as Appendix 1 to this paper.
- 5.24 A high level summary of each of the problem areas and the options identified to resolve them in the January 2007 discussion paper.
- 5.25 A complete statement of Gas Industry Co's proposal for downstream allocation and reconciliation arrangements, including the decisions made by Gas Industry Co in response to submissions on the January 2007 discussion paper, is set out in section 8 of this paper.

Appointment of the allocation agent

- 5.26 It was proposed that the allocation agent be appointed by Gas Industry Co for an initial term of 5 years under a service provider agreement. The initial term of 5 years was suggested to give appropriate certainty to industry but not lock in arrangements for an inefficient period. It was considered that a short period would be inefficient due to the need to recover the costs of a tender process.
- 5.27 The remuneration of the allocation agent would be agreed as between Gas Industry Co and the allocation agent in an allocation agent service provider agreement. Gas Industry Co and the allocation agent would agree on any other

⁵ See submissions on June 2006 and January 2007 discussion papers at http://www.gasindustrycompany.co.nz/Previously_consulted.php

terms and conditions, consistent with the functions, rights, powers and obligations of the allocation agent under the proposed rules.

- 5.28 Gas Industry Co's proposal in relation to appointment of the allocation agent is set out at paragraphs 8.8 to 8.10.

Allocation groups

- 5.29 In the January 2007 discussion paper it was proposed that energy consumption information be provided to the allocation agent according to the allocation group to which it relates, defined as follows:

- Allocation Group 1: TOU meter with telemetry where the gas quantities recorded are the actual daily quantities.
- Allocation Group 2: TOU meter without telemetry where the gas quantities recorded are the actual daily quantities.
- Allocation Group 3: Non-TOU meter where the daily gas quantities are to be determined by application of an approved static deemed profile to the estimated monthly quantity for the installation.
- Allocation Group 4: Non-TOU meter where the daily gas quantities are to be determined by application of the gas gate residual profile to the estimated monthly quantity for the installation.
- Allocation Group 5: Non-TOU meter where the daily gas quantities are to be determined by application of an approved dynamic deemed profile to the estimated monthly quantity for the installation.
- Allocation Group 6: Non-TOU meter where the daily gas quantities are to be determined by application of the gas gate residual profile to the estimated monthly quantity for the installation.

- 5.30 Because there are currently no customers that fall into allocation groups 3 and 5, GART considered the option of eliminating those two groups. However, it was decided to retain them for the purposes of the proposed new arrangements.

- 5.31 Gas Industry Co's proposal for allocation groups is set out at paragraphs 8.11 to 8.12.

Meter types

- 5.32 The rules should include an obligation for meter owners to ensure that the metering equipment complies with NZS 5259:2004.
- 5.33 It was proposed that retailers be required to ensure a TOU meter is installed for consumer installations for which the rolling 12 months actual consumption, or expected annual gas usage, is greater than 10 TJ. These consumer installations will be assigned to allocation groups 1 or 2. A consultation question was asked specifically about whether the threshold should be 5TJ instead of 10TJ.

- 5.34 Where the rolling 12 months actual consumption, or expected annual gas usage, is greater than 250GJ, then retailers need to ensure that either a TOU meter is installed and the consumer installation is assigned to allocation groups 1 or 2, or if non-TOU metering is installed then the consumer installation is assigned to allocation groups 3 or 4.
- 5.35 Gas Industry Co's proposal on meter types is set out at paragraphs 8.13 to 8.16.

Meter reading requirements

- 5.36 It was proposed that differing meter reading requirements be set out in the rules depending on the type of allocation group to which the consumer installation belongs.
- 5.37 It was suggested that retailers should be required to obtain a meter reading at least once every 12 months for every consumer installation with a standard meter that the retailer supplies, with an allowance for those consumer installations for which exceptional circumstances prevent a meter reading. An example of exceptional circumstances could be where access to the relevant meter is not achieved despite the best endeavours of the retailer.
- 5.38 The following meter reading requirements were proposed: 95% of each retailer's allocation group 5 and 6 meters at each gas gate to be read within each quarter and 100% within each gas year.
- 5.39 The submissions on the January 2007 proposals largely agreed with the proposed requirements, however there were some reservations. Two submitters felt that the requirements should mirror those in the Electricity Governance Rules to achieve the best efficiencies for those retailers which provide both gas and electricity. Other submitters felt that meter reading should be more frequent than at least once every 3 or 4 months.
- 5.40 Gas Industry Co understands that, in practice, most retailers attempt to read non-TOU meters every two months. However, meeting a requirement to read every meter (or a high proportion of meters) every two months would require a great deal of investment and resource from retailers to absolutely ensure this was met.
- 5.41 Gas Industry Co's proposal on meter reading requirements is set out at paragraphs 8.17 to 8.19.

File Formats

- 5.42 It was recognised in the January 2007 discussion paper that there is currently a lack of standardised file formats and data requirements, so it was proposed that a Gas Data Formats Group be established to develop, and later review (as and when appropriate), standardised file formats and forward to Gas Industry Co for approval and publication. Submitters were in favour of this proposal.
- 5.43 Gas Industry Co's proposal on file formats is set out at paragraph 8.20.

Provision of information by retailers

- 5.44 Currently retailers supply consumption information to the allocation agent for all consumer installations depending on the type of allocation group to which the consumer installation belongs:
- Daily consumption information for each consumer installation in allocation groups 1 and 2;
 - The aggregate estimated daily energy quantities by gas gate of consumer installations in allocation group 3, and the number of consumer installations included;
 - The aggregate estimated daily energy quantities by gas gate for consumer installations in allocation group 5 and the number of consumer installations included; and
 - The aggregate estimated month energy quantities by gas gate for all consumer installations in allocation groups 4 and 6.
- 5.45 It was proposed that retailers continue to provide consumption information for all consumer installations where they are the responsible retailer, including where the property is vacant but gas is still able to flow.
- 5.46 The arrangements will also need to reflect the fact that, under the switching rules, Gas Industry Co is required to determine and publish the definitions of the six different allocation groups, which may change over time.
- 5.47 It was proposed that there be three allocations performed by the allocation agent - initial (at each month end), interim (after a further 3 months), and final (12 months after initial allocation).
- 5.48 Gas Industry Co's proposal on provision of information by retailers is set out at paragraphs 8.21 to 8.26.

Provision of information by transmission system owners

- 5.49 Timeframes were suggested for transmission system owners to provide month end daily volume injection information for each gas gate connected to the transmission system to the allocation agent. In addition to this, it was also proposed that each transmission system owner publish estimated day end volume injection quantities in GJ for each gas gate connected to its transmission system at 12pm each day (and at any other time as required and notified by Gas Industry Co).
- 5.50 Gas Industry Co's proposal on provision of information by transmission system owners is set out at paragraphs 8.27 to 8.28.

Estimation of consumption information

- 5.51 There are currently significant inaccuracies arising from the estimation methodologies being employed to estimate the usage of non-TOU customers whose meters are not read monthly. Retailers use a variety of methodologies to

forecast monthly consumption, called forward estimation. Once the next actual reading has been taken, previous estimates are re-calculated based on the new data. This is called historical estimation.

- 5.52 A forward estimate is an estimation of the total quantity of gas that flowed through a consumer installation during all or part of a consumption period, which is used for any period for which an historical estimate cannot be calculated. By contrast, an historic estimate uses actual meter readings to determine an estimate of the total quantity of gas that flowed through a consumer installation during all or part of a consumption period.
- 5.53 The January 2007 discussion paper proposed that retailers submit normalised data for allocation groups 3 to 6 for each calendar month, and that data was to be normalised on a simple pro-rated basis (the retailer takes the two readings on either side of the month and calculates an average daily quantity in order to estimate the consumption for the calendar month in question).
- 5.54 The paper also recommended:
- Not to introduce a single methodology for forward estimates at this time, but to maintain a watching brief in this area.
 - To introduce estimation accuracy criteria for non-TOU metering. The proposed criteria would compare the accuracy of data provided for the initial month end allocation against the data provided for the final allocation 12 months later. It was suggested that the initial allocation data be required to be within +/- 2% of the final allocation data.
- 5.55 Some submitters thought that estimation methods should be prescribed, whilst others felt that the normalisation method proposed may not improve accuracy. Their preference was to apply a seasonal adjustment profile shape. Only one submitter completely disagreed with the proposal to require normalisation of data, but most submitters had comments on its application and expressed a few concerns. A number of other suggestions were made by GART in March 2007 in respect of which Gas Industry Co developed a "straw man" solution for consideration by GART and other industry participants on 12 April 2007.
- 5.56 The submissions received on the estimation accuracy criteria were concerned about the accuracy threshold of +/-2%, when a rolling 3 month basis was used. It was suggested there may have been some confusion about the +/-2% threshold specified in the Reconciliation Code, which is intended to be used as a guideline for the annual reconciliation process (which compares the allocated quantities for the 12 months with the actual quantities to determine if the estimation methodology self corrects under and over estimates). Comparing 12 months data removes the impact of seasonality in the consumption data.
- 5.57 Gas Industry Co's proposal on estimation of consumption information is set out at paragraphs 8.29 to 8.33.

Loss factors

- 5.58 Under the Reconciliation Code, the loss factors determined by distributors are used by the allocation agent to scale delivery point gas quantities (i.e. measured at the customer's site) up to equivalent receipt point (gas gate) quantities. Retailers take these loss factors into account when determining their tariffs, since they are a cost of supplying gas to customers. Unless loss factors are regularly updated they quickly become irrelevant or inaccurate.
- 5.59 It was proposed in the January 2007 discussion paper that loss factors be calculated and published by distributors each gas year on a per gas gate basis. Each updated loss factor would apply to all metering devices at the gas gate and there would be no mandated process for this calculation.
- 5.60 There were a number of submissions made on the definition of losses and the process for calculating and publishing loss factors. This issue was discussed by industry participants at the GART meeting on 12 March 2007, where it was noted that a move to global reconciliation would eliminate the need for distributors to publish loss factors as the "losses" at a gas gate would be allocated via the mechanism agreed upon for the distribution of UFG. However, at a subsequent GART meeting on 12 April 2007, industry participants discussed the concept of having a technical loss factor (calculated by distributors) which represented the actual "physical", or "technical" losses (rather than non-technical losses such as theft, metering error, etc, which would be captured by UFG), was discussed. These "technical" losses would be losses such as leakage of gas on the distribution network,
- 5.61 Allocation of UFG, and the need for loss factors, is discussed in more detail in section 6 of this paper. Gas Industry Co's proposal on allocation methodology and allocation of UFG is set out in paragraphs 8.34 to 8.39.

Global allocation of UFG

- 5.62 It was proposed that the allocation agent use a "global" method of allocation in order to conduct an initial allocation, an interim allocation, a final allocation and any special allocation.
- 5.63 The allocation agent should have the power to estimate consumption information if a retailer has failed to provide the consumption information for the relevant allocation by the times and on the days specified, and the allocation agent is satisfied that the estimate will result in a reasonably reliable allocation. If the allocation agent is not satisfied that an estimate of consumption information will result in a reasonably reliable allocation, the allocation agent should not be required to perform an allocation.
- 5.64 It was also proposed that the allocation agent would determine a UFG factor on a monthly basis and apply this across both TOU and non-TOU customers. This methodology was called "one month global". A number of submissions raised significant opposition to the proposed methodology.
- 5.65 Further work undertaken by Gas Industry Co relating to UFG is discussed in

section 6 of this paper. Gas Industry Co's proposal on allocation methodology and allocation of UFG is set out in paragraphs 8.34 to 8.39.

Allocation agent obligations

- 5.66 In addition to performing the allocations proposed, it was also suggested that the allocation agent would publish the following reports in respect of each gas gate:
- The total gas energy injected for the month, as provided by the transmission system owner;
 - The aggregate of all energy consumption for the month as derived by the allocation agent from the consumption information provided by retailers;
 - The quantity and percentage of UFG for the month; and
 - Whether the information relates to an initial allocation, interim allocation, final allocation or special allocation.
- 5.67 Gas Industry Co's proposal on allocation agent obligations is set out in paragraphs 8.40 to 8.42.

Special allocations

- 5.68 It was proposed that up to and until 12 months after a final allocation has been performed, Gas Industry Co should have the power to require the allocation agent to perform a special allocation in addition to, or in combination with, an initial allocation, interim allocation, or final allocation.
- 5.69 To require a special allocation in between the time period for two scheduled allocations, Gas Industry Co must be of the opinion that the current allocation information or allocation results are sufficiently unfair that it is not appropriate to wait until the next scheduled interim or final allocation is performed. In making such a decision, Gas Industry Co should balance the unfairness of the current allocation information or allocation results against any commercial reasons for retaining the current allocations.
- 5.70 Gas Industry Co's proposal on special allocations is set out in paragraphs 8.44 to 8.46.

Notification requirements

- 5.71 The proposal included a number of notices that participants would need to provide in order to assist in the achievement of accurate reconciliation, namely:
- Retailers to provide notice to the allocation agent before they begin trading at a gas gate;
 - Distributors to provide notice to retailers supplying gas on its distribution system containing information relevant to consumer installations; and

- Meter owners to provide notice to retailers of certain information regarding the meter at the retailers' consumer installations.

5.72 Gas Industry Co's proposal on notification requirements is set out at paragraph 8.47.

Profiles

5.73 It was proposed to provide for the use by retailers of two types of profiles:

- static deemed profiles which are pre-determined estimates of daily gas quantities used to define the daily profile of consumption during a consumption period for the consumer installation or class of consumer installations to which they apply; and
- dynamic deemed profiles which are consumption profiles that change in accordance with information obtained from TOU meters installed at one or more sample consumer installations that are representative of the daily consumption profile of the consumer installation or class of consumer installations to which they apply.

5.74 However, retailers would only be able to use such a profile if it is registered for use by the retailer and has been approved by the allocation agent in relation to that consumer installation or installations. To provide for this, the allocation agent would need to establish a register to record profiles. The register would not be published.

5.75 In order to register a profile in relation to one or more particular consumer installations the retailer would be required to provide information to the allocation agent in relation to that or those consumer installations. Any profiles registered prior to the implementation date of the proposed arrangements would be automatically registered. The retailer requesting the registration of the profile would pay the allocation agent a registration fee.

5.76 Gas Industry Co's proposal on profiles is set out at paragraphs 8.48 to 8.51.

Audits

5.77 An effective audit regime is necessary to ensure that accurate reconciliation occurs. In order to meet this requirement, the following regime was proposed:

- Gas Industry Co to appoint independent auditor(s) as required for regular and ad hoc audits.
- auditors should be able to audit performance and systems of any industry participant and the allocation agent and ascertain the causes of a particular issue or event;
- Gas Industry Co to determine when regular and ad hoc audits should occur at its discretion. Any industry participant may ask Gas Industry Co to request an audit, but Gas Industry Co will screen requests to ensure audits are reasonable and vexatious or frivolous audits do not occur. Regular audits will not be

subject to a pre-determined timeframe but instead the timeframes will be set by Gas Industry Co;

- payment for audits will be based on the principle that a party at fault is responsible for paying an appropriate portion of the audit cost;
- participants will be required to provide an auditor with requested information, although some information may be exempt (e.g. information subject to legal privilege) and audit reports may be subject to confidentiality requirements where appropriate;
- all audit reports shall be first circulated in draft and an appropriate opportunity provided for industry comment;
- subject to confidentiality, final audit reports will be published on Gas Industry Co's website.

5.78 Gas Industry Co's proposal on audits is set out at paragraphs 8.52 to 8.58.

Funding

5.79 In the January 2007 discussion paper it was proposed that any development costs for the reconciliation arrangements would be funded through the levy, with ongoing allocation costs funded through an "ongoing fee" charged to retailers based on numbers of ICPs. The paper also noted that many of the "one-off" costs, such as for setting up new gas gates and deemed profiles, would continue to be covered by the allocation agent's standard charges and invoiced directly to the relevant retailer.

5.80 A number of submitters disagreed with the suggestion that the ongoing fee be calculated based on number of ICPs and considered that it would be more equitable to retain the existing practice of charging allocation fees based on volumes.

5.81 Gas Industry Co's proposal on funding is set out at paragraphs 8.59 to 8.63.

Governance

5.82 As well as the options for resolving each of the detailed issues identified in the review, in the January 2007 discussion paper Gas Industry Co considered the governance requirements for the proposed new arrangements.

5.83 Two reasonably practicable options were identified for further consideration – being a regulatory arrangement or pan-industry agreement. As a number of advantages were identified with a regulatory arrangement, a framework for regulations or rules which could be used as a starting point for instructing external lawyers was attached to the paper.

5.84 Gas Industry Co's proposal on governance is set out at paragraph 8.3 of this paper.

Compliance and enforcement

- 5.85 It was proposed in the January 2007 discussion paper that a statutory compliance regime would be implemented to support the allocation and reconciliation arrangements. It was envisaged that such a regime would be similar to that currently proposed for switching. All submitters agreed with the proposal.
- 5.86 Gas Industry Co's proposal for compliance and enforcement of the proposed arrangements is set out in section 9 of this paper.

Issues identified with proposed options

- 5.87 In general, the submissions were supportive of the preferred options for resolution of the issues identified with the current arrangements. In particular, submitters indicated overall support for a regulatory arrangement. A number of submitters made specific comments about the regulatory framework which have been considered and taken into account.
- 5.88 However, two issues were identified as requiring further consideration and consultation with stakeholders. They were:
- Regulatory Objective: Whether the proposed downstream reconciliation arrangements impacted upstream balancing and reconciliation arrangements and, if so, whether these impacts were sustainable/acceptable. This issue is discussed in more detail below.
 - Allocation of UFG. This issue is discussed in more detail in section 6 of this paper.

Regulatory objective

- 5.89 One of the key issues raised was the proposal to limit the current review of reconciliation arrangements to the allocation and reconciliation of quantities downstream of the gas gate.
- 5.90 "Downstream allocation" refers to allocation of gas at a gas gate where the high pressure transmission pipelines interconnect with low pressure distribution pipelines. The allocation determines the quantity of gas delivered by each transmission shipper to the gas gate and the quantity of gas for which each retailer on the distribution network is responsible. These arrangements are currently specified in the Reconciliation Code.
- 5.91 Distribution networks connected to the Vector Transmission ("VT") pipelines that have multiple retailers supplying gas to customers connected to them are required by VT to have arrangements in place for allocation and reconciliation of gas quantities that comply with the Reconciliation Code. There is also a very small number of distribution networks connected directly to the Maui pipeline. Gas Industry Co understands that allocation and reconciliation on those networks is also performed in accordance with the Reconciliation Code.
- 5.92 "Upstream allocation" refers to allocation of quantities of gas supplied at "gas transfer points" where gas enters the VT pipeline. Gas transfer points are mostly

points of interconnection between the Maui and VT pipelines, although the point at which the Kapuni gas treatment plant injects gas into the VT pipeline is also a gas transfer point. Arrangements for allocation of upstream gas quantities are currently specified in the Gas Transfer Code.

- 5.93 The proposal in the January 2007 discussion paper that the current review be limited to downstream allocation and reconciliation arrangements was considered necessary to ensure sufficient progress was able to be made in a timely manner, with review of upstream reconciliation arrangements being delayed while work continues on issues relating to legacy gas and upstream balancing.
- 5.94 Several submitters expressed concern about the impact of the proposal to move to four and thirteen month allocations (see paragraph 5.47 above) and, in particular, the need to re-allocate gas between the initial and interim allocations (referred in the June 2006 discussion paper as “wash-ups”). It was suggested that such wash-ups could have a significant impact on upstream balancing and reconciliation arrangements by requiring upstream allocations to be revisited after they have been settled at each month end.
- 5.95 Given the level of concern expressed in the submissions on this issue, Gas Industry Co commissioned an investigation into the implications, if any, of excluding upstream allocation and reconciliation arrangements from the current review. A copy of that report is available on Gas Industry Co’s website⁶.
- 5.96 In summary, the report concluded that, despite the concerns expressed in the submissions, it was not possible to identify any issue which would require Gas Industry Co to reconsider its proposal to focus on downstream reconciliation arrangements. In particular, the investigation determined that:
- The need to re-allocate gas downstream largely results from inaccurate estimation and nominations by shippers on Vector’s transmission system.
 - Month-end balancing costs and transmission fees are calculated on the basis of estimations and nominations provided by shippers to VT.
 - Subsequent wash-ups from downstream re-allocations therefore impact upon the month-end allocation of balancing costs and transmission fees between shippers on Vector’s transmission pipelines.
 - Wash-ups are already provided for in the current reconciliation arrangements albeit on an ad hoc basis. The allocation agent currently undertakes wash-ups on a regular basis throughout each month.
 - VT’s arrangements with its shippers provide it with the ability to re-allocate balancing costs and transmission fees between shippers in the event of a wash-up. VT has discretion whether to pass on the effect of a wash-up to its shippers based on a materiality threshold.

⁶ See Energy Acumen Ltd *Report to the Gas Industry Company – The Impact of Downstream Reconciliation Wash-ups on Upstream Balancing Arrangements* 30 March 2007 at <http://www.gasindustrycompany.co.nz/Presentations.php>

- The proposed wash-ups would not impact Maui pipeline allocations.
- Wash-ups target costs to causers more accurately by providing an incentive for Vector's shippers to improve accuracy of estimations and nominations over time.
- Wash-ups could discourage Vector shippers from taking action to correct mismatch or participate in balancing gas tenders at month end although there is no evidence that this is currently the case.

5.97 Gas Industry Co has therefore decided that in the interests of making progress on improving downstream reconciliation arrangements, upstream allocation would continue to be excluded and dealt with at a later date.

Q2: *Do submitters have any comments on the analysis and findings in the Energy Acumen report?*

Conclusion

- 5.98 All of the issues set out above were considered further and discussed with industry participants (including at GART meetings on 12 March, 12 April and 9 August 2007) and, where appropriate, revised proposals developed for inclusion in the proposal set out in section 7 of this paper.
- 5.99 Having identified the reasonably practicable options for resolving the issues identified during its review, in the January 2007 discussion paper Gas Industry Co indicated that it had instructed NZIER perform a cost-benefit analysis to assess which of the two governance options would best achieve the regulatory objective, and provided a framework for a cost-benefit analysis on which submissions were invited. A table of the submissions on that framework are available on Gas Industry Co's website. The cost-benefit analysis is discussed in more detail in section 7.

6 Allocation of UFG

- 6.1 Industry feedback has illustrated that the allocation of UFG is the most contentious downstream reconciliation issue. This section summarises the industry consultation and analysis that Gas Industry Co has performed to date, canvasses possible options that Gas Industry Co has considered, and describes Gas Industry Co's preferred approach towards allocation of UFG.
- 6.2 Many of these issues were also discussed in Gas Industry Co's June 2006 discussion paper and January 2007 discussion paper.

Background information

Industry consultation and process

- 6.3 Gas Industry Co has researched problems with the allocation of UFG to gain as full as possible understanding of the issues. In addition to meeting with GART and other industry participants, publishing the two discussion papers, and researching the treatment of UFG in other jurisdictions, Gas Industry Co engaged Guenter Wabnitz of Maunsell Limited ("Maunsell") to prepare a report on allocation of UFG. A copy of this report is available on Gas Industry Co's website.⁷

What is UFG and how is it caused?

- 6.4 For the purposes of downstream reconciliation, UFG is essentially the difference between the amount of gas which a distributor believes has entered the distribution network at a gas gate and the amount of gas the retailers believe they and their customers have taken from the distribution network connected to that gas gate. The UFG figure is positive for losses and negative for gains.
- 6.5 There appears to be some confusion regarding the use of terminology in this area - in particular, the inter-changeable use of the terms "UFG" and "loss factor". For example, it is not clear whether UFG under the differencing methodology in the Reconciliation Code refers to all gas losses (i.e. before consumption has been "loss factor" adjusted) or only refers to the unaccounted for gas after "loss factor" adjustment.
- 6.6 UFG comprises technical and non-technical gas losses. Technical losses are made up of leakage of gas from distribution pipelines and gas used to operate the pipeline. Unlike electricity networks, technical losses of gas are usually inconsequential. Maunsell estimates that leakage in New Zealand is below 0.2% and losses for operational purposes are also very small (mainly occurring when gas needs to be vented for maintenance reasons or new connections). Maunsell estimates that total technical losses are likely to be below 0.5%.⁸ However, it is

⁷ See Maunsell Limited *Allocation of Unaccounted for Gas* June 2007 at <http://www.gasindustrycompany.co.nz/Presentations.php>

⁸ Maunsell notes that 0.5% is similar to the disclosed technical losses i.e. "shrinkage" in the UK. Shrinkage as disclosed per distribution network in the UK is typically below 1%. See Maunsell's report at 2.2.

possible that during emergencies or anomalous events (such as oil contamination) additional technical losses may occur.

- 6.7 Non-technical UFG arises from a variety of sources including theft, inaccurate meters, meter reading errors, human error, data transfer errors, database system errors, calculation/conversion errors, rounding errors and inaccuracies in the billing methodology (including estimation errors). In New Zealand, non-technical errors usually account for the bulk of UFG and, to this end, UFG can be thought of as an indicator of the quality of the systems of all parties sharing a distribution network.
- 6.8 The proposed reconciliation rules include numerous measures which aim to improve these systems and the quality of information provided, and consequently reduce UFG. As these measures are put in place, and have effect over time, it is envisaged that non-technical losses will reduce.
- 6.9 Retailers with only TOU customers (allocation groups 1 and 2) have argued that the consumption information they provide for those customers is more accurate than the information provided by retailers with mass market customers. The main reason given for this is that TOU meters record consumption daily and therefore do not have any estimation error associated with them.
- 6.10 Estimation errors can be a significant cause of UFG, particularly over a short time frame. For example, May 2007 was unseasonably warm so it is probable that retailers of mass market customers over-estimated their customers' likely consumption during this time.
- 6.11 However, while estimation error is not an issue for TOU meters, other sources of error do occur in the recording and reporting of the consumption of these customers. Further, given that TOU customers tend to have far bigger loads than mass market customers, small errors can result in a large impact on UFG. For example, Maunsell's report includes a discussion on pressure factors which highlights the fact that industrial TOU meters often operate at higher pressures. For this reason, a pressure drop at the meter's regulator or an incorrect setting could result in a significant impact on UFG. The report notes that these pressure factor issues are "an illustration for the argument by some Retailers that the TOU meters cause greater UFG".⁹
- 6.12 Maunsell's report also discusses how other factors (such as the temperature correction factor) can be incorrectly applied, including in relation to customers with TOU meters. According to Maunsell "The temperature correction factor fluctuates over seasons, days and hours and has the greatest potential for being incorrectly used. The billing system should have stored a continuous temperature profile and calculate the correction factor for each individual billing period."¹⁰ Maunsell's report also includes some estimates of the potential error that could be caused by various technical or administrative malfunctions, such as temperature conversion errors and altitude conversion errors.

⁹ See Maunsell's report at 6.2.

¹⁰ See Maunsell's report at 6.3.

How much UFG is there currently?

- 6.13 Unfortunately, because of the manner in which consumption data is currently collected, and the allocation methodologies being used, it is impossible to know with any certainty how much UFG there is currently.
- 6.14 UFG estimates vary depending on the gas gate and period of time being investigated. Some gas gates (e.g. those which currently use global allocation) have better information available on UFG than other gas gates.
- 6.15 The only independent UFG data available is from an allocation agent investigation on UFG in 2006. This data suggests that nationwide the average UFG during 2006 was approximately 2.45%. However, the data indicates that at some gates UFG was much higher.¹¹ For example, UFG at the Tawa gas gate was 7.88%.
- 6.16 While some gas industry participants may dispute the allocation agent's UFG findings, it is important to note that, because of the issues identified with the current allocation and reconciliation arrangements, this UFG information represents the best, and only independent, information available at this point in time.
- 6.17 Maunsell's report concludes that UFG is too high and suggests that the industry should be working towards reducing the annual UFG of each network to below +/- 2%.

How is UFG currently allocated?

- 6.18 The allocation of UFG at shared gas gates varies. The vast majority of gas gates use the "difference" method of allocating UFG, with the remaining handful applying the "1 month UFG" method.
- 6.19 Under the difference method a "loss factor" is used to scale up gas quantities for all retailers except the incumbent (nominated for each network in 2000), with the balance of UFG being allocated to the incumbent. The current loss factors, which range from 0% to 3.16%, were set by the distributors in 2000 and have not been updated since.¹² Under the one month global method UFG is calculated for the gas gate and allocated proportionately to all retailers at that gas gate.
- 6.20 To appreciate the mechanics of the two methodologies it is easiest to consider a working example. Table 1 below compares the outcome of a common usage scenario under each methodology.

¹¹ The analysis in Maunsell's report estimates the UFG by network owner as: Vector (Auckland) 2.52%, Powerco 4.07%, GasNet -0.01%, Vector (NGC) 0.89% and no information available for Novagas (see Maunsell's report Appendix B).

¹² Auckland region 2.31%, Manawatu 0.42%, Hawkes Bay 0.65%, Wellington 2.5%, Waitangirua 0.5%, Taranaki 1.6%, Wanganui 2.0%, Cambridge 0.95%, Gisborne 1.14%, Hamilton 2.4%, Mt Maunganui (0.72%), Rotorua (0.7%), Tauranga 3.16%, Whakatane (0.16%), Whangarei 2.35%, and 30 gas gates use 0% (Source: Tom Tetenburg & Associates)

Table 1 : Working example of difference and one month global allocations

Allocation by Difference		1 Month UFG Allocation	
Process: <ul style="list-style-type: none"> Retailers provide data. Incumbent retailers are not required to provide any data but all do provide data for TOU customers for the purposes of calculating the residual profile. Incumbent retailer information does not affect the overall allocation of UFG but does assist the allocation agent to identify actual UFG. Transmission system operator provides total amount of gas injected into gas gate over the relevant period. The allocation agent calculates the total load of all of the non-incumbent retailers. This load is then adjusted by the loss factor. This adjusted quantity is subtracted from the gas entering the system to calculate the incumbent retailer's load. 		Process: <ul style="list-style-type: none"> All retailers must provide data and there is no "incumbent" retailer identified. Transmission system operator provides total amount of gas injected into gas gate over the relevant period. The allocation agent works out the UFG on the gas gate (i.e. gas gate total less aggregate of consumption data provided by all retailers) and calculates the applicable UFG factor. This factor is then applied to all the data provided by the retailers – under the current one month UFG global method this factor is equally applied to both TOU and non-TOU data. 	
Allocation:		Allocation:	
Loss factor provided by distributor in 2000:	0.8%	Loss factor (of 0.8%) is provided by distributor but this is not utilised in the calculations.	
Data provided to allocation agent		Data provided to allocation agent	
Gas measured at gas gate	80,000GJ	Gas measured at gas gate	80,000GJ
TOU data		TOU data	
Non-incumbent Retailer 1 consumption	20,000GJ	Retailer 1 consumption	20,000GJ
Non-incumbent Retailer 2 consumption	15,000GJ	Retailer 2 consumption	15,000GJ
Note: Incumbent retailer advises its consumption of 15,000GJ, but this information is irrelevant when determining UFG allocation.		Retailer 3 consumption	15,000GJ
Non-TOU data (i.e. aggregated groups 3-6)		Non-TOU data (i.e. aggregated groups 3-6)	
Non-incumbent Retailer 1 consumption	10,000GJ	Retailer 1 consumption	10,000GJ
Non-incumbent Retailer 2 consumption	7,500GJ	Retailer 2 consumption	7,500GJ
Note: Incumbent Retailer advises its consumption of 8,880GJ but this information is irrelevant when determining UFG allocation.		Retailer 3 consumption	8,880GJ
"Loss factor" adjustment		Calculation of "UFG factor"	
Loss factor (as advised by distributor)	0.8%	Subtracting the consumption data from the gas injected leaves 3,620GJ of UFG or 4.525%. This gives a UFG factor of 1.0474.	
		"UFG factor" as calculated from data	4.74%
Allocations		Allocations	
TOU		TOU	
Retailer 1 (20,000*1.008)	20,160GJ	Retailer 1 (20,000*1.0474)	20,948GJ
Retailer 2 (15,000*1.008)	15,120GJ	Retailer 2 (15,000*1.0474)	15,711GJ
Incumbent (see below)		Retailer 3 (15,000*1.0474)	15,711GJ
Non-TOU		Non-TOU	
Retailer 1 (10,000*1.008)	10,080GJ	Retailer 1 (10,000*1.0474)	10,474GJ
Retailer 2 (7,500*1.008)	7,560GJ	Retailer 2 (7,500*1.0474)	7,855GJ
Incumbent (see below)		Retailer 3: (8,880*1.0474)	9,301GJ
Total allocations to non-incumbents	52,920GJ		
Allocation to incumbent retailer (80,000-52,920)	27,080GJ	Allocation to retailer 3 (15,711+9,301)	25,012GJ

- 6.21 The hypothetical example in the table illustrates how the allocation of UFG can vary depending on which allocation method is adopted. Depending on the accuracy of the consumption information provided by non-incumbents, the difference model can either unfairly lump UFG on the incumbent or, where UFG is negative (i.e. a gain), give the incumbent a windfall.

Problems with the current allocation methodology

- 6.22 The effect of the differencing method of gas allocation is either to allocate to the nominated incumbent retailer the balance of all UFG above the historical loss factor published by the distributors, or, where there has been a gain, to provide the incumbent with a windfall reduction in gas quantities. When the Reconciliation Code was drafted in 2000, incumbent retailers were identified for each shared gas gate, based on their market share at that point in time. Industry changes and customer transfers since that date mean that some incumbent retailers do not now have the majority of market share at gas gates, both in terms of ICPs and/or volumes.
- 6.23 The differencing methodology also contributes to the deficiencies in information quality in a number of other ways. First, incumbent retailers are not required by the Reconciliation Code to provide any consumption data to the allocation agent for the gates at which they are the nominated incumbent¹³. Second, the allocation of UFG to non-incumbents is determined using loss factors which were calculated by the distributors at the inception of the Reconciliation Code in 2000 and have been fixed since that time. This creates a number of issues. In particular, it means that the true amount of UFG is never properly calculated or published by the allocation agent. In addition, the amount of UFG being allocated to non-incumbent retailers does not reflect the true levels of UFG at the particular gas gate resulting in potential cross-subsidisation of non-incumbents and, accordingly, a lack of proper incentives to reduce the levels of UFG.
- 6.24 While the Reconciliation Code gives the incumbent the opportunity to opt for global allocation at a gas gate, this option has proven difficult to enforce as, in practice, implementing the change requires the agreement of all other parties to the shared gas gate - which may prefer to maintain the status quo where it favours their commercial interests.
- 6.25 In the January 2007 discussion paper, it was proposed that the allocation agent would determine a UFG factor on a monthly basis and apply this across both TOU and non-TOU customers. This allocation methodology was called "one month global". A number of submissions raised significant opposition to the proposed methodology. Those submissions, and further work undertaken by Gas Industry Co relating to UFG, are discussed below.

¹³ Gas Industry Co understands that incumbent retailers do provide consumption data to the allocation agent for their TOU customers but this information is not used to allocate UFG.

January 2007 discussion paper and industry submissions on UFG allocation

- 6.26 The one month global allocation methodology proposed in the January 2007 discussion paper would allocate UFG across all consumers (not just those with non-TOU meters) which, all things being equal, was regarded as being more equitable. The success of the one month global allocation methodology would rely on data being of good enough quality to ensure that UFG is able to be fairly allocated. The January 2007 discussion paper therefore included a number of other options for improving information quality.
- 6.27 Submissions on the January 2007 discussion paper were mixed regarding the suitability of the proposed approach to UFG allocation. Although all submitters generally agreed that the current differencing methodology was inequitable, there were some strong submissions against moving to global allocation of UFG. Of particular concern was the proposal to allocate the same level of UFG to both TOU and non-TOU meters, which some thought failed to take into account the superior accuracy and timeliness of consumption information derived from TOU meters.
- 6.28 A further major concern was that there would continue to be significant issues with the quality of data being provided by retailers to mass market consumers, largely resulting from the estimation methodologies employed by those retailers. As inaccurate consumption information can generate large variations in UFG month by month, it was argued that it would be untenable for TOU customers to accommodate this variation in their monthly bills. Further, some submitters were concerned that the adoption of the one month UFG global method would remove incentives on retailers to improve data quality, as UFG would be allocated to all retailers with no regard to the level of contribution to the causes of UFG.
- 6.29 The concerns regarding the commercial impact of UFG being allocated to TOU devices are exacerbated by the large differences between the current actual levels of UFG and the loss factors being applied by the allocation agent. For example, at present it is thought that the actual UFG may be as high as 7.88% on the Tawa A gas gate, whereas the loss factor being applied by the allocation agent at that gate is only 2.5%.¹⁴ While it is expected the actual UFG levels will decrease following introduction of the proposed measures to improve information quality, it is difficult to quantify at this stage precisely how much the levels will decrease by and how long it will take.
- 6.30 Given the concerns raised in the submissions, industry participants discussed a revised proposal at the 12 April 2007 GART meeting. In the revised proposal, at the initial allocation UFG would only be allocated to consumer installations with non-TOU meters, with UFG being allocated to all consumer installations at the interim and all subsequent allocations. By this method it was envisaged that consumers with TOU meters would be protected from any inaccuracies caused by the estimation methodologies used by mass market retailers. By the time of the interim allocation (4 months) any inaccuracies would largely be eliminated and allocation of UFG to all consumers would then be appropriate.

¹⁴ See Appendix B of Maunsell's report.

6.31 However, there was significant concern expressed about the revised proposal and, in particular, continuing controversy about the extent to which TOU customers did or did not contribute to UFG. Views tended to be polarised depending on the make up of particular participants' customer bases.

Maunsell's report

6.32 For this reason, Gas Industry Co engaged Maunsell to prepare a report on the causes of UFG, and recommend a methodology for its allocation. In summary, the report recommends that:

- "UFG" be defined as long-term unaccounted for gas i.e. annual UFG. Monthly under and overs should be excluded from the definition and defined as something else e.g. "monthly variation".
- An "annual" UFG factor should be determined by the allocation agent for each gas gate at a specific date once a year. The date should be chosen for maximum accuracy and it was suggested that it should be at the end of the summer season when monthly variations have the least impact.
- Annual UFG be equally allocated to all accounts at each gas gate, i.e. to both TOU and non-TOU customers, throughout the year. While retailers have argued that TOU meters contribute less to UFG than non-TOU meters, no evidence has been provided by retailers to substantiate their arguments. UFG should therefore be allocated equally unless relevant evidence is provided to justify a different approach.¹⁵
- At the end of each year the difference between UFG from the previous year and the actual UFG from the past year be calculated by the allocation agent and the balance equally allocated to all accounts together with the first monthly account of the new "UFG-year".
- Industry participants should work towards reducing the annual UFG of each network to below +/-2%.
- The contribution of conversion processes to UFG be minimised by mandating the processes in NZS 5259:2004 which would be developed and adopted into a standardised, auditable billing methodology to be used by all retailers to convert meter readings to energy quantities.

6.33 The development and introduction of a standardised billing methodology has not been part of the scope of the review of downstream allocation and reconciliation undertaken by Gas Industry Co. While Gas Industry Co acknowledges that a standardised billing methodology could assist with the reduction of UFG, it is clear that it would require significant resources and time to develop.

6.34 Gas Industry Co understands that retailers' use-of-network agreements usually mandate compliance with NZS 5259:2004. Gas Industry Co considers that it would

¹⁵ See Maunsell's report at pages 24-25.

also be appropriate for the new reconciliation rules to require compliance by retailers with that standard.

- 6.35 It is hoped that the combination of this with the proposed measures to improve information quality, and appropriate incentives on retailers through the application of a new allocation methodology, will be sufficient to reduce UFG to acceptable levels. Accordingly, Gas Industry Co considers it inappropriate at this time to extend the scope of its review to include work on a standardised billing methodology. However, if the implementation of the proposed reconciliation rules does not result in sufficient reductions in UFG, Gas Industry Co may need to reconsider its approach. The other recommendations in Maunsell's report are discussed further in the balance of this section of the paper.

Q3: *Do submitters agree that, provided compliance with the conversion processes in NZS 5259:2004 is mandated, it is inappropriate to introduce a standardised billing methodology at this time?*

International practice

- 6.36 In considering how best to allocate UFG under any new regime, Gas Industry Co was keen to gauge whether other jurisdictions allocate UFG differently between daily metered and mass market sites. Gas Industry Co undertook a brief review of UFG in other jurisdictions for this purpose, the findings of which are summarised in Table 2 below.¹⁶
- 6.37 In most jurisdictions it was difficult to ascertain whether daily and mass-market sites were allocated UFG differently and, if so, how the allocations were made. While it appeared that in some jurisdictions such a distinction was made, often these distinctions were linked to the type of network to which consumers were connected (i.e. high or low pressure).
- 6.38 As always, it is important to bear in mind that international comparisons on a narrow issue can be very misleading as they fail to take into account key market and structural differences. For example, some of the jurisdictions that were considered adopted highly complex reconciliation regimes which would not be practicable or economic in New Zealand's very small gas market.
- 6.39 Overall Gas Industry Co's review of overseas jurisdictions failed to identify any particular evidence of widespread differentiation between TOU and non-TOU customers for allocation and reconciliation purposes.

¹⁶ The summary in Table 2 is intended as an overview only. It may contain generalisations on the treatment of UFG that do not hold true in every fact scenario.

Table 2: Summary of international findings on UFG allocation

Jurisdiction	Key findings	Is UFG allocated differently to different customer groups?
UK	<p>Reconciliation is by difference, but not the same difference methodology as adopted in New Zealand. Gas consumed on each local distribution zone (LDZ) is calculated daily by metering gas flowing into each LDZ, adjusting for stock change and shrinkage (i.e. technical losses), then removing that consumed at daily metered (DM) supply points. Residual amount of gas is allocated between non daily-metered (NDM) supply points on the basis of their annual quantity and end user categories. Transporters forecast LDZ shrinkage requirements for gas year by prior publication. The methodology and processes that are applied are subject to discussions with shippers at a shrinkage forum.</p> <p>Shrinkage is made up of: leakage (0.5-0.7% of LDZ consumption) which is applied to DM and NDM sites; theft (0.3% of LDZ consumption) which is not applied to DM or large NDM customers; and gas for operational purposes which is applied across the board.</p> <p>An adjustment is done at the end of the year, where actual shrinkage factors are compared to the forecast ones.</p>	Some (e.g. “theft UFG” is not applied to daily metered customers)
NSW (Aus)	<p>Contract customers (large customers that use 10TJ or more of gas per year) and tariff customers (residential and business customers who use less than 10TJ of gas per year) are treated differently.</p> <p>In the Regulator’s Final Decision for the previous Access Arrangement Period the Regulator required:</p> <ul style="list-style-type: none"> • a defined percentage to be added to the volume of gas withdrawn from delivery points in order to calculate the volume of gas upon which tariffs will be set; • the allowable level of unaccounted for gas to be set at 2.5% of network gas throughput, 0.76% for contract customers and 4.45% for tariff customers. <p>This approach provided an incentive on the distributor to reduce the level of UFG (since any UFG in excess of allowable levels would be their cost), but the distributor would retain a financial benefit if it were to achieve lower levels of UFG.</p>	Yes – although it is not clear whether this differentiation is linked to network type
Victoria (Aus)	<p>Distribution networks have UFG benchmarks that are listed in the applicable code. These benchmarks range between 3 and 4.5% and reflect the different leakage rates of the distribution networks.¹⁷ If the UFG is greater than the given benchmarks, the distribution company has to account for it. For medium-low pressure networks these benchmarks range from 3.1 to 4.5%.</p> <p>Retailers initially bear the cost for all UFG, which arises from the fact that their obligations to the spot-market reflect the quantities of gas that enters the network. Distributors bear the cost associated with gas losses in excess of the benchmarks and benefit from gas losses</p>	Indirectly some different treatment (i.e. smaller customers on medium-low pressure networks get a higher UFG allowance)

¹⁷ These leakage rates are greater than those seen in New Zealand. Maunsell’s report notes that some Victoria networks (e.g. the Melbourne networks) have a large percentage of old cast iron mains that tend to leak more than the modern plastic pipelines used in New Zealand.

Jurisdiction	Key findings	Is UFG allocated differently to different customer groups?
	that are below the benchmarks.	
Tasmania	<p>Appears to be similar to the Reconciliation Code regime in New Zealand. UFG factor is applied to monthly quantities of gas for each retailer, with apparently no difference in treatment of different end user groups.</p> <p>Benchmark quantity of UFG for the rates of flow which a distributor must use its reasonable endeavours to ensure in its distribution system in a financial year is 2.5%. Regular reporting to Director of Gas.</p> <p>Gas Conversion Methodology fulfils similar role to the standard billing methodology proposed in Maunsell's report.</p>	No
Canada	From brief review, regime appears to be too different to make any useful analogies.	

Analytical approach to identifying options that achieve the regulatory objective

- 6.40 In developing its proposal on UFG allocation, Gas Industry Co's analysis has required it to consider three distinct areas.
- First, identification of the methodology for allocating UFG that will best achieve the regulatory objective in the long term.
 - Second, given the commercial concerns raised by industry participants, consideration of whether there is a need to take an incremental approach to the introduction of the preferred allocation methodology (i.e. consideration of transitional arrangements).
 - Third, an assessment of the need to provide for exemption of certain gas gates or customers where the application of the preferred allocation methodology would not meet the regulatory objective.
- 6.41 In order to identify the allocation methodology which would best achieve the regulatory objective in the long term, Gas Industry Co assessed a number of options against the key principles in the regulatory objective, including:
- achieving more efficient and accurate downstream allocation;
 - ensuring the protocols and standards are efficient, fair and reliable;
 - facilitating retail competition and ensuring barriers to competition are minimised; and
 - providing for more accurate identification, and fairer allocation, of the amount of UFG.

- 6.42 The key points of Gas Industry Co's analysis, together with a summary of each of the options considered, are detailed below.

Possible long term allocation methodologies

Incentives for distributors to reduce UFG

- 6.43 In some jurisdictions, UFG attributable to technical losses is allocated to distributors as a means of incentivising them to reduce such losses. Given the low level of technical losses in New Zealand, it is considered appropriate for all UFG to be allocated to retailers rather than distributors. However, Gas Industry Co considers that there should be some ongoing incentives for distributors to continue to reduce technical losses.
- 6.44 While it is intended to publish the UFG quantities and factors which apply to each gas gate, it is considered that publication alone is not likely to be a sufficient incentive.
- 6.45 This issue was discussed by industry participants at the GART meeting on 12 March 2007, where it was noted that, with the move to global allocation, the loss factors published by distributors would not be used for any purpose other than pricing and, potentially, billing.
- 6.46 At the 12 April 2007 GART meeting, industry participants discussed the concept of having the distributors calculate a technical loss factor which represented only the actual "physical" or "technical" losses on each of their networks. While it was envisaged that the technical losses would still be allocated to retailers, its separate identification might give a more accurate picture of the levels of UFG on each network.
- 6.47 Gas Industry Co has considered this issue further and does not believe that it is necessary or efficient at this time to provide for a separate technical loss factor. In particular, Gas Industry considers that the benefits from the reduction in already low levels of technical losses are unlikely to outweigh the cost of identifying the technical losses on each network.
- 6.48 However, as discussed further below, Gas Industry Co does consider that provision should be made to investigate unusually high UFG on particular networks. Distributors will have obligations to provide information to assist with any such investigations. Gas Industry Co considers that this, along with the usual commercial drivers, is likely to sufficiently incentivise distributors to minimise technical losses on their networks. Should it become apparent that technical losses are increasing, or distributors are not taking appropriate steps to reduce UFG, then Gas Industry Co may look at adding further incentives in the future.

Global allocation preferred

- 6.49 Given the numerous problems identified with the current differencing allocation methodology, Gas Industry Co considers that some form of global allocation should be adopted.
- 6.50 Various forms of global allocation are possible. In considering which form to

adopt, the main issue is whether TOU and non-TOU customers should be allocated the same proportions of UFG. The arguments for and against are numerous. In brief:

- Consumption information from TOU meters is arguably more accurate because they are read more often and the derivation of consumption information does not require any estimation. However, it is not possible to prove the degree to which such meters are more accurate without taking significant steps such as installing check meters.
- TOU devices still have many possible sources of error. The meters may be fast or slow, and a process for converting meter readings to consumption information is still required. Given the much larger volumes involved, such errors will inevitably have a greater impact upon the UFG at the relevant gas gate.
- TOU customers should not be exposed to the variability in monthly UFG that is caused by the estimation processes used by mass market retailers as it will be difficult for retailers to accommodate such variability within their TOU commercial contracts.

6.51 Gas Industry Co agrees with Maunsell that a primary aim of the allocation and reconciliation regime should be to reduce UFG to below +/- 2%. On the basis that the proposals set out in section 8 of this paper - in particular the improvement in the quality of the information used in the allocation process and greater transparency - should result in UFG reducing to these levels, Gas Industry Co does not consider that there is any justification for treating TOU and non-TOU customers differently in the long term.

6.52 Taking all of this into account, Gas Industry Co has considered a number of possible forms of global allocation, and assessed which option would best meet the regulatory objective. Gas Industry Co's analysis of four of these options is detailed below.

Option 1: One month global

6.53 Gas Industry Co continues to consider that, assuming sufficient information quality improvements are made, the one month global methodology proposed in the January 2007 discussion paper would meet the regulatory objective in the long term.

6.54 However, Gas Industry Co accepts that it is not sufficiently certain that the proposed information quality measures will result in the level of improvement required in the short term. Accordingly, there remains a risk that the UFG allocated in the initial allocation will vary significantly month by month due to the estimation processes of mass market retailers. Subjecting TOU customers to such high levels of variability would not meet the regulatory objective as there is a risk that the commercial impacts on those customers would be untenable.

Option 2: Delayed one month UFG global

6.55 The month-by-month variability is likely to be highest at the initial allocation stage.

Estimation error will be reduced in interim and final allocations as the consumption information provided by mass market retailers will increasingly be based on historic usage levels. Accordingly, a further option is to only allocate UFG to TOU customers in the interim and final allocations.

- 6.56 Unfortunately, such an option would be difficult to implement in practice and could result in inequitable outcomes for consumers. It is accepted that some UFG is actually caused by TOU meters. Under a delayed one month UFG global allocation methodology, all of this UFG would be allocated in the initial allocation to retailers with mass market customers. Such an outcome would likely reduce the accuracy of initial allocations, resulting in an increased risk of significant re-allocations at the interim and final stages.
- 6.57 Further, this option may potentially still result in untenable variability in the interim and final allocations of UFG to TOU customers until there are significant improvements in data quality and estimation processes.

Option 3: Cap on UFG allocated to TOU customers

- 6.58 A further option considered was to set a cap on the UFG allocated to TOU customers. Under this approach, all allocations would be made using the one month global method, except that, if the percentage of UFG in any month at any gas gate was above a predefined threshold, the amount allocated to TOU customers would be capped – with the balance being allocated to non-TOU customers in that month.
- 6.59 As stated above, the primary concerns expressed by retailers of TOU customers is that those customers should not be subject to either the variability or potentially high levels of UFG caused by the need to estimate the consumption of mass market customers. Both of these concerns could be mitigated by placing a cap on the level of UFG that can be allocated to TOU customers in any one month.
- 6.60 This option was discussed at a meeting of industry participants on 9 August 2007. Industry participants raised two concerns with Gas Industry Co's proposed approach:
- Some participants considered that, if TOU customers are to be protected from the monthly "peaks" in UFG, then the quid pro quo is that TOU customers should not benefit from low or negative monthly UFG%. This would therefore require application of a "collar" on allocation of UFG to TOU customers.
 - The cap on UFG for TOU customers is calculated from the latest available final allocation information for a complete gas year. However, as this information will not be available until at least 25 months from the commencement date this creates a lag between historic UFG trends and the allocation of UFG to TOU customers.
- 6.61 All participants at the meeting were concerned with the timing lag.

Option 4: TOU customers allocated annual UFG

- 6.62 The option proposed by Maunsell was to calculate a fixed "annual UFG" factor

each year that would then be applied to consumption by TOU customers. Non-TOU customers would be allocated the balance of UFG calculated on a monthly basis, with a “wash-up” of UFG at the end of any year where the actual annual UFG is less than that applied to TOU customers during the year.

- 6.63 This option was also discussed by industry participants at the meeting on 9 August 2007. The central concern raised with Maunsell’s proposed methodology was the time lag between the time at which the UFG percentage was set and the subsequent “wash up” which could be up to 25 months after the initial allocation. Given that the proposed reconciliation rules already provide for two potential “wash-ups”, a further wash-up would be undesirable. Gas Industry Co considers that the issues resulting from a further wash-up would be such that this option would not achieve the regulatory objective. No participant at the meeting supported Maunsell’s recommended methodology.
- 6.64 A variation of this option discussed at the meeting is to set the percentage of UFG to be allocated to TOU customers in each month at each gas gate based on the actual percentage of UFG recorded during the 12 months up to and including the interim (4 month) allocations relating to initial allocations made in the previous February. The balance of monthly UFG would then be allocated to non-TOU customers.
- 6.65 Under this option:
- The percentage of UFG allocated to TOU customers will be fixed by gas gate before the beginning of each gas year, giving more certainty to those participants with TOU customers and eliminating the monthly volatility caused by non-TOU estimates.
 - The percentage of UFG allocated to non-TOU customers will be the balance such that the total allocations after the initial, interim and final allocations will reconcile to the total gas gate volume.
 - The time lag between the data on which the percentage of UFG will be set and the allocations to which it will be applied will be significantly reduced.
- 6.66 The calculation of the annual UFG figure would be performed by the allocation agent in July of each year, allowing retailers to incorporate it into their pricing for the following gas year as required. However, Gas Industry Co considers that it should be able to direct the allocation agent to take into account certain information or use different data where Gas Industry Co considers that this will result in a more appropriate annual UFG calculation. This process would allow anomalous UFG levels caused by exceptional events to be excluded.
- 6.67 Gas Industry Co considers that the fixed annual UFG option would better achieve the regulatory objective than the status quo at those gas gates where the differencing methodology is currently applied. However, Gas Industry Co acknowledges that it may not be appropriate for UFG to be fixed for all TOU customers at all gas gates.
- 6.68 Gas gates where the 1 month UFG method is already being applied by the

allocation agent because of the particular configuration of customers at that gate might be an example. In addition, there may be some other gas gates, and certain TOU customers, where it may be possible to demonstrate that application of the approach would be inequitable. Accordingly, Gas Industry has proposed a provision which can be used to exempt certain gas gates and/or TOU customers from the application of a fixed level of UFG where Gas Industry Co is satisfied an exemption would better achieve the regulatory objective.

- 6.69 Gas Industry Co considers that the provision for regular performance audits, and its ability to direct event audits where required, will be sufficient to ensure that the application of a fixed level of UFG is not resulting in inequitable allocations of UFG. Both retailers and distributors will be required to comply with auditors' requests for information in order to investigate unusually high UFG levels.
- 6.70 The only remaining issue is whether there is a need for a transitional period before the proposed arrangements come into effect.

Transitional provisions

- 6.71 Under the proposed option, the fixed annual UFG figure for TOU customers will be calculated at each gas gate based on the latest available interim allocation information relating to initial allocations performed during the 12 months ending in the previous February. Gas Industry Co considers that a transitional period of two years will be required before this option can be fully implemented for two reasons.
- 6.72 First, a full 12 months' allocation data will not be available until February 2010. For the first two years, the only allocation data available will be a combination of allocations performed under the current "differencing" methodology (which does not contain any incumbent consumption data) and allocations performed under the proposed rules.
- 6.73 Second, because customers of non-incumbent retailers are currently being allocated relatively low levels of UFG based on historical loss factors (which in some cases are set at zero), there is a real risk of "rate shock" for some of those customers. TOU customers with large volumes are likely to be particularly hard hit by even relatively small increases in UFG. The potential impact is illustrated in the table below:

	Auckland		TawaA		Hastings	
	Current Arrangements	New Arrangements	Current Arrangements	New Arrangements	Current Arrangements	New Arrangements
	2.31%	2.59%	2.5%	7.88%	0.65 %	3.89%
Domestic Customer (30.31 GJ pa)	\$19.67	22.15	\$21.38	\$67.40	\$5.56	\$33.27
Industrial Customer (92,751 GJ pa)	\$14,079	\$15,854	\$15,303	\$48,237	\$3,979	\$23,812

**Price and average quantities taken from Energy Data File June 2007*

6.74 Accordingly, Gas Industry Co has proposed a transitional arrangement which will apply for the first 2 years of the new reconciliation regime. During this period Gas Industry Co proposes to use the best available information on the national average of annual UFG for the previous gas year based on the annual reconciliations performed in October 2007 and October 2008. For the gas year ending in September 2006, based on the annual reconciliation information provided to the current allocation agent, this figure was 2.45%.¹⁸ This will mean that, assuming a commencement date of 1 October 2008, the annual UFG for the 2008/09 gas year will be based on the national average of UFG for the year ending 30 September 2007, calculated from the annual reconciliation data held by the current allocation agent.

Exemptions

6.75 Gas Industry Co considers that the regulatory objective will only be met if exemptions can be granted. Gas Industry Co should be able to approve exemptions where it is satisfied that the exemption would better achieve the regulatory objective at a particular gas gate and/or for a particular TOU customer. Exemptions may apply where, for example:

- the consumption at a gas gate is dominated by one or two large TOU customers;
- a retailer can prove to Gas Industry Co's satisfaction that a particular TOU customer should be allocated a lower level of UFG because check meters have been installed or a certain billing methodology applied which show with a high degree of confidence that the customer's usage is accurate to within a set low percentage; and
- gas gates or networks have particular characteristics requiring different treatment.

6.76 The power to grant an exemption, and apply an alternative allocation methodology, should be at Gas Industry Co's discretion, with provision for consultation where appropriate.

Conclusion

6.77 Gas Industry Co has concluded that the fixed annual UFG method of allocation, with appropriate transitional and exemption provisions, is the reasonably practicable option which will best achieve the regulatory objective.

Q4: *Do submitters have any comments on Gas Industry Co's proposed method of global allocation which would fix the annual level of UFG allocated to allocation groups 1 and 2?*

Q5: *Do submitters have any comments on the proposed transitional arrangements?*

¹⁸ See Appendix B of Maunsell's report.

Q6: *Are the proposed exemption provisions appropriate? Do submitters envisage that, if the proposal is implemented, they would seek an exemption? If so, please provide details.*

7 Assessment of Reasonably Practicable Options

- 7.1 Once it has identified the reasonably practicable options for resolving the issues with the current arrangements, section 43N(1)(b) of the Gas Act requires Gas Industry Co to assess those options by considering:
- the costs and benefits of each option; and
 - the extent to which the regulatory objective would be promoted or achieved by each option; and
 - any other matters that Gas Industry Co considers relevant.
- 7.2 In this section of the paper, Gas Industry Co sets out its assessment of the extent to which each of the options promotes or achieves the regulatory objective, and the results of the cost-benefit analysis undertaken by NZIER.

Extent to which each option promotes or achieves the regulatory objective

- 7.3 It is clear from Gas Industry Co's review of the current allocation and reconciliation arrangements that it is not an option to retain the status quo because it does not meet the regulatory objective. Gas Industry Co has identified a number of options for dealing with the specific issues identified with the current arrangements. Having reached conclusions on which of each of those options best achieved the regulatory objective, it was necessary for Gas Industry Co to consider which governance arrangement incorporating that detailed design would best achieve the regulatory objective. Gas Industry Co identified two reasonably practicable governance options to improve the status quo, being a pan-industry agreement and a regulatory regime.
- 7.4 The detailed results of Gas Industry Co's assessment of the extent to which of each of the status quo, a pan-industry agreement or a regulatory regime achieves or promotes the regulatory objective are set out in Appendix 2.
- 7.5 While either of a regulatory arrangement or pan-industry agreement could meet the regulatory objective, Gas Industry Co's analysis has identified that, in relation to governance and compliance, a regulatory arrangement has some advantages over a pan-industry agreement.
- 7.6 A brief summary of submissions on the January 2007 discussion paper, showing the preferred option for each submitter, is provided in Table 3.

Table 3 – Summary of preferred option by submitter

Submitter	Preferred Option
Contact Energy	Regulatory regime
GasNet	Regulatory regime
Genesis Energy	Pan-industry agreement, but think that in order to achieve mandatory adherence a regulatory solution may be required
Mighty River Power	Regulatory regime
Nova Gas	Pan-industry agreement
OnGas	Pan-industry agreement which includes existing reconciliation code arrangements
Powerco	Pan-industry agreement
Tetenburg & Associates Ltd	Pan-industry agreement, but also prefers regulatory governance structure
Vector	Pan-industry agreement which includes existing reconciliation code arrangements
Wanganui Gas	Regulatory regime

7.7 Having considered all the submissions, Gas Industry Co has concluded that the reasonably practicable option which best achieves the regulatory objective is to develop rules to govern allocation and reconciliation of downstream gas quantities.

Assessment of the costs and benefits of the proposal

7.8 Gas Industry Co commissioned NZIER to provide an analysis of the costs and benefits of each of the reasonably practicable options. A proposed framework for a cost-benefit analysis was included in the January 2007 discussion paper which included a number of measures on which submitters were invited to make submissions.

7.9 The submissions received on the proposed framework are summarised as follows:

- NZIER proposed using five years as the period for the analysis. Submitters largely agreed with this, although one submitter suggested that a workshop would be beneficial to discuss this and other aspects of the analysis. A workshop on the proposed framework was held on 12 April 2007.
- Most submitters considered the proposed baseline scenario to be reasonable, although some suggested the industry would progress faster in agreeing

reform voluntarily than assumed in the absence of the current proposals. NZIER proposed to cover this in its sensitivity analysis.

- NZIER proposed a standard cost-benefit analysis which disregarded wealth transfers between market participants as a benefit or a cost. The responses from submitters were mixed on this, with some agreeing wealth transfers should be ignored and others thinking they should not be. NZIER continues to recommend the standard approach to measuring net benefits.
- Most submitters did not express an opinion on the appropriateness of NZIER's proposal to use 6% and 12% real discount rates. NZIER explained that the wide range covered the spread of reasonable views on what discount rate to use. Private investors tend to argue for high rates, while those parties not bearing the costs tend to argue for low rates. If the changes do not stack up at 6%, rejection is easily justified. If the changes yield a positive net benefit at 12% then progressing should not cause controversy. If the break-even of net benefit or cost is between 6% and 12% then it would be a judgement call as to whether to progress or not.

- 7.10 After the workshop and consideration of the submissions, it was concluded that it was not appropriate to use the status quo (i.e. no intervention by the Gas Industry Co, including no active role in brokering a pan-industry agreement) as the base case for considering the costs and benefits of the options given that it does not meet the regulatory objective.
- 7.11 The preferred options identified by Gas Industry Co in the January 2007 discussion paper contained a number of alternatives that could be adopted independently of each other. The costs and benefits of some of these alternatives would depend on which other options are also adopted. Given the number of alternatives identified, there are a large number of possible combinations, assessing all of which would be a major exercise. For simplicity, NZIER therefore assessed the costs and benefits of adopting all of the preferred options as a single package.
- 7.12 It may be possible to argue that the costs and benefits might be different if NZIER had adopted a different option within the package. However, in most cases such a change would likely involve a transfer of wealth between industry participants which would have a minimal impact on the overall costs and benefits of the package as a whole.
- 7.13 The new reconciliation arrangements would take effect, at the earliest, from 1 October 2009 under a pan-industry agreement and 1 October 2008 under a regulatory regime. The cost-benefit analysis models costs and benefits over the first ten years of the new arrangements being in force, with the addition of initial development and establishment costs.

Cost-benefit analysis

- 7.14 A copy of the final cost-benefit analysis is included as Appendix 5. A summary of the results of the analysis is set out below.
- 7.15 Assessing the costs and benefits of the new reconciliation arrangements can be

simplified to two questions:

- What are the costs and benefits of improving reconciliation arrangements?
- If reconciliation arrangements are improved, what is the difference in costs and benefits of implementing the new arrangements through a regulatory regime relative to the baseline scenario of through a pan-industry agreement?

7.16 NZIER has grouped the costs of the proposed arrangements into four categories (for definitions refer to the NZIER report at Appendix 5):

- Development costs;
- Establishment costs;
- Administration costs; and
- Operational costs.

7.17 Establishment costs will differ according to whether improved reconciliation arrangements are implemented through a pan-industry agreement or a regulatory regime. With the same new reconciliation arrangements under a pan-industry agreement as a regulatory regime, the development, administration and operational costs of the new arrangements will largely be the same.

7.18 The benefits of the proposed arrangements are grouped into the following three categories:

- UFG benefits;
- Dispute benefits; and
- Competition benefits.

7.19 The costs and benefits of the proposed arrangements are detailed in Appendix 5.

7.20 With the new reconciliation arrangements taking effect from 1 October 2009 under a pan-industry agreement and 1 October 2008 under a regulatory regime, the benefits of improving reconciliation arrangements commence one year later under a pan-industry agreement.

7.21 Periodically, the new reconciliation arrangements would need to be reviewed and revised to ensure that they remain effective.

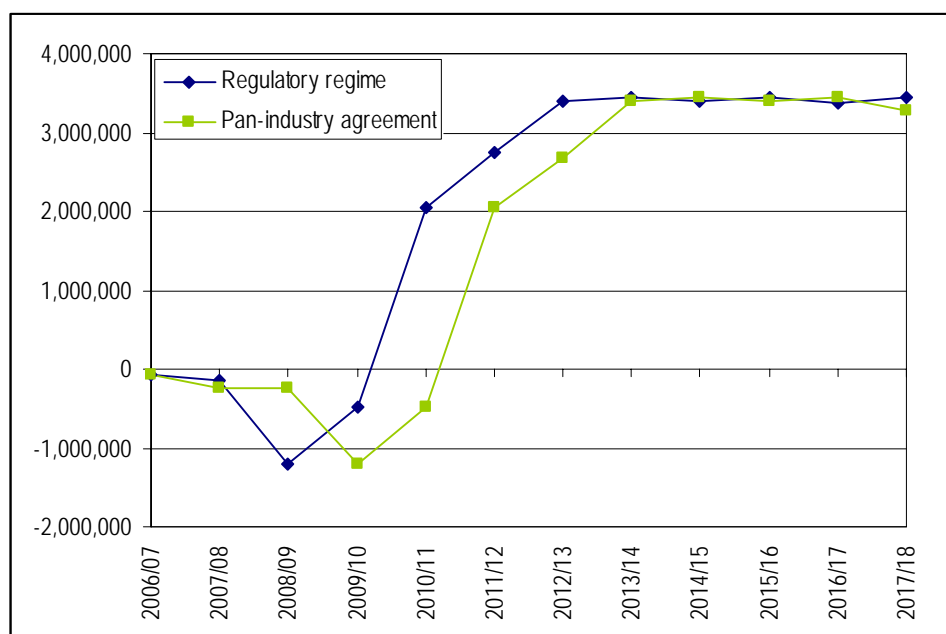
7.22 It has been assumed that the new arrangements will require amendment every five years. The costs of developing and establishing these amendments each time, whether under a pan-industry agreement or a regulatory regime, is assumed to average one quarter of the initial establishment costs.

Results of the cost-benefit analysis

Annual costs and benefits

7.23 With adoption of the above coefficients, the annual costs and benefits of the new proposed reconciliation arrangements are shown in the figure below.

Figure 1 Annual net benefits



Source: NZIER

Total costs and benefits

7.24 With discounting to reflect their relative timing, the above costs and benefits imply, over the period 2006/07 to 2017/18:

- present value total costs of:
 - \$3.933 million under a pan-industry agreement;
 - \$3.977 million under a regulatory regime;
- present value total benefits of:
 - \$12.286 million under a pan-industry agreement;
 - \$14.769 million under a regulatory regime;
- present value total net benefits of:
 - \$8.354 million under a pan-industry agreement;

- \$10.792 million under a regulatory regime.
- 7.25 A regulatory regime therefore provides \$2.439 million more in net benefits than a pan-industry agreement over this time period. This difference in net benefits derives from a regulatory regime having lower establishment costs and future amendment costs and taking one year less to establish such that, although the costs of administering and operating under the new reconciliation arrangements begin to be incurred one year sooner, dispute and competition benefits start to be achieved also one year sooner, as can be seen in Figure 1 above.
- 7.26 The largest cost component is operational costs, at 81 per cent of present value total costs under a pan-industry agreement and 89 per cent under a regulatory regime. The next largest cost is establishment costs under a pan-industry agreement, at 10 per cent, but operational costs under a regulatory regime, at five per cent.
- 7.27 Present value total benefits are dominated by competition benefits, at 99 per cent under each of a pan-industry agreement and a regulatory regime.

Sensitivity analysis

- 7.28 The sensitivity of these results to the cost and benefit coefficients adopted is shown in Table 3 of NZIER's report. Present value net benefits are most sensitive to the magnitudes of operational costs and competition benefits adopted. In all cases, however, net benefits remain positive under both a pan-industry agreement and a regulatory regime, and significantly higher under a regulatory regime. This remains so even if operational costs or competition benefits are half the size modelled.

Any other matters that Gas Industry Co considers relevant

- 7.29 Gas Industry Co has considered whether the proposal to adopt the capped one month global UFG allocation model discussed in section 6 of this paper would change the outcome of the cost/benefit analysis. In months where UFG exceeds the cap set for TOU customers, the adoption of this model will involve the transfer of UFG from those customers to mass market customers. For this reason, Gas Industry Co does not consider that the adoption of this model would change the outcome of the cost/benefit analysis.
- 7.30 Gas Industry Co does not consider that there are any other matters relevant to its assessment of the reasonably practicable options.

Conclusion on assessment of reasonably practicable options

- 7.31 Having concluded the process outlined above, Gas Industry Co believes that:
- the status quo option does not meet the regulatory objective and is not a reasonably practicable option;
 - the pan industry agreement, whilst it meets the regulatory objective, will incur greater costs than a regulatory arrangement due to the need for industry agreement and possible authorisation or clearance from the Commerce

Commission, and take longer for benefits to accrue due to delayed implementation.

- 7.32 Therefore, Gas Industry Co has concluded that the reasonably practicable option which best meets the regulatory objective is to develop rules or regulations to govern downstream allocation and reconciliation.

Q7: *Do submitters have any comments on the cost-benefit analysis, including any comment on NZIER's report attached as Appendix 5?*

8 Statement of Proposal

- 8.1 The purpose of this paper is to comply with the requirement in section 43N(1)(d) of the Gas Act to issue a statement of the proposal for the purpose of consultation with persons that Gas Industry Co thinks are representative of the interests of persons likely to be substantially affected by the proposal (s43L(1)(b)).
- 8.2 The statement of the proposal must contain:
- A detailed statement of the proposal;
 - A statement of the reasons for the proposal;
 - An assessment of the reasonably practicable options, including the proposal; and
 - Other information that Gas Industry Co considers relevant.
- 8.3 The proposal is to make a recommendation to the Minister of Energy under section 43F of the Gas Act for rules on allocation and reconciliation of downstream gas quantities. A draft of the proposed rules is attached in Appendix 6. This section of the paper provides a detailed statement of those proposed rules.

Detailed description of the proposed reconciliation rules

Overview

- 8.4 Accurate reconciliation is a key component of any effective gas market. Having considered all of the submissions on the January 2007 discussion paper, Gas Industry Co sets out in this section its proposal for new allocation and reconciliation arrangements. The focus of the proposed arrangements is to improve the accuracy and integrity of downstream reconciliation information, but not to specify how this information is to be subsequently used for financial settlements.
- 8.5 While a number of different allocation and reconciliation arrangements are possible, it is not efficient or cost-effective to examine every imaginable approach to each issue. In general, Gas Industry Co has sought to preserve the status quo where it will achieve the regulatory objective. Each option for resolution of a particular issue has then been considered as part of an integrated arrangement.
- 8.6 In summary, Gas Industry considers the proposed arrangements will:
- Implement a number of mandatory information quality measures;
 - Establish that the month end daily allocation service will be performed using a global methodology on all gas gates;
 - Allow for the appointment of a single downstream Allocation Agent by Gas Industry Co;

- Mandate clear, transparent governance structures and related processes; and
 - Allow for the performance of audits, the establishment of a compliance regime and the ability in prescribed circumstances for Gas Industry Co to perform “special allocations”.
- 8.7 The proposed arrangements assume that the switching rules and central gas registry have been established by the time they are introduced.

Appointment of the allocation agent

- 8.8 The allocation agent will be appointed by Gas Industry Co for a term agreed by Gas Industry Co and the allocation agent, and set out in an allocation agent service provider agreement.
- 8.9 In the January 2007 discussion paper it was proposed that the initial term be for a period of 5 years in order to give appropriate certainty to industry but not lock in arrangements for an inefficient period. It was considered that a short period would be inefficient due to the need to recover the costs of a tender process. However, it is now considered appropriate to leave this for the discussions held on the terms of the appointment, rather than being prescriptive in the rules about the term of appointment.
- 8.10 The remuneration of the allocation agent will be agreed as between Gas Industry Co and the allocation agent in the allocation agent service provider agreement. Gas Industry Co and the allocation agent will agree on any other terms and conditions, not inconsistent with the functions, rights, powers and obligations of the allocation agent under the proposed rules.

Allocation groups

- 8.11 Under the switching rules, each retailer is required to assign each of its consumer installations to an allocation group which will be used for the purposes of the reconciliation rules. Gas Industry Co is required by the switching rules to determine and publish the definitions of the allocation groups from time to time.
- 8.12 Although there was some discussion with GART as to whether the allocation groups proposed in the January 2007 discussion paper should be amended, it was decided to retain the current allocation groups, which have been listed in the draft rules for ease of reference. They are:
- Allocation Group 1: TOU meter with telemetry where the gas quantities recorded are the actual daily quantities.
 - Allocation Group 2: TOU meter without telemetry where the gas quantities recorded are the actual daily quantities.
 - Allocation Group 3: Non-TOU meter where the daily gas quantities are to be determined by application of an approved static deemed profile to the estimated monthly quantity for the installation.

- Allocation Group 4: Non-TOU meter where the daily gas quantities are to be determined by application of the gas gate residual profile to the estimated monthly quantity for the installation.
- Allocation Group 5: Non-TOU meter where the daily gas quantities are to be determined by application of an approved dynamic deemed profile to the estimated monthly quantity for the installation.
- Allocation Group 6: Non-TOU meter where the daily gas quantities are to be determined by application of the gas gate residual profile to the estimated monthly quantity for the installation.

Meter types

- 8.13 Meter owners will ensure that any metering equipment supplied by them complies with NZS 5259:2004.
- 8.14 Retailers will be required to install a TOU meter for all consumer installations for which the rolling 12 months actual consumption, or expected annual gas usage, is greater than 10 TJ. These consumer installations must be assigned to allocation groups 1 or 2.
- 8.15 There had been some discussion in the January 2007 discussion paper about whether this threshold should be 5TJ instead of 10TJ, and a consultation question asked specifically about this. The rationale for leaving the threshold at 10TJ is that any requirement to lower it is likely to increase metering and data management costs without providing any additional benefit. If the other measures in the proposed arrangements to increase data accuracy are not undertaken, then revisiting the threshold would be necessary as another mechanism to assist with increasing data accuracy. The threshold can be revisited once the other proposed arrangements have been implemented and their impact on data accuracy considered. The majority of submitters agreed that the 10TJ threshold was appropriate.
- 8.16 Where the rolling 12 months actual consumption, or expected annual gas usage, for a consumer installation is greater than 250GJ, then retailers will be required to either:
- install a TOU meter and assign the consumer installation to allocation groups 1 or 2; or
 - install non-TOU metering and assign the consumer installation to allocation groups 3 or 4.

Meter reading requirements

- 8.17 Meter reading requirements will differ depending on the type of metering equipment installed at the consumer installation. All TOU meters will be required to have readings or consumption recorded for each day of consumption. All non-TOU meters for consumers with an expected annual consumption of between 250GJ and 10TJ will be required to be read monthly.

- 8.18 Retailers will be required to obtain a meter reading at least once every 12 months for every consumer installation with a non-TOU meter and an expected annual consumption of less than 250GJ that the retailer supplies continuously for each 12 month period, with an allowance for those consumer installations for which exceptional circumstances prevent a meter reading.
- 8.19 In addition to the above obligation, a meter reading must be obtained at least once every 4 months for 90% of consumer installations with non-TOU meters at which the retailer trades continuously for each 4 months for which consumption information is required to be submitted into the reconciliation process.

File Formats

- 8.20 A Gas Data Formats Group will be established to develop, and later review (as and when appropriate), standardised file formats and forward to Gas Industry Co for approval and publication. The draft rules specify that participants will be required to comply with any standard file formats that are developed and published by Gas Industry Co.

Provision of information by retailers

- 8.21 Each retailer will be required to supply consumption information to the allocation agent for all its consumer installations depending on the type of allocation group to which the consumer installation belongs:
- Daily consumption information for each consumer installation in allocation groups 1 and 2;
 - The aggregate estimated daily energy quantities by gas gate of consumer installations in allocation group 3, and the number of consumer installations included;
 - The aggregate estimated daily energy quantities by gas gate for consumer installations in allocation group 5 and the number of consumer installations included; and
 - The aggregate estimated month energy quantities by gas gate for all consumer installations in allocation groups 4 and 6.
- 8.22 Retailers will also be required to provide consumption information for all consumer installations where they are the responsible retailer and where the property is vacant but gas is still able to flow. Such consumer installations are those with an ICP status in the gas registry of INACTIVE-TRANSITIONAL or INACTIVE-PERMANENT.
- 8.23 Consumption information will be required to be converted from meter readings in accordance with the standards in NZS 5259:2004.
- 8.24 The draft rules require the allocation agent to perform three allocations:
- An initial allocation at each month end;

- An interim allocation 3 months after the initial allocation; and
 - A final allocation 12 months after the initial allocation.
- 8.25 Retailers will be required to provide consumption information to the allocation agent for each allocation as follows:
- Initial allocation - 8am on the 4th business day of the month that immediately follows the month to which the information relates;
 - Interim allocation - 8am on the 10th business day of the 4th month that follows the month to which the information relates; and
 - Final allocation - 8am on the 10th business day of the 13th month that follows the month to which the information relates.
- 8.26 The timeframe for the initial allocation differs slightly to the timeframe for the month end allocation service in the Reconciliation Code to reflect what submitters advised Gas Industry Co is the current industry practice.

Provision of information by transmission system owners

- 8.27 Each transmission system owner will be required to provide month end daily volume injection information for each gas gate connected to its transmission system to the allocation agent by 8am on the 4th business day of the month that immediately follows the month to which the information relates.
- 8.28 Each transmission system owner will also be required to publish estimated day end volume injection quantities in GJ for each gas gate connected to its transmission system at 12pm each day (and at any other time as required and notified by Gas Industry Co).

Estimation of consumption information

- 8.29 After consideration of submissions on the January 2007 discussion paper and discussions with the industry, Gas Industry Co has concluded that it would not be appropriate to use a flat profile between actual reads to determine historic estimates.
- 8.30 The methodology to be used by retailers for preparing an historic estimate of volume information for each consumer installation is specified in the draft rules. In addition, a seasonal profile will be applied to the data to take account of the variability in gas consumption rather than the data being normalised on a simple pro-rated basis.
- 8.31 For allocation groups 5 and 6, retailers will be required to provide a forward estimate of consumption for those customers where an actual meter reading has not been obtained (and therefore the calculation of an historic estimate is not possible). While the forward estimation methodology has not been specified in the draft rules, retailers will be required to ensure that the accuracy of the information provided to the allocation agent for the initial and final allocations falls within the accuracy range specified and published, from time to time, by Gas Industry Co.

- 8.32 Gas Industry Co considers that the requirement to meet an estimation accuracy target, as well as the ability to audit a retailer's forward estimation methodology if concerns are raised, is sufficient to improve accuracy of consumption information at this time without mandating a forward estimation methodology.
- 8.33 While there was general agreement to the accuracy target approach, submitters were concerned that the proposed estimation accuracy range of +/-2% would be too "tight" on a rolling 3 month basis. It is therefore proposed that the initial accuracy range be set at +/- 15% which will be reviewed by Gas Industry Co from time to time to ensure that it is providing the right incentive to retailers to ensure they are using an accurate forward estimate methodology.

Global allocation and UFG

- 8.34 Allocation will be based on a one month global methodology with provision for a fixed annual level of UFG to be allocated to TOU customers in any given month. The annual UFG will be set for each gas gate at the annual average of UFG recorded at the relevant gas gate from the interim allocation information relating to initial allocations performed in the 12 months ending in February of each year. The annual UFG figure will be calculated by the allocation agent in July of each year so that retailers can incorporate it into their pricing for the following gas year as required, with the power for Gas Industry Co to direct the allocation agent to take into account certain information or use different data where Gas Industry Co considers that this will result in a more appropriate annual UFG calculation.
- 8.35 The balance of UFG will be allocated to non-TOU customers. Special allocations will not be subject to UFG fixed annual UFG limit.
- 8.36 Transitional arrangements will apply for the first 2 years of the new reconciliation regime. During this period the allocation agent will calculate the national average of annual UFG each year based on the annual reconciliations performed in October 2007 and October 2008 as a proxy for the annual UFG calculation at each gas gate.
- 8.37 Gas Industry Co will have the power to approve exemptions where it is satisfied that the exemption would better achieve the regulatory objective at a particular gas gate and/or for a particular TOU customer. The power to grant an exemption, and apply an alternative allocation methodology, will be at Gas Industry Co's discretion, with provision for consultation where appropriate.
- 8.38 Monthly UFG quantities and factors will be published by the allocation agent at the end of every month by gas gate. The fixed annual UFG for TOU customers will be published by the allocation agent in July of each year.
- 8.39 Distributors will no longer be required to determine and publish loss factors.

Allocation agent obligations

- 8.40 The allocation agent will be required to perform the three allocations within the following timeframes:

- Initial allocation – by 8am on the 5th business day of the month (immediately after the month to which the information relates);
 - Interim allocation – by 8am on the 12th business day of the month (that is 4 months after the month to which the information relates); and
 - Final allocation – by 8am on the 12th business day of the month (that is 13 months after the month to which the information relates).
- 8.41 In response to submissions, the above timeframes give the allocation agent an extra day to perform the allocations.
- 8.42 By 8am on the 13th business day of each month, the allocation agent will be required to publish the following reports in respect of each gas gate:
- The total gas energy injected for the month, as provided by the transmission system owner;
 - The aggregate of all energy consumption for the month as derived by the allocation agent from the consumption information provided by retailers;
 - The quantity and percentage of UFG for the month; and
 - Whether the information relates to an initial allocation, interim allocation, final allocation or special allocation.

Annual reconciliation

- 8.43 Although it was not proposed in the January 2007 discussion paper, in response to submissions Gas Industry Co has decided to retain the requirement in the Reconciliation Code for the allocation agent to perform an annual reconciliation after the end of each gas year. The purpose of the annual reconciliation is to verify the accuracy of the initial allocation consumption information provided to the allocation agent by each retailer for each gas gate during the previous 12 months by comparing it to the retailer's sales data. The allocation agent will then be required to publish the results of the reconciliation.

Special allocations

- 8.44 Up to and until 12 months after a final allocation has been performed, Gas Industry Co will be able to require the allocation agent to perform a special allocation in addition to an initial allocation, interim allocation, or final allocation.
- 8.45 Before requiring a special allocation to be performed, Gas Industry Co must be of the opinion that the current allocation information or allocation results are sufficiently unfair that it is not appropriate to wait until the next scheduled allocation is performed. In making its decision Gas Industry Co must balance the unfairness of the current allocation information or allocation results against any commercial reasons for retaining the allocation.
- 8.46 Special allocations will not be subject to the cap on UFG allocation to TOU customers. Where at all possible special allocations should be made in

conjunction with an initial, interim or final allocation.

Notification requirements

- 8.47 The draft rules prescribe a number of notices that participants need to provide in order to assist in the achievement of accurate reconciliation, namely:
- Retailers are required to notify the allocation agent before they begin trading at a gas gate;
 - Distributors must notify retailers supplying gas on their distribution systems of certain information relating to those retailers' consumer installations;
 - Meter owners must notify retailers of certain information regarding the meters installed at each of the retailers' consumer installations.

Profiles

- 8.48 Retailers will have the option of registering two types of profiles with the allocation agent:
- Static deemed profiles being a pre-determined estimate of the quantity of gas attributed to each day of a consumption period which defines the daily profile of consumption for the consumer installation or class of consumer installations to which it applies; and
 - Dynamic deemed profiles being a deemed profile which changes in accordance with information obtained from TOU metering at one or more sample consumer installations that are representative of the daily consumption profile of the consumer installation or class of consumer installations to which it applies.
- 8.49 A retailer will only be able to use a static deemed profile or a dynamic deemed profile in relation to one or more consumer installations if that profile has been registered by the retailer and has been approved by the allocation agent for use in relation to that consumer installation or installations.
- 8.50 The allocation agent will establish a register which records approved static deemed profiles and dynamic deemed profiles. Retailers will be required to register profiles with the allocation agent, including providing sufficient information on the consumer installation(s) to the allocation agent to approve the use of the profile. Profiles in use prior to commencement of the rules will be deemed registered on the go-live date. This register will not be published. The only profile to be published will be the gas gate residual profile.
- 8.51 The costs of registering a profile will be met by the registering retailer.

Audits

- 8.52 The draft rules give Gas Industry Co the power to commission "performance" audits and "event" audits.

- 8.53 The purpose of a “performance audit” is to assess the allocation agent’s or allocation participant’s general compliance with the rules, including the systems they have put in place to ensure compliance. Performance audits will be carried out on a regular basis, with the intention being that each participant is audited at least once in the first two years of operation of the rules.
- 8.54 The purpose of an “ad hoc audit” is to ascertain the cause or causes of any particular issue or event that has arisen in relation to the allocation of gas. The allocation agent, or any allocation participant, may request such an audit and Gas Industry Co will decide whether to grant or refuse the request.
- 8.55 Gas Industry Co will appoint auditors, who must be independent.
- 8.56 Auditors will have all the powers of inspection under section 43U of the Gas Act (limited in accordance with sections 43V and 43W). The auditor will prepare a draft audit report on which the allocation agent, relevant allocation participants, and Gas Industry Co will have 10 business days to provide comments. The auditor will then provide a final audit report which cannot be altered (although comments from relevant parties may be included).
- 8.57 If the auditor concludes that a material issue has been raised the allocation agent or the allocation participant to which the material issue relates must pay the costs of the auditor. If the material issue relates to more than one party, then the parties must pay the costs of the auditor in such proportions that reflect their contribution to that material issue as determined by the auditor.
- 8.58 If the auditor concludes that no material issue has been raised the costs of the auditor must be apportioned between such of the allocation agent and the allocation participants, as the case may be, as Gas Industry Co determines in its sole discretion.

Funding

- 8.59 In response to submissions received on the January 2007 discussion paper, Gas Industry Co undertook further consideration and analysis of the proposed mechanism for allocation of costs. A copy of Gas Industry Co’s detailed analysis is set out in Appendix 3 to this paper.
- 8.60 In summary, it is now proposed that development and establishments costs will be funded through the retail levy, and ongoing allocation costs will be funded by retailers, split between them on the basis of volumes of gas allocated for the month two months prior to the month in which the costs are payable.
- 8.61 Ongoing allocation costs are the ongoing costs related to the allocation and reconciliation process and will include:
- The costs payable by Gas Industry Co to the allocation agent for the services provided under part 2 of the draft rules;
 - The administrative costs of Gas Industry Co associated with allocation and its role under the draft rules;

- The costs of enforcing compliance with the draft rules under the compliance regulations; and
 - Any other costs that are determined by Gas Industry Co to form part of the ongoing allocation costs.
- 8.62 Ongoing allocation costs will not include costs of audits and registration of profiles.
- 8.63 Gas Industry Co will be required to estimate the ongoing allocation costs for a year at least two months prior to the start of the year and publish them with a breakdown. Any person who is a retailer on the first business day of the month will be liable to pay ongoing allocation costs for that month.

Q8: *Do submitters agree with the funding options for the proposal? If not, please state your reasons.*

Q9: *Do submitters agree with the allocation of costs for the proposal? If not, please state your reasons.*

Exemptions

- 8.64 Provision will be made for participants to apply to Gas Industry Co to be exempted from the application of any of the requirements of the rules.

Transitional provisions

- 8.65 Transitional provisions will be provided in relation to the application of the UFG caps and other requirements in the rules which relate to time periods which have not elapsed before the rules come into force (such as annual reporting requirements).

Choice between rules and regulations

- 8.66 Section 43Q(1) of the Gas Act allows the Minister of Energy to make a rule for all or any of the purposes for which a gas governance regulation may be made. Given that the draft rules:
- govern the limited domain of processes for allocating and reconciling downstream quantities of gas between retailers;
 - incorporate detailed and technical matters affecting gas supply and distribution;
 - apply to retailers, distributors and meter owners only, who are all industry participants;
 - are aimed at making allocation and reconciliation processes more efficient;
 - will be readily accessible, at no charge and at all reasonable times, on both an internet site maintained by the Minister of Energy and on Gas Industry Co's website making the cost of publication under the Act and regulations Publication Act unwarranted; and

- have been drafted by Gas Industry Co, a co-regulatory body set up by the Government to undertake the specific task of regulating the New Zealand gas industry through rules or regulations where appropriate;

Gas Industry Co has concluded that the reconciliation arrangements should be implemented by way of rules under the Act.

Other means to achieve the objective

- 8.67 For the reasons previously outlined, Gas Industry Co does not believe that the regulatory objective is likely to be satisfactorily achieved by any reasonably practicable means other than the making of the proposed rules.

Conclusion

- 8.68 Gas Industry Co concludes that the reasonably practicable option which best achieves the regulatory objective is the making of the draft reconciliation rules under the Gas Act.

Q10: *Do submitters have any comments on the proposed rules attached at Appendix 6? If appropriate, please provide a marked-up copy of the rules (a Word version is available on Gas Industry Co's website for this purpose).*

9 Compliance and Enforcement

General approach to compliance and enforcement

- 9.1 In April 2006, Gas Industry Co released a discussion paper on proposed compliance and enforcement arrangements for the New Zealand gas industry¹⁹. In that paper, Gas Industry Co proposed setting up a compliance and enforcement regime, based around the Rulings Panel and investigative powers contemplated in the Gas Act, which would apply to any arrangements established through rules or regulations promulgated under the Act.
- 9.2 Submitters on that paper were strongly of the view that any compliance and enforcement regime should be “fit for purpose” and that therefore Gas Industry would need to consider on a case by case what type of regime was appropriate for each set of arrangements being proposed. Gas Industry Co has proceeded to develop arrangements for compliance and enforcement on that basis.
- 9.3 The first gas governance arrangements in respect of which Gas Industry Co proposed a compliance regime were those for a central gas registry and rules which would apply when switching customers between gas retailers (the “switching compliance proposal”)
- 9.4 Following extensive consultation with the industry, on 31 May 2007, Gas Industry Co recommended to the Minister of Energy that he recommend to the Governor General the making of regulations by Order in Council to establish a compliance and enforcement regime to support the Gas (Switching Arrangements) Rules 2007 (the “compliance regulations”). The compliance regime is made up of:
- A Market Administrator which has responsibility for receiving notices of reported breaches of the rules, attending to administrative tasks, determining the materiality of breaches, and attempting to resolve any immaterial breach with the agreement of the parties.
 - An Investigator who investigates material or unresolved immaterial breaches, endeavours to settle the matter, and refers settlements and unresolved breaches to the Rulings Panel.
 - A one member Rulings Panel which approves or rejects settlements, determines unresolved breaches and orders remedies.²⁰

¹⁹ See *Compliance and Enforcement Arrangements in the New Zealand Gas Industry*, 12 April 2006 at www.gasindustry.co.nz

²⁰ See *Recommendation to the Minister of Energy on Regulation for Enforcement of Switching Rules*, May 2007 at www.gasindustry.co.nz

Legislative powers

Power to make regulations for compliance and enforcement

- 9.5 The specific powers in the Act which allow Gas Industry Co to recommend rules in respect of allocation and reconciliation issues to ensure effective outcomes for customers are described in section 3 above.
- 9.6 In addition, section 43G(2) of the Act provides that the Minister of Energy can recommend to the Governor-General the making of regulations for the purpose of:
- “(i) providing procedures for resolving disputes between industry participants:*
 - “(j) providing for the operation and facilitation of those dispute resolution procedures by a person, and the powers and procedures of that person:*
 - “(k) providing for compliance with gas governance regulations and rules to be monitored and enforced by the industry body or the Commission or any other person or court, and the powers and procedures of that person or court:...”*

Specific provisions relating to enforcement and compliance

- 9.7 Subpart 1 of Part 4A of the Act sets out a broad framework for enforcing compliance with any gas governance rules and regulations made pursuant to Part 4A. The provisions within the Act:
- contemplate that a Rulings Panel might be established;
 - include limits on investigation powers for monitoring and enforcing compliance with gas governance regulations and rules, obligations on industry participants to co-operate with any investigation, and privileges protection (sections 43U to 43W);
 - contain a list of the orders that the Rulings Panel can make (sections 43X and 43Y);
 - impose limits on tort claims against service providers (section 43Z); and
 - establish rights of judicial review and appeal to the Courts (sections 43ZA to 43ZJ).

Supplementary powers

- 9.8 In addition, section 43S of the Act includes supplementary empowering provisions applying to any regulation or rule made under Subpart 1 of Part 4A of the Act (which includes rules for allocation and reconciliation arrangements). Those provisions include the ability for rules or regulations to
- “(a) provide for 1 or more persons or bodies or groups of persons to carry out functions in relation to those regulations or rules, and for matters concerning their establishment, constitution, functions,*

members (including their appointment, removal, duties, and protection from liability), procedures, employees, administration and operation, funding by participants, and reporting requirements:

- (b) provide for systems, processes and procedures (including dispute resolution procedures), and the keeping, supply and disclosure of information, in relation to any matters specified in this subpart:*
- (c) prescribe the form and manner in which information is to be disclosed:*
-*
- (e) prescribe when and for how long information must be disclosed:*
- (f) exempt or provide for exemptions (including provide for the revocation of exemptions), on any terms and conditions, of any person or class of persons from all or any of the requirements in regulations or rules made under this subpart:*
- (g) provide for the supply of information for the purpose of administration and enforcement of this Act, and regulations and rules made under this Act:*
- (h) provide for transitional provisions:*
- (i) provide for any other matters contemplated by this Act or necessary for its administration or necessary for giving it full effect.”*

Requirements when recommending regulations

- 9.9 Prior to making a recommendation for regulations relating to compliance and enforcement, the Gas Act places the same requirements on Gas Industry Co to:
- Identify the reasonably practicable options for achievement of the regulatory objective;
 - Assess the benefits and costs of each option and the extent to which each of them achieves the regulatory objective; and
 - Issue a statement of proposal for consultation with industry participants.
- 9.10 This section of the paper sets out a statement of the proposal for compliance and enforcement of the proposed allocation and reconciliation rules for the purposes of consultation with industry participants.

Options for compliance and enforcement of allocation and reconciliation rules

- 9.11 Compliance with the current allocation and reconciliation arrangements was one of the issues raised in both the June 2006 and January 2007 discussion papers. Submissions on both those papers agreed that compliance with the current regime was poor, and that ensuring compliance was necessary to realise the benefits from any new allocation and reconciliation arrangements.

- 9.12 The January 2007 discussion paper contained an extensive discussion of the various aspects required of a compliance regime and the criteria for evaluation of each aspect. Much of this discussion was drawn from previous work undertaken by Gas Industry Co in designing and consulting upon the compliance regulations²¹.
- 9.13 In addition to provision for regular audits of participants' compliance with the allocation and reconciliation rules, the paper discussed the need for an effective compliance regime to gain industry confidence that downstream allocation and reconciliation is accurate. Because the types of participant breaches relating to the switching rules were considered likely to involve similar issues to those which could be foreseen for allocation and reconciliation, it was considered that the proposed switching compliance regime was a highly useful precedent. The other precedent considered was the compliance arrangements in MARIA which supported reconciliation in the electricity industry.
- 9.14 As a service provider appointed under rules promulgated under the Gas Act, the allocation agent will be protected by section 43Z of the Act from actions in tort except where the allocation agent has acted fraudulently. In line with the approach taken in the switching arrangements for the registry operator, it was proposed that the allocation agent be liable under the compliance regime for breaches of certain specified rules. Liability would be limited to \$50,000 in respect of any one event or series of closely related events arising from the same cause or circumstance, or \$250,000 in respect of all events occurring in any financial year. The allocation agent will, of course, also be liable to Gas Industry Co for any breaches of its service provider agreement.
- 9.15 After considering how to incorporate all the necessary elements of a compliance regime, the January 2007 discussion paper concluded at paragraphs 10.123 to 10.126 that the preferred option for an allocation and reconciliation compliance regime was similar to that recommended for the switching rules comprising of the bodies described in paragraph 9.4 above. Submissions on the January 2007 discussion paper were supportive of this approach.

Assessment of options

- 9.16 In section 12 of the January 2007 discussion paper, consideration was given to whether the allocation and reconciliation arrangements should be effected through a pan-industry agreement or regulations. The objective of the compliance regime is to provide a high degree of confidence that the proposed allocation and reconciliation rules will be adhered to, thereby contributing to the overall achievement of the Government's policy objectives for the gas industry.
- 9.17 Having concluded that mandatory arrangements are required for allocation and reconciliation, Gas Industry Co assessed both options to ascertain which would

²¹ See *Compliance and Enforcement Arrangements in the New Zealand Gas Industry*, 12 April 2006; *Decision Paper on Modified Arrangements for Compliance and Enforcement Arrangements for Retail Gas Market Registry and Switching*, 19 July 2006; *Switching Arrangements for the New Zealand Gas Industry-Part 2 Compliance and Enforcement Arrangements*, 31 August 2006; *Decision Paper Switching and Compliance*, 19 January 2007 at www.gasindustry.co.nz.

best achieve the regulatory objective. Gas Industry Co's conclusion was that, subject to confirmation through a cost/benefit analysis, a regulatory arrangement was most likely to best achieve the regulatory objective.

- 9.18 As set out in section 7 above, the cost/benefit analysis undertaken by NZIER confirmed that the net benefits of a regulatory solution were likely to be greater than those of a pan industry agreement. Gas Industry Co is therefore proposing that the allocation and reconciliation arrangements be promulgated through rules recommended under the Gas Act.
- 9.19 Having concluded that rules are required for allocation and reconciliation, it follows that it would be most effective for the compliance regime to also be regulated under the Act. Further, as a compliance regime affects peoples' rights, including empowering a decision-making body to make determinations and impose penalties on parties to such determinations, it is appropriate that the regime should be implemented through regulations under the Act rather than rules.
- 9.20 The costs and benefits of a compliance regime are necessarily linked to ensuring that the benefits of the arrangements which they enforce are achieved. The purpose of any compliance regime is to ensure a high level of compliance with the arrangements which the regime is designed to enforce. The benefits of the compliance regime are therefore the achievement of the benefits derived from the implementation of those arrangements.
- 9.21 In this case, the benefits of a regime for compliance with, and enforcement of, rules for allocation and reconciliation of gas quantities is ensuring the achievement of the benefits set out in section 7 above.
- 9.22 The likely range of costs for a compliance regime was set out in Appendix 1 of the switching compliance proposal. These covered all the initial establishment and set up costs for the regime, including appointment of investigators and the Rulings Panel.
- 9.23 As those costs will have already been incurred, the costs of allocation and reconciliation compliance will only consist of the incremental cost of amending the switching compliance regulations to include allocation and reconciliation, and any additional workload for the compliance bodies set out in paragraph 9.4 above. It is not envisaged, for example, that coverage of the allocation and reconciliation rules will require appointment of additional personnel to any of those bodies. It is proposed that these incremental costs be recovered through the ongoing fee under the allocation and reconciliation rules.

Conclusion

- 9.24 It is proposed that Gas Industry Co recommend the following amendments to the compliance regulations so as to include in those regulations provision for them to cover the proposed allocation and reconciliation rules:
- Include the allocation agent, allocation participants and the reconciliation rules in the definitions section;

- Require the allocation agent to notify the market administrator of alleged breaches;
- Require the auditor to notify the market administrator if it determines during the course of any audit that there may have been an alleged breach of the rules; and
- Include a provision limiting the liability of the allocation agent for breaches of certain of the rules.

9.25 A draft of the amended regulations is attached as Appendix 7.

Q11: *Do submitters have any comments on the proposed compliance arrangements? If appropriate, please provide a marked-up copy of the regulations (a Word version is available on Gas Industry Co's website for this purpose).*

10 Submission Requirements

- 10.1 Gas Industry Co invites submissions on the Proposal and any answers to the specific questions contained in Appendix 4 by 1 October 2007. Please note that submissions received after this date may not be able to be considered.
- 10.2 Gas Industry Co's preference is to receive submissions in electronic form (Microsoft Word format and PDF) and to receive one hard copy of the electronic version. The electronic version should be emailed with the phrase "Submission on the Statement of Proposal for Allocation and Reconciliation Arrangements for the New Zealand Gas Industry" in the subject header to submissions@gasindustry.co.nz and one hard copy of the submission should be posted to the address below:
- Jay Jeffries
Team Secretary
Gas Industry Co
Level 9, State Insurance Tower
1 Willis Street
PO Box 10-646
Wellington
New Zealand
- 10.3 Gas Industry Co will acknowledge receipt of all submissions electronically. Please contact Jay Jeffries on 04 472 1800 if you do not receive electronic acknowledgement of your submission within two business days.
- 10.4 Submissions on the specific questions should be provided in the format shown in Appendix 4. Submissions on the draft rules should be provided separately in mark-up in the form of redrafted rules with any comments.
- 10.5 Gas Industry Co values openness and transparency and therefore submissions will generally be made available to the public on Gas Industry Co's website. Submitters should discuss any intended provision of confidential information with Gas Industry Co prior to submitting the information.
- 10.6 Following receipt of submissions, Gas Industry Co intends to develop a recommendation to the Minister of Energy, with a view to making a recommendation by December 2007. It is anticipated that the new allocation and reconciliation arrangements will come into effect from 1 October 2008.

Appendix 1: Summary of Options in January 2007 Discussion Paper

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
Problem Area 1 – Information quality		
Inputs used in allocation process	Lack of standardised file formats and data requirements	<p>Establish a Gas Data Formats Group to develop, and later review (as and when appropriate), standardised file formats and forward to Gas Industry Co for approval and publication.</p> <p>Require participants to comply with the standard file formats (if any) published on Gas Industry Co's website.</p>
	Inconsistent estimation methodologies	<p>Introduce estimation accuracy criteria. The proposed criteria will assess on a rolling basis the accuracy of data provided for initial allocation for allocation groups 3 to 6 on each gas gate aggregated over a rolling 3 month period with the comparable data provided for final allocation. The initial allocation data is required to be within +/- 2% of the final allocation data.</p> <p>Provide that normalised data be submitted for allocation groups 3 to 6 for each calendar month. Data is to be normalised on a simple pro-rated basis unless a different approach is authorised by Gas Industry Co.</p> <p>Not introduce a single methodology for forward-estimates at this time, but maintain a watching brief in this area.</p>
	Issues regarding the use of metering devices	<p>Require 95% of each retailer's allocation group 5 and 6 meters at each gas gate to be read within each gas year quarter and 100% within each gas year.</p> <p>Require retailers to comply with NZS 5259:2004. Retailers should raise with Standards New Zealand any concerns regarding the inadequacy of that standard.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
	Irregular updating of loss factors across distribution networks	<p>Require loss factors to be updated each gas year on a per gas gate basis. Each updated loss factor should apply to all allocation groups at the gas gate and should apply from the start of the gas year.</p> <p>Distributors should annually calculate updated loss factors and provide these (and the supporting calculations) to Gas Industry Co by 1 July. There will be no mandated process for this calculation but the aim is a loss factor that is likely to result in an accurate estimation of the expected losses for the period to which the loss factor will apply.</p> <p>Require publication by Gas Industry Co of updated loss factors and the calculations supporting those loss factors.</p> <p>Industry participants must notify the distributor and Gas Industry Co within 2 weeks of publication if they consider the proposed loss factor is inappropriate and, in such circumstances, Gas Industry Co will determine the updated loss factor. Gas Industry Co will use reasonable efforts to publish the updated loss factor by 1 September.</p> <p>If there are continued issues regarding the setting of loss factors, Gas Industry Co will establish a work stream to consider introducing a standardised process.</p>
Quality and reliability of allocation information	Inadequate timeframes	Retain the current timelines for monthly allocation, but excuse the Allocation Agent from any failure to deliver allocations on time if the Allocation Agent used reasonable care and skill.
	Customer switching and lack of a central registry	<p>Once switching and registry arrangements have been implemented, consider whether additional changes are required.</p> <p>Include exemption and transitional provisions to cover any issues faced by industry participants complying with the arrangements prior to the central registry go-live date.</p>
	Lack of effective incentives to provide accurate information and lack of mandatory performance criteria	Require all industry participants to submit accurate data to the Allocation Agent and comply with all applicable data submission requirements.

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
"Wash-ups" and corrections	"Wash-up" timeframe inappropriate	<p>Avoid use of term "wash ups" which may imply a financial settlement.</p> <p>Introduce rolling revisions as follows:</p> <p>4 month "interim allocation" (i.e. initial month plus 3 months);</p> <p>13 month "final allocation" (i.e. initial month plus 1 year);</p> <p>these allocations will have no materiality threshold (i.e. all errors will be reallocated no matter how small).</p> <p>Require all participants to submit revised data for both the interim and final allocations.</p> <p>Require that data submitted for the final allocation include actual data or 100% historic estimated / normalised data.</p>
	Ad hoc corrections problematic	Remove current ad hoc correction process but retain ability for Allocation Agent to correct allocation information (of any allocation - initial, interim or final) within one working day of its publication if a manifest error is discovered.
Transparency	Lack of transparency / too much confidentiality	<p>In addition to publication of loss factors noted above, require:</p> <p>daily publication of daily gas gate metered quantities;</p> <p>publication of UFG (initial, interim and final) on a per gas gate basis;</p> <p>publication on a per gas gate basis of total aggregated monthly gas allocated to each retailer (initial, interim and final).</p>
Problem Area 2 – Allocation methodologies and UFG		
Mix of difference and global methodologies	UFG allocation untenable on some gas gates	Mandate a "1 month UFG global" method of allocation.
Allocation services	Two of the three allocation services are barely used	Day End Estimated Energy Information Service and Month End Monthly Energy Allocation Service will not be covered by the mandatory reconciliation regime at this stage, but participants will be able to negotiate directly with the Allocation Agent if they wish to acquire these as optional services.
Problem Area 3 – Appointment of Allocation Agent		
Appointment of Allocation Agent	Appointment very problematic	<p>Gas Industry Co to appoint single downstream Allocation Agent.</p> <p>Appointment model to be similar to the "service provider" model used in electricity industry. Initial appointment (by tender) to be for a five year term.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
Problem Area 4 – Governance		
Governance arrangements	No transparent, workable, enforceable, mandatory governance arrangements	<p>Establish clear, enforceable, mandatory governance arrangements in either a regulatory arrangement or pan-industry agreement.</p> <p>If a regulatory arrangement is adopted:</p> <p>Gas Industry Co is the governing body and administrator;</p> <p>Gas Industry Co is to oversee development of arrangements and make recommendations to the Minister of Energy;</p> <p>rule changes to occur following Gas Act process (essential components are Gas Industry Co to consult with industry and, where necessary, perform cost / benefit analysis before making a recommendation to the Minister of Energy); and</p> <p>governance arrangements to be funded by prescribed formula. Gas Industry Co's preliminary view is that this should be by retailers according to number of ICPs. (Funding of audits and compliance discussed separately.)</p> <p>Alternatively, if a pan-industry agreement is adopted, it would also need to provide for clear, transparent governance structures. The structure of the MARIA agreement is presented as a possible precedent.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
Problem Area 5 – Audits and Compliance		
Audits	No workable audit process in current arrangements	<p>Gas Industry Co to appoint independent auditor(s) as required for regular and ad hoc audits.</p> <p>Auditors should be able to audit performance and systems of any industry participant and the Allocation Agent and audit/ascertain the causes of a particular issue or event.</p> <p>Gas Industry Co to determine when regular and ad hoc audits should occur at its discretion. Any industry participant may ask Gas Industry Co to request an audit, but Gas Industry Co will screen requests to ensure audits are reasonable. Timeframes for regular audits will be determined by Gas Industry Co.</p> <p>Payment for audits will be based on the principle that a party at fault is responsible for paying an appropriate portion of the audit cost. In particular:</p> <p>the costs of performing a regular audit of a particular industry participant shall be paid by that participant; and</p> <p>the costs of any ad hoc audit will depend on the outcome of the audit findings. If the auditor finds material non-performance, the costs shall be paid by the participant at fault or by the participants at fault on a basis that reflects the relative materiality of non-compliance. If the auditor does not find any material non-compliance, the costs of the audit shall be apportioned between all relevant participants at the discretion of Gas Industry Co.</p> <p>Participants will be required to provide an auditor with information. Precise limits of the requirement to provide information are yet to be clarified but some information may be exempt (e.g. information subject to legal privilege).</p> <p>If the auditor considers it appropriate to include confidential information in the audit report, the auditor will prepare a confidential version of the audit report for Gas Industry Co and a redacted version for industry participants.</p> <p>All audit reports shall be first circulated in draft and an appropriate opportunity provided for industry comment. Feedback will be taken into account when preparing the final audit report. There will be no ability for industry participants to challenge the findings of a final audit report.</p> <p>Final audit reports (with confidential information redacted) will be published on Gas Industry Co's website.</p> <p>Auditors will be able to audit the time period up to 3 years prior to the date on which the audit was requested.</p> <p>Audit reports may be used for a variety of purposes.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
Compliance regime	The features of the preferred compliance regime for downstream reconciliation arrangements look similar to the compliance regime proposed in the switching compliance proposal. The preferred approach is detailed below. The “Rulings Panel”, “Market Administrator” and “Investigator” could be appointed under either a regulatory arrangement or a pan-industry agreement. The description below notes where the preferred approach differs from the switching compliance proposal and where there are possible advantages of a regulatory arrangement over a pan-industry agreement.	
	Which breaches are covered	<p>Compliance regime should cover all breaches by any retailer, distributor, transmission owner or meter owner.</p> <p>Certain Allocation Agent breaches should be covered by the compliance regime (e.g. process and timeframe breaches) but other breaches will only be covered by the appointment contract (e.g. preparation of reports and general performance). Subject to final drafting, this position may be different from the position of the Registry Operator in relation to switching.</p> <p>Performance of auditors and Gas Industry Co not covered by compliance regime.</p>
	Decision maker	<p>Specialised Rulings Panel should be appointed and consist of one member and limited/appropriate use of industry experts. Use of industry experts to be approved by Gas Industry Co on a case by case basis.</p> <p>Rulings Panel may reject or approve settlements of material breaches or any breach referred to it. Rulings Panel can set own procedures (e.g. determine matter on written submissions or by hearing).</p> <p>There are likely to be some advantages of a regulatory arrangement in terms of the design of the Rulings Panel (e.g. Gas Act already provides key features, ability to piggyback off switching compliance proposal and some less risk, such as technical legal risk and risk of waning industry support).</p>
	Detection	<p>Participants and non-participants (e.g. Allocation Agent) may be able to detect breaches.</p> <p>Monitoring or surveillance functions will not be included, but audit function allows a form of surveillance on demand where non-compliance is suspected. A comprehensive audit function was not included in the switching compliance proposal.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
	Reporting of breaches	<p>Mandatory reporting of breaches by Allocation Agent. Regular reporting to Gas Industry Co by Allocation Agent of suspected breaches. Gas Industry Co has right to report a breach. Voluntary reporting by participants and non-participants.</p> <p>Unlike switching compliance proposal, notices alleging breach will only be required to state the rule that is breached where known, but will still be required to explain the circumstances relating to the alleged breach.</p> <p>Essentially a 3 year time limit for reporting breaches.</p>
	Recipient of breach notices	Reported breaches notified to Market Administrator who notifies all participants. Participants have right of rejoinder.
	Investigation of breaches and early Resolution / Settlement	<p>Market Administrator can seek further information and must determine materiality of breach (in accordance with criteria) and facilitate early resolution/settlement of immaterial breaches. No investigation of immaterial breaches unless requested by a participant.</p> <p>Referral from Market Administrator to Investigator of material breaches or breaches that a participant requests to be investigated. Investigator appointed on a case by case basis.</p> <p>Investigator to investigate breach and must seek early resolution and settlement. Any proposed settlement must be referred to the Rulings Panel for approval. Investigator can recommend Rulings Panel reject settlement proposal.</p> <p>Investigator prepares report on non-resolved/settled breach allegations and forwards to Rulings Panel for determination.</p> <p>Regulatory arrangement has some advantages over pan-industry agreement as clear investigative powers are specified in the Gas Act.</p>
	Enforcement / Prosecution	Investigator provides report to Rulings Panel and speaks to report on request. Parties have right of representation. Rulings Panel to determine own process (bearing in mind need to provide for natural justice etc).
	Consequences	<p>Rulings Panel should have access to wide range of remedies including issuing a private warning and public warning, imposing additional or more stringent record-keeping or reporting requirements, imposing civil pecuniary penalties (up to \$20,000), ordering payment of compensation, imposing other orders (e.g. an order terminating or suspending the rights of an industry participant) and proposing a change to the downstream reconciliation arrangements be considered by Gas Industry Co.</p> <p>Regulatory arrangement has some advantages as remedies are already specified in the Gas Act, whereas there may be some legal risk including all of these remedies in a contractual arrangement.</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
	Appeal rights	<p>Compliance regime should include set appeal rights.</p> <p>Appeal rights can be included in either regulatory arrangement or pan-industry agreement.</p> <p>Regulatory arrangement may have some advantages as Gas Act includes provisions on appeals whereas contractual appeal rights to a specialist appeal body will need careful drafting.</p>
	Appointment and liability of persons performing key compliance roles	<p>Gas Industry Co to:</p> <ul style="list-style-type: none"> either perform role or appoint Market Administrator; appoint Investigators and Rulings Panel; approve industry experts sought by Rulings Panel; manage performance of appointed bodies; publish settlements and decisions; and recover costs from industry participants. <p>Liability of persons performing compliance roles should be appropriately limited.</p>
	Publication	<p>All decisions and settlements of Market Administrator and Rulings Panel to be published. Notices of breach to be notified to all participants but not published. Publication to be on Gas Industry Co's website.</p>
	Funding	<p>General compliance regime costs to be recovered from retailers under set formula. Preliminary view is that the arrangements should be funded by retailers according to ICP number. Formula to specify whether penalties are to be offset against costs of arrangements.</p> <p>Costs in relation to a particular breach may be able to be recovered by an award of costs or as part of the terms of settlement.</p> <p>In terms of funding, there are some advantages with a regulatory approach as common compliance costs can likely be spread over other arrangements (e.g. switching).</p>

Broad Issue	Specific Problems	Preferred approach to deliver the Regulatory Objective
Special allocations	Process required for changing allocations following findings of an audit or the compliance regime	<p>Special allocations to be performed by Allocation Agent in response to a direct request by Gas Industry Co.</p> <p>Gas Industry Co to weigh unfairness of allocation data (in light of error discovered by audit or compliance regime) against commercial drivers for retention of allocation data.</p> <p>Special allocations can be performed for initial, interim and final allocations. However, in considering whether to request the Allocation Agent to perform a special allocation of an initial or interim allocation, Gas Industry Co will need to determine that the allocation data is sufficiently unfair to outweigh the benefit in waiting until the next allocation (i.e. interim or final) is performed.</p> <p>Each special allocation is likely to require unique consideration. Gas Industry Co to set own procedure.</p> <p>Special allocations for any given month's data may only be performed up to the date 12 months from the date of final allocation. After this time, allocations will not change but non-compliance may result in compensation or other consequences as a result of the findings of the compliance regime.</p>

Appendix 2: Analysis of reasonably practicable options against the regulatory objective

Option 1 – Status Quo

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
Efficiency	Protocols and standards for reconciling gas are efficient	No	Lack of transparency/ too much confidentiality/ Irregular updating of loss factors/ Appointment of Allocation Agent problematic/ No transparent, workable, enforceable, mandatory governance arrangements
Efficiency	Provides standardised data exchange protocols	No	No standardised file formats or data requirements
Efficiency	Ensures correct data is communicated to all affected parties in a timely manner	No	Inadequate timeframes/ wash-up timings inappropriate
Accuracy	Reconciliation produces accurate results	No	Inconsistent estimation methodologies/ Issues with frequency of meter reading/ lack of effective incentives to provide accurate information/ ad hoc corrections problematic
Fair	Protocols and standards for reconciling gas are fair/ equitable	No	UFG allocation untenable on some gates/ Lack of transparency
Fair	Provides accurate identification and fairer allocation of the amount of unaccounted for gas	No	UFG allocation untenable on some gates/ Lack of transparency
Reliable	Protocols and standards for reconciling gas are reliable	No	No effective compliance/ not auditable/ inaccurate information
Reliable	Consistent, transparent, and enforceable processes	No	No transparent, workable, enforceable, mandatory governance arrangements
Reliable	Is auditable	No	No workable audit process in current arrangements

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
Reliable	Effective compliance regime	No	No effective mechanism that monitors and enforces compliance with the provisions in the Reconciliation Code and allocation agreements
Barriers to competition minimised/ Facilitates Retail Competition	Transparency around full costs of balancing and reconciling gas	No	No transparency surrounding UFG and its allocation/ Lack of transparency
Barriers to competition minimised / Facilitates Retail Competition	Provides a reconciliation process, which does not create barriers to new entrant participants	No	Any new entrant would be faced with uncertainty surrounding reconciliation processes and the costs/ obligations involved

Option 2 – Pan-industry agreement

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
Efficiency	Protocols and standards for reconciling gas are efficient	Yes	Introduction of transparent, workable, enforceable, mandatory governance arrangements/ standardised processes
Efficiency	Provides standardised data exchange protocols	Yes	Requirement to comply with any data exchange protocols developed by the industry and published by Gas Industry Co
Efficiency	Ensures correct data is communicated to all affected parties in a timely manner	Yes	Processes to enable reconciliation are more clearly defined and timeframes for allocation are clear
Accuracy	Reconciliation produces accurate results	Yes	Historical Estimation methodologies defined and requirement for calculation of forward estimates (including requirement that initial submission be within 15% of final submission Meter reading obligations to ensure more accurate

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
			reconciliation data
Fair/Equitable	Protocols and standards for reconciling gas are fair/ equitable	Yes	Measures to ensure more accurate reconciliation data is submitted be in place which would ensure fair and correct allocation of gas quantities Methodology for allocating UFG defined
Fair/Equitable	Provides accurate identification and fairer allocation of the amount of unaccounted for gas	Yes	Methodology for allocating UFG defined UFG amounts published so more transparent
Reliable	Protocols and standards for reconciling gas are reliable	Yes	Measures to ensure more accurate reconciliation data is submitted be in place which would ensure fair and correct allocation of gas quantities Introduction of compliance processes
Reliable	Consistent, transparent, and enforceable processes	Partly	Governance arrangements introduced – rely on cooperation of parties – not easily enforceable
Reliable	Is auditable	Partly	Audit processes in place – rely on cooperation of parties – not easily enforceable
Reliable	Effective compliance regime	Partly	Monitoring and compliance regime set out – rely on cooperation of parties – not easily enforceable
Barriers to competition minimised/ Facilitates Retail Competition	Transparency around full costs of balancing and reconciling gas	Yes	Processes defined and therefore more transparent UFG amounts published
Barriers to competition minimised / Facilitates Retail Competition	Provides a reconciliation process, which does not create barriers to new entrant participants	Yes	Development of robust reconciliation processes and availability of information mean that new entrants will have the necessary information required to enter

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
			the gas retail market

Option 3 – Regulatory arrangement

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
Efficiency	Protocols and standards for reconciling gas are efficient	Yes	Introduction of transparent, workable, enforceable, mandatory governance arrangements/ standardised processes
Efficiency	Provides standardised data exchange protocols	Yes	Requirement to comply with any data exchange protocols developed by the industry and published by Gas Industry Co
Efficiency	Ensures correct data is communicated to all affected parties in a timely manner	Yes	Processes to enable reconciliation are more clearly defined and timeframes for allocation are clear
Accuracy	Reconciliation produces accurate results	Yes	Historical Estimation methodologies defined and requirement for calculation of forward estimates (including requirement that initial submission be within 15% of final submission Meter reading obligations to ensure more accurate reconciliation data
Fair/Equitable	Protocols and standards for reconciling gas are fair/equitable	Yes	Measures to ensure more accurate reconciliation data is submitted be in place which would ensure fair and correct allocation of gas quantities Methodology for allocating UFG defined

Objective	Objective requirement	Meets objective requirement?	How objective met/not met
Fair/Equitable	Provides accurate identification and fairer allocation of the amount of unaccounted for gas	Yes	Methodology for allocating UFG defined UFG amounts published so more transparent
Reliable	Protocols and standards for reconciling gas are reliable	Yes	Measures to ensure more accurate reconciliation data is submitted be in place which would ensure fair and correct allocation of gas quantities Introduction of compliance processes
Reliable	Consistent, transparent, and enforceable processes	Yes	Governance arrangements introduced
Reliable	Is auditable	Yes	Audit processes in place
Reliable	Effective compliance regime	Yes	Monitoring and compliance regime set out
Barriers to competition minimised/ Facilitates Retail Competition	Transparency around full costs of balancing and reconciling gas	Yes	Processes defined and therefore more transparent UFG amounts published
Barriers to competition minimised / Facilitates Retail Competition	Provides a reconciliation process, which does not create barriers to new entrant participants	Yes	Development of robust reconciliation processes and availability of information mean that new entrants will have the necessary information required to enter the gas retail market

Appendix 3: Cost allocation

Background

In the January 2007 discussion paper, Gas Industry Co proposed that the costs of development and ongoing reconciliation arrangements be funded by retailers as they will obtain most of the benefits from the anticipated changes.

As between retailers, it was suggested that costs should be allocated on the basis of the number of ICPs rather than by gas volume.

In addition, the discussion paper proposed alternative funding arrangements for audits and compliance arrangements to reflect the specific characteristics of these activities and the ability to identify discrete beneficiaries of the activity.

Views of submitters

Ten submissions were received in relation to the two funding issues raised in the discussion paper.

The first issue was whether funding of the reconciliation arrangements should be covered by a process detailed in the reconciliation arrangements, rather than the industry levy. Of the ten responses, nine either explicitly agreed with this approach or made no comment.

The only exception was Wanganui Gas, which proposed that the levy be used to fund the reconciliation process as this “would mean that retailers would not be advantaged or disadvantaged by significant movements in their customer bases following acquisition campaigns throughout the year or years that the costs are recovered”.

While Wanganui Gas sees ‘smoothing’ of costs as an advantage, it is possible that some other parties could take a different view, depending on whether they were gaining or losing market share. Furthermore, the extent of any ‘smoothing’ in charges is likely to be relatively small, given that the retail levy is based on month end ICP numbers.

The second question was whether parties supported the approach of recovering costs from retailers, with apportionment across retailers according to the number of ICPs allocated to them. While all ten submissions either explicitly or implicitly supported funding by retailers, there was less agreement on whether ICPs, or another basis should be used as the formula for allocation between retailers.

The views of submitters are summarised in the table below.

Organisation/sector		Cost recovery preference	
Powerco	Distributor	Retailers	By ICP
Vector	Distributor/ retailer	Retailers	By ICP
GasNet	Distributor	Unclear	Unclear
On Gas	Distributor	Retailers	By ICP
Nova	Distributor	Retailers	By ICP
Genesis Energy	Retailer	Retailers	By volume
Contact Energy	Retailer	Retailers	By volume
Mighty River Power	Retailer	Retailers	Setup costs by ICP Ongoing costs by gas gate numbers
Tom Tetenberg Assoc.	Data management service provider	Retailers	By ICP
Wanganui Gas	Retailer	Levy	By ICP

Contact and Genesis, both mass market retailers, argued that gas volume rather than ICPs should be the basis of cost recovery.

The other mass market retailer to respond, Mighty River Power, argued that whilst set-up costs should be allocated by ICPs, ongoing costs should be based on the number of gas gates being reconciled. Whilst no further detail is provided, this appears to suggest an approach based on the complexity of the reconciliation with the number of parties to a gas gate being one of the contributing factors.

Of the two other submissions from retail companies (non-mass market), Vector agreed with the proposal to calculate the share of funding using ICPs. The other (Wanganui Gas) does not specify a preferred approach due to their preference for it to be funded through the levy, though this would effectively be on the basis of ICPs.

Of the four submissions from pipeline companies, three clearly agreed with the proposal to calculate the share of funding using ICPs. The other (GasNet) does not specify a preferred approach but supports a mechanism which aligns cost recovery to activity levels.

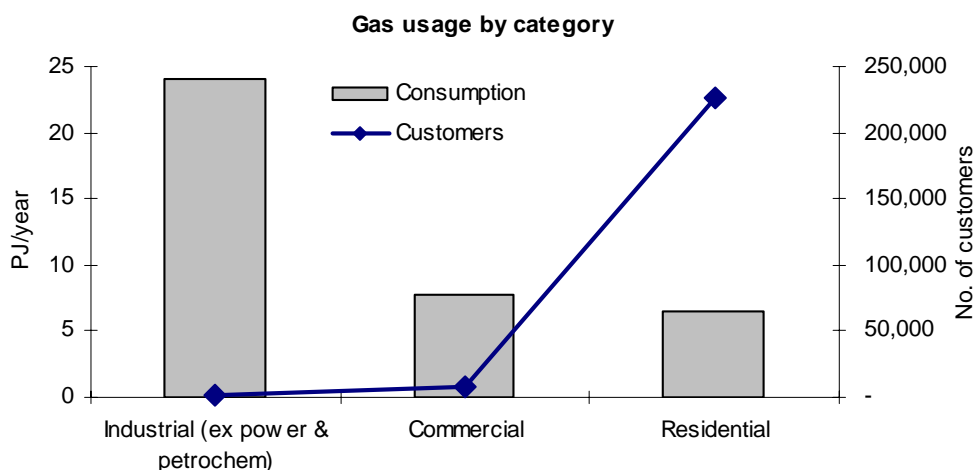
The submission by Tom Tetenburg and Associates, the current Allocation Agent, supported funding based on ICPs.

In summary, there was broad agreement that retailers should meet the cost of the reconciliation arrangements, but two clear schools of thought on the question of allocation among retailers. Generally speaking, the mass market retailers prefer allocation based on gas volumes, while the balance of submitters would prefer allocation based on ICPs.

Significance of ICPs versus volumes

The choice between these options will have a major impact on cost allocation, because some retailers tend to focus on servicing larger users, while others operate across the full spectrum of customers.

The potential magnitude of the variation is illustrated in the chart below, which shows gas purchase volumes/customer numbers for three main customer categories.



Source: Derived from Ministry of Economic Development, Energy Data File September 2006

Industrial users (excluding power generation and petrochemical production) as a category account for 63% of gas purchases, but less than 1% of customer numbers. A retailer focussing exclusively on that customer category would benefit from an ICP based charge.

Residential users on the other hand account for 17% of gas purchase volumes, but more than 95% of customer numbers. Retailers servicing this segment will benefit from volume based reconciliation charges.

Summary of current arrangements

The current funding arrangements are set out in Schedule 4 of the Reconciliation Code. Activities that are specific to individual parties, such as setting up new sites or audit costs, are charged to the party or parties requesting the service.

The service charges for routine operations (reconciling Day End and Month End information) are based on a number of components to reflect the number of Receipt Points, the number of TOU/telemetry sites, the number of parties requiring the service and days per month.

These service charges are then passed to each party based on the estimated (Day End) or allocated (Month End) gas quantities to each party.

Thus, the volume of gas attributed to each party has a large influence on the

allocation of costs among reconciled parties. This is consistent with informal feedback from industry participants.

Core principles for cost recovery

Gas Industry Co has developed a set of standard criteria to use in considering cost recovery issues. These criteria are consistent with the principles and objectives in the Gas Act and Government Policy Statement. They are:

- Economic efficiency – the charging structure should encourage, and not detract from efficient market behaviour;
- User/causer/beneficiary pays – where possible costs should be allocated on a basis where the those causing the costs or benefiting from the costs will pay;
- Rationality – where costs are allocated to participant classes there should be a strong connection between the participant class and the costs being recovered;
- Simplicity – the fee structure should be simple to apply and understand;
- Equity – users in similar situations should pay similar amounts;
- Sufficiency – the fee structure should generate sufficient revenue to recover the costs.

The application of these criteria for cost allocation does not typically yield one unique solution, and in some cases the application of different criteria leads to conflicting outcomes. Settling on a cost allocation usually requires some judgement about the weighting to apply to different criteria. Different parties will sometimes apply different weightings depending upon their own perspective on what the most important criteria should be. Thus it is possible to come up with two or more different approaches to cost allocation by applying the same standard criteria.

Economic Efficiency Criterion

The economic efficiency criterion suggests that cost allocation should promote efficient market behaviour by industry participants (or at least should not materially detract from it). The cost allocation should also support a focus on cost-containment by the Gas Industry Co and its agents.

This approach tends to support fee structures that allocate costs to those parties that are able to, and have an incentive to, influence volumes, quality or costs.

The parties most sensitive to reconciliation costs are retailers. Retailers have the strongest combination of incentives and ability to influence costs.

These costs will be driven in part by scale effects (favouring ICPs), and in part by other factors. In particular, beyond a certain level, the marginal cost processing data for a new ICP is likely to be very low (due to economies of scale in information technology costs). As a result, it is hard to distinguish between ICP and volume based charges from an efficiency perspective.

The User/Causer/Beneficiaries Pays Criterion

The user/causer/beneficiaries pays criterion suggests that where the costs of providing certain services are identifiable with certain participants, or where the benefits arising from the service are attributable to particular participants, those participants should be allocated costs. In some cases this criterion suggests an allocation to a party that has no ability to influence the costs and can conflict with the economic efficiency criterion. It is therefore important to consider the two criteria in combination.

The first issue to be determined under this criterion is the users/causers of the service. Strictly speaking, gas customers are the ultimate users/causers, because the need for a reconciliation service only arises where customers want to be able to exercise supplier choice, and a gate station is shared between customers. While customers are the ultimate beneficiaries, retailers, wholesalers and distributors are indirect users, because reconciliation enables billing of retailers by distributors and wholesalers. However, retailers are likely to be the best 'surrogate' for consumers in this context.

The second issue to be determined under this criterion is whether the benefits can be attributed to particular participants. A cost-benefit analysis undertaken by NZIER identified three broad types of benefits from improved reconciliation processes:

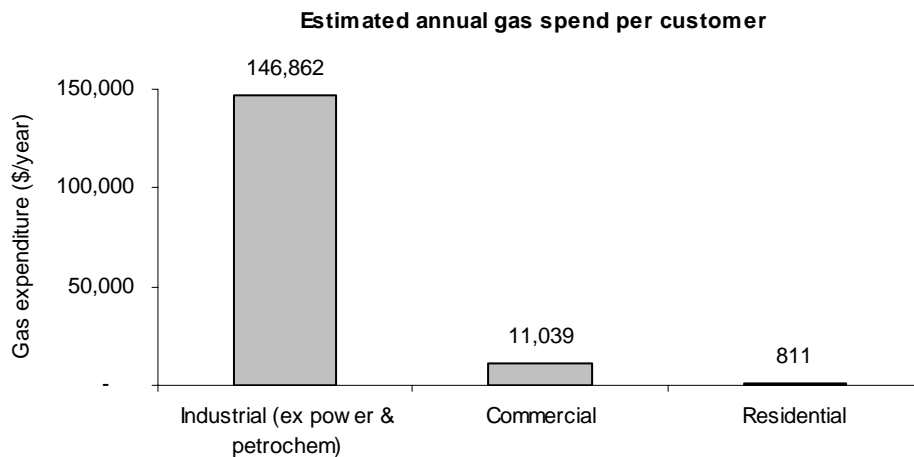
- unaccounted for gas (UFG) benefits – a more accurate allocation of UFG between participants may lead to greater incentives to pursue measures to reduce UFG. This is expected to be a significant issue, because reported UFG varies widely, ranging from minus 10% to positive 13% across gate stations;
- dispute benefits – a reduction in the occurrence and resource requirements of audits undertaken specifically to resolve disputes;
- competition benefits – more efficient and accurate reconciliation of gas quantities gives clearer market signals to participants and improved confidence that they will secure the net benefits from gas they supply.

The table below examines whether these benefits are likely to be correlated with ICP numbers, sales volumes or some other factor.

Issue	ICPs	Sales volumes	Comment
Better manage UFG	✓✓✓	✓✓✓	Most UFG sources ²² are likely to be more problematic for mass market customers, because larger sites generally have higher quality meter/data transfer arrangements. However, such equipment does not entirely eliminate potential for UFG at larger customer sites. Furthermore, to the extent that UFG issues still arise (e.g. due to data errors) the larger sales volumes could make the issue significant.
Improve dispute resolution	✓✓	✓✓	Disputes are likely to mainly arise due to estimation procedures, or in relation to UFG. While both are likely to be ICP correlated, the value of disputes will be higher for larger volume customers
Facilitate competition	✓	✓✓✓	Competition provides benefits to all consumers, but the benefits are likely to be correlated with gas usage (see below for more detail)

Gas retailers will seek a margin to compensate them for the costs and risks associated with gas supply. Typically these margins will be based on a percentage of the total cost of supply, with the actual percentage varying according to the level of competitive pressure.

As a result, customers which spend a large amount on gas will benefit more from competition than smaller users. An indication of the potential differences in benefit can be gauged by examining the annual gas expenditure of different customer categories. This is shown in the chart below.



Source: Derived from Ministry of Economic Development, Energy Data File September 2006

²² UFG arises from a range of sources including metering errors and inaccuracies, data collection and processing errors, pipeline leakage, theft and variations in calorific value of gas.

This means that the benefits of competition are likely to be much more strongly correlated with gas volumes, than ICP numbers.

Furthermore, this correlation is likely to be reinforced by the cost split between wholesale supply (contestable) and transport (generally not contestable) for the different customer groups. In broad terms, contestable components will account for a greater share of total costs for larger users, meaning they should derive a relatively larger benefit from competition.

Rationality Criterion

The rationality criterion suggests that there should be a relatively strong nexus between the participants or participant classes to whom a cost is allocated and the cost being recovered.

Retailers appear to have the strongest connection with the reconciliation process, although distributors clearly have an interest in an efficient process for billing the gas supplied.

The rationality criterion does not clearly support any particular choice of allocation basis.

Simplicity Criterion

The cost allocation and fee structure should not create undue transactions costs for the Gas Industry Co or participants. This determines that the fee structure should be based on readily measurable quantities and allocated only to those participants that have a strong connection with the process and the cost savings.

Allocating costs to retailers only, rather than a mix of retailers and distributors, would meet the simplicity criterion.

Equally, allocating on the basis of ICPs or volume would appear to be relatively straightforward. In short, the simplicity criterion does not appear to be a factor that provides a basis to discriminate between the broad approaches.

Equity Criterion

This criterion suggests that participants in similar situation should pay similar amounts and that, within a class of participants, the allocation of costs should not competitively advantage one participant over another.

It appears equitable to charge retailers only, rather than distributors as the need for reconciliation framework arises to allow competition (which benefits retailers) rather than distributors.

As between allocation based on ICPs and volume, there would not appear to be any overriding basis to choose one path over the other.

Sufficiency Criterion

The sufficiency criterion suggests that the fees charged to participants need to be

sufficient to fully recover the costs of the registry.

This criterion can be met by allocating on an ICP or volume basis, subject to accuracy of forecasting and a “wash-up” process. There are some advantages to ICP as there is less likelihood of variability in ICP numbers compared with gas volume figures.

Overall Assessment Based on Core Principles

Application of the standard criteria for cost allocation suggests that of industry participants, retailers have the strongest connection with the reconciliation process, are likely to have the strongest incentives to influence the costs, and are the participants likely to accrue the most benefits (as intermediaries for consumers). The general thrust of submitters’ views is consistent with these conclusions.

The remaining question is whether ICPs or gas volumes should be used for allocating costs among retailers. The following table summarises the relative ability of each allocation basis to meet the criteria.

Criterion	ICP	Gas volume
Economic efficiency	✓=	✓=
User/causer	✓=	✓=
Beneficiary pays	✓	✓✓✓
Rationality	✓=	✓=
Simplicity	✓=	✓=
Equity	✓=	✓=
Sufficiency	✓=	✓=

On most criteria, the choice is evenly balanced. However, a volume based approach would appear to better align with the ‘beneficiary pays’ principle, given that the competition benefits are expected to be strongly correlated to volumes.

Comparison to electricity

Examination of the methodology for recovering reconciliation costs in the electricity industry is useful, because many of the issues are directly analogous between the industries.

Electricity reconciliation costs are charged 50% to generators and 50% to retailers and direct customers and allocated on the MWh injected/purchased in the period. Note, however, that electricity reconciliation covers both upstream and downstream markets. Given that the upstream and downstream cost components were broadly equivalent when last separately reported, the approach used for electricity is broadly consistent with the method proposed for downstream gas reconciliation.

Start-up costs versus ongoing operating costs

The current phase of work on reconciliation arrangements involves Gas Industry

Co analysing issues, and preparing the materials to make a final recommendation to the Minister. Because this phase has a strong policy focus, it is more difficult to identify specific beneficiaries, and funding via the general retail levy remains appropriate.

As work progresses toward the operational phase, it will be appropriate to move to an approach based on allocating costs by sales volume among retailers, rather than using the levy which is ICP based.

Because there is a difference in cost allocation method between the 'development' and 'operating' phases, it is important to specify the point or conditions that will trigger a transition.

A number of considerations are relevant:

- Clear transition point – a clear transition point is useful because this reduces the scope for unnecessary disputes – in this respect, the obvious points would be when any regulations take effect, or when the new reconciliation arrangements commence. Given that the parties will be bearing reconciliation costs under the existing scheme until the latter of these points, there is some logic in choosing the 'go live' date as the transition point;
- Extent of start-up cost – if there are material start up costs that will be incurred prior to a go live date (e.g. because there is significant capital spend required on information systems), this would suggest a transition date before the 'go live' date, or some mechanism to flow those costs into the period after 'go live' (e.g. a loan). In this instance, it does not appear likely that significant start up costs will be incurred;
- Materiality of difference – if the cost allocation rules are markedly different before and after the transition point, there is a stronger case for looking closely at where to draw the boundary. However, in this instance, costs in both cases will be allocated to retailers, and the only difference is between ICPs and volume. As noted earlier, the aggregate start-up costs are not expected to be large, meaning that the individual differences in charge are unlikely to be material.

Taking these factors into account, it is reasonable to use the 'go live' date as the transition point for moving to volume based charges.

Conclusions on cost recovery

In light of the findings discussed above, it is recommended that:

- downstream reconciliation costs of a generic nature (i.e. costs not attributable to specific parties) be recovered from retailers based on their volume share of total retail gas sales;
- specific costs (e.g. audits, establishment of new services) be recovered from the parties causing the cost to be incurred; and

- these cost recovery arrangements take effect from the 'go live' date for the new reconciliation arrangements, and that the retail levy be used to meet the costs of policy development until that point

Appendix 4: Recommended format for submissions

To assist Gas Industry Co in the orderly and efficient consideration of stakeholders' responses, a suggested format for submissions has been prepared an electronic copy of which is available on our website. This is drawn from the questions posed throughout this Statement of Proposal.

Respondents are also invited to include any other comments in their responses to this Statement of Proposal.

Questions	Comments
Q1: Do submitters have any general comments on the proposal or the process adopted by Gas Industry Co?	
Q2: Do submitters have any comments on the analysis and findings in the Energy Acumen report?	
Q3: Do submitters agree that, provided compliance with the conversion processes in NZS 5259:2004 is mandated, it is inappropriate to introduce a standardised billing methodology at this time?	
Q4: Do submitters have any comments on Gas Industry Co's proposed method of global allocation which would cap the UFG allocated to allocation groups 1 and 2?	
Q5: Do submitters have any comments on the proposed transitional arrangements?	

Questions	Comments
<p>Q6: Are the proposed exemption provisions appropriate? Do submitters envisage that, if the proposal is implemented, they would seek an exemption? If so, please provide details.</p>	
<p>Q7: Do submitters have any comments on the cost-benefit analysis, including any comment on NZIER's report attached as Appendix 5?</p>	
<p>Q8: Do submitters agree with the funding options for the proposal? If not, please state your reasons.</p>	
<p>Q9: Do submitters agree with the allocation of costs for the proposal? If not, please state your reasons.</p>	
<p>Q10: Do submitters have any comments on the proposed rules attached at Appendix 6? If appropriate, please provide a marked-up copy of the rules (a Word version is available on Gas Industry Co's website for this purpose).</p>	
<p>Q11: Do submitters have any comments on the proposed compliance arrangements? If appropriate, please provide a marked-up copy of the regulations (a Word version is available on Gas Industry Co's website for this purpose).</p>	

Appendix 5: NZIER Report

Attached

Appendix 6: Draft rules

Attached

Appendix 7: Draft compliance regulations

Attached