Transmission Pipeline Balancing: Supplement to the October 2009 Statement of Proposal

Date issued: April 2010
Submissions close: 5pm Tuesday 27 April 2010

GAS INDUSTRY COMPANY LIMITED

About Gas Industry Co.

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

Its role is to:

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

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Executive summary

Gas Industry Co recommends a regulatory solution for transmission pipeline balancing arrangements

Gas Industry Co Limited (Gas Industry Co) has completed its review of transmission pipeline balancing arrangements in New Zealand and has determined that a regulatory solution is required. In December 2009, Gas Industry Co wrote to the Associate Minister of Energy and Resources (Associate Minister) to indicate that the Company would be recommending she adopt the 'participative regulation' option first described in the July 2009 *Transmission Pipeline Balancing Second Options Paper* (Second Options Paper).

Subsequent activity has included a cost-benefit analysis and further industry consultation

In our December 2009 letter to the Associate Minister, we requested that Gas Industry Co be allowed more time before submitting a formal recommendation. We were not confident the industry had fully engaged on the detail of the draft balancing rules (Draft Rules) that comprised its proposed solution. We proposed holding a series of workshops to discuss the detail of the Draft Rules and to identify possible implementation issues.

In a response to Gas Industry Co's letter, the Associate Minister recognised our wish to engage further with the industry. She also requested that our final recommendation be accompanied by a quantitative cost-benefit analysis. Gas Industry Co engaged the New Zealand Institute of Economic Research (NZIER) to perform this analysis, which is presented in Appendix B. We invite submissions on NZIER's cost-benefit analysis.

As a result of this additional activity, Gas Industry Co was unable to meet its proposed deadline for submitting a final recommendation to the Associate Minister at the end of February. We anticipate that the final recommendation will now be submitted in May 2010.

This supplement explores whether new information would cause Gas Industry Co to reconsider its proposal

Gas Industry Co determined that it would be helpful to issue this supplement to the October 2009 *Statement of Proposal on Transmission Pipeline Balancing* (SOP) to explain the work that has taken place since the SOP. The supplement explores whether any new information would cause Gas Industry Co to reconsider its proposal. In particular the paper provides:

- an update on developments since the SOP

- a description of key changes made to the Draft Rules following further industry discussions (including a copy of the Draft Rules)
- implementation plans for the Draft Rules determined with industry input, and
- a quantitative cost-benefit analysis of the Draft Rules.

Recent industry initiatives

In December 2009, Gas Industry Co published the paper *Consideration of Recent Industry Balancing Initiatives* (Balancing Initiatives Paper). The paper analysed two industry initiatives to improve balancing arrangements. One was a package of improvements to the Maui Pipeline Operating Code (MPOC) proposed by Maui Development Limited (MDL) and the other a balancing solution developed through an Industry Code Development (ICD) process. The paper considered whether these initiatives would cause us to reconsider the conclusion of the SOP that a 'participative regulation' option best meets the Gas Act and Government Policy Statement objectives.

The ICD process reached broad agreement on principles. However, Gas Industry Co remains convinced that individual commercial interests would stymie agreement on the detail. Self-interest will continue to prevent the industry from unanimously agreeing the common good solution within acceptable timeframes.

The Balancing Initiatives Paper included a high-level analysis of the anticipated package of improvements from MDL. A detailed analysis was not possible because, although MDL had outlined these in its submission on Gas Industry Co's Second Options Paper, the specific changes were unknown at the time we wrote the Balancing Initiatives Paper. However, the scope of MDL's proposed improvements was less than that the scope of the solution proposed by the ICD process. We reasoned that if an implemented ICD solution was considered inferior to the participative regulation option, then MDL's proposed improvements must also be inferior. Gas Industry Co subsequently received an MPOC change request from MDL (on 17 December 2009), which provided more detail. We are currently processing this change request.

Gas Industry Co's response to MDL's proposed improvements

Gas Industry Co commends MDL for its efforts. We acknowledge that it has broadly met its stated intention to:

- issue revised Standard Operating Procedures, and set rules for managing linepack, unaccounted for gas (UFG), and any socialised gas
- develop MPOC changes that allow the introduction of a back-to-back cash-out balancing regime and submit them under the MPOC change process, and

- develop MPOC changes that incorporate a description of the Balancing Operator's role and function into the MPOC.

MDL has not yet met its intention to:

- develop MPOC changes that would adopt the Rulings Panel for settling disputes related to balancing, and
- allow balancing gas suppliers located on Vector pipelines to supply balancing gas services to the Maui Pipeline.

Gas Industry Co recognises and respects MDL's efforts to improve balancing arrangements; however, we remain of the opinion that these efforts will not achieve the benefits of participative regulation. In particular:

- Pipeline balancing across both pipelines will still not be managed coherently by a single balancing operator with clearly defined responsibilities and accountabilities.
- Without this unification, MDL and Vector will continue to disagree on how balancing is most effectively managed.
- Pipeline users will continue to suffer the effects of commercial conflict between the pipeline owners—ongoing disputes, continuing industry debate, and distraction from more pressing industry concerns, and the business of delivering gas to customers.

Conclusion: Gas Industry Co confirms the recommendation for a regulatory solution

The conclusion of the Balancing Initiatives paper confirmed our preference for the participative regulation option. Gas Industry Co considers that none of the subsequent developments—receipt of MDL's MPOC change request, the industry workshops and refinement of the draft balancing rules, development of implementation scenarios, or the results of a quantitative cost-benefit analysis—affects the overall conclusion of the SOP, or alters the proposal to a degree that requires us to reissue the SOP. We still believe that participative regulation is the best option.

We acknowledge there are risks in pursuing participative regulation. From the industry workshops held in February 2010 to consider the Draft Rules and develop implementation scenarios, it was clear that many industry participants consider that MDL and Vector will be unable to agree on a balancing plan or on the appointment of a Balancing Operator. The Draft Rules provide that Gas Industry Co would then step in to complete these tasks. This would be a more costly outcome for the industry, but we believe that a lot can be done to mitigate that risk.

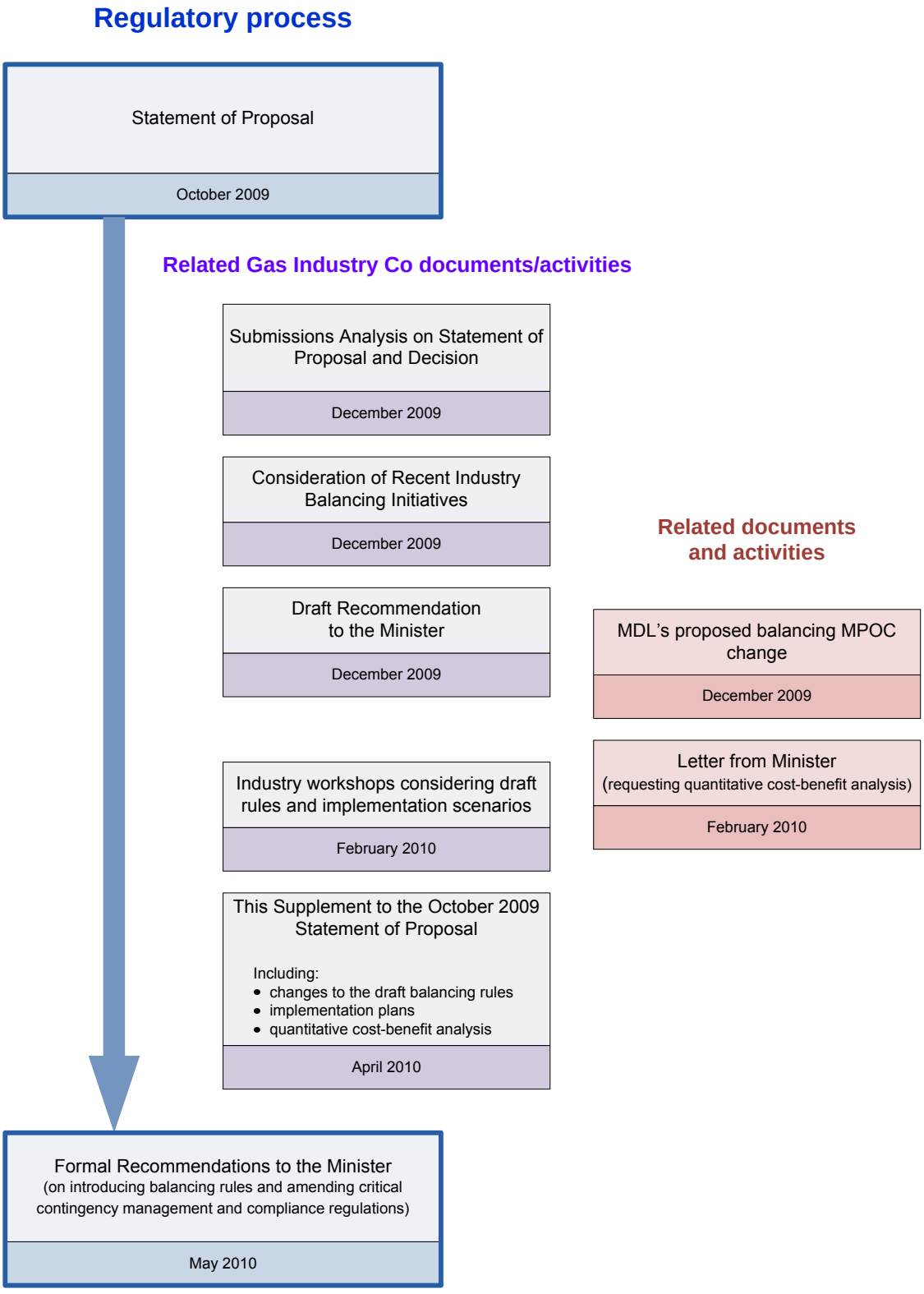
In addition, the industry should not lose sight of the risks involved in not pursuing participative regulation. These include:

- continuing disruption from MDL/Vector disputes, which may lead Vector to terminate its interconnection contract with MDL
- adverse changes to MDL/Vector operating policies (which contain the detail of how the Balancing Operator(s) manage linepack and exercise discretion), and
- possible deterioration of the Balancing Operator(s) performance, leaving pipeline users without protection or means of complaint.

Gas Industry Co believes that, while these behavioural risks are difficult to reflect in a cost-benefit analysis, they are nevertheless present. The governance arrangements contained in the Draft Rules provide the industry with a robust, integrated framework and processes for dealing with these risks. The alternative is a continuation of the fragmented balancing arrangement of the MPOC and VTC, continuing industry 'negotiation' on balancing issues without any means of seriously challenging the rule of the pipeline owners. Gas Industry Co continues to believe that balancing is a 'community of users' issue, which needs to be governed through rules that properly balance the interests of stakeholders.

The diagram on the next page outlines the regulatory process followed by Gas Industry Co in making this recommendation.

Summary of the regulatory process



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1 Introduction

1.1 Purpose

This paper is a supplement to Gas Industry Co's October 2009 SOP. Its purpose is to inform the industry of events that have occurred since the SOP was published. It also presents, for formal consultation, a quantitative cost-benefit analysis of our proposal.

The paper confirms our intention to recommend to the Associate Minister to introduce balancing rules.

1.2 Background

For the past several months, Gas Industry Co has worked on finalising the details of its recommendation to the Associate Minister for new transmission pipeline balancing arrangements. Work completed over this period is summarised below.

Statement of Proposal

Before making any recommendation to the Associate Minister, section 43N(1)(d) of the Gas Act 1992 (Gas Act) requires Gas Industry Co to prepare a formal statement of the proposed arrangements and to consult on the proposal. The SOP proposed to adopt a 'participative regulation' option first identified as Gas Industry Co's preferred option in the *Transmission Pipeline Balancing Second Options Paper* (Second Options Paper)[1].

Participative regulation comprises a set of balancing rules that require Transmission System Owners (TSOs) to agree a Balancing Operator and balancing plan for the whole transmission system. If they are unable to agree, the industry body takes over the appointment of a Balancing Operator and develops a balancing plan. Participative regulation was identified as the best option to meet the objectives of the Gas Act, the Government Policy Statement on Gas Governance 2008 (GPS) and Gas Industry Co's regulatory objective for balancing, which is:

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

[1] All documents are available under the 'Transmission Pipeline Balancing' workstream on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1511.

The SOP:

- outlined the balancing review process including the key issues that had been identified throughout
- outlined the legislative framework under which the proposal was being made
- set out the regulatory objectives
- outlined the assessment of the options assessed in the Second Options Paper
- detailed the participative regulation option, and
- included proposed Draft Gas Governance (Balancing) Rules (the Draft Rules).

The industry code development process

The majority of submissions on the SOP stated that regulation was not warranted and that a contracts-based solution to balancing was feasible. As a result, Gas Industry Co organised an industry code development (ICD) process. This process comprised an industry forum, facilitated by an independent chair. Its purpose was to 'design a unified balancing regime for the New Zealand gas transmission system that will avoid or minimise the need for regulatory intervention to achieve the relevant objectives of the Gas Act or GPS'[2]. The ICD took place in parallel to the continued development of Gas Industry Co's participative regulation option.

Throughout the ICD process, Gas Industry Co was clear that the participative regulation option would remain its preferred option for achieving an efficient, unified balancing regime unless a better alternative could be developed. If the scope or detail of the regulated proposal changed substantially as a result of the ICD process, a further SOP would be issued.

Decision Paper and Balancing Initiatives Paper

The outcome of the ICD process was discussed in Gas Industry Co's papers of December 2009, *Consideration of Recent Industry Balancing Initiatives* (Balancing Initiatives Paper)[3], and *Transmission Pipeline Balancing-Analysis of Submissions on the Statement of Proposal and Decision* (Decision Paper)[4].

The ICD process produced a non-binding memorandum of understanding, the December 2009 *Memorandum of Understanding for an Integrated Gas Balancing Regime* (ICD MOU)[5]. In the Decision Paper we concluded that the ICD MOU would not change our regulatory proposal. The analysis on

[2] The ICD process Terms of Reference are available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1511
[3] Available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1511.
[4] Available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1518.
[5] The ICD MOU is available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1511 .

which this decision is based can be found in the Balancing Initiatives Paper. This paper considered two initiatives that had occurred since Gas Industry Co issued its SOP.

- A package of proposed changes to the Maui Pipeline Operating Code (MPOC) being prepared by Maui Development Limited (MDL). At the time of drafting the Decision Paper, Gas Industry Co had not received the proposed changes[6].
- The ICD MOU.

The Balancing Initiatives Paper included a high-level assessment of the anticipated MPOC change request. (A detailed analysis was not possible because the specific changes being proposed were unknown at the time.) The paper also presented a detailed comparison of the ICD MOU and Gas Industry Co's regulatory proposal. This analysis was supported by qualitative and quantitative cost-benefit analyses. The results confirmed participative regulation as the preferred option.

1.3 Outline of this paper

Since publishing the Decision Paper in December 2009, work has progressed on finalising the details of Gas Industry Co's proposal. This included workshops with industry participants to discuss the detail of the Draft Rules and their implementation. Several changes to the Draft Rules have resulted from these discussions.

In this paper we present the latest draft of the balancing rules and describe how it differs from the version presented in the SOP.

The Associate Minister also requested that Gas Industry Co formally consult with industry participants on a quantitative cost-benefit analysis before submitting its recommendation. This analysis is also presented in this supplement.

We also confirm our intention to recommend that Associate Minister introduce balancing rules.

This paper is structured as follows:

- **Section 2: Recent developments** describes the recent events that have led us to prepare this supplement.
- **Section 3: Key issues and Gas Industry Co response** identifies the key issues that have been identified since the SOP was published.
- **Section 4: Implementation of proposal** provides details of the implementation plan and issues discussed with industry participants.

[6] Some of the proposed changes were contained in an MPOC change request, which Gas Industry Co received on 17 December 2009 and is currently considering (see section 2.2).

- **Section 5: NZIER quantitative cost-benefit analysis** introduces NZIER's quantitative cost-benefit analysis.
- **Section 6: Conclusion and next steps** summarises the conclusions reached in this paper and sets out the proposed timetable to enable a recommendation to be made to the Associate Minister.

1.4 Invitation for comments

Gas Industry Co invites submissions on this paper. We are particularly seeking responses to the questions that are highlighted at various points in the paper. Submissions on the questions should be provided in the format shown in Appendix A.

Submissions are due by **5pm on Tuesday, 27 April 2010**. Please note that submissions received after this date may not be considered.

We prefer receiving submissions in electronic form (Microsoft Word format and PDF). Submissions may be uploaded on our website at www.gasindustry.co.nz. You will need to log in as a user and upload the submission on the consultation page by clicking on the submissions button.

Gas Industry Co will acknowledge receipt of all submissions electronically. If you do not receive electronic acknowledgement of your submission within two business days, please contact Jay Jefferies on 04 472 1800.

Gas Industry Co values openness and transparency and usually places submissions on our website. If you intend to provide confidential information in your submission, please discuss this first with Ian Wilson at Gas Industry Co (04 472 1800).

2 Recent developments

In this section, we describe recent developments that have led us to prepare this paper.

2.1 Gas Industry Co's letter to the Associate Minister and her response

On 18 December 2009, Gas Industry Co wrote to the Associate Minister advising its intention to recommend that the participative regulation option be adopted. We noted in the letter that this conclusion was reached after completing the regulatory process in accordance with the Gas Act. We also noted that few industry participants had commented in detail on the Draft Rules, despite several opportunities to do so. Based on previous experience we believed it important that the industry engage in the detail of the proposal before we made a final recommendation. To achieve this engagement, Gas Industry Co proposed holding workshops with industry participants to review the Draft Rules. We also believed it was important to explore implementation issues with the industry before the rules were gazetted. This additional period of consulting with the industry required that the formal balancing recommendation be delayed until the end of February 2010.

In a response to the above letter, the Associate Minister requested that Gas Industry Co consult the industry on a quantitative cost-benefit analysis of its proposal before making a formal recommendation. This has resulted in a further delay to making a formal recommendation.

2.2 MPOC change request

On 17 December 2009, Gas Industry Co received an MPOC change request from MDL (December Change Request)[7]. That change request proposes extensive amendments to the MPOC that would significantly alter current balancing arrangements. The December Change Request does not have the same objective as the Draft Rules. Any MPOC change request can apply only to arrangements on the Maui pipeline; it cannot aim to develop a unified balancing regime across both Maui and Vector pipelines. However, the December Change Request has some features similar to those proposed in the Draft Rules. For example, it proposes:

- a form of 'back-to-back' balancing;

[7] The December Change Request and other related documents are available on Gas Industry Co's website: http://www.gasindustry.co.nz/work-programme/mpoc-change-request-17-december-2009?tab=1574.

- a set of 'balancing principles' (largely aimed at clarifying the Balancing Operator role), and
- more clarity on how unallocated balancing costs will be recovered (introduction of a 'Tariff 3').

The December Change Request is less comprehensive than the solution proposed in the ICD MOU; however, the MPOC change request process[8] gives confidence that the changes can be effected reasonably quickly. The result would be a set of fully-consulted changes that meet MDL's operational requirements, and that Gas Industry Co judges to be a better match to Gas Act and GPS objectives than current MPOC arrangements. The December Change Request is therefore a good indicator of what may be achieved through a contracts-based solution.

Although the December Change Request has some features that are similar to the Draft Rules, many of the details are different. For example, the December Change Request:

- has no obligation for TSOs to balance or co-operate on balancing actions
- does not provide for Vector users to have access to the balancing market (the Balancing Gas Exchange (BGX))
- is not as clear as the Draft Rules on how balancing gas is allocated between Running Operational Imbalance (ROI), mismatch, and TSO operations
- will allow mismatch cash-outs to occur without any underlying balancing action
- does not have balancing thresholds that trigger balancing actions, and
- does not set price limits for balancing gas transactions.

More detail can be found in Gas Industry Co's preliminary comparison of the December Change Request and the Draft Rules[9].

2.3 Industry workshops

During the first two weeks of February, Gas Industry Co held four workshops with industry participants to discuss the detail of the Draft Rules and their implementation. The first two workshops were for the TSOs, and the last two were for all industry participants. Gas Industry Co notified the

[8] Under section 29 of the MPOC, Gas Industry Co has a role in considering any proposed amendments to the MPOC. This role is to consult with the gas industry on the change request and determine whether or not to support it. A change request can only proceed where required by law or where Gas Industry Co makes a written recommendation to Maui Development Limited (MDL) supporting it.

[9] *Working Paper – Comparison of 17 December 2009 MDL change request and draft balancing rules* http://www.gasindustry.co.nz/sites/default/files/u24/100201_Comparison_of_17_Dec_MPOC_CR_and_draft_rules_152380.2.pdf

industry of the workshops on 23 December 2009. That notice described the objective of the workshops, which was to:

> ...finalise technical detail and identify any implementation issues for industry prior to finalising the rules that will accompany Gas Industry Co's formal recommendation to the Associate Minister…

In addition, Gas Industry Co invited participants to submit more detailed comments on the Draft Rules.

TSO workshops

Vector Gas Limited (Vector) and MDL attended the two-day workshops to discuss the detail of the Draft Rules.

Full industry workshops

The first of the full industry workshops identified and discussed major concerns with the Draft Rules. The second workshop focused on implementation details and on establishing the framework for the quantitative cost-benefit analysis, discussed in the following section.

The key issues from these workshops and Gas Industry Co's response are discussed in section 3.

2.4 Implementation and Cost-Benefit Analysis framework

Implementation discussion

The implementation discussion took place first. We considered that many of the tasks involved in implementing the Draft Rules would result in costs that would need to be accounted for in the cost-benefit analysis. To start the discussion, Gas Industry Co presented the group with a draft of a likely implementation process. In it we identified the following tasks: drafting the balancing plan, and implementing changes to codes, OATIS, and business processes and contracts. Attendees proposed a further category, 'other IT changes', referring to the changes that each transmission system user might need to make to its own IT systems.

It was also decided that it was necessary to consider an optimistic and pessimistic scenario. The optimistic scenario occurs if the TSOs successfully draft a balancing plan and appoint a Balancing Operator. The pessimistic scenario occurs if the TSOs were unsuccessful and the industry body has to draft a balancing plan and appoint a Balancing Operator.

Details of the implementation plans are discussed in section 4.

Establishing the cost-benefit analysis framework

The New Zealand Institute of Economic Research (NZIER) attended the workshop to facilitate the discussion on the framework for the cost-benefit analysis. The discussion:

- determined the 'baseline' scenario, which would occur without the proposed rules
- considered the feasible alternatives to Gas Industry Co's proposal
- established a timetable for modelling the costs and benefits, and
- established the types of costs and benefits to model.

Following this discussion NZIER issued a draft cost-benefit analysis framework with 'strawman' numbers. Gas Industry Co circulated the draft and invited industry participants to submit comments before the draft was finalised.

The final cost-benefit analysis is presented in Appendix B. NZIER's response to comments from industry participants is in Appendix C.

3 Key issues and Gas Industry Co response

3.1 Identification of key issues and affect on overall proposal

Identification of key issues

Gas Industry Co has further refined the Draft Rules as a result of:

- submissions received in the formal consultation on the SOP
- additional feedback received from:
  - the industry workshops
  - written comments received after the workshops, and
- our own work to identify improvements.

This section sets out some of the key issues raised during the two periods of industry consultation and Gas Industry Co's response to those issues, describing where we have amended the Draft Rules as a result. It also includes an update of the amendments to other gas governance arrangements that would be needed if the Draft Rules were implemented.

Appendix D is a summary of the key amendments to each rule (the comparison is with the version contained in the SOP). Appendix E is a new draft of the rules.

Affect of the rule amendments on the overall proposal

Section 7 of the SOP provided details of the participative regulation proposal. As noted at the start of that section, if significant changes to the proposal were necessary, a further statement of proposal would be issued.

We consider that none of the key issues or consequent changes to the Draft Rules affect the overall proposal to a degree that requires Gas Industry Co to reissue the SOP. The majority of the changes

refine the policy already described within the SOP or clarify intent. They do not introduce new policy or change the policy.

3.2 Purpose statement

The purpose statement in the Draft Rules appended to the SOP was:

> … to achieve an efficient, unified balancing arrangement for managing imbalance in the transmission system.

Some workshop attendees expressed concern that the purpose statement was too high-level to be useful. It was also considered that the purpose statement had not been used consistently throughout the Draft Rules. Gas Industry Co believes that a purpose statement is important because it is a useful aid for resolving different interpretations of the rules. It is not intended to be detailed or prescriptive. However, we acknowledge the concerns that it could be made simpler and have since removed the word 'arrangement' which was unhelpful in the context.

The purpose statement has also been clarified to ensure that it applies to the aggregate imbalance (also referred to in the industry as the 'net' or 'residual' imbalance). It is the management of this aggregate imbalance that is to be efficient and unified. The revised purpose statement is:

> … to achieve efficient, unified management of aggregate imbalance in the transmission system (rule 3).

The Draft Rules now require that:

- if balancing transactions are to be undertaken on terms other than the ones for the balancing market, the industry body is required to explain why these arrangements would better meet the purpose of the rules, and
- if an amendment to a balancing plan is proposed, the amended balancing plan must better meet the purpose of the rules.

3.3 Use of the word 'allocated'

The word 'allocated' appears throughout the Draft Rules. In the Draft Rules in the SOP the word was defined as:

> … allocated in accordance with the terms of a transmission system code or the Gas (Downstream Reconciliation) Rules 2008 and allocation has a corresponding meaning.

However, many found this definition confusing and in some instances unnecessary. For example, under the Draft Rules included in the SOP, shippers and traders were required to ensure their allocated quantities of gas matched. However, submitters noted that this was impossible as those parties were not responsible for 'allocating' gas. Further, shipper deliveries to mass-market delivery points are not

allocated until month end. Therefore it was considered that the definition of balance could suggest that shippers' mass-market deliveries would have to be balanced retrospectively. To avoid this confusion, we deleted the definition and removed the word 'allocated' in relation to the definition of balance. The word 'allocations' was also deleted in rule 11.1.3 in relation to TSOs adjusting title.

3.4 Obligation to balance

The TSOs thought that the obligation on users to balance should have a higher standing than 'reasonable endeavours.' Gas Industry Co disagrees with this view. We believe that the introduction of 'back-to-back' balancing through the regime, resulting in costs flowing to the causer, correctly incentivises users to balance at least cost.

An attendee at the TSO workshop expressed concern that its obligation to balance would be made difficult by unaccounted-for-gas (UFG). The attendee noted that large swings in UFG occurred daily, something neither TSOs nor shippers can control. It was suggested that some 'safety net' by way of a tolerance for UFG be applied to minimise the risk of continuously trying to track UFG. Gas Industry Co understands this concern; however, we consider that it is for each TSO to determine how it manages UFG. It may well choose to correct its UFG position only beyond a particular tolerance level. Nothing in the rules prevents such an approach. The rules just provide that, to the extent that a TSO has not effectively managed UFG, and it has contributed to the need to take a balancing action, then the TSO receives an allocation of the costs of that balancing action.

Other attendees at the all industry workshop queried what the time period is over which users must balance. Gas Industry Co clarified that the obligation is continuous.

No changes have been made to the rules about obligations to balance.

3.5 TSO obligations and relationship with Balancing Operator

TSOs' procedures and arrangements

Some submitters suggested that TSOs should have a stronger obligation than 'reasonable endeavours' to ensure their procedures and arrangements are consistent with, and do not unreasonably prevent, users from meeting their obligations to balance. Gas Industry Co is concerned that a higher obligation could imply that the TSOs should invest in additional 'tools' to ensure users are in balance. The intent of this obligation is not to impose additional cost on TSOs, but rather to ensure their arrangements are not constraining users from meeting their obligations. Therefore, we consider it is best left unchanged.

TSOs' co-operation with the Balancing Operator

Some workshop attendees expressed concerns with the TSOs' obligation to 'facilitate' the Balancing Operator to ensure it completes its functions. They thought the word was unclear, which could result

in unanticipated consequences such as the TSOs incurring extra costs. The word 'facilitate' has been removed but the requirement on TSOs to co-operate with the Balancing Operator remains.

Gas Industry Co has also clarified the provisions requiring the TSOs to notify the Balancing Operator of their operating procedures and co-ordinate these actions if necessary. The previous Draft Rules required the TSOs to ensure no unnecessary or uncoordinated balancing actions took place as a result of their operating procedures. The amendments do not affect the overall obligation of the TSOs and the Balancing Operator to coordinate their actions.

TSOs' obligations to be reasonable and prudent operators

Another concern was the level of prescription of the Balancing Operator's obligations to buy balancing gas only within price thresholds and under certain circumstances. The concern was that the TSOs would always need to be ready to balance if the Balancing Operator failed to do so, because TSOs are obliged to be reasonable and prudent operators. Gas Industry Co considers the Draft Rules provide enough avenues of communication between the Balancing Operator and TSOs to prevent TSOs from needing to take balancing actions. The price thresholds are meant to reflect the point at which it would be inefficient and unreasonable to buy or sell gas. Therefore, Gas Industry Co considers that the Draft Rules provide an efficient framework in which balancing actions should occur. Anything that occurs outside the framework is at the discretion of the TSOs. They can decide if it is reasonable and prudent to continue with a balancing action even if the rules have determined further action is unreasonable.

Other changes

To clarify TSO obligations and their relationship with the Balancing Operator, Gas Industry Co has made several other changes:

- amendment to make it explicit that TSO obligations under the rules should not override the provision of transmission services; nor do the rules require the TSO to incur unreasonable expenditure
- removal of the rule that prevented profile limits on balancing gas transmission, and
- removal of the option to delegate control of compressors to the Balancing Operator to prevent any implied obligations. However, in the balancing plan the TSOs are able to delegate to the Balancing Operator the operation of compressors if they choose to do so.

3.6 Balancing Operator functions

'Balancing Agent' changed to 'Balancing Operator'

At workshops and in submissions, participants raised concerns that 'Balancing Agent' in the Draft Rules implied that person was acting for one or more principals. To clarify that such an agency relationship was not necessarily intended, the title 'Balancing Agent' has been changed to 'Balancing Operator'.

Balancing Operator's responsibilities to manage linepack

Feedback from industry indicated that some found the Balancing Operator's responsibility to manage linepack to be unclear. This feedback suggested it was necessary to clarify whether the Balancing Operator was responsible for full management of linepack or only for managing aggregate imbalance. We have clarified that the Balancing Operator's function in relation to linepack is to manage aggregate imbalance. Management is through purchasing or selling gas when thresholds in the balancing plan are or may, in the Balancing Operator's reasonable opinion, be breached.

Discretion on taking balancing action

Refinements have also been made to provide some flexibility and discretion on when the Balancing Operator takes a balancing action and how it determines how much gas to buy or sell. The Draft Rules in the SOP required the Balancing Operator to take balancing actions when linepack moved outside the thresholds, and to buy or sell enough gas to bring linepack back within those thresholds. The amendments recognise that the decision to take a balancing action has to be taken on the basis of the Balancing Operator's 'reasonable opinion'.

Some workshop attendees considered that the requirement for the Balancing Operator to use 'reasonable endeavours' to purchase or sell balancing gas created too much risk for users, because it gives the Balancing Operator too much discretion in its actions. Gas Industry Co considers that the rules should provide a strong obligation on the Balancing Operator without being absolute. Therefore we have amended the obligation to 'best endeavours'.

Balancing Operator's records

Gas Industry Co received suggestions for additional records that the Balancing Operator could usefully maintain. The Balancing Operator is now required to record, for each balancing action, the amount by which the linepack of the balancing zone diverged from its threshold at the time of the action. The Balancing Operator is also required to publish the date and time of each balancing action and the zone in which the action took place.

3.7 Balancing market

Comments received on the balancing market indicated that additional changes were required to clarify that the Balancing Operator can partially accept bids, and also how transmission charges are incurred. Amendments have been made to clarify these points.

Some submitters expressed concerns that the rules for transactions outside the balancing gas market lacked detail. In particular, some noted that the circumstances in which the Balancing Operator would determine to sell or purchase balancing gas on terms other than those of the balancing market were ambiguous and would benefit from greater prescription.

To address these concerns, Gas Industry Co has added a number of provisions, including the following.

- How the industry body determines that transactions outside the balancing market might better meet the purpose of the rules, setting out the matters it must take into account.
- A requirement for the industry body to publish a notice containing the reasons for its decision and to consult with the Balancing Operator.
- More detail has been added to ensure terms and conditions for these transactions are well defined and consistent (to the extent possible) with transactions that occur on the balancing market.
- An addition to the definition of clearing price to allow for balancing gas purchased or sold on terms and conditions outside of the balancing market to be cleared at the weighted average price.

3.8 Clearing price

Some industry participants remain sceptical about the provision for marginal pricing in the Draft Rules. More specifically, they consider that marginal pricing will not have the intended effect in the context of the current New Zealand gas market because of the market structure. It has been argued that the thinness of the market and the lack of effective competition means that marginal pricing will not result in the benefits such an arrangement intends to promote. Rather, participants would prefer the use of a weighted average clearing price.

Gas Industry Co recognises these concerns, but remains convinced that marginal pricing is the best approach. Marginally priced transactions are efficient because prices reflect the opportunity cost of gas at the time of the transaction. Marginal pricing also provides the correct price signal to both upstream and downstream users, allowing them to make decisions as to whether they should invest in additional deliverability or information. In addition, when the balancing operator is buying gas to remove an imbalance, each potential supplier is incentivised to offer at the marginal value of its gas. If the potential supplier offers at a higher value, it may end up not having its offer accepted. If the clearing price is higher than its own marginal value, it will receive that higher amount. Therefore it follows that a user will have no incentive to offer above its own marginal value for the gas.

Further, marginal pricing allows a user participating in the balancing market to receive the same price for balancing gas offered as received in the cash-out enabling the user to 'hedge' its price risk. The user needs to offer sufficient capacity to cover its uncertainty of demand, but this ability to hedge is a valuable risk management tool.

3.9 Interconnection points

Participants expressed confusion about interconnection points. The TSOs noted that the definition of 'interconnected party' would not cover some of their users, because these parties had flow-on demand arrangements that did not require scheduling gas flow under an interconnection agreement. Others found the provisions for interconnection points within a balancing zone to be unclear. Gas Industry Co notes that the rules do not require interconnection agreements to be in place. There is, however, incentive for TSOs to put these agreements in place because any imbalance resulting from parties not captured under the rules will be allocated to TSOs.

To clarify the intent we have:

- clarified the definition of 'interconnection point' to ensure that an interconnection agreement could be within the transmission system
- made it explicit that an interconnection point might not have scheduled quantities and interfaces between balancing zones might not have interconnection agreements, and
- added a provision to the schedule to clarify the situation where an interconnection point is within a balancing zone.

3.10 Treatment of unallocated Balancing Gas

The Draft Rules in the SOP required the Balancing Operator to settle any unallocated balancing gas to itself. The Balancing Operator was to trade that gas on the New Zealand Gas Exchange, or any other available market, with a view to minimising losses or maximising any gains. The loss or gain would be allocated to the TSO. Some submitters raised concerns that this arrangement would be difficult, because the Balancing Operator would be required to meet the prudential requirements for trading on such markets and secure capacity for the trading. TSOs were concerned they would carry the price risk of the Balancing Operator trading that gas. The TSOs would prefer to receive any unallocated gas in kind.

Gas Industry Co agreed with this suggestion and has amended the allocation model in the Draft Rules so that any unallocated balancing gas will be allocated directly to the relevant TSO.

3.11 Go-live date

The go-live date for the balancing plan in the SOP Draft Rules meant it was possible that the first balancing plan would go-live after a short period (possibly five days) after the industry body gazetted its approval of a balancing plan. Participants at the industry workshop requested the rules be amended to ensure a reasonable amount of time between the approval of the balancing plan and the go-live date. Otherwise, participants have little warning to amend any operating procedures that may depend on the details of the balancing plan.

Gas Industry Co agreed this is a risk that the rules should protect against. As a result, the date when the initial balancing plan comes into force is now a date notified by the industry body when it approves the plan. The date must be the start of a month and no more than six months after the balancing plan has been approved. The date a balancing plan that is not the initial plan comes into effect is unchanged.

3.12 Transparency

Gas Industry Co received several suggestions for improving the Draft Rules by providing additional transparency and greater clarity of process. We have adopted some of these suggestions, resulting in the following amendments.

User notifications

A new rule ensures the Balancing Operator notifies TSOs if a balancing action is needed, but there is insufficient gas for sale or purchase within the price thresholds defined in the balancing plan. If this occurs, another new rule requires the TSOs to notify users of the situation.

Invoices/credit notes

Users may have more than one balancing transaction during a month. Gas Industry Co has amended the Draft Rules so that invoices are itemised. Some workshop participants also considered that the Balancing Operator should be required to issue credit notes within a certain time. Gas Industry Co has since added the requirement for the Balancing Operator to pay the affected user 'as soon as practicable after the beginning of the month following the month in which the credit note was issued'.

One submitter considered that the Balancing Operator should be required to use 'best endeavours' to pursue purchasers of balancing gas for any outstanding payment. Gas Industry Co has added this suggestion to the Draft Rules.

Audits

To provide for greater transparency when an audit takes place, the Draft Rules now require the industry body to publish the identity of any auditor and the auditor's terms of reference.

3.13 Credit risk

The credit risk on the Balancing Operator was discussed in great detail at the industry workshops. Participants suggested ways to improve the Draft Rules to minimise that risk. Several provisions that relate to credit risk have been further refined as a result. This includes:

- transferring the credit risk from 'put gas' suppliers to the relevant user that has been cashed out, through provisions allowing for part payment
- explicitly allowing off-set deductions for unpaid monies
- allowing interest to accumulate on overdue payments
- adding the ability for the industry body to review estimated ongoing fees on a quarterly basis and revise if necessary to protect against the possibility of substantial credit or debt compared to actual costs
- adding a requirement for the Balancing Operator to publish in the monthly report the names of any user(s) who has failed to pay its invoice on time
- adding provisions for the person that appointed the Balancing Operator to indemnify the Balancing Operator for any unrecoverable costs from users or contracting parties in relation to the purchase and sale of balancing gas, and
- adding provisions to ensure that if a new Balancing Operator is appointed, the previous Balancing Operator remains liable for any of its breaches of the rules or obligations on or before the date of termination of its contract.

3.14 Adjustment to allocations

At the workshops and in submissions it was suggested that the Draft Rules should cover the affect of errors and corrections, such as metering errors and revised allocations resulting from the downstream allocation process. Gas Industry Co has amended the provisions for adjusting allocations to reflect the two kinds of adjustments:

- adjustments resulting from an error by the Balancing Operator, and
- adjustments based on new imbalance information provided by the TSOs (such information could result from metering corrections or new information received under the Gas (Downstream Reconciliation) Rules 2008).

The Balancing Operator assesses this information and determines whether an allocation of balancing gas or its associated cash-out amount for a balancing action was incorrect. The Balancing Operator makes the correction and notifies affected user(s) and relevant TSOs.

3.15 Balancing plan

Suggestions were made at workshops and in submissions on ways to improve the process for appointing the Balancing Operator and for determining the balancing plan. In particular, many found the processes for approving and amending a balancing plan to be confusing.

In response to this feedback, Gas Industry Co refined the Draft Rules to improve these processes. The refinements are listed below. We have also updated the flow chart diagrams from the SOP for the balancing plan approval and amendment processes for both TSOs and industry body. These are included in Appendix F.

- Subpart 1 is amended so that the appointment process is more generic. It includes new terms for 'the appointer', 'former appointer' and 'new appointer'.
- Clarification that the appointer must use best endeavours to ensure a Balancing Operator is in place at all times.
- A new rule requires that the balancing plan must be consistent with the Gas (Downstream Reconciliation) Rules 2008.
- New provisions allow for any balancing plan to include transitional provisions or provide for different parts of the balancing plan to apply at different times.
- A new rule requires TSOs to notify users once a balancing plan has been approved as well as of the expiry of any urgent amendments.
- Clarification that the TSOs have the opportunity to notify the industry body at anytime within the 60 business day period if they are unable to reach agreement.
- A new rule requires TSOs to provide the industry body with copies of submissions on a draft balancing plan. The industry body is then required to publish those submissions.
- Revisions requiring a TSO to provide the anticipated consequential transmission code changes with the draft balancing plan during consultation. The revisions clarify that this does not override TSOs' respective code change processes. TSOs are also required to submit the consequential code changes for any proposed balancing plan amendment.
- The consultation period for the initial draft balancing plan has been extended from 20 to 25 business days. The consultation period for amended balancing plans can be from 10 to 20 business days.

- A new requirement that when determining to approve an amendment, the industry body should consider whether an amended balancing plan should 'better meet' the purpose of the rules.
- A new rule allows the industry body up to 20 business days to determine whether or not to approve a balancing plan.
- Additional provisions require the industry body to consider matters such as relevant Rulings Panel decisions, audit results or evidence provided by the operator when determining if the TSO-appointed Balancing Operator is no longer suitable. The Balancing Operator is also given the opportunity to respond.
- If the TSOs have consulted on a draft balancing plan but are unable to agree on some aspect of it, the industry body is able, after invoking subpart 3, to make amendments to that balancing plan and approve it.
- New rules allow for reversion from the industry body appointment model to the TSO appointment model and back again. A flow chart diagram of the reversion process is included in Appendix F.

3.16 Critical contingencies

Several submitters noted that critical contingencies can be either national or regional. The Draft Rules in the SOP did not account for regional contingencies. As a result, Gas Industry Co has amended the Draft Rules so that the Balancing Operator ceases its functions only on that part of the pipeline affected by the contingency.

3.17 Provision of information

Workshop attendees expressed concern that the obligations to provide information required investment to obtain such information. Gas Industry Co has not intended this obligation to imply unreasonable investment. The obligations have been clarified to ensure the information provided is readily available and any request for information by the Balancing Operator must be reasonable.

3.18 Funding

Another key issue at the workshops was that of funding. Refinements to the funding proposal between the industry body and TSOs are listed below.

- A new rule makes explicit the possibility for TSOs to pass on the costs of any fees payable under the rules to shippers on their part of the pipeline. Fees to a shipper are in proportion to the quantities of gas transmitted by that shipper through that part of the pipeline—or on another basis as agreed between the TSOs and industry body.

- The amount of any fees passed on by TSOs must be net of any unpaid amounts that the TSO is not otherwise able to recover from a user.

3.19 Access to OATIS

Some submitters considered that the Draft Rules should be explicit and require the Balancing Operator to have access to OATIS. However, Gas Industry Co considers it important to 'future-proof' the rules in the event OATIS changes its name, ownership or is replaced. Therefore, we consider 'information exchange' is still appropriate with reference to OATIS included in the definition.

The Draft Rules have also been amended to make it explicit that Balancing Operator access to the information exchange includes the ability to utilise any user notifications device available through the exchange. TSOs will be required to provide the access on reasonable terms and conditions to enable the Balancing Operator to perform its functions.

3.20 Allocation process

As a result of feedback from submitters and workshop attendees on the allocation process, Gas Industry Co has amended the allocation provisions. Gas Industry Co has made some changes to allocations as described. The following changes have also been made.

- Submitters noted the importance of recognising the appropriate transfer of title to gas purchased or sold. Therefore, the passing of gas title has been made explicit throughout the Draft Rules.
- A new rule explains that if the Balancing Operator receives sufficient information to allocate balancing gas to some users but not others, it must allocate gas to those users for whom it has information. This rule ensures the allocation process does not depend on receiving information from processes under the Gas (Downstream Reconciliation) Rules 2008, which could hold up the allocation process.

3.21 Transmission contracts

Several industry participants noted that there were some non-code transmission agreements that had provisions relating to balancing. As a result, Gas Industry Co provided a new definition, 'transmission system arrangements' to capture all industry agreements that contain balancing provisions.

To clarify 'imbalance', the definition has been amended to ensure that the allocations referred to under the definition are those made under the relevant transmission system arrangements. Corresponding changes reflect that transmission system arrangements may adjust a user's title to gas if balancing gas has been allocated to the user.

3.22 Relationships with transmission system arrangements

Another issue raised at the balancing rules workshops was how the same obligation under industry arrangements and the rules would be treated. The Draft Rules have been amended to clarify the priority of the rules relative to the transmission system arrangements. It also ensures that if obligations in relation to the same matter are imposed, the obligations or liability under the rules prevails. The provision does not include the Gas (Downstream Reconciliation) Rules 2008.

3.23 Refining terms

Several definitions have been improved to ensure they are interpreted correctly.

- 'Receipt' and 'delivery' are used for defining a user's balance and imbalance (with respect to the injection and taking of gas).
- 'Transmit' has been defined to mean the transport of gas.
- The definition of 'cost' has been deleted and replaced by 'cash-out amount'.
- 'Transmission charges' is now used instead of the term 'transmission costs'.
- 'Balancing action' has been clarified so the term refers to either selling or buying balancing gas (that is, it is not possible for both transactions to occur in the same balancing action).
- 'Balancing gas' has been refined so that it is better linked to its use under the Draft Rules.
- 'Cash-out amount' and 'clearing price' now give tighter definitions of quantities, which can refer to money and gas.
- 'Directly/indirectly managed balancing zones' definitions have been clarified.
- The definition 'Linepack' has been amended to clarify its uses.
- 'Imbalance' removes the definitions of negative and positive imbalance as this is implied.
- 'User' is simplified with respect to the TSO by linking it back to the definition of balance.
- 'Balance' is clarified to ensure each user's obligation to balance is clear.

3.24 Updated consequential amendments to other gas governance arrangements

As indicated in the SOP, if the Draft Rules are adopted, consequential amendments are required to:

- Gas Governance (Compliance) Regulations 2008, to ensure the Draft Rules are supported by Gas Industry Co's compliance regime

- Gas Governance (Critical Contingency Management) Regulations 2008, to ensure the Balancing Operator is notified by the critical contingency operator if a contingent event occurs on the transmission pipeline.

It is necessary for Gas Industry Co to make recommendations to the Associate Minister for these regulations to be amended. The details of the changes required were first notified in the SOP and are updated below to account for the change from 'Balancing Agent' to 'Balancing Operator'.

Gas Governance (Compliance) Regulations 2008

- Regulation 3 is amended by inserting a new subclause: '(e) Gas Governance (Balancing) Rules 2010'.

- Regulation 4 is amended by inserting in the correct alphabetical order:

  > Balancing Operator means the service provider appointed by transmission system owners or the industry body under rule 28(1)(c) or 42 of the Gas Governance (Balancing) Rules 2010.

- Regulation 4 is amended by inserting in paragraph (b) of the definition of 'participant' –

  > (iv) a user and the Balancing Operator; or

- Regulation 11(1) is amended by omitting 'or the allocation agent or the critical contingency operator' and 'or allocation agent or the critical contingency operator', and in both places substituting ', allocation agent, critical contingency operator, or Balancing Operator'.

- Regulation 11(3) is amended by omitting 'or allocation agent or critical contingency operator', and substituting ', allocation agent, critical contingency operator, or Balancing Operator'.

- Regulation 11(4) is amended by adding after 'Gas (Downstream Reconciliation) Rules 2008,' the words 'regulation 55 of the Gas Governance (Balancing) Rules 2010,'.

- Regulation 14(1)(c) is amended by omitting 'or the allocation agent or the critical contingency operator', and substituting ', allocation agent, critical contingency operator, or Balancing Operator'.

- A new regulation is inserted after regulation 58A providing a cap on liability for the Balancing Operator:

  > 58B Liability of Balancing Operator
  >
  > The balancing operator is liable for any breach that it commits of Part 2 of the Gas Governance (Balancing) Rules 2010.
  >
  > The balancing operator is not liable under these regulations for a sum in excess of –

$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 Gas Governance (Critical Contingency Management) Regulations 2008

- Regulation 51 is amended by inserting the following paragraph after paragraph (e):

(ea) the balancing operator appointed under the Gas Governance (Balancing) Rules 2010; and

- Regulation 62 is amended by inserting the following paragraph after paragraph (e):

(ea) the balancing operator appointed under the Gas Governance (Balancing) Rules 2010;

Q1: Do you have any comments on the Draft Rules?

4 Implementation of proposal

As discussed in section 2.4 (page 7), two implementation scenarios for the Draft Rules were developed with the industry. We also discussed possible implementation issues with the industry, which are described below.

4.1 Implementation scenarios

Two implementation scenarios are considered.

- The optimistic scenario: TSOs successfully develop the initial balancing plan and agree the appointment of a Balancing Operator. It is assumed that the balancing plan does not involve substantial change to current balancing arrangements so that code and IT changes (although allowed for) are not significant. In this case the new balancing arrangements would 'go-live' within 12 months of gazetting the balancing rules.
- The pessimistic scenario: TSOs attempt to develop an initial balancing plan and agree the appointment of a Balancing Operator but are unsuccessful and the industry body steps in to complete those functions. It is also assumed that the balancing plan involves substantial change to current balancing arrangements resulting in extensive code changes and IT system changes. In this case the new balancing arrangements would 'go-live' within 30-36 months of gazetting the balancing rules.

Both scenarios are comprised of the same elements: Balancing Plan development, MPOC and VTC code changes, OATIS changes, other IT changes, and business process and contract changes. The only difference is when each of these activities takes place.

Optimistic scenario

We anticipate that the Draft Rules under an optimistic scenario could 'go-live' 12 months after the rules are gazetted. Table 1 sets out the assumptions for the optimistic scenario.

Table 1 Optimistic scenario

Activity	Step	Time
Balancing plan	Draft balancing plan	3 months (from Gazette date)
	Consultation	2 months
	Industry body approval	1 month
	Statutory notice	1 month
MPOC and VTC code changes	Draft code changes	6 months (from Gazette date)
	Formal code change process	3 months (start once balancing plan submitted to industry body for approval)
OATIS changes	Design	2 months
	Code	1.5 months (start after balancing plan approved)
	Test/ train	4.5 months
Other IT changes	Design	1.5 months
	Code	1.5 months (start after OATIS coding complete)
	Test/ train	3 months
Business process and contract changes	Changes	4 months (start once balancing plan submitted to industry body for approval)

Pessimistic scenario

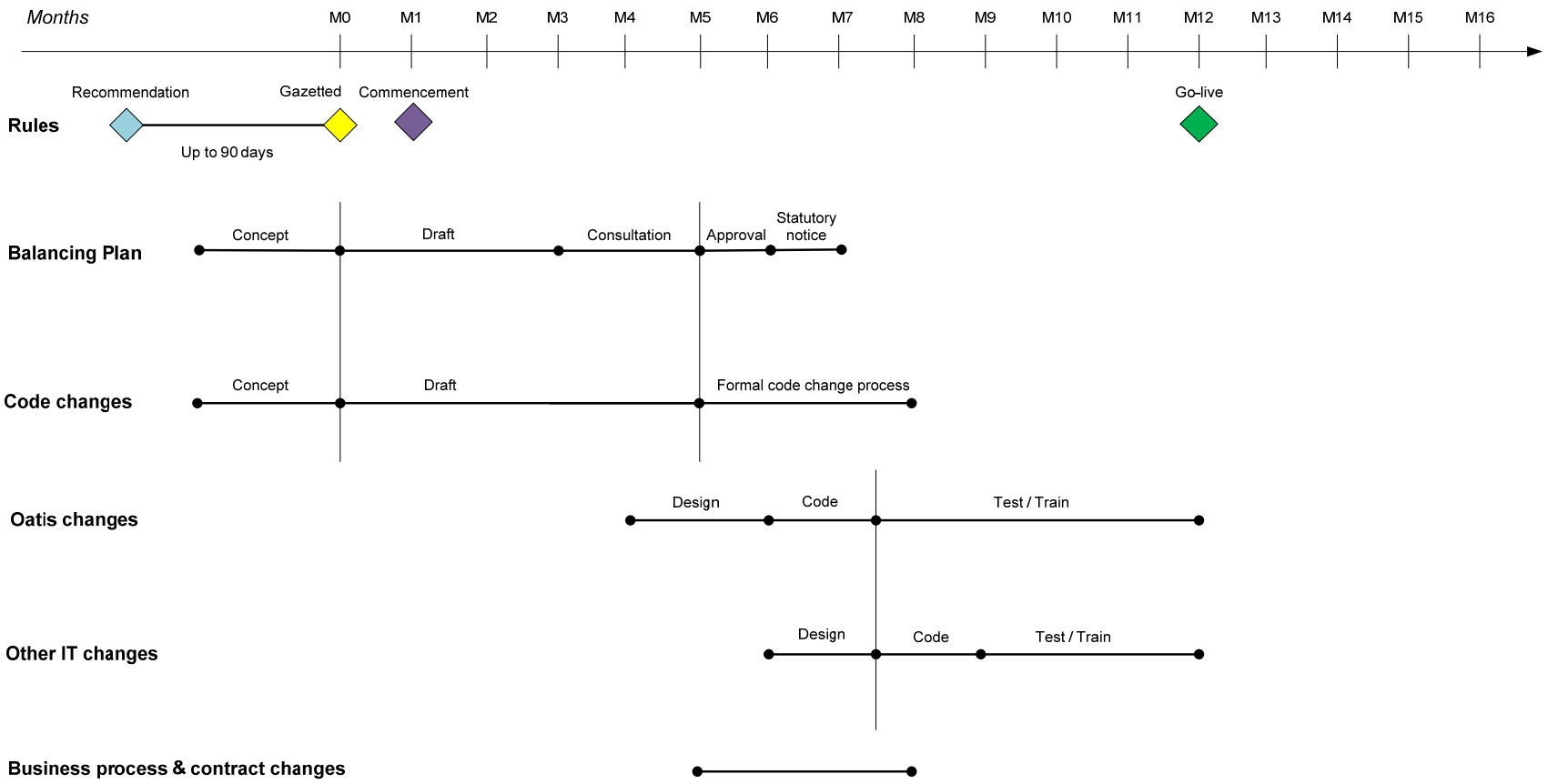
We anticipate that the Draft Rules under a pessimistic scenario could 'go-live' 34.5 months after the rules are Gazetted. Table 2 sets out the assumptions for the pessimistic scenario.

Table 2 Pessimistic scenario

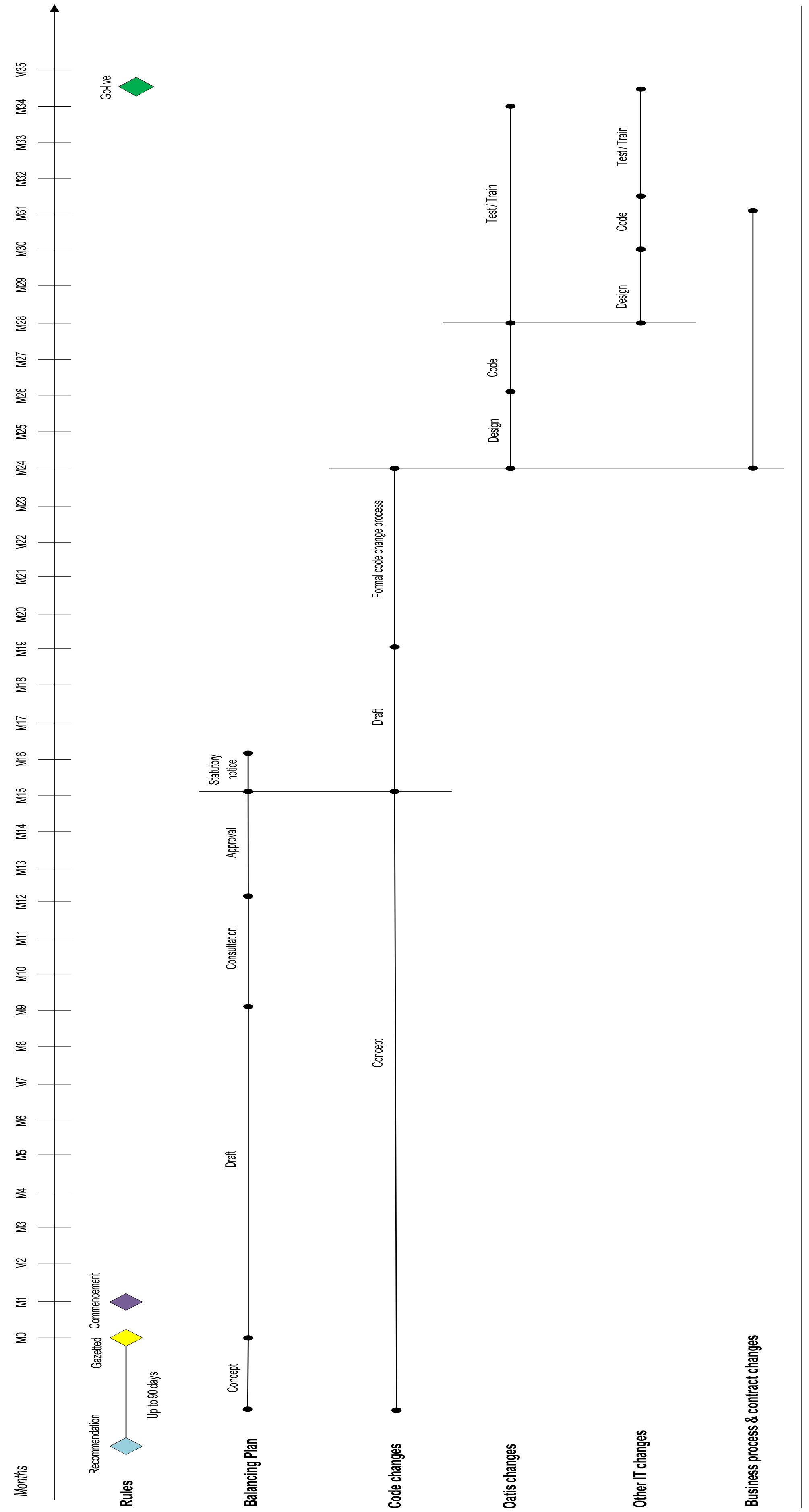
Activity	Step	Time
Balancing plan	Draft balancing plan	9 months (from Gazette date)
	Consultation	3 months
	Industry body approval	3 months
	Statutory notice	1 month
MPOC and VTC code changes	Draft code changes	4 months (start after balancing plan approved)
	Formal code change process	5 months
OATIS changes	Design	2 months (start after formal code change process complete)

Activity	Step	Time
	Code	2 months
	Test/ train	6 months
Other IT changes	Design	2 months (start after OATIS coding complete)
	Code	1 months
	Test/ train	3 months
Business process and contract changes	Changes	7 months (start after formal code change process complete)

BALANCING RULES IMPLEMENTATION PLAN – OPTIMISTIC SCENARIO



BALANCING RULES IMPLEMENTATION PLAN – PESSIMISTIC SCENARIO



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4.2 MPOC/ VTC Code Changes

The potential difficulties that could arise from code changes were discussed at the implementation/cost-benefit analysis framework workshop. Difficulties arise from having two different codes with different balancing provisions that follow different code change approval processes. A further difficulty arises from not knowing the extent of changes. Such issues put the 'go-live' date at risk.

Different code change approval processes

Gas Industry Co has a role in both the MPOC and VTC code change processes. It has agreed a Memorandum of Understanding (MOU) with each TSO to describe how these roles will be performed.

Under the MOU with MDL, proposed MPOC changes are submitted directly to Gas Industry Co by MDL or parties to the MPOC. Gas Industry Co conducts a consultation process, analyses the change against the Gas Act objectives, and makes a recommendation to MDL as to whether or not the change should be adopted. MDL has sole discretion to reject a recommendation if it considers the change would materially adversely affect its business, or require MDL to incur capital expenditure (that may not be recoverable). The average time to process a change under this process is four months from receipt of the proposed change to the final recommendation.

Gas Industry Co has a role in Vector's code change process only when a party appeals Vector's decision to accept or reject a proposed change. The consultation process is described in section 25 of the VTC, and it provides for any shipper or Vector to propose a change. All changes are submitted to Vector, who then notifies parties of the proposed change. Within 15 business days shippers must notify Vector whether or not they consent to the proposed change. Vector must also notify parties of whether or not it consents. Vector, like MDL, can withhold its consent if the change would materially adversely affect its business, or require it to incur capital expenditure (that may not be recoverable). For a change to proceed (or be rejected), Vector and at least 75% of all shippers who respond to the proposed change, must consent (or not consent) to the change. This process typically takes two months. A party (Vector or a shipper) is able to lodge an appeal with Gas Industry Co if it considers the outcome was not the right one. Once Gas Industry Co receives the appeal it is required to, under its MOU with Vector, consult on the appeal, analyse the matter against the Gas Act objectives, and make a final recommendation to Vector. Gas Industry Co's decision is final and binding. The appeal process, on average, takes up to four months to complete.

Content of code changes

Another issue is that the detail of the code changes will remain uncertain until the detailed content of the balancing plan is finalised. This means changes could range from relatively small and straightforward to extensive and detailed. The optimistic and pessimistic scenarios attempt to capture

this range of possibilities. But there a risk remains that extensive code changes add further delay to the implementation of the Draft Rules, so the pessimistic scenario is not necessarily the worst case.

Minimising the risk of delaying go-live

To help facilitate the process of identifying code changes the rules now require that draft code changes are submitted with draft balancing plans and all proposed balancing plan amendments. The Draft Rules also ensure that to the extent of any inconsistency between the Draft Rules and transmission codes, the rules prevail.

4.3 OATIS/other IT changes

We anticipate that there will be some IT changes that will result from any balancing plan put in place. The changes to OATIS and users' systems will depend on the detail of the balancing plan. At the industry workshops several participants indicated that they were likely to incur some cost to amend their current IT systems to work with the new balancing arrangements. Vector has also indicated that it would pursue an OATIS change to provide for linked nominations for any balancing plan. Vector estimates that such a change would cost approximately $800,000. It estimates other OATIS changes would cost approximately $200,000. This provides some certainty around cost but leaves the timing of making such changes and the affect on other users' IT systems uncertain.

5 NZIER quantitative cost-benefit analysis

Earlier this year the Associate Minister requested that a quantitative cost-benefit analysis on the Draft Rules accompany Gas Industry Co's formal balancing recommendation. To complete this analysis, Gas Industry Co engaged NZIER and worked with industry participants to develop the framework for the analysis.

The NZIER quantitative cost-benefit analysis is attached in Appendix B.

Q2: Do you have any comment on the NZIER cost-benefit analysis attached in Appendix B?

6 Conclusion and next steps

6.1 Conclusions

In this paper we have carefully considered industry developments since the SOP was published—receipt of MDL's MPOC change request, the industry workshops and refinement of the draft balancing rules, development of implementation scenarios, and the results of a quantitative cost-benefit analysis. We have paid particular attention to the ICD MOU and the package of changes proposed by MDL. This focus is in response to the submissions on the SOP, most of which stated that a contracts-based solution to balancing arrangements was feasible.

We consider that none of the developments since the SOP was published affects the overall conclusion of that paper, or alters Gas Industry Co's proposal to a degree that requires us to reissue the SOP. We still believe that participative regulation is the best option.

In this section we explain our conclusions on the ICD MOU and MDL's proposed changes. We also discuss the risks associated with participative regulation.

ICD MOU

The ICD process reached broad agreement on principles. But Gas Industry Co remains convinced that individual commercial interests would stymie agreement on the detail. Self-interest will continue to prevent the industry from unanimously agreeing the common good solution.

MDL proposal

Gas Industry Co commends MDL for its efforts. We acknowledge that it has broadly met its stated intention to:

- issue revised Standard Operating Procedures, and set rules for managing linepack, UFG and any socialised gas;
- develop MPOC changes that allow the introduction of a back-to-back cash-out balancing regime and submit them under the MPOC change process; and

- develop MPOC changes that incorporate a description of the Balancing Operator's role and function into the MPOC.

MDL has not yet met its intention to:

- develop MPOC changes that would adopt the rulings panel for settling disputes related to balancing; and
- allow balancing gas suppliers located on Vector pipelines to supply balancing gas services to the Maui Pipeline.

Gas Industry Co recognises and respects MDL's efforts to improve balancing arrangements; however, we remain of the opinion that these efforts will not achieve the benefits of participative regulation. In particular:

- pipeline balancing across both pipelines will still not be managed coherently by a single balancing operator with clearly defined responsibilities and accountabilities;
- without this unification, MDL and Vector will continue to disagree on how balancing is most effectively managed;
- pipeline users will continue to suffer the affects of commercial conflict between the pipeline owners—ongoing disputes, continuing industry debate, and distraction from more pressing industry concerns, and the business of delivering gas to customers.

Risks in pursuing participative regulation

We acknowledge there are risks in pursuing participative regulation. From the industry workshops held in February 2010 it was clear than many participants consider that MDL and Vector will be unable to agree on a balancing plan or on the appointment of a Balancing Operator. The rules provide that Gas Industry Co would then step in to complete these tasks. This would be a more costly outcome, but we believe that a lot can be done to mitigate that risk.

In addition, the industry should not lose sight of the risks involved in not pursuing participative regulation. These include:

- continuing disruption from MDL/Vector disputes, which may lead Vector to terminate its interconnection contract with MDL;
- adverse changes to MDL/Vector operating policies (which contain the detail of how the Balancing Operator(s) manage linepack and exercise discretion);
- possible deterioration of the Balancing Operator(s) performance, leaving pipeline users without protection or means of complaint.

Gas Industry Co believes that, while these behavioural risks are difficult to reflect in a cost-benefit analysis, they are nevertheless present. The governance arrangements contained in the Draft Rules provide the industry with a robust, integrated framework and processes for dealing with these risks. The alternative is a continuation of the fragmented balancing arrangement of the MPOC and VTC, continuing industry 'negotiation' on balancing issues without any means of seriously challenging the rule of the pipeline owners. Gas Industry Co continues to believe that balancing is a community of users' issue, which needs to be governed through rules that properly balance the interests of stakeholders.

6.2 Next steps

The next steps are shown in Table 3.

Table 3 Next steps

Item	Date
Submissions on the Supplement to the SOP due	Tuesday 27 April 2010
Gas Industry Co makes recommendation to the Associate Minister	May 2010

Glossary

balancing gas	Gas added to or removed from the transmission pipelines by the Balancing Operator to manage linepack.
balancing market	The market created by the Balancing Operator when sourcing or disposing of balancing gas, whether a contracts market or a spot market.
Balancing Initiatives Paper	Consideration of Recent Industry Balancing Initiatives, December 2009, Gas Industry Co.
Balancing Operator	The party with the responsibility for buying and selling balancing gas.
cash-out	A forced trade with the Balancing Operator, used to correct part or all of a user's imbalance position.
Decision Paper	Transmission Pipeline Balancing-Analysis of Submissions on the Statement of Proposal and Decision, December 2009, Gas Industry Co.
Gas Act	Gas Act 1992.
GPS	Government Policy Statement on Gas Governance issued under the Gas Act published 18 April 2008.
ICD	Industry code development, the industry process led by Gas Industry Co aimed at minimising the scope of the proposed balancing regulations.
ICD MOU	Memorandum of Understanding for an Integrated Gas Balancing Regime, December 2009, a non-binding memorandum of understanding, which was the outcome of the ICD process.
industry body	The body appointed under section 43ZL of the Gas Act.
MDL	Maui Development Limited (an agent company for the Maui Joint Venture that owns the Maui transmission pipeline).

MPOC	Maui Pipeline Operating Code.
New Zealand Gas Exchange	The day-ahead gas trading platform currently under development by Gas Industry Co.
NZIER	New Zealand Institute of Economic Research.
OATIS	'Open Access Transmission Information System'. The information system and internet site used to manage the day to day operations of open access on the Maui and Vector pipelines.
Second Options Paper	Transmission Pipeline Balancing Second Options Paper, July 2009, Gas Industry Co.
SOP	Statement of Proposal on Transmission Pipeline Balancing, October 2009, Gas Industry Co
transmission pipeline	High pressure pipelines used to transport natural gas which does not include distribution networks.
TSO	Transmission System Owner.
UFG	Unaccounted for Gas, a change in linepack where the source is not identified largely due to metering or estimation errors.
Vector	Vector Limited in its role as owner of the Vector transmission pipelines.
VTC	Vector Transmission Code.
December Change Request	MDL's MPOC change request received by Gas Industry Co on 17 December 2009.

Appendix A Format for submissions

To assist Gas Industry Co in the orderly consideration of stakeholders' responses, a suggested format for submissions has been prepared. This is drawn from the questions posed throughout the body of this consultation document.

A word version of this template is available on Gas Industry Co's website at: http://www.gasindustry.co.nz/work-programme/transmission-pipeline-balancing?tab=1576

QUESTION	COMMENT
Q1: Do you have any comments on the Draft Rules?	
Q2: Do you have any comment on the NZIER cost-benefit analysis attached in Appendix B?	

Appendix B NZIER cost-benefit analysis

nzier
authoritative analysis

Proposed balancing rules

Cost-benefit analysis

Report to Gas Industry Co

31 March 2010

About NZIER

The New Zealand Institute of Economic Research (NZIER) is a specialist consulting firm that uses applied economic research and analysis to provide a wide range of strategic advice to clients in the public and private sectors, throughout New Zealand and Australia, and further afield.

NZIER is also known for its long-established *Quarterly Survey of Business Opinion* and *Quarterly Predictions*.

Our aim is to be the premier centre of applied economic research in New Zealand. We pride ourselves on our reputation for independence and delivering quality analysis in the right form, and at the right time, for our clients. We ensure quality through teamwork on individual projects, critical review at internal seminars, and by peer review at various stages through a project by a senior staff member otherwise not involved in the project.

NZIER was established in 1958.

Authorship

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Version:	Final

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Executive summary

Gas Industry Co has reviewed current balancing arrangements on New Zealand's two open access gas transmission pipelines. It has concluded that the best means of achieving the government's objectives for the industry is the introduction of rules to provide for the efficient, unified management of aggregate imbalance in the transmission pipeline system.

The Associate Minister of Energy and Resources has requested that a quantitative cost-benefit analysis (CBA) accompany any regulatory recommendation made by Gas Industry Co. Gas Industry Co has engaged NZIER to assist in preparing this CBA. This report outlines the method and results of this CBA.

To reflect the diversity of views in the gas industry, we model the costs and benefits of the proposed balancing rules under two scenarios – an optimistic scenario and a pessimistic scenario. Under the pessimistic scenario the proposed balancing rules take longer and cost more to implement and also achieve smaller benefits than under the optimistic scenario.

Views differ also on what would occur in the absence of the proposed balancing rules. Further improvement in current balancing arrangements seems likely, given industry dissatisfaction, but it is not yet clear whether this would be achieved through code changes, such as those currently proposed by Maui Development Limited (MDL), or, if the code change process is not successful, through a wider industry initiative, such as the Industry Code Development (ICD) process which produced a Memorandum of Understanding (MOU) in December 2009, setting out the broad parameters of a wide ranging balancing solution. We therefore assess the proposed balancing rules relative to each of these two alternative baseline scenarios, in turn – a code changes scenario and an ICD MOU scenario.

Not surprisingly, the results of the CBA indicate that whether the proposed balancing rules are of net benefit depends on the baseline scenario – specifically, whether the code change process is successful – and whether the costs and benefits of the proposed balancing rules are closer to the optimistic or pessimistic views expressed by the gas industry.

We do not know which of the four possible combinations of scenarios is the most likely, but the results of the CBA indicate that the proposed balancing rules are the superior approach in all but one of these four possible eventualities, as shown below.

Superior approach by scenario

		Costs and benefits of Proposed balancing rules	
		Optimistic scenario	Pessimistic scenario
Baseline scenario	Code changes	Proposed balancing rules	Code changes
	ICD MOU	Proposed balancing rules	Proposed balancing rules (marginally)

Source: NZIER

The results of the CBA indicate that only if the code change process is considered likely to succeed *and* the costs and benefits of the proposed balancing rules are considered likely to be closer to the pessimistic scenario is adopting code changes likely to be somewhat better (by around $3.5 million in present value net benefits over the next 14 years) than implementing the proposed balancing rules.

If the costs and benefits of the proposed balancing rules are considered likely to be closer to the optimistic scenario, it is likely to be substantially better (by $17 million to $21 million) to implement the proposed balancing rules. If the code change process is considered unlikely to succeed, it is likely to be either substantially better or marginally better (by $21 million or $0.5 million) to implement the proposed balancing rules than an ICD MOU.

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1. Purpose

Gas Industry Co has reviewed current balancing arrangements on New Zealand's two open access gas transmission pipelines[1]. It has concluded that the best means of achieving the government's objectives for the industry is the introduction of rules to provide for the efficient, unified management of aggregate imbalance in the transmission pipeline system. The rationale for this conclusion was set out in the transmission pipeline balancing statement of proposal[2]. This conclusion was supported by a qualitative cost-benefit analysis (CBA).

Subsequently, the Associate Minister of Energy and Resources (Associate Minister) has requested that a quantitative CBA accompany any regulatory recommendation made by Gas Industry Co. Gas Industry Co has engaged NZIER to assist in preparing this CBA. This report outlines the method and results of this CBA.

2. Proposed balancing rules

Balancing refers to maintaining the gas inventory in a pipeline ("linepack") within limits to ensure the reliable delivery and receipt of gas. Balancing is necessary to keep the gas pressure in the pipeline above the minimum required to maintain supply of gas to customers, but below the safe physical operating limit for the pipeline.

Users of the pipeline have an obligation to balance their inputs and outputs so as not to consume linepack or park gas in the transmission system beyond allowed tolerances. This is known as primary balancing.

There remains a need for residual balancing, given common use of the pipeline by multiple users. Currently, this is the responsibility of the two transmission system owners (TSOs) Maui Development Limited (MDL) and Vector Gas Limited (Vector).

The purpose of the proposed balancing rules is[3]:

> *…to achieve an efficient, unified management of aggregate imbalance in the transmission system.*

In summary, the rules provide for:

> *the appointment of –*
>
> - *a single balancing operator and development of a unified balancing plan (to be approved by the industry body) by transmission system owners; or*

[1] Gas Industry Company (2008) *Transmission Balancing Options Paper*, December 2008; Gas Industry Company (2009) *Transmission Balancing Second Options Paper*, July 2009.

[2] Gas Industry Company (2009) *Statement of Proposal Transmission Pipeline Balancing,* October 2009.

[3] *Draft Gas Governance (Balancing) Rules*, updated following February 2010 consultation , p.1.

- *in certain circumstances, a single balancing operator and development of a unified balancing plan by the industry body; and*

the powers and functions of the balancing operator to –

- *purchase and sell gas when thresholds in the balancing plan are or may be breached; and*
- *allocate gas and costs associated with the purchase and sale of gas under the rules; and*

the rights and obligations of users and transmission service owners in relation to the balancing operator's functions.

3. Method

3.1 Cost-benefit analysis

CBA provides a formal, structured method for systematically assessing proposals in terms of their outcomes relative to their use of resources.

The CBA process comprises 10 steps:

1. define the problem
2. select the options for assessment (proposal and alternatives)
3. specify the baseline scenario
4. identify the impacts of the options – positive (benefits) and negative (costs)
5. where possible, quantify the impacts
6. where possible, value the impacts
7. adjust for differences in the timing of the impacts
8. calculate decision criteria
9. analyse the sensitivity of the results and
10. document the CBA

In the analysis of government policy, CBA is normally undertaken from a national economy perspective, weighing up the relative costs and benefits to New Zealand as a whole. Wealth transfers between parties, although affecting the distribution of costs and benefits, cancel each other out in the aggregation of total costs and benefits to New Zealand (i.e. where a cost to one party is an equivalent benefit to another party).

3.2 Baseline scenarios

A critical step in any CBA is specifying the baseline scenario – the default or prevailing situation or conditions that would occur in the absence of the proposal and

any alternatives under consideration. It is relative to this counterfactual that the costs and benefits of the proposal and any alternatives are measured.

For the purpose of assessing the costs and benefits of the proposed balancing rules, we define the baseline scenario as the "status quo" – continuation of the current balancing arrangements, but subject to gradual improvement over time. Some improvement seems likely, given industry dissatisfaction, such that it would be unrealistic to adopt a status quo of no further improvement in current balancing arrangements in the absence of the proposed balancing rules.

A difficulty in specifying this baseline scenario is that it is uncertain whether this improvement in current balancing arrangements would be achieved through code changes, such as those currently proposed by MDL, or, if the code change process is not successful, through a wider industry initiative, such as the Industry Code Development (ICD) process which produced a Memorandum of Understanding (MOU) in December 2009, setting out the broad parameters of a wide ranging balancing solution. We therefore assess the proposed balancing rules relative to each of these two alternative baseline scenarios, in turn:

- a code changes scenario and
- an ICD MOU scenario.

The CBA assesses the extent to which the proposed balancing rules would incur additional costs and deliver additional benefits beyond those that would otherwise occur under each of these two baseline scenarios.

3.3 Scenarios for proposed balancing rules

Discussions with representatives of the gas industry have highlighted the diversity of views on the current balancing arrangements and the proposed balancing rules. To reflect the range of these views, we model the costs and benefits of the proposed balancing rules under two scenarios:

- an optimistic scenario and
- a pessimistic scenario.

These two scenarios differ in terms of the timing and magnitude of the costs and benefits of the proposed balancing rules relative to those that would otherwise occur under the baseline scenarios of gradual improvement over time in current balancing arrangements through either code changes or an ICD MOU. The proposed balancing rules take longer and cost more to implement under the pessimistic scenario and also achieve smaller benefits than under the optimistic scenario.

Note that these scenarios seek to reflect the range of views on what is considered realistic and likely, rather than more extreme low probability "best" or "worst" possible outcomes.

3.4 Time horizon

If the proposed balancing rules are recommended to the Associate Minister in the second quarter of 2010, approved by the Associate Minister and gazetted by early July 2010, they would come into effect from the beginning of August 2010.

Representatives of the gas industry have assisted in outlining a timeline for implementing the proposed balancing rules, if approved. Implementation would involve preparing, agreeing and establishing the balancing plan and required changes to pipeline codes, information technology (IT) systems, business processes and contracts. Under the optimistic scenario, this implementation could be achieved within a total of 12 months. We therefore model the new balancing arrangements as operational from the beginning of August 2011. Under the pessimistic scenario, significant areas of disagreement would take longer to resolve and implementation could take a total of 34.5 months to achieve. In this case, we model the new balancing arrangements as operational from the beginning of July 2013.

In comparing the proposed balancing rules with the baseline scenarios, we assume that code changes could be completed within a year and be operational from the beginning of July 2011. If the code change process is not successful, we assume that an ICD MOU would take three years to agree and implement and be operational from the beginning of July 2013.

We do not include in the CBA any development costs already incurred to date, given that these are "sunk" costs regardless of whether or not the proposed balancing rules are implemented. We model the costs and benefits from the decision point of whether or not the Associate Minister approves the proposed balancing rules.

To capture sufficient ongoing costs and benefits after initial implementation for a robust assessment of the proposed balancing rules, we model the costs and benefits over a period of 14 years, from mid 2010 to mid 2024. Thus, we model at least 10 years of operating under the new balancing arrangements, even if implementation takes the longer estimate of three years.

So that we can compare directly costs and benefits occurring at different points in time, we adopt a discount rate of 10% to convert future costs and benefits to their present values in 2009/10. In the sensitivity analysis, we also model discount rates of 6%, to reflect a public policy perspective, and 12%, to reflect a commercial perspective[4].

3.5 Costs and benefits

The types of costs likely to be incurred by the proposed balancing rules are shown in Table 1. Table 1 also indicates the magnitudes of these costs modelled in the CBA, over and above the costs incurred under the baseline scenarios of code changes or an ICD MOU. The types of benefits likely to result from the proposed balancing rules

[4] Treasury now recommends an 8% real discount rate for energy and water infrastructure projects. This is spanned by the range we model in the sensitivity analysis.

are shown in Table 2, together with the magnitudes modelled in the CBA, again additional to the benefits achieved under the baseline scenarios.

Table 1 Costs of proposed balancing rules

Additional to baseline scenario

Cost	Frequency	Optimistic scenario	Pessimistic scenario
Prepare, agree and establish initial balancing plan and required changes to codes, IT systems, business processes and contracts	Initial	As outlined in implementation timeline[1], $2.233 million over 12 months Net of implementation costs under baseline scenarios, $1.8 million over one year for code changes, $2.8 million over three years for an ICD MOU	As outlined in implementation timeline[1], $2.560 million over 34.5 months Net of implementation costs under baseline scenarios, $1.8 million over one year for code changes, $2.8 million over three years for an ICD MOU
Establish single balancing operator	Initial	Competitively priced bids from existing TSO service providers, $1 million	$2 million[2]
Establish new balancing market	Initial	Use existing market, no additional cost	Unable to use existing market, establish new market, $0.5 million
Administer balancing operator and manage funding arrangements	Ongoing	Transfer of functions and associated costs from TSOs to single balancing operator, no net cost	Transfer of functions and associated costs from TSOs to single balancing operator, no net cost
Support balancing operator's functions	Ongoing	Resource retained by TSOs, quarter of a FTE, $35,000	Resource retained by TSOs, half a FTE, $70,000
Operate under balancing plan and amended codes, IT systems, business processes and contracts	Ongoing	May also provide some cost savings, net cost no more than currently, under proposed balancing rules and baseline scenarios	Costs average of $10,000 more per year per market participant, across 10 market participants, than operating under the baseline scenarios
Oversee and monitor balancing operator and balancing market	Ongoing	Quarter of a FTE, $35,000	Half a FTE, $70,000
Prepare, agree and establish future amendments to balancing plan and any associated changes to codes, IT systems, business processes and contracts	Ongoing	Quarter of initial cost (see above), every three years, average per year Net of cost of future amendments to codes or contracts under baseline scenarios, quarter of initial cost, every three years, average per year	Quarter of initial cost (see above), every three years, average per year Net of cost of future amendments to codes or contracts under baseline scenarios, quarter of initial cost, every three years, average per year

Notes: [1] See Appendix A for details of implementation costs.

[2] Gas Industry Company (2008) *Transmission Balancing Options Paper*, December 2008, p.22.

Source: Gas industry representatives, Gas Industry Co, NZIER

Table 2 Benefits of proposed balancing rules

Additional to baseline scenario

Benefit	Frequency	Optimistic scenario	Pessimistic scenario
Reduction in cost of residual balancing actions	Ongoing	Transfer of balancing costs between market participants (reduction in balancing costs to users, equivalent reduction in revenues to balancing operator, some reallocation of balancing costs between users), no net benefit	Transfer between market participants, no net benefit
Reduction in cost of disputes over balancing	Ongoing	Averts one major dispute every two years, average benefit $25,000 per year, from first year of operation Net of reduction in dispute costs under baseline scenarios, avert one major dispute every five years, average benefit $10,000 per year, reached gradually over first five years	Averts one major dispute every five years, average benefit $10,000 per year, from first year of operation Net of reduction in dispute costs under baseline scenarios, avert one major dispute every five years, average benefit $10,000 per year, reached gradually over first five years
Cost savings to TSOs of administering balancing and managing funding arrangements	Ongoing	Transfer of functions and associated costs from TSOs to single balancing operator, no net benefit	Transfer of functions and associated costs from TSOs to single balancing operator, no net benefit
Efficiency benefits More efficient levels of balancing and more accurate allocation of balancing costs Results in more efficient use of pipelines, more economically efficient production and consumption decisions and potentially increased market participation and competition (greater certainty about actual costs and benefits of buying and selling gas)	Ongoing	Allocative efficiency improvements[1] resulting in 0.5% reduction in price of gas, from first year of operation, productive efficiency improvements resulting in 0.5% reduction in unit cost of gas, reached gradually over first five years Net of efficiency improvements under baseline scenarios, allocative efficiency improvements[1] resulting in 0.25% reduction in price of gas, reached gradually over first five years, productive efficiency improvements resulting in 0.25% reduction in unit cost of gas, reached gradually over first 10 years	Allocative efficiency improvements[1] resulting in 0.25% reduction in price of gas, from first year of operation, productive efficiency improvements resulting in 0.25% reduction in unit cost of gas, reached gradually over first five years Net of efficiency improvements under baseline scenarios, allocative efficiency improvements[1] resulting in 0.25% reduction in price of gas, reached gradually over first five years, productive efficiency improvements resulting in 0.25% reduction in unit cost of gas, reached gradually over first 10 years

Notes: [1] See Appendix B for details of efficiency benefits.

Source: Gas industry representatives, Gas Industry Co, NZIER

The proposed balancing rules may affect some individual market participants more than others. The costs and benefits modelled reflect averages across the industry. Given that the magnitudes of these costs and benefits are uncertain, we test the sensitivity of the CBA's results across a range of values for each type of cost and benefit (see Section 4.3 below).

4. Results

4.1 Annual costs and benefits

Figure 1 and Figure 2 show our estimates of the total annual costs and benefits of the proposed balancing rules, under the optimistic and pessimistic scenarios, relative to the baseline scenario of code changes.

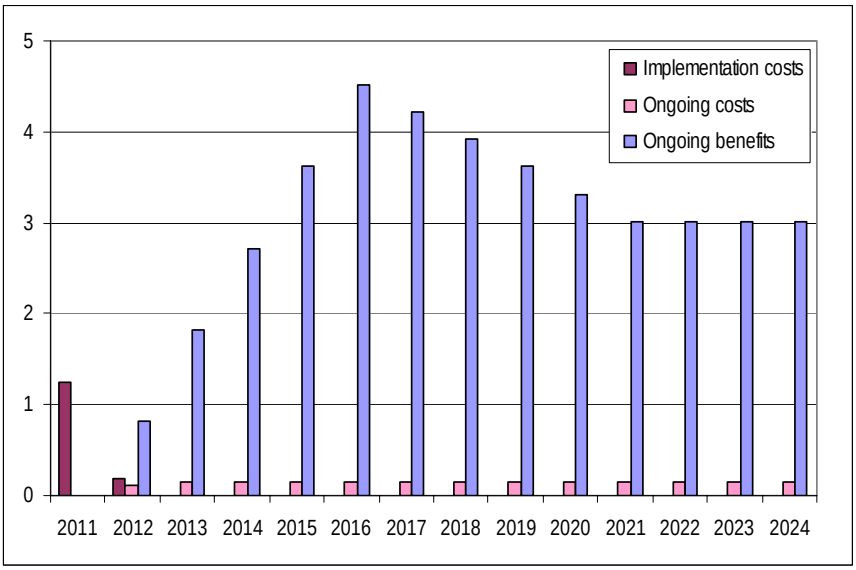
Recall that these are the additional costs and benefits of the proposed balancing rules over those of the baseline scenario. This explains the negative "additional" benefits initially in Figure 2, when improved balancing arrangements under the proposed balancing rules have yet to come into effect due to the longer development and implementation process under the pessimistic scenario, whilst code changes are already achieving some improvement. It also explains why annual benefits decline from 2016/17 in Figure 1 and 2018/19 in Figure 2 as the benefits achieved through code changes increase over time.

Recall also that the costs to the balancing operator of administering balancing and managing funding arrangements, and the equivalent cost savings to TSOs from no longer having to perform these functions, are not modelled explicitly, as they cancel each other out. Nor is the reduction in cost of residual balancing actions modelled explicitly as it represents the transfer of balancing costs between market participants, which again cancel each other out. In the figures below, the effect of including these transfers would be to raise the annual cost and annual benefit by the same amount.

Under the optimistic scenario, the proposed balancing rules cost more to implement initially than code changes and a little more to operate under thereafter, but deliver substantially more benefits, as shown in Figure 1. Under the pessimistic scenario, however, the proposed balancing rules cost more to implement initially than code changes and more to operate under thereafter, for not much more in benefits, as shown in Figure 2. The resulting annual net benefits under the two scenarios are shown in Figure 3.

Figure 1 Annual costs and benefits of proposed balancing rules under optimistic scenario relative to baseline scenario of code changes

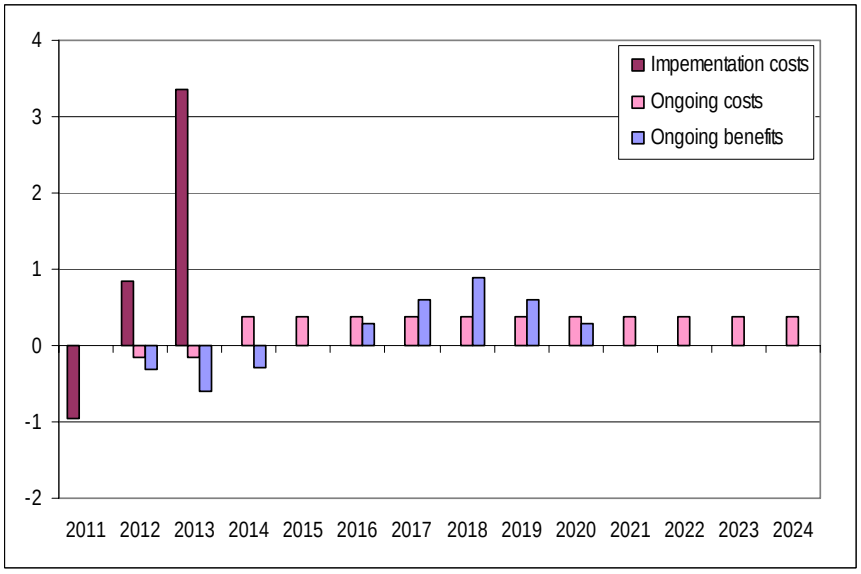
$ million, year ending June



Source: NZIER

Figure 2 Annual costs and benefits of proposed balancing rules under pessimistic scenario relative to baseline scenario of code changes

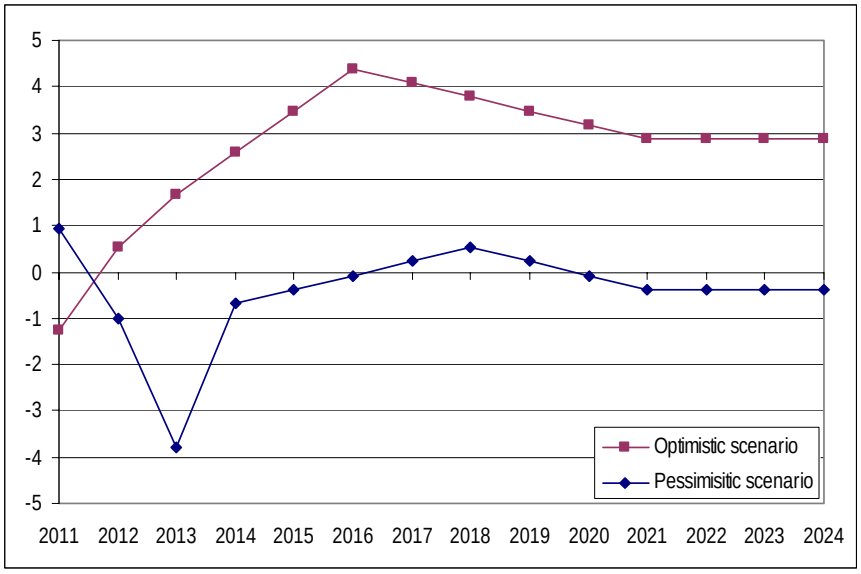
$ million, year ending June



Source: NZIER

Figure 3 Annual net benefits of proposed balancing rules relative to baseline scenario of code changes

$ million, year ending June



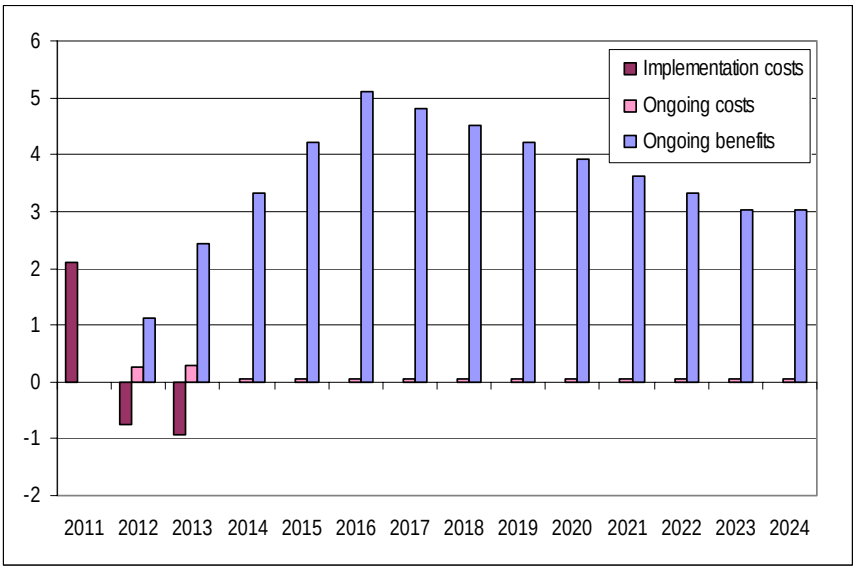
Source: NZIER

Figure 4 and Figure 5 show our estimates of the total annual costs and benefits of the proposed balancing rules, under the optimistic and pessimistic scenarios, relative to the baseline scenario of an ICD MOU, if the code change process is not successful.

Under the optimistic scenario, the proposed balancing rules cost not much more to implement initially than an ICD MOU and a little more to operate under thereafter, but deliver substantially more benefits, as shown in Figure 4. Under the pessimistic scenario, the proposed balancing rules cost more to implement initially than an ICD MOU and more to operate under thereafter, but also deliver more in benefits for several years, as shown in Figure 5. The resulting annual net benefits under the two scenarios are shown in Figure 6.

Figure 4 Annual costs and benefits of proposed balancing rules under optimistic scenario relative to baseline scenario of ICD MOU

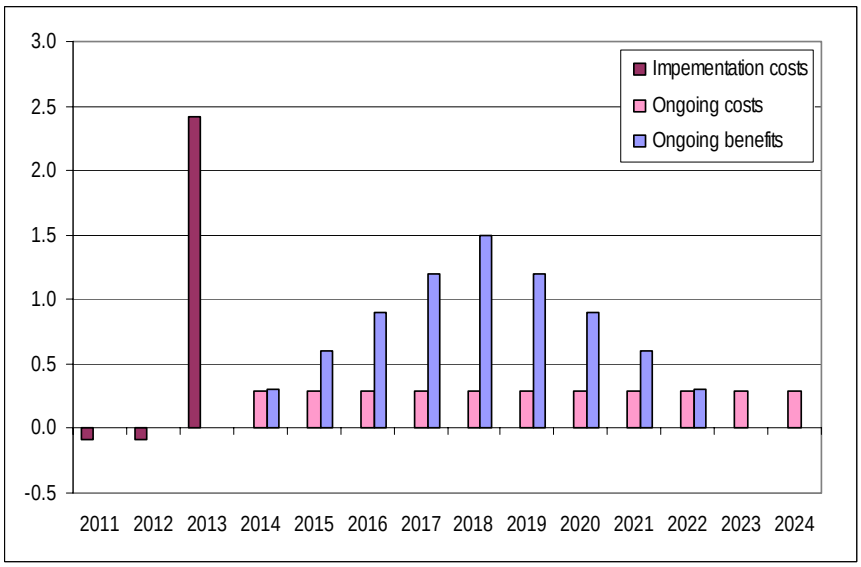
$ million, year ending June



Source: NZIER

Figure 5 Annual costs and benefits of proposed balancing rules under pessimistic scenario relative to baseline scenario of ICD MOU

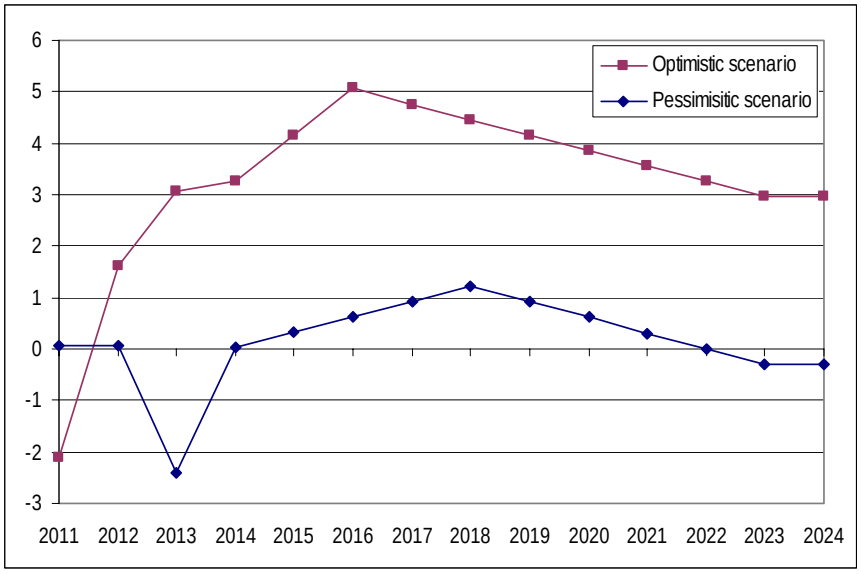
$ million, year ending June



Source: NZIER

Figure 6 Annual net benefits of proposed balancing rules relative to baseline scenario of ICD MOU

$ million, year ending June



Source: NZIER

4.2 Total costs and benefits

With discounting to reflect their relative timing, the above annual costs and benefits imply present value total costs and benefits over 2010/11 to 2023/24 as shown in Table 3.

Table 3 Present value total costs and benefits of proposed balancing rules

$ million, 2010/11 to 2023/24

	Costs	Benefits	Net Benefits
Baseline scenario of code changes			
Proposed balancing rules - optimistic scenario	2.178	19.191	17.013
Proposed balancing rules - pessimistic scenario	3.949	0.363	-3.586
Baseline scenario of ICD MOU			
Proposed balancing rules - optimistic scenario	1.323	22.404	21.081
Proposed balancing rules - pessimistic scenario	3.094	3.576	0.481

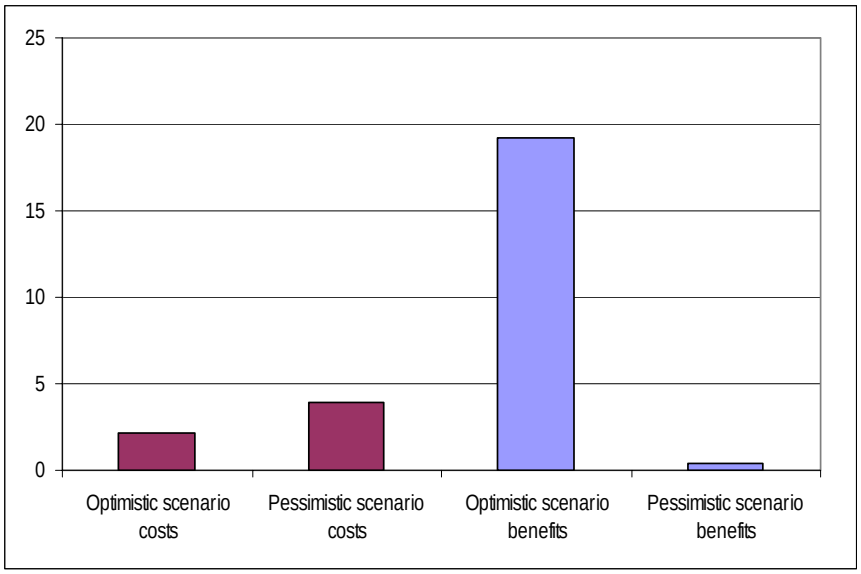
Source: NZIER

Relative to the baseline scenario of code changes, the proposed balancing rules are estimated to deliver around $17 million more in net benefits over the next 14 years under the optimistic scenario. For each dollar of cost, they return $8.81 in benefits. They break even in three years.

Under the pessimistic scenario, however, the proposed balancing rules are estimated to deliver around $3.5 million less in net benefits than the baseline scenario of code changes.

Figure 7 Present value total costs and benefits of proposed balancing rules relative to baseline scenario of code changes

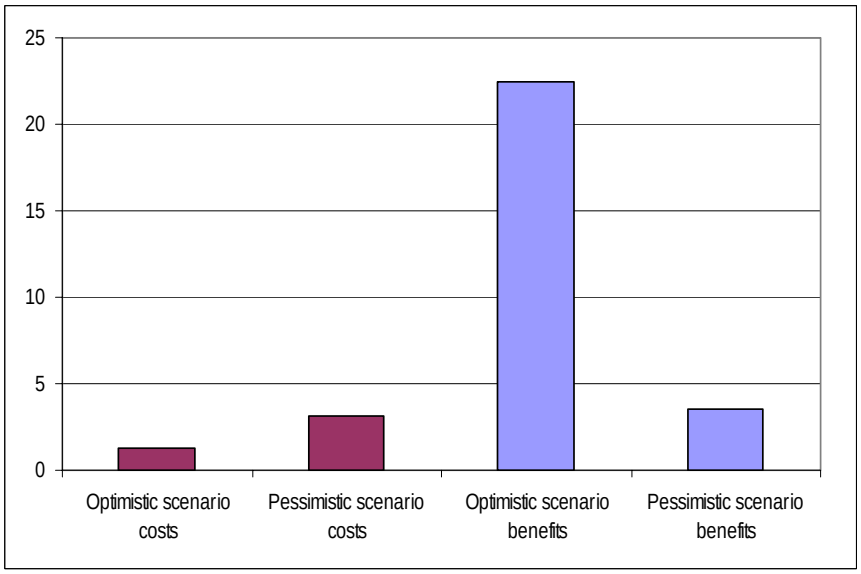
$ million , 2010/11 to 2023/24



Source: NZIER

Figure 8 Present value total costs and benefits of proposed balancing rules relative to baseline scenario of ICD MOU

$ million , 2010/11 to 2023/24



Source: NZIER

Relative to the baseline scenario of an ICD MOU, the proposed balancing rules are estimated to deliver around $21 million more in net benefits under the optimistic

scenario. For each dollar of cost, they return $16.93 in benefits. They break even in three years.

Even under the pessimistic scenario, the proposed balancing rules still deliver around $0.5 million more in net benefits over the next 14 years than the baseline scenario of an ICD MOU. For each dollar of cost, they return $1.16 in benefits. They break even in nine years. The net benefits of the proposed balancing rules are, however, marginal and, over the long term, would eventually be eroded by the small negative ongoing annual net benefits from 2022/23 onwards shown in Figure 6 above.

Not surprisingly, these results indicate that whether the proposed balancing rules are of greater net benefit depends on the baseline scenario – specifically, whether the code change process is successful – and whether the costs and benefits of the proposed balancing rules are closer to the optimistic or pessimistic views expressed by representatives of the gas industry.

If the code change process is successful and the costs and benefits of the proposed balancing rules are closer to the optimistic scenario, the proposed balancing rules provide greater net benefits. If, however, the costs and benefits of the proposed balancing rules are closer to the pessimistic scenario, code changes provide greater net benefits, provided that they succeed.

If the code change process is not successful, the proposed balancing rules provide greater net benefits than an ICD MOU, regardless of whether their costs and benefits are closer to the optimistic or pessimistic scenarios, although the difference is marginal under the pessimistic scenario.

In other words, the proposed balancing rules are the superior approach in all but one of these four possible eventualities, as summarised in Table 4.

Table 4 Superior approach by scenario

		Costs and benefits of proposed balancing rules	
		Optimistic scenario	Pessimistic scenario
Baseline scenario	Code changes	Proposed balancing rules	Code changes
	ICD MOU	Proposed balancing rules	Proposed balancing rules (marginally)

Source: NZIER

We do not know which of these four possible eventualities is the most likely. From Table 4, we can say, however, that only if the code change process is considered likely to succeed *and* the costs and benefits of the proposed balancing rules are considered likely to be closer to the pessimistic scenario is adopting code changes likely to be somewhat better (by around $3.5 million over the next 14 years) than implementing the proposed balancing rules. If the costs and benefits of the proposed balancing rules are considered likely to be closer to the optimistic scenario, it is likely to be substantially better (by $17 million to $21 million) to implement the proposed balancing rules. If the code change process is considered unlikely to succeed, it is likely to be either substantially better or marginally better (by $21 million or $0.5 million) to implement the proposed balancing rules than an ICD MOU.

We do not know the relative probabilities of these different eventualities, but if, by way of illustration, we assume that the two baseline scenarios are equally likely, the expected net benefits of the proposed balancing rules are around $19 million under the optimistic scenario and -$1.5 million under the pessimistic scenario. Alternatively, if we assume that the optimistic and pessimistic scenarios are equally likely, the expected net benefits of the proposed balancing rules are around $7 million relative to the baseline scenario of code changes and $11 million relative to the baseline scenario of an ICD MOU. If the two baseline scenarios are equally likely *and* the optimistic and pessimistic scenarios are also equally likely, the expected net benefits of the proposed balancing rules are around $9 million.

4.3 Sensitivity analysis

As noted above, the unit costs and benefits modelled in the CBA are uncertain. We therefore test the sensitivity of the main results presented above across a range of values for each type of cost and benefit. The results of this sensitivity analysis are shown in Table 5. This table shows how adopting 10% or 25% lower or higher unit costs or benefits would alter the estimated present value total net benefits of the proposed balancing rules, relative to the baseline scenarios, over the next 14 years. It is normal practice to hold the baseline scenario constant in sensitivity analysis of a proposal or options, but this is not possible in this case because a number of the uncertainties apply to the baseline scenarios also. In this sensitivity analysis, we allow values to vary in the baseline scenarios also, but hold constant the relationships between the optimistic and pessimistic scenarios and the baselines scenarios.

The present value net benefits of the proposed balancing rules are most sensitive to the magnitude of efficiency benefits modelled, the discount rate applied and the cost of establishing the single balancing operator. Only if the efficiency benefits were 25% lower than modelled, however, would an ICD MOU, under the pessimistic scenario, provide greater net benefits than the proposed balancing rules (highlighted in bold in Table 5). With this one exception, the findings of Table 4 above hold throughout Table 5 – the proposed balancing rules remain superior to code changes under the optimistic scenario and to an ICD MOU under both the optimistic and pessimistic scenarios.

As noted in Appendix B, the magnitude of efficiency benefits is particularly uncertain, not only from the proposed balancing rules but also under the two baseline scenarios. Table 6 shows how modelling different magnitudes of efficiency benefits would alter the estimated present value total net benefits of the proposed balancing rules, relative to the baseline scenarios, over the next 14 years. Only if the efficiency benefits of the proposed balancing rules were as low as a 0.025% reduction in the price and unit cost of gas (equivalent to just 0.2 cents/GJ at an average price of gas of $8/GJ) would the proposed balancing rules no longer be superior to either of the two baseline scenarios under the optimistic scenario (highlighted in bold in Table 6).

In the event that neither of the two baseline scenarios deliver any future efficiency benefits, the net benefits of the proposed balancing rules would be positive in all four possible combinations of scenarios and range between around $7 million (pessimistic scenario, relative to both baseline scenarios) and $28 million (optimistic scenario, relative to both baseline scenarios).

Table 5 Sensitivity analysis

Present value total net benefits, $ million, 2010/11 to 2023/24

		Relative to baseline scenario of code changes		Relative to baseline scenario of ICD MOU	
		Optimistic scenario	Pessimistic scenario	Optimistic scenario	Pessimistic scenario
Main results		17.013	-3.586	21.081	0.481
Costs					
Prepare and establish balancing plan and changes to codes, IT systems, business processes and contracts (including future amendments)	-25%	17.163	-3.447	21.017	0.407
	-10%	17.073	-3.530	21.055	0.452
	+10%	16.954	-3.642	21.107	0.511
	+25%	16.864	-3.726	21.145	0.555
Establish single balancing operator	-25%	17.241	-3.211	21.308	0.857
	-10%	17.104	-3.436	21.172	0.632
	+10%	16.923	-3.737	20.990	0.331
	+25%	16.786	-3.962	20.854	0.106
Establish new balancing market	-25%	17.013	-3.492	21.081	0.575
	-10%	17.013	-3.549	21.081	0.519
	+10%	17.013	-3.624	21.081	0.444
	+25%	17.013	-3.680	21.081	0.387
Operate under balancing plan and amended codes, IT systems, business processes and contracts	-25%	17.013	-3.464	21.081	0.603
	-10%	17.013	-3.538	21.081	0.530
	+10%	17.013	-3.635	21.081	0.432
	+25%	17.013	-3.708	21.081	0.359
Oversee and monitor balancing operator and balancing market	-25%	17.069	-3.501	21.137	0.567
	-10%	17.036	-3.552	21.103	0.515
	+10%	16.991	-3.620	21.059	0.447
	+25%	16.958	-3.672	21.025	0.396
Support balancing operator's functions	-25%	17.125	-3.416	21.193	0.652
	-10%	17.058	-3.518	21.126	0.550
	+10%	16.969	-3.655	21.036	0.413
	+25%	16.902	-3.757	20.969	0.310

Benefits					
Fewer disputes over balancing	-25%	16.983	-3.589	21.050	0.478
	-10%	17.001	-3.587	21.069	0.480
	+10%	17.026	-3.585	21.093	0.483
	+25%	17.044	-3.584	21.112	0.484
Efficiency benefits	-25%	12.243	-3.677	15.511	-0.410
	-10%	15.105	-3.623	18.853	0.125
	+10%	18.922	-3.550	23.309	0.838
	+25%	21.784	-3.495	26.651	1.372
Discount rate	6%	22.895	-4.206	28.048	0.948
	12%	14.782	-3.331	18.420	0.307

Source: NZIER

Table 6 Sensitivity analysis – efficiency benefits

Present value total net benefits, $ million, 2010/11 to 2023/24

Allocative and productive efficiency improvement (reduction in price and unit cost of gas)		Relative to baseline scenario of code changes		Relative to baseline scenario of ICD MOU	
Optimistic scenario	Pessimistic scenario and baseline scenarios[1]	Optimistic scenario	Pessimistic scenario	Optimistic scenario	Pessimistic scenario
2.000%	1.000%	74.349	-2.496	88.022	11.177
1.000%	0.500%	36.110	-3.223	43.378	4.046
0.500%	0.250%	17.013	-3.586	21.081	0.481
0.450%	0.225%	15.105	-3.623	18.852	0.125
0.400%	0.200%	13.196	-3.659	16.624	-0.231
0.350%	0.175%	11.288	-3.695	14.395	-0.588
0.300%	0.150%	9.379	-3.732	12.167	-0.944
0.250%	0.125%	7.471	-3.768	9.939	-1.300
0.200%	0.100%	5.563	-3.804	7.711	-1.657
0.150%	0.075%	3.655	-3.841	5.483	-2.013
0.100%	0.050%	1.748	-3.877	3.255	-2.369
0.050%	0.025%	-0.160	-3.914	1.028	-2.726
0.025%	0.013%	-1.114	-3.932	-0.086	-2.904

Notes: [1] Maintaining the same relationships between scenarios, i.e. that the pessimistic scenario achieves half as much improvement in efficiency as the optimistic scenario and the baseline scenarios achieve the same improvement in efficiency as the pessimistic scenario but more gradually (see Table 2).

Source: NZIER

Appendix A Implementation costs

Representatives of the gas industry have assisted in outlining a timeline for implementing the proposed balancing rules, if approved. Implementation would involve preparing, agreeing and establishing the balancing plan and required changes to pipeline codes, IT systems, business processes and contracts.

Under the optimistic scenario, this implementation could be completed within a total time period of 12 months. Under the pessimistic scenario, significant areas of disagreement would take longer to resolve and implementation could take a total time period of 34.5 months to complete.

We have used this timeline to estimate the approximate resource requirements of implementation under the two scenarios. Although resource requirements are greater under the pessimistic scenario, some of its longer timeline is attributable to more risk averse sequencing of activities, which are able to be undertaken concurrently under the optimistic scenario.

A.1 Proposed balancing rules – optimistic scenario

Balancing plan:

- TSOs prepare draft balancing plan, three months each, at a standard rate of $140,000/FTE
- eight market participants review and comment on draft balancing plan, one month each, at $140,000/ FTE
- Gas Industry Co reviews and approves draft balancing plan, one month, at $140,000/FTE.

Code changes:

- TSOs prepare code changes, six weeks, at $140,000/FTE
- eight market participants review and make submissions on code changes, two weeks each, at $140,000/ FTE
- Gas Industry Co reviews submissions on code changes and makes determinations, six weeks, at $140,000/FTE.

OATIS changes:

- one TSO designs, codes and tests changes to OATIS, seven months, two FTEs at $200,000/FTE
- $800,000 for linked nominations.

Other IT changes:

- 10 market participants design, code and test changes to other IT systems, 4.5 months each, at $200,000/ FTE.

Business process and contract changes:

- 10 market participants make changes to business processes and contracts, six weeks each, at $140,000/ FTE.

A.2 Proposed balancing rules – pessimistic scenario

Balancing plan:

- TSOs start preparing draft balancing plan, three months each, at $140,000/FTE
- Gas Industry Co completes preparing draft balancing plan, three months, at 140,000/FTE
- 10 market participants review and comment on draft balancing plan, six weeks each, at $140,000/ FTE
- Gas Industry Co reviews submissions and approves draft balancing plan, three months, at $140,000/FTE.

Code changes:

- TSOs prepare code changes, three months, at $140,000/FTE
- eight market participants review and make submissions on code changes, one month each, at $140,000/ FTE
- Gas Industry Co reviews submissions on code changes and makes determinations, two months, at $140,000/FTE.

OATIS changes:

- one TSO designs, codes and tests changes to OATIS, 10 months, two FTEs at $200,000/FTE
- $800,000 for linked nominations.

Other IT changes:

- 10 market participants design, code and test changes to other IT systems, 4.5 months each, at $200,000/ FTE.

Business process and contract changes:

- 10 market participants make changes to business processes and contracts, six weeks each, at $140,000/ FTE.

A.3 Baseline scenarios

Implementing code changes or an ICD MOU under either of the two baseline scenarios would incur many of the same types of costs as listed above. Representatives of the gas industry indicated that code changes could be readily implemented, if successful. If the code change process is not successful, an ICD MOU would be time consuming and costly to agree and establish. In comparing the proposed balancing rules with the baseline scenarios, we model implementation of code changes as taking a year at a cost of $1.800 million. We model an ICD MOU as taking three years to agree and establish at a cost of $2.800 million.

Appendix B Efficiency benefits

Improved balancing arrangements would achieve efficiency benefits through reducing residual balancing to efficient levels, paid for by the causers of imbalances. Pipeline users would seek to manage their inputs and outputs to avoid causing imbalances where it is less costly for them to undertake this primary balancing than to be charged the balancing costs of the balancing operator. In this way, the transmission pipelines would not only be kept in balance at a lower total cost, but, ultimately, used more efficiently, as users adjust the timing or volume of their inputs and outputs according to pipeline capacity and the value of their inputs and outputs.

With more efficient levels of balancing and more accurate allocation of balancing costs, market participants would have greater certainty about the actual costs and benefits to them of buying and selling gas and improved confidence that they would secure the actual net benefits of the gas they supply or demand. This may in turn increase or decrease the amount of gas they are willing to supply or demand and increase competition. Increased competition between participants would exert downward pressure on the sale price and supply cost of gas and enhance the incentive to pursue future cost reductions, with all of which to achieve an advantage over competing participants.

The consequence is therefore better – in terms of more economically efficient – production and consumption decisions, where the three components of economic efficiency are:

- allocative efficiency – the price and quantity of gas supplied
- productive efficiency – the cost of supplying gas and
- dynamic efficiency – investment and innovation to pursue reduction over time in the cost of supplying gas.

The magnitude of efficiency benefits from improving balancing arrangements is unknown. For the purpose of assessing whether the proposed balancing rules are likely to provide net benefits over the baseline scenarios of gradual improvement over time in current balancing arrangements through code changes or an ICD MOU, we model potential competition benefits as follows.

B.1 Proposed balancing rules – optimistic scenario

Improved balancing arrangements would promote allocative efficiency through providing greater certainty about costs and increased competition between participants. If, under the proposed balancing rules, these effects lowered the price at which gas is supplied by, for example, just 0.5%[1], at an average price of around $8/GJ, this would reduce the average price by $0.04/GJ. For existing demand, this reduction in price is simply a transfer from producers to consumers, resulting in no

[1] This is the greatest uncertainty in the CBA, but does not seem unreasonable. In the sensitivity analysis, we test how small this effect could be for costs and benefits to just break even.

net benefit. Under a price elasticity of demand of -0.1, a 0.5% reduction in price would increase total demand by 0.05%, which would be around an additional 0.075 PJ per year. For this additional demand, there is a benefit to additional consumers who did not consume gas at the previous higher price, in the form of a "consumer surplus" of half[2] the price reduction, applied across the increase in quantity demanded. We therefore model allocative efficiency benefits to the market of around $1,500 per year from the proposed balancing rules under the optimistic scenario.

Improved balancing arrangements would also promote productive efficiency through increased competition between participants improving the efficiency with which gas is produced and supplied. If, under the proposed balancing rules, this effect lowered the average unit cost of supplying gas by again just 0.5%, at an average price of gas of around $8/GJ, this would reduce the average cost by $0.04/GJ. Across around 150 PJ of gas supplied through the transmission pipelines each year, these benefits would amount to around $6 million per year from the proposed balancing rules under the optimistic scenario. Unlike the immediate allocative efficiency benefits above, however, improvements to production and supply processes take time to develop and implement. We therefore phase in these benefits over the first five years of operating under the proposed balancing rules.

Over time, dynamic efficiency benefits have potential to outweigh by far the above static efficiency improvements. These are much longer term, however, so we assume for simplicity that they are beyond the time horizon of the CBA.

B.2 Proposed balancing rules – pessimistic scenario

Under the pessimistic scenario, we model the proposed balancing rules as achieving allocative and productive efficiency improvements half the size of those modelled under the optimistic scenario. Under the pessimistic scenario, the proposed balancing rules therefore result in a 0.25% reduction in the price of gas and 0.25% reduction in the unit cost of supplying gas, providing allocative efficiency benefits of $375 per year and productive efficiency benefits of $3 million per year, the latter phased in over the first five years of operating under the proposed balancing rules.

B.3 Baseline scenarios

Under each of the baseline scenarios, improvement in current balancing arrangements is also likely to achieve some gradual increase in efficiency over time. For the purpose of the CBA, we model the baseline scenarios of code changes or an ICD MOU as achieving the same efficiency benefits as the proposed balancing rules under the pessimistic scenario, but less quickly. Under the baseline scenarios, gradual improvement over time in current balancing arrangements therefore results in a 0.25% reduction in the price of gas and 0.25% reduction in the unit cost of supplying gas, providing allocative efficiency benefits of $375 per year, phased in

[2] To give the area of the consumer surplus triangle formed by the intersection of the demand and supply curves.

over the first five years of operation, and productive efficiency benefits of $3 million per year, phased in over the first 10 years of operation.

These efficiency benefits under each of the baseline scenarios are subtracted from the efficiency benefits of the proposed balancing rules under the optimistic and pessimistic scenarios to give the *additional* benefits achieved by the proposed balancing rules.

Appendix C NZIER response to comments on 'strawman' quantitative CBA

Table 1 Comments from gas industry representatives on 19 February 2010 "straw man" draft cost-benefit analysis and NZIER's responses

Comment	Response
Query the status of this CBA.	Have amended "Purpose" section in revised CBA to clarify status.
Undertaking CBA from national economy perspective means that could have a balancing plan that provides net benefits to economy but results in inefficient arrangements for managing imbalance.	Disagree – regulatory process (and the Gas Act) require identifying the objective of regulation and the options for achieving this objective, so options would already be limited to those that would improve balancing arrangements before starting a CBA. In this CBA, nearly all of the costs and benefits are to market participants within the gas industry – by "national economy perspective" we mean that the CBA adds up all costs and benefits to all affected parties throughout the economy, not just one subgroup.
Use two baseline scenarios – MDL's change request and a contractual solution – rather than combining into a single "mid point" baseline scenario.	Agree – have done in revised CBA (assuming both eventually achieve same benefits, but contractual solution takes longer and costs more to agree and establish) Baseline scenario in draft CBA was equivalent to the average of these two baseline scenarios or weighting them by their probabilities if equally likely (i.e. each has a probability of 0.5), given that we do not yet know which will occur.
Model two scenarios for contractual process – one in which contractual process is successful and one in which contractual process is attempted but unsuccessful and then followed by regulation.	Disagree – we did this already in the CBA of 16 December 2009, which compared four scenarios – participative regulation, ICD process (fast), ICD process (slow), ICD process (slow and failed) followed by participative regulation.
The baseline scenario should take into account progress made to date and future progress when the MDL change request comes into force.	It did in the draft CBA and the two baseline scenario do in the revised CBA – the CBA deducts the further improvements under the baseline scenarios from the improvements under the proposed balancing rules to examine how much *additional* improvements the proposed rues would provide.
Costs and benefits are uncertain – final form of proposed balancing rules is not yet known, impacts will depend on details of balancing plan which is not yet written, baseline scenario is uncertain and could yield outcomes with similar benefits.	Agree that uncertain at this time, but that is why the CBA models optimistic and pessimistic scenarios to reflect the likely range, given these uncertainties. The final CBA will also include sensitivity analysis to test how much the results change if the values of the costs and benefits were somewhat higher or lower.
Referring to having consulted with representatives of the gas industry is somewhat exaggerated.	Have amended to "discussions with".
Why are costs and benefits expressed in 2009 dollars.	Have corrected in revised CBA to 2009/10 dollars (all years are June years).
If timeline has the pessimistic scenario taking three times as long to implement as the optimistic scenario, it should also cost three times as much.	Disagree – although resource requirements are greater under the pessimistic scenario, some of its longer timeline is attributable to more risk averse sequencing of activities (e.g. not starting drafting code changes until balancing plan is approved, not starting OATIS changes until end of formal code change process), which are able to be undertaken concurrently or with greater overlap under the optimistic scenario.

Costs of change to OATIS would be higher.	Agree – have increased in revised CBA (although also incurred in both baseline scenarios).
Other costs for preparing, agreeing and establishing initial balancing plan and required changes to codes, IT systems, business processes and contracts would be higher.	Disagree – with the exception of costs of changes to OATIS, these costs in the draft CBA were actually quite close to (in some cases even slightly higher than) those suggested in industry feedback. The final CBA will also include sensitivity analysis to test how much the results change if the values of the costs and benefits were somewhat higher or lower
Optimistic scenario would incur no additional costs and involve no transfer of functions from TSOs.	Disagree – the optimistic scenario relates to the proposed balancing rules, not the baseline.
Even after the balancing function has transferred from TSOs to the single balancing agent, TSOs would still need to retain some resource to support the balancing agent's functions.	Agree – have added to revised CBA (although modest resource requirement, given that TSOs currently spend most time on operating the balancing market, less time on balancing).
May be additional cost for establishing a new balancing market if cannot continue to use BGX after balancing functions are transferred to single balancing agent	Agree – have added to pessimistic scenario in revised CBA.
Agree with excluding past sunk costs, but might there be an additional future cost from TSOs seeking to recover these past sunk costs	Depends how TSOs have treated these costs. Even if they do, would occur under baseline scenarios as well as proposed balancing rules scenarios, and would also be a transfer between market participants (cost to users, equivalent revenue to TSOs).
Proposed balancing rules would incur costs to users for additional infrastructure for exchange of information and ongoing additional information requirements to be able to self balance.	Disagree – this was suggested in the CBA framework paper of 9 February 2010 but rejected by industry representatives at the meeting of 12 February 2010.
Costs to Gas Industry Co of overseeing and monitoring balancing agent and balancing market would be higher due to substantial costs in overseeing implementation of balancing rules.	Disagree – in the CBA, this refers to the ongoing annual monitoring costs after implementation. Gas Industry Co considers the value adopted appropriate. Costs to Gas Industry Co of its involvement in implementation are included in implementation costs.
Would any prudentials be required by the balancing agent/operator.	No.
Would there be an additional cost for extended nominations.	No, outside the scope of this CBA, could happen in any case.
Benefit of reduction in cost of residual balancing actions – was used in Gas Industry Co's previous analyses, but now removed from CBA, surprising that proposed balancing rules do not deliver any reduction in cost of residual balancing actions.	Disagree – this benefit is included in the CBA, but is recognised as a transfer between market participants (reduction in balancing costs to users, but equivalent reduction in revenue to balancing agent; also some reallocation of balancing costs between users, from those overpaying currently to those underpaying currently), which, directly, represents no **net** benefit to the market as a whole. An indirect consequence is improved efficiency, represented in "efficiency benefits".
Proposed balancing rules could increase number of residual balancing actions	Disagree – would do the opposite by charging costs of residual balancing to causers of imbalances and thereby encouraging more primary balancing. Follows rationale set out in statement of proposal.
Benefit of reduction in cost of disputes over balancing – some commented that this benefit was understated in the CBA, some commented that this benefit would be small and some commented that there would be no significant reduction in disputes.	Have retained small benefit in revised CBA, reflecting approximate average/midpoint in range of opinion (smaller under pessimistic scenario).

Proposed balancing rules could increase number of disputes because they create uncertainty about role of TSOs and the balancing agent.	Disagree – would do the opposite by providing greater clarity about roles and requirements and more accurate allocation of balancing costs. Follows rationale set out in statement of proposal.
Efficiency benefits – some claimed that there was no explanation of how improved balancing arrangements could affect the efficiency of the market for gas, some questioned how these could be greater than the total cost of balancing.	Disagree – explanation was provided in the appendix to the CBA, Follows rationale set out in statement of proposal. More efficient levels of balancing and more accurate allocation of balancing costs would promote more efficient use of pipelines and provide greater certainty about actual costs and benefits of buying and selling gas, in turn supporting more economically efficient production and consumption decisions and potentially increased market participation and competition. These efficiency benefits extend to the market for gas, not just balancing gas.
Efficiency benefits – some commented that these were overstated, some that these were understated, some queried the source/basis of the 1% assumption (reduction in price and unit cost of gas).	The draft CBA stated that the magnitude of these efficiency benefits were unknown but "if" they were "say, just 1%". In other words, 1% was a conservative assumption adopted for modelling purposes (and was reduced to 0.5% for the pessimistic scenario). These efficiency benefits are also included in the baseline scenario, so it is the relative not absolute magnitudes that matter. The draft CBA highlighted the uncertainty about these efficiency benefits and that we would test in the sensitivity analysis how low the efficiency benefits could be for the proposed balancing rules to just break even relative to the baseline scenario. In the revised CBA, we have reduced the efficiency benefits modelled to 0.5% under the optimistic scenario and 0.25% under the pessimistic scenario and both baseline scenarios. This reduces the net benefits of both the proposed balancing rules and the baseline scenarios, so doesn't significantly alter the findings about how the proposed balancing rules compare with the baseline scenarios. Again, this is not stating that the efficiency benefits **will be** 0.5% and 0.25%, but rather that **if** they are 0.5% and 0.25%. The final CBA will include sensitivity analysis to identify the break even level of efficiency benefits.

Source: NZIER

Appendix D Summary of amendments to Draft Rules

The table below provides an overview of the changes that have been made to specific rules since the SOP. Draft Rules with minor or no changes have been excluded.

Table 5 Summary of amendments to Draft Rules

Draft Rule		Amendment
2	Commencement	The commencement of the Draft Rules has been clarified so that all rules except the ones that require the Balancing Operator to undertake balancing actions will take effect on commencement and the others will come into effect, along with the balancing plan, on the go-live date. Flexibility has been added as to when the initial balancing plan comes into effect.
3	Purpose	The purpose has been simplified.
5	Interpretation	Deleted 'allocated', clarified 'balancing action' and 'balancing gas', added 'balancing operator', added 'cash-out amount', clarified 'cash-out price', 'clearing price', deleted 'cost', clarified 'directly managed', 'go-live date', 'indirectly managed', 'interconnection agreement', 'interconnection point', deleted 'negative imbalance and positive imbalance', added 'reapplication date', clarified 'reference location', 'target linepack', 'transmission charge', added 'transmit', transmission system arrangements, and 'transmission system code', clarified 'transmission system owner', 'user', 'balance' and 'imbalance.'
6	Users obligations in relation to balancing	Clarified user's obligation to balance and consequence of imbalance (6.1 and 6.2). Added provision to make explicit that title will be transferred to reflect balancing gas bought or sold by the Balancing Operator and allocated to that user (6.2.3). Clarified joint obligations for two or more TSOs who own parts of the transmission system that are within a single balancing zones, including obligation to balance and consequence of imbalance (6.3).
7	Users' obligation to provide information	Rule has been clarified by adding in a timeframe in which users are required to provide information in (as soon as practicable) and new provisions added to clarify that requests for information by the Balancing Operator must be reasonable and the information must be in the users possession or control.
8	TSO obligation to facilitate balancing	Clarified that each TSO must use reasonable endeavours to ensure its operating procedures and contractual arrangements are consistent with and do not unreasonably prevent users complying with obligations to balance in rule 6.1.
9	TSOs to provide transmission system information	Clarified that information requested from the TSOs for the Balancing Operator must be reasonably required (9.1). A new request for information about the details of any amendments to the information provided by users imbalances that could affect allocations of balancing gas made under transmission system arrangements be notified (9.1.5(b)). Rule has also been clarified by adding how and by when information is to be provided as soon as practicable, including in real time if relevant via an information exchange or other means (9.2.2).

Draft Rule		Amendment
10	TSOs to provide transmission services for balancing	Clarified that transmission services should be provided on reasonable terms and conditions. Deletion of profile limits as no longer necessary because terms and conditions must be reasonable.
11	Other obligations of TSOs in relation to balancing	Clarified TSOs requirement to co-operate with the Balancing Operator, including the addition of new provisions for notifying and co-ordinating with the Balancing Operator in relation to any operational matters that may affect linepack. A new rule added for TSOs to provide Balancing Operator access to information exchanges on reasonable terms and conditions. Clarified that TSOs are responsible for adjusting users' title to gas to reflect allocations made and notified by the Balancing Operator. A new requirement has been added for TSOs to immediately notify users if the Balancing Operator has notified them that there is insufficient gas for sale or purchase within the price thresholds for it to perform its functions.
13	Functions of the Balancing Operator	Clarified the Balancing Operator's functions requirement to notify TSOs of any adjustments to users' title to gas to reflect the allocation of balancing gas.
14	Functions to be carried out independently	Clarified provisions relating to information given to the Balancing Operator for the purposes of the rules so that confidential information remains so unless disclosure is required to enable the Balancing Operator to perform its functions; or if required by law.
15	Management of linepack	Clarified that the balancing zones will be defined in the balancing plan. Addition to require the Balancing Operator to use 'best endeavours' when purchasing or selling gas. The amount of which will be 'in the Balancing Operator's opinion, necessary to return the linepack to, or close to the threshold, or prevent it from falling below/exceeding the threshold. Clarified notification process if insufficient gas available for sale or purchase. Additional requirement to notify the critical contingency operator.
16	Rules for transactions relating to the balancing gas market	Clarified that the Balancing Operator must sell or purchase balancing gas only through the balancing market unless rule 17 applies, in which case it is only required to comply with provisions in rules 16.4 and 16.5 for accepting offers and paying or receiving payment. These provisions have also been clarified to make explicit that offers can be fully or partially accepted and that the transmission charges will be calculated in the course of transmitting gas to/from a receipt/delivery point to the reference location for the balancing action.
17	Circumstances in which transactions may be undertaken on other terms	This rule has been expanded to provide more detail on how the industry body will determine that the transactions should be undertaken on other terms to better meet the purpose of the rules, including what the industry body must have regard for when making that decision. Provisions regarding notification and the determination of terms and conditions have also been included. A provision has been added that for the avoidance of doubt, rule 16.6 relating to price thresholds, continues to apply.
18	Terms of balancing gas transactions	This rule has been clarified so that it applies to sale and purchase of balancing gas in accordance with rule 16.

Draft Rule		Amendment
19	Rules for allocation of balancing gas	Clarified that the Balancing Operator is to allocate based on the best information available to it at the time of the allocation. If it is unable to fully allocate all the balancing gas it must allocate what it can and then allocate the remainder once the additional information is received. Two additional provisions have been added to this rule: for the Balancing Operator to allocate any unallocated gas to the relevant TSO; and for title to balancing gas allocated to a user by the Balancing Operator to vest at the time of the balancing action.
20	Notification of allocations and cash-out price of balancing gas	New provision added for the Balancing Operator to notify the relevant TSO as soon as practicable after an allocation of any adjustment needed to that users' title. If a user considers its allocation of balancing gas or cash-out amount is incorrect, it is required under this rule to notify the Balancing Operator as soon as practicable.
21	Payment for balancing gas purchased	Additional requirement for the Balancing Operator to include in an invoice the quantity and cash-out amount of the purchased balancing gas allocated to the user during the month which the balancing action relates. Clarified that payment of the invoice is due on the following business day if the 20th of the month is not one.
22	Payment for proceeds of sales of balancing gas	Additional requirement for the Balancing Operator to include in a credit note the quantity and cash-out amount of the sold balancing gas allocated to the user during the month to which the balancing action relates. Clarified that the Balancing Operator will 'pay when paid' and that the Balancing Operator must use 'best endeavours' to pursue purchasers for any outstanding monies. The rule also now provides for part-payment and the possibility of the cash-out amount for sold balancing gas to be negative.
23	Further provisions relating to payment	New provision has been added that requires interest be paid by users that have failed to pay full invoice amounts. Interest will apply to any unpaid monies from the date in which the amount was due until it is paid in full. The obligation is not suspended due to dispute affecting the amount owed. However, the rule requires that if a dispute is successful the Balancing Operator will be required to pay interest on the refunded amount. The rule also clarifies that the cash-out amount is GST exclusive.
24	Records of transactions	Additional requirement for the Balancing Operator to maintain a record of the amount by which linepack of the balancing zone diverged from the relevant threshold in relation to a balancing action. Extra information regarding balancing transactions in relation to balancing zones is also now required to be maintained. Further detail around the information that the Balancing Operator is required to publish has also been included.
25	Amendments to allocations	More detail has been added to this rule to clarify the types of errors that can be notified to and considered by the Balancing Operator. The rule now provides the process that will take place if the Balancing Operator considers the original allocation was incorrect or inaccurate.
26	Monthly reports	A new provision to this rule has been added that requires the Balancing Operator to publish the names of any users who have failed to pay any amount they owe the Balancing Operator. The report must also include the amount and date the payment was due.
27	Meaning of Appointer	A new rule to allow for the terms: appointer, former appointer, and new appointer.

Draft Rule		Amendment
28	Appointment of Balancing Operator by appointer	This rule merges former rules that were specific to either the TSOs or the industry body. This rule provides the detail of what the appointer must have regard to when appointing a person to become the Balancing Operator.
29	Terms of appointment of Balancing Operator	This rule merges former rules that were specific to either the TSOs or the industry body. It also makes it clear the Balancing Operator is a service provider.
30	Publication of Balancing Operator service provider agreement	This rule merges former rules that were specific to either the TSOs or the industry body and has been updated to reflect that there will be a service provider agreement.
31	Consequences of change of application of subpart	This rule has been generalised to reflect the possibility that the Minister may now reinstate subpart 2. It also now includes provisions that a new appointer must pay the former Balancing Operator reasonable costs associated with the transfer to the new Balancing Operator. The rule also has been clarified to ensure the previous Balancing Operator may continue to exercise the powers under the rules in relation to any balancing action undertaken before termination. Clarified alsio that the former Balancing Operator remains liable in respect of any breaches of the rules, and to pay the cash-out price for any balancing gas sold before its employment has been terminated. Similarly, it remains entitled to be paid any cash-out amount owed to it.
32	Criteria for approval of balancing plan	Greater detail has been added to this rule to allow it to apply amended proposed balancing plans as well. The industry body can approve a balancing plan or amended balancing plan if it is satisfied the plan will assist in meeting or better meeting the purpose of the rules. A draft balancing plan is also now required to be consistent with the Gas (Downstream Reconciliation) Rules 2008 and may contain transitional provisions or provisions to allow for different parts of a plan to come in at different times.
33	Publication of balancing plan	This rule merges former rules for either TSOs or industry body, providing a common process to apply for both appointment models. New provisions have been added requiring TSOs to notify users of the approval or a balancing plan or amended balancing plan and the expiry date of any urgent amendments. The rule has also been amended to provide for a more flexible go-live date for the first balancing plan to take effect.
34	Draft balancing plan or amended balancing plan comes into force	This rule has been amended to provide details of when balancing plans and amended balancing plans, apart from the first, would come into force. It also clarifies that urgent amendments come into force on the first business day after notification of approval.
35	Expiry of urgent amendments	This rule merges former rules for either TSOs or industry body, providing a common process to apply for both appointment models, including that urgent amendments will expire after 60 business days unless consulted on by the appointer and reapproved by the industry body. If it expires, a new requirement has been added for TSOs to notify users via an information exchange.
36	Application of subpart (2)	This rule has been clarified as to when this subpart applies and ceases to apply.

Draft Rule		Amendment
37	Joint obligations of TSOs in relation to appointment of Balancing Operator and preparation of balancing plan	This rule has been amended to include a requirement that the TSOs, in addition to attempting to agree on the identity of a person to be a Balancing Operator, must also attempt to agree on the terms of a draft service provider agreement. TSOs must attempt to agree on this within the 60 business day period and submit it to the industry body along with the draft balancing plan. A new provision has been added to clarify that TSOs can notify the industry body before the expiry of 60 business days. Also clarified that TSOs must use best endeavours to ensure a Balancing Operator remains in place at all times when this subpart is in effect.
38	Procedure for preparation and consultation on draft balancing plan	A new provision has been added that requires the TSOs to provide one or more documents setting out any code changes that are required as a result of the draft balancing plan. The TSOs are now be required to publish the draft balancing plan and all submissions received on it. The timeframe for consultation has been revised to allow for 20 but no more than 25 business days. A new requirement has been added that the industry body must also publish the draft balancing plan and submissions.
39	Decision by industry body on draft balancing plan	A new requirement that the industry body must decide within 20 business days whether to approve or decline a draft balancing plan. The timeframe for consultation for submissions on proposed amendments to a draft balancing plan has been revised to allow for 10 but no more that 20 business days.
40	Procedure for amendment to approved balancing plan	This rule merges former rules outlining the process for amending an approved TSO balancing plan and consulting on proposed amendments. The revised rule has also been amended to require that TSOs submit a document outlining the code changes that would be required if the proposed amendment were to take effect.
41	Procedure for minor and technical urgent amendments to the balancing plan	This rule has been separated from the rule outlining the amendment approval process for TSO balancing plans and revised to deal with minor and technical and urgent amendments.
42	Procedure for non-minor and technical amendments to balancing plan	This rule has been separated from the rule outlining the amendment approval process for a TSO balancing plan and revised to deal with non-minor and technical amendments. It also clarifies that any approved urgent amendments must be consulted on and reapproved before expiring.
43	Application of this subpart (3)	This rule has been clarified as to when the subpart applies and ceases to apply. It includes a new provision that if TSOs fail to submit a draft balancing plan to the industry body for approval within 40 business days after first submitting the draft balancing plan for approval, this subpart applies. The rule has also been amended to expand on what the industry body must consider when determining whether to give notification that the Balancing Operator is failing to carry out its functions, including the results of any audit, Rulings Panel determinations, and any other evidence presented that the Balancing Operator is failing to carry out its functions. A new provision has been added which allows the Balancing Operator to respond to this notice. The rule has also been amended to allow for reapplication of the subpart at a later stage.

Draft Rule		Amendment
44	Industry body's obligation if subpart applies	A new requirement has been added for the industry body to publish any notification given under this rule. It has also been amended to allow for other interested parties to submit on any notice given by the industry body. The rule has been clarified to recognise that TSOs may provide notification to the industry body that a Balancing Operator will be in place from a certain date. If the industry body is not satisfied that there will be it can notify the TSOs of its takeover. A new provision has also been added to allow the industry body to takeover if, within 20 business of the date notified, there is still no Balancing Operator in place.
45	Procedure for preparation and consultation on balancing plan and appointment of Balancing Operator	This rule has been amended so that the timeframe for consultation on an industry body draft balancing plan is 20 but no more than 25 business days. A new requirement has been added for the industry body to publish submissions. It has also been amended to clarify that the Balancing Operator is appointed as soon as practicable after the balancing plan is approved. New provisions have been added that allow the industry body to adopt a draft balancing plan that has already been consulted on by TSOs, make amendments as required and approve the balancing plan. This applies if the TSOs have failed to reach agreement on a final draft balancing plan, or if a TSO balancing plan is in place and the Balancing Operator is failing to perform its functions. Further clarified that the industry body must use best endeavours to ensure a Balancing Operator remains in place at all times when this subpart is in effect.
46	Procedure for amendment to approved balancing plan	The rule has been amended to require that if TSOs wish to propose an amendment to the industry body balancing plan, they submit an explanation for the amendment, a statement as to whether or not, in their opinion, it needs to be made urgently or is minor and technical, and a document outlining any code changes that would be required if the amendment were to be adopted.
47	Procedure for minor and technical urgent amendments to the balancing plan	This rule has been separated from the draft rule in the SOP outlining the amendment process for the industry body balancing plan. The approval process for minor, technical, or urgent amendments has been made explicit.
48	Procedure for non-minor and technical amendments to balancing plan	This rule has been separated from the draft rule in the SOP outlining the amendment process for the industry body balancing plan. The approval process for non minor or technical amendments has been made explicit. The rule has also been clarified to require any approved urgent amendments are to be consulted on before being reapproved.
49	Reversion to TSO appointment	This new rule allows a return to the TSO appointment model under subpart 2 if the TSOs submit to the industry body reasons why this would better meet the purposes of the rules. The rule provides for consultation to take place on this notification, including allowing persons 20 to 25 business days to make submissions to the industry body, who must publish and consider those submissions. The industry body may then recommend to the Minister that the Minister issue a Gazette notice specifying the reapplication date of subpart 2. If after 60 business days, there is not a Balancing Operator appointed by the TSOs, the Minister may revoke its decision and subpart 3 continues to apply. This rule and other subsequent changes provides for repeated reversion between the subparts.

Draft Rule		Amendment
50	Development fee	This rule has been amended to allow for a development fee to be charged if a subpart is reapplied. The rule has also been clarified to make explicit what the costs comprise the fee.
51	How and when development fee must be paid	This rule has been amended to allow for a development fee to be charged if a subpart is reapplied.
54	How and when actual ongoing fees payable	Clarified that actual ongoing fees may be for a part of a year due to the ability to change between subpart 2 and 3.
55	General provisions regarding fees	Clarified how TSOs will recover fees, including that costs of any fees are to be passed onto shippers in proportion to the quantities of gas transmitted by the shipper in the TSO's part of the system or on another basis agreed by the industry body. The rule also now requires that the amount be net of any amount that the TSO is able to recover from a user and clarifies that a person if not released from any obligation to pay because of a change from subpart 2 to 3 and vice versa.
56	Industry body to commission performance audits	New requirement for the industry body to publish the identity of any auditor appointed along with the auditor's terms of reference.
58	Auditor to prepare draft report	Clarified that the draft audit report will be provided to each TSO.
62	Use of final audit reports	A provision has been added that the final audit report can also be used for considering amendments to the balancing plan.
66	Safety override	New provision to clarify that the safety override does not absolve a user from any liability to pay for balancing gas allocated to it.
67	Relationship with transmission system arrangements	Clarified that this rule covers transmission system arrangements, not just codes. New provision that a party to the transmission system arrangements is not liable to comply with it to the extent an obligation or liability in it is inconsistent with or doubles up with an obligation or liability under the rules. Clarified that for the purposes of this rule, transmission system arrangements does not include the Gas (Downstream Reconciliation) Rules 2008.
68	Relationship with Gas Governance (Critical Contingency Management) Regulations 2008	Clarified that the Balancing Operator must only cease its functions in the balancing zone in which that part of the transmission system in which a critical contingency has been declared. Further clarified that a critical contingency does not affect the validity of any balancing action taken by the Balancing Operator, nor does it affect the Balancing Operator's ability to allocate balancing gas and the associated cash-out amount.

Draft Rule		Amendment
	Schedule	The Schedule has been amended to clarify the information that is to be included in the balancing plan. In particular, it has been clarified to elaborate on what 'information relating to balancing zones' (previously 'management of linepack') should be included. This includes further description of the information on directly and indirectly managed zones. The section on the provision of information has also been clarified to better reflect the other notification processes under the Draft Rules, including allocations and any new allocations as a result of amendments. The allocation model has been revised to reflect that allocations must be made based on the best information available to the Balancing Operator at the time of the allocation. The allocation model has also been revised to provide more detail on how allocations are to be made if there is an interconnection point within a balancing zone.

Appendix E Draft Balancing Rules

DRAFT GAS GOVERNANCE (BALANCING) RULES

Contents

Part 3

Appointment of balancing operator, development of balancing plan and funding

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General provisions

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Appointment of balancing operator by joint transmission system owners

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Funding

1. Title

These rules are the Gas Governance (Balancing) Rules 2010.

2. Commencement

2.1 Rules 6, 13.1.1, 13.1.2, and 15 come into force, on the date notified by the industry body in the *Gazette* in accordance with rule 33.3.2.

2.2 The rest of these rules come into force on the 28th day after the date of their notification in the *Gazette*.

3. Purpose

The purpose of these rules is to achieve efficient, unified management of aggregate imbalance in the transmission system.

4. Outline

4.1 These rules provide for –

4.1.1 the appointment of –

(a) a single balancing operator and development of a unified balancing plan (to be approved by the industry body) by transmission system owners; or

(b) in certain circumstances, a single balancing operator and development of a unified balancing plan by the industry body; and

4.1.2 the powers and functions of the balancing operator to –

(a) purchase and sell gas when thresholds in the balancing plan are or may be breached; and

(b) allocate gas and costs associated with the purchase and sale of gas under the rules; and

4.1.3 the rights and obligations of users and transmission system owners in relation to the balancing operator's functions.

Part 1

General provisions

5. Interpretation

5.1 In these rules, unless the context otherwise requires -

Act means the Gas Act 1992

balance has the meaning in rule 5.2

balancing action means one or more transactions to –

(a) purchase balancing gas committed to at the same time for the purposes of rule 15.1.1; or

(b) sell balancing gas committed to at the same time for the purposes of rule 15.2.1

balancing gas means gas that is sold or purchased as part of a balancing action

balancing market means the market established or accessed by the balancing operator to comply with rule 16.1

balancing operator means a person appointed as the balancing operator by the transmission system owners or the industry body, as applicable, under rule 28.1

balancing plan–

(a) means a balancing plan approved by the industry body and in force under subpart 1 of Part 3; and

(b) includes any amendment to that plan that are in force.

balancing zone means a part of the transmission system defined as a balancing zone in the balancing plan

business day means any day of the week except—

(a) Saturday and Sunday; and

(b) any day that Good Friday, Easter Monday, Anzac Day, the Sovereign's birthday, Labour Day, Christmas Day, Boxing Day, New Year's Day, the day after New Year's Day, or Waitangi Day are observed for statutory holiday purposes; and

(c) any other day that the industry body has determined not to be a business day as published by the industry body

cash-out amount, means the product of the gigajoules of balancing gas allocated to a user in respect of a balancing action and the cash-out price for that balancing gas

cash-out price means the price per gigajoule determined by the balancing operator under rule 20.1.2 in respect of the sale or purchase of balancing gas allocated to a user

clearing price means, -

(a) if rule 16.4.3 applies in relation to the purchase of balancing gas by the balancing operator in a balancing action, the highest sum of–

(i) the offer price (per gigajoule) for any balancing gas accepted in that balancing action, plus

(ii) any transmission charges payable by the balancing operator to transmit that balancing gas from the purchase location to the reference location (per gigajoule); and

(b) if rule 16.5.3 applies in relation to the sale of balancing gas by the balancing operator in a balancing action, the lowest sum of–

(i) the offer price (per gigajoule) for any balancing gas accepted in that balancing action, less

(ii) any transmission charges payable by the balancing operator to transmit that balancing gas from the reference location to the purchase location (per gigajoule); and

(c) if rule 16.4.3 does not apply in relation to the purchase of balancing gas by the balancing operator in a balancing action, the weighted average of the sum of –

(i) the offer price (per gigajoule) for any balancing gas accepted in that balancing action; plus

(ii) any transmission charges payable by the balancing operator to transmit that balancing gas from the purchase location to the reference location (per gigajoule); and

(d) if rule 16.5.3 does not apply to the sale of balancing gas by the balancing operator in a balancing action, the weighted average of the sum of –

(i) the offer price (per gigajoule) for any balancing gas accepted in that balancing action; less

(ii) any transmission charges payable by the balancing operator to transmit that balancing gas from the reference location to the purchase location (per gigajoule)

commencement date means the date referred to in rule 2.2

directly managed, in relation to a balancing zone, means a balancing zone that is to be managed directly through the sale and purchase of balancing gas in accordance with rules 15.1 and 15.2

go-live date means the day rules 6, 13.1.1, 13.1.2 and 15 come into force under rule 2.1

imbalance has the meaning in rule 5.2

indirectly managed, in relation to a balancing zone, means a balancing zone that is to be managed through the taking of gas from or injection of gas into a directly managed balancing zone, for example, by pressure regulation

industry body means—

(a) the industry body approved by Order in Council under section 43ZL of the Act; or

(b) in the event that the approval of the industry body is revoked under section 43ZM of the Act and no other industry body is approved, the Energy Commission to be established under section 43ZZH of the Act

information exchange means –

(a) any information system that is used to facilitate information exchange in respect of access to all or part of the transmission system; and

(b) includes OATIS, the online interactive information system that is used to facilitate information exchange in respect of the open access regime under MPOC and VTC

interconnected party means a person who is a party to an interconnection agreement with a transmission system owner

interconnection agreement means any agreement or customary arrangement between a transmission system owner and another person relating to the receipt of scheduled or agreed quantities of gas into or delivery of scheduled or agreed quantities of gas out of a part of the transmission system owned by the transmission system owner

interconnection point means any point where —

(a) an interconnected party's facilities connect to the transmission system; or

(b) 2 parts of the transmission system owned by different transmission system owners connect

linepack, in relation to a part of the transmission system, means the quantity of gas in that part of the transmission system

Maui Pipeline Operating Code or MPOC means the code, issued by the owner of that part of the transmission system identified as the Maui pipeline on the map published under rule 12, covering operation of the Maui pipeline, as amended from time to time

publish, in respect of information to be published by a person, means to make that information publicly available on the person's website

reapplication date means the date, notified by the Minister in a notice in the *Gazette* under rule 49.3, from which subpart 2 of Part 3 reapplies

reference location means the location or balancing zone used by the balancing operator to evaluate balancing gas offers in respect of a proposed balancing action

shipper means a person who is a party to an agreement with a transmission system owner to have gas transmitted through all or part of the transmission system

target linepack, in relation to a part of the transmission system, means the target quantity of linepack for that part of the transmission system as specified in or determined in accordance with the balancing plan

trader means a person who buys or sells gas within the transmission system

transmission charge means an amount payable to a transmission system owner for transmission of gas in a part of the transmission system

transmit, in relation to gas, includes to receive a quantity of gas at one point on the transmission system and deliver an equivalent quantity of gas to another point on the transmission system

transmission system means the system of interconnected high pressure open access gas transmission pipelines depicted on the map published by the industry body under rule 12

transmission system arrangements mean any or all of the following -

(a) a transmission system code:

(b) an agreement entered into under or in accordance with a transmission system code (for example, a transmission services agreement or gas transfer agreement):

(c) an agreement relating to access to and use of a part of the transmission system entered into other than under or in accordance with a transmission system code:

(d) an agreement relating to title to gas that is injected into, taken from, or transmitted within the transmission system:

(e) the Gas (Downstream Reconciliation) Rules 2008

transmission system code means MPOC, VTC, and any other code that sets out rules covering access, use, and operation of a part or all of the transmission system, as amended from time to time

transmission system owner means –

(a) a person who owns all or any part of the transmission system; and

(b) if two or more persons jointly own any part of the transmission system, those persons jointly and severally

user –

(a) means –

(i) a shipper; or

(ii) a trader; or

(iii) an interconnected party; or

(iv) a transmission system owner in relation to –

(A) its activities as a shipper, trader, or interconnected party; or

(B) its obligation to balance other than in regard to its activities as a shipper, trader, or interconnected party; and

(b) does not include the balancing operator in relation to the performance of the balancing operator's functions

Vector Transmission Code or VTC means the code, issued by the owner of that part of the transmission system identified as the Vector pipeline on the map published under rule 12, covering operation of the Vector pipeline, as amended from time to time.

5.2 For the purposes of these rules, -

balance means, in relation to –

(a) a shipper, to ensure that the shipper's receipts and deliveries of gas match; and

(b) a trader, to ensure that the trader's quantities of gas purchased and sold match; and

(c) an interconnected party, to ensure that the same quantity of gas as agreed or scheduled under the terms of an interconnection agreement with the relevant transmission system owner is taken from or injected by that party into the transmission system; and

(d) a transmission system owner (other than in regard to its activities as a shipper, trader, or interconnected party), to ensure that the linepack in

a part of the transmission system owned by the transmission system owner matches the aggregate of the following:

(i) the target linepack of that part of the transmission system:

(ii) all other users' imbalances in that part of the transmission system; and

imbalance means, in relation to -

(a) a shipper, the amount by which the shipper's receipts and deliveries of gas as determined under relevant transmission system arrangements do not match; and

(b) a trader, the amount by which the trader's quantities of gas purchased and sold as determined under relevant transmission system arrangements do not match; and

(c) an interconnected party, the amount by which the quantity of gas taken from or injected into the transmission system by that party differs from that agreed or scheduled under the terms of any relevant interconnection agreement; and

(d) a transmission system owner (other than in regard to its activities as a shipper, trader, or interconnected party), the amount by which the linepack of a part of the transmission system owned by that person differs from the aggregate of the following:

(i) the target linepack of that part of the system:

(ii) all other users' imbalances in that part of the system; and

(e) a balancing zone, the aggregate imbalance of all users in that zone.

Users' obligations

6. Users' obligation in relation to balancing

6.1 Subject to rule 6.5, a **user** must use reasonable endeavours –

6.1.1 to **balance** within each **balancing zone**; and

6.1.2 if, despite rule 6.1.1, the **user** has an **imbalance** in any **balancing zone**, to return the **user's imbalance** to zero.

6.2 If a **user** has an **imbalance** in a **balancing zone** –

6.2.1 the **user** is –

(a) liable to pay to the **balancing operator** the **cash-out amount** of any **balancing gas** purchased by the **balancing operator** and allocated to the **user** under these rules; or

(b) entitled to receive from the **balancing operator** the **cash-out amount** of any **balancing gas** sold by the **balancing operator** and allocated to the **user** under these rules; and

6.2.2 the **user's** title to gas in the **transmission system** under any relevant **transmission system arrangements** is subject to adjustment to reflect any **balancing gas** purchased or sold by the **balancing operator** and allocated to that **user** under these rules.

6.3 Subject to rule 6.5, but despite anything else in these rules, if 2 or more **transmission system owners** own parts of the **transmission system** that are within a single **balancing zone**, those **transmission system owners**–

6.3.1 must each use reasonable endeavours to ensure –

(a) that the **linepack** in the **balancing zone** matches the aggregate of the following:

(i) the **target linepack** for that **balancing zone**:

(ii) the aggregate **imbalance** of all **shippers**, **traders**, and **interconnected parties** in that **balancing zone** (including the **imbalance** of the **transmission system owners** in those capacities); and

(b) any amount by which the **linepack** of the **balancing zone** differs from the aggregate of the matters listed in paragraphs (a)(i) and (ii) is returned to zero; and

6.3.2 are jointly liable or entitled, as applicable, to be allocated **balancing gas** by the **balancing operator** in respect of any **imbalance** that has arisen from the failure of the **transmission system owners** to ensure that the **linepack** in the **balancing zone**

matches the aggregate of the matters listed in rule 6.3.1(a)(i) and (ii); and

6.3.3 are jointly liable to pay or entitled to receive the **cash-out amount** of any **balancing gas** allocated to them in accordance with rule 6.3.2.

6.4 The provisions of these rules and the **balancing plan** apply with any necessary modifications in the circumstances specified in rule 6.3 as if the 2 or more **transmission system owners** were a single **transmission system owner**, and the definitions of **balance, imbalance** and **user** in rule 5 were read in light of the joint obligations in rule 6.3.1.

6.5 Rules 6.1 and 6.3.1 do not apply in relation to a **balancing zone** during any period where a critical contingency has been declared and not terminated under the Gas Governance (Critical Contingency Management) Regulations 2008 in respect of a part of the **transmission system** that falls within the **balancing zone**.

7. Users' obligation to provide information

7.1 A **user** must, if requested by the **balancing operator**, as soon as practicable provide any information to the **balancing operator** that –

7.1.1 is in its possession, or over which it has control; and

7.1.2 is reasonably required by the **balancing operator** to enable the **balancing operator** to carry out its functions.

Transmission system owners' obligations

8. Transmission system owners' obligation to facilitate balancing

8.1 Subject to rule 8.2, each **transmission system owner** must use reasonable endeavours to ensure its operating procedures and contractual arrangements are consistent with and do not unreasonably prevent **users** complying with the obligations in rule 6.1.

8.2 Nothing in rule 8.1, 10, or 11.1.1 requires a **transmission system owner** to take any action that would unreasonably interfere with the transmission of gas in a part of the **transmission system** that is owned by that **transmission system owner**.

9. Transmission system owners to provide transmission system information

9.1 Each **transmission system owner** must ensure that any of following information that is reasonably required by the **balancing operator** for the performance of the **balancing operator's** functions under these rules is made available to the **balancing operator** in relation to any part of the **transmission system** owned by the **transmission system owner**:

9.1.1 information about the threshold(s) specified in the **transmission system owner's** critical contingency management plan under the Gas Governance (Critical Contingency Management) Regulations 2008:

9.1.2 information about **linepack**:

9.1.3 information about the pressure at each of the measurement points specified in the **balancing plan**:

9.1.4 information necessary to confirm whether **balancing gas** transactions and any related transmission of **balancing gas** have been carried out:

9.1.5 information about the **imbalance** in each **balancing zone** including –

(a) details of each **user's imbalance** sufficient to enable the **balancing operator** to allocate **balancing gas** and its associated **cash-out amount** under these rules; and

(b) details of any amendments made in accordance with **transmission system arrangements** to the information provided about **users' imbalances** that could affect allocations of **balancing gas**:

9.1.6 historical **imbalance**, **linepack**, or pressure data:

9.1.7 metering (or other equipment) data on the amount of gas received or taken:

(a) through each **interconnection point**; and

(b) between each **balancing zone** (if there is no **interconnection point** between the zones):

9.1.8 the quantity of gas (if any) agreed between the **transmission system owner** and an **interconnected party**, or otherwise expected or scheduled, to pass -

(a) through each **interconnection point**; and

(b) between each **balancing zone** (if there is no **interconnection point** between the zones):

9.1.9 any relevant notices issued by the **transmission system owner** under a **transmission system code**:

9.1.10 any other information reasonably requested by the **balancing operator** for the purpose of carrying out its functions under these rules.

9.2 The information provided under rule 9.1 must be –

9.2.1 the best information available (including real-time information if applicable) that, in the particular circumstances, is in the **transmission system owner's** possession or can be obtained or derived by the **transmission system owner** without unreasonable difficulty or expense; and

9.2.2 provided as soon as practicable, including in real-time if this is practicable, via an **information exchange** or other agreed means.

10. Transmission system owners to provide transmission services for balancing gas

10.1 Subject to rule 8.2, each **transmission system owner** must provide the **balancing operator** with transmission services for the transmission of **balancing gas** on reasonable terms and conditions which include:

10.1.1 variable pricing; and

10.1.2 priority access to pipeline capacity not already committed (for example, to approved nominations).

11. Other obligations of transmission system owners in relation to balancing

11.1 Subject to rule 8.2, each **transmission system owner** must –

11.1.1 cooperate with the **balancing operator** in the performance of the **balancing operator's** functions with a view to minimising the quantity of **balancing gas** sold and purchased through **balancing**

actions, and in particular by notifying and if relevant coordinating with the **balancing operator** in relation to any operational matters that may affect **linepack** in a part of **transmission system** owned by the **transmission system owner** (for example, the operation of compressors, maintenance, or safety matters):

11.1.2 give sufficient access, on reasonable terms and conditions, to the **balancing operator** to any **information exchange** used by the **transmission system owner** to enable the **balancing operator** to perform its functions; and

11.1.3 ensure records of the relevant **users**' (or **transmission system owners**') title to gas under relevant **transmission system arrangements** are, if necessary, adjusted to reflect allocations made by the **balancing operator** under rule 19 or 25 and notified to the **transmission system owner** under rule 20 or 25; and

11.1.4 **publish** as soon as practicable, –

(a) its compressor operation policy, and any amendments to that policy; and

(b) any written operational communications between the **transmission system owner** and the **balancing operator** that affect how the **balancing operator** carries out its functions; and

11.1.5 immediately notify **users** via any **information exchange** used by the **transmission system owner** if it is notified by the **balancing operator** under rule 15.3 that there is insufficient gas available for sale or purchase within the price thresholds specified in the **balancing plan** to return the **linepack** in a **balancing zone** to, or close to, the relevant threshold (or to stop it falling below or exceeding the threshold, as applicable).

12. Publication of transmission system

12.1 No later than 5 **business days** after the **commencement date**, each person who owns any part of New Zealand's system of interconnected high pressure open access gas transmission pipelines must provide the **industry body** with the information specified in clause 1(2) of Part 5 of Schedule 1 of the Gas (Information Disclosure) Regulations 1997.

12.2 As soon as practicable after receiving the information described in rule 12.1, the **industry body** must consult with the persons who have submitted the information on a draft map depicting the **transmission system** for the purposes of these rules.

12.3 As soon as practicable after that consultation and no later than the **go-live date**, the **industry body** must **publish** a map depicting the **transmission system**.

12.4 A **transmission system owner** must notify to the **industry body** of any error or change in the boundaries of, and pipelines comprising, the **transmission system owner's** part of the **transmission system** as soon as practicable after becoming aware of the error or change.

12.5 The **industry body** may amend or update the boundaries of, and pipelines comprising, the **transmission system** in response to any notice given by a **transmission system owner** under rule 12.4 and, where applicable, must **publish** an updated map depicting the **transmission system**.

Part 2

Balancing

Balancing operator functions

13. Functions of the balancing operator

13.1 The functions of the **balancing operator** are to –

13.1.1 buy or sell **balancing gas** in relation to any **directly managed balancing zone** in accordance with rule 15; and

13.1.2 take any action provided for in the **balancing plan** in relation to any **indirectly managed balancing zone**; and

13.1.3 enter into transmission agreements in relation to the transmission of **balancing gas** to and from **reference locations**; and

13.1.4 allocate **balancing gas** and its associated **cash-out amount** in accordance with this Part in respect of each **balancing action** taken by the **balancing operator**; and

13.1.5 notify the relevant **transmission system owner** or owners of any adjustments required to be made under **transmission system arrangements** to the owner's records of **users'** (or the **transmission system owner's**) title to gas in the **transmission system** to reflect the allocation of **balancing gas** under this Part; and

13.1.6 carry out any other functions provided for in these rules.

14. Functions to be carried out independently

14.1 The **balancing operator** must carry out its functions under these rules-

14.1.1 independently of any other functions carried out by that person; and

14.1.2 if the **balancing operator** is, or is related to, a **user** or **transmission system owner**, at arm's length from any other business of that **user** or **transmission system owner**.

14.2 The **balancing operator** must keep confidential all information provided or disclosed to it under these rules except to the extent that disclosure –

14.2.1 is required to enable the **balancing operator** to carry out its functions under these rules; or

14.2.2 is otherwise authorised or required by law.

15. Management of linepack

15.1 If the **linepack** of a **balancing zone** that is defined in the **balancing plan** as **directly managed** falls below, or in the **balancing operator's** reasonable opinion is likely if **balancing action** is not taken to fall below, the lower threshold specified in the **balancing plan** for the zone, the **balancing operator** must–

15.1.1 use best endeavours to purchase the amount of gas that, in the **balancing operator's** opinion, is necessary to return the **linepack** to, or close to, the threshold, or prevent the **linepack** falling below the threshold; and

15.1.2 if necessary, ensure that the **balancing gas** purchased is **transmitted** to the relevant **balancing zone**.

15.2 If the **linepack** of a **balancing zone** that is defined in the **balancing plan** as **directly managed** exceeds, or in the **balancing operator's** reasonable

opinion is likely if **balancing action** is not taken to exceed, the upper threshold specified in the **balancing plan** for the zone, the **balancing operator** must–

15.2.1 use best endeavours to sell the amount of gas that, in the **balancing operator's** opinion, is necessary to return the **linepack** to, or close to, the threshold, or prevent the **linepack** exceeding the threshold; and

15.2.2 if necessary, ensure that the **balancing gas** sold is **transmitted** from the relevant **balancing zone**.

15.3 If there is insufficient gas available for sale or purchase within the price thresholds specified in the **balancing plan** to return the **linepack** in a **balancing zone** to, or close to, the relevant threshold (or to stop it falling below or exceeding the threshold, as applicable), then the **balancing operator** must immediately notify –

15.3.1 the **transmission system owner** or owners who own the part or parts of the **transmission system** covered by the affected **balancing zone**; and

15.3.2 the critical contingency operator appointed under the Gas Governance (Critical Contingency Management) Regulations 2008.

Balancing market

16. Rules for transactions relating to balancing gas market

16.1 The **balancing operator** must establish or access the services of a market for buying and selling **balancing gas**.

16.2 The **balancing market** must be open to any person who –

16.2.1 has gas available for sale, or who wishes to purchase gas, no matter where on the **transmission system** the gas is made available or where on the **transmission system** the person wishes to take the gas from, so long as the gas is able to be **transmitted** to or from the required **balancing zone** by the required time; and

16.2.2 meets any technical requirements for procurement of **balancing gas** specified in the **balancing plan**; and

16.2.3 meets and agrees to be bound by the reasonable terms and conditions for the sale and purchase of **balancing gas published** by the **balancing operator** under rule 18.

16.3 The **balancing operator** must purchase or sell **balancing gas**–

16.3.1 only through the **balancing market**; and

16.3.2 unless rule 17 applies, only on the terms and conditions in rule 16.4 or 16.5, as applicable.

16.4 Subject to rule 16.6, when purchasing **balancing gas** through the **balancing market** the **balancing operator** must –

16.4.1 hold open, for as long as is reasonably practicable before the taking of **balancing action**, the period during which the **balancing operator** will consider offers to sell gas, or changes to offers to sell gas; and

16.4.2 accept, or partially accept, the lowest priced offer or offers necessary to meet the **balancing operator's** obligation under rule 15.1.1, (where each offer price is first increased by any **transmission charges** that will be incurred by the **balancing operator** in transmitting that gas from its receipt point to the **reference location**); and

16.4.3 pay the same **clearing price** to each person whose offer to sell gas is fully or partially accepted as part of a **balancing action**, less any **transmission charges** incurred by the **balancing operator** in transmitting that gas from its receipt point to the **reference location**.

16.5 Subject to rule 16.6, when selling **balancing gas** through the **balancing market** the **balancing operator** must –

16.5.1 hold open, for as long as is reasonably practicable before the taking of **balancing action**, the period during which the **balancing operator** will consider offers to purchase gas, or changes to offers to purchase gas; and

16.5.2 accept, or partially accept, the highest priced offer or offers necessary to meet the **balancing operator's** obligation under section 15.2.1, (where each offer price is first decreased by any **transmission charges** that will be incurred by the **balancing**

operator in transmitting that gas from the **reference location** to its delivery point); and

16.5.3 require the payment of the same **clearing price** from each person whose offer to purchase gas is fully or partially accepted as part of a **balancing action**, plus any **transmission charges** incurred by the **balancing operator** in transmitting that gas from the **reference location** to the delivery point.

16.6 The **balancing operator** must not accept any offer to sell or purchase **balancing gas** where the resulting **clearing price** would be, -

16.6.1 in the case of purchase of gas, higher than the purchase price threshold specified in the **balancing plan**; or

16.6.2 in the case of sale of gas, lower than the sale price threshold specified in the **balancing plan**.

17. Circumstances in which transactions may be undertaken on other terms

17.1 The **balancing operator** may, for the purposes of rule 15, purchase or sell gas other than in accordance with rule 16.4 or 16.5, as applicable, if the **industry body** has given notice to the **balancing operator** under this rule that in its opinion transactions on other terms and conditions would better meet the purpose of these rules.

17.2 In determining whether transactions on terms other than those in rule 16.4 or 16.5 would better meet the purpose of the rules, the **industry body** must have regard to –

17.2.1 the security of the delivery of gas;

17.2.2 the liquidity of the **balancing market**; and

17.2.3 any other relevant matters.

17.3 If the **industry body** gives notice to the **balancing operator** under rule 17.1 it must –

17.3.1 include reasons for the **industry body's** opinion in the notice; and

17.3.2 **publish** the notice; and

17.3.3 in consultation with the **balancing operator**, determine the terms and conditions upon which the **balancing operator** will purchase and sell **balancing gas,** which terms must be consistent with rule

16.4 or 16.5, as applicable, except to the extent that other terms and conditions would, in the **industry body's** opinion better meet the purpose of these rules.

17.4 The **balancing operator** must resume purchasing or selling **gas** in accordance with rule 16.4 or 16.5, as applicable, if the **industry body** notifies the **balancing operator** that in its opinion transactions in accordance with that rule would better meet the purpose of these rules.

17.5 The **industry body** must –

17.5.1 in determining whether to give a notice under rule 17.4 have regard to the matters in rule 17.2; and

17.5.2 give reasons in any notice given under 17.4 as to why the **industry body** is of the opinion that transactions in accordance with rule 16.4 or 16.5, as applicable, would better meet the purpose of the rules; and

17.5.3 **publish** any notice given under 17.4.

17.6 To avoid doubt, rule 16.6 continues to apply to purchases or sales of balancing gas by the balancing operator, even if the balancing operator is not required to comply with rule 16.4 or 16.5, as applicable, by operation of this rule 17.

18. Terms of balancing gas transactions

18.1 The **balancing operator** must **publish** the terms and conditions on which it will purchase or sell gas for the purposes of meeting its obligations under rule 15, which–

18.1.1 must be consistent with the intent of rule 16.2 to allow the **balancing market** to be as inclusive as possible; and

18.1.2 must reflect reasonable commercial practice.

18.2 Rule 18.1 applies both to the sale and purchase of gas in accordance with rule 16 and in accordance with any determination of the **industry body** under rule 17.3.3.

Allocation

19. Rules for allocation of balancing gas

19.1 The **balancing operator** must in respect of each **balancing action** taken by the **balancing operator**, allocate the **balancing gas** sold or purchased to **users** -

19.1.1 in accordance with the allocation model specified in the **balancing plan**; and

19.1.2 as soon as practicable after the taking of the **balancing action**; and

19.1.3 based on the best information available to the **balancing operator** at the time of the allocation.

19.2 To avoid doubt, if the **balancing operator** has received insufficient information to allocate all **balancing gas** sold or purchased in respect of a **balancing action** under the allocation model the **balancing operator** must –

19.2.1 allocate **balancing gas** to those **users** in respect of which the **balancing operator** has sufficient information to apply the allocation model; and

19.2.2 as soon as the **balancing operator** receives sufficient information, allocate the remaining **balancing gas** under the allocation model.

19.3 If the **balancing operator** is unable to allocate any **balancing gas** to a **user** under the allocation model the **balancing operator** must –

19.3.1 allocate the unallocated **balancing gas** to the **transmission system owner** or owners who own the part or parts of the **transmission system** within the **balancing zone** in respect of which the **balancing gas** is unable to be allocated; and

19.3.2 treat a **transmission system owner** allocated **balancing gas** under rule 19.3.1 as a **user** who has been allocated the **balancing gas** under the allocation model in respect of an **imbalance** in the relevant **balancing zone**, and rules 19.4, and 20 to 25 apply accordingly.

19.4 Title to **balancing gas** allocated to a **user** by the **balancing operator** under this rule 19 is deemed to have passed to or from the **balancing operator** at the time of the **balancing action**.

20. Notification of allocations and cash-out price of balancing gas

20.1 As soon as practicable after allocating **balancing gas** to a **user** under rule 19, the **balancing operator** must –

20.1.1 notify any relevant **transmission system owner** of any adjustment needed to the **user's** title to gas under **transmission system arrangements** to reflect the **balancing operator's** allocation of **balancing gas**; and

20.1.2 determine the **cash-out price** for the **balancing gas** allocated to the **user** which –

(a) for the purchase of **balancing gas**, is the sum of–

(i) the **clearing price** (per gigajoule) for the gas; and

(ii) any **transmission charges** (per gigajoule) incurred by the **balancing operator** in **transmitting** the **balancing gas** from the **reference location** to the location of the **user's imbalance**, and

(b) for the sale of **balancing gas**, is–

(i) the **clearing price** for the gas (per gigajoule); less

(ii) any **transmission charges** (per gigajoule) incurred by the **balancing operator** in **transmitting** the **balancing gas** from the location of the **user's imbalance** to the **reference location**, and

20.1.3 notify the **user** of the amount of **balancing gas** from the **balancing action** allocated to the **user** (in gigajoules), and the associated **cash-out price** of that **balancing gas** (per gigajoule).

20.2 A **user** who has been notified of an allocation of **balancing gas** under rule 20.1.3 and who considers that the allocation of **balancing gas** or the determination of its associated **cash-out amount** was calculated in error, must advise the **balancing operator** of the alleged error as soon as reasonably practicable.

21. Payment for balancing gas purchased

21.1 As soon as possible after the end of each month, the **balancing operator** must issue an invoice to each **user** who has been allocated **balancing gas** under rule 19 (or rule 25) during the month (an **affected user**) –

21.1.1 for the total **cash-out amount** of **balancing gas** purchased that the **balancing operator** allocated to the **user** during the month; and

21.1.2 that contains a breakdown of the amount of the invoice showing the quantity and **cash-out amount** of the purchased **balancing gas** allocated to the **user** during the month by reference to the **balancing action** to which it relates.

21.2 An affected **user** must pay the total amount of any invoice issued under rule 21.1 to the **balancing operator,** –

21.2.1 if the invoice is received before the 10th of the month, no later than the 20th of the month in which the invoice was issued (or if the 20th of the month is not a **business day**, the following **business day**); or

21.2.2 if the invoice is received on or after the 10th of the month, no later than 10 business days after the invoice was received.

22. Payment of proceeds of sales of balancing gas

22.1 As soon as possible after the end of each month, the **balancing operator** must issue a credit note to each **user** who has been allocated **balancing gas** under rule 19 (or rule 25) during the month (an **affected user**) –

22.1.1 for the total **cash-out amount** of **balancing gas** sold that the **balancing operator** allocated to the **affected user** during the month; and

22.1.2 that contains a breakdown of the amount of the credit note showing the quantity and **cash-out amount** of the sold **balancing gas** allocated to the **user** during the month by reference to the **balancing action** to which it relates.

22.2 The **balancing operator** must, in relation to each **balancing action** recorded in a credit note issued under rule 22.1, pay the **affected user** the amount calculated in accordance with the following formula as soon as practicable after the beginning of the month following the month in which

the credit note was issued (and if necessary the beginning of each month following that):

$$P = R \times (C/\Sigma C)$$

where

P is the total amount in dollars to be paid to the **user** in respect of the **balancing action** for the preceding month

R is the total amount of money in cleared funds received by the **balancing operator** in the preceding month from purchasers of the **balancing gas** sold in the **balancing action** (the "**sold balancing gas**")

C is the **cash-out amount** of the **sold balancing gas** allocated to the **user** in respect of the **balancing action**

ΣC is the total **cash-out amount** of the **sold balancing gas** allocated to **users** in respect of the **balancing action**.

22.3 Subject to rule 22.4, the **balancing operator** must make subsequent payments to affected **users** calculated in accordance with the formula in rule 22.2 so that, if full payment is received by the **balancing operator** for the **sold balancing gas,** the amount stated in the credit note is fully paid out to those **users**.

22.4 The **balancing operator** -

22.4.1 is not required to pay out an amount greater than the total amount of payments received for **balancing gas** sold in a **balancing action**; but

22.4.2 must use best endeavours to pursue each purchaser of **balancing gas** for any outstanding monies relating to **balancing gas** purchased by that person.

22.5 The **balancing operator** –

22.5.1 may, despite anything in these rules, deduct from any amount payable to a **user** under these rules, the amount (or any part of the amount) of any monies owing under an invoice issued under 21.1 that is unpaid by the due date; but

22.5.2 must, if any amount is deducted in accordance with rule 22.5.1 notify the **affected user** by way of a monthly statement of the amount deducted.

22.6 Despite anything in these rules, if the **cash-out amount** for **sold balancing gas** allocated to a **user** is negative, the **balancing operator** must not include that **cash-out amount** in a credit note under this rule, but must instead include that amount in an invoice issued to the **user** under rule 21 and rules 6.2.1 and 23 apply accordingly as if the sale of the associated **balancing gas** was a purchase.

23. Further provisions relating to payment

23.1 A **user** who fails to pay the amount of an invoice issued under rule 21.1 in full by its due date is liable to pay interest on the unpaid amount -

23.1.1 at the 90-day bill rate (as at the date payment was due in respect of the invoice);

23.1.2 for the period from the date by which the amount was due to be paid until the date of payment of the whole amount.

23.2 The obligation to pay an amount stated in an invoice is not suspended by any dispute that may affect the amount payable, however, if following resolution of the dispute the **balancing operator** is required to refund any excess payment, the **balancing operator** must pay interest –

23.2.1 on any amount refunded;

23.2.2 at the 90-day bill rate (as at the date the excess payment was made);

23.2.3 for the period from the date the excess payment was made until the date of the refund.

23.3 Neither rule 23.1 nor 23.2 authorises the giving of interest upon interest.

23.4 A **cash-out amount** is exclusive of any goods and services tax payable under the Goods and Services Tax Act 1985, and goods and service tax on the amount (if any) must be added to any invoice or credit note issued under rule 21 or 22.

24. Records of transactions

24.1 The **balancing operator** must maintain a separate record -

24.1.1 for each **balancing gas** transaction of -

(a) the offer and final prices;

(b) the quantity of gas purchased or sold;

(c) the counterparty;

(d) the **transmission charges** (if any); and

(e) the **balancing action** with which the transaction is associated; and

24.1.2 for each **balancing action** of –

(a) the date and time the **balancing action** was committed to;

(b) the amount (if any) by which the **linepack** of the **balancing zone** to which the **balancing action** related diverged from the relevant threshold at the time of the **balancing action**;

(c) the **clearing price**;

(d) the total quantity of **balancing gas** purchased or sold; and

(e) the **balancing zone** or zones to which the **balancing gas** purchased or sold is allocated, and for each **user** (or **transmission system owner**) to whom **balancing gas** is allocated in respect of that **balancing zone**–

(i) the quantity of **balancing gas** allocated to the person; and

(ii) the **cash-out price** of the **balancing gas** allocated to the person; and

24.1.3 of any other details of the transactions associated with **balancing actions** that the **balancing operator** considers desirable.

24.2 As soon as practicable after taking **balancing action,** the **balancing operator** must **publish** the following information in respect of the **balancing action**:

24.2.1 the date and time of the **balancing action**;

24.2.2 the **balancing zone** to which the **balancing action** related;

24.2.3 the total quantity of **balancing gas** sold or purchased; and

24.2.4 the **clearing price** for the gas; and

24.2.5 the quantity of **balancing gas** (if any) allocated to any **transmission system owner** under rule 19.3.1; and

24.2.6 the **transmission charges** for any **balancing gas** transmission services used by the **balancing operator**.

24.3 The **balancing operator** must keep the records referred to in rule 24.1 for at least 5 years following the relevant **balancing action**.

25. Amendments to allocations

25.1 This rule applies if the **balancing operator** considers that an allocation of **balancing gas** or its associated **cash-out amount** for a **balancing action** under these rules was incorrect or inaccurate –

25.1.1 due to an error by the **balancing operator**; or

25.1.2 based on new **imbalance** information provided to the **balancing operator** by a **transmission system owner** under rule 9.1.5(b).

25.2 If this rule applies in relation to **balancing gas**, the **balancing operator** must –

25.2.1 assess any difference between any previous allocation of **balancing gas** in relation to the **balancing action** (the **previous allocation**) and the allocation that, having regard to the allocation model and the best information available to the **balancing operator** at the time of the assessment, the **balancing operator** considers should have been made (the **correct allocation**); and

25.2.2 allocate to any **user** who is affected by the assessment the amount of **balancing gas** that is the difference between the previous allocation and the correct allocation (a **mop-up allocation**).

25.3 If the **balancing operator** makes a **mop-up allocation** under rule 25.2 and the **mop-up allocation** was not made because of a metering error on the a **transmission system**, the **balancing operator** must also –

25.3.1 assess any difference between the **cash-out amount** notified for the previous allocation (the **previous cash-out amount**) and the **cash-out amount** calculated in respect of the correct allocation (the **correct cash-out amount**); and

25.3.2 determine for any **user** who is affected by the assessment the amount that is the difference between the previous **cash-out amount** and the correct **cash-out amount** (a **mop up cash-out amount**).

25.4 The **balancing operator** must also determine a **mop-up cash-out amount** in accordance with rule 25.3 if the **balancing operator** considers there was an error in the previous **cash-out amount**, but no **mopup allocation** is necessary in relation to the **balancing gas** to which that **cash-out amount** relates.

25.5 The **balancing operator** must –

25.5.1 give notice of any **mop-up allocation** to -

(a) any affected **user**; and

(b) the relevant **transmission system owner** or owners; and

25.5.2 give notice of any **mop-up cash-out amount** to any affected **user**; and

25.5.3 include any **mop-up cash-out amount** in an invoice or credit note, as applicable, issued to the **user** under rule 21 or 22.

25.6 The **balancing operator** must make a decision in relation to a mop-up allocation or **mop-up cash-out amount** as soon as practicable after becoming aware of any error or new **imbalance** information.

Reporting

26. Monthly reports

26.1 The **balancing operator** must, within 10 **business days** of the end of each month, provide a written report to the **industry body** and to each **transmission system owner** that sets out the following information -

26.1.1 a summary of the information referred to in rule 24.2 for the month; and

26.1.2 any breaches of these rules by the **balancing operator** or any other person of which the **balancing operator** is aware at the date of the report and which have not previously been notified in a report.

26.2 The **industry body** must **publish** the information in the monthly report that is provided under rule 26.1.1 and such information that is provided under rule 26.1.2 as in its opinion is desirable.

26.3 The information reported by the **balancing operator** under rule 26.1.2 and **published** under rule 26.2 must include the names of any **users** who have failed to pay any amount owing to the **balancing operator** under an invoice issued under rule 21 by the due date, and the amount outstanding.

Part 3

Appointment of balancing operator, development of balancing plan, and funding

Subpart 1
General provisions

Balancing operator appointment

27. Meaning of "appointer"

In this subpart,

appointer means a person required to appoint a **balancing operator** under subpart 2 or 3 of this Part

former appointer has the meaning in rule 31.1.1

new appointer has the meaning in rule 31.2.1

28. Appointment of balancing operator by appointer

28.1 An appointer may by agreement with any person appoint that person to act as the **balancing operator** under these rules.

28.2 In determining whether to appoint a person under rule 28.1, the **appointer** must have regard to –

28.2.1 the person's capacity to carry out the functions of a **balancing operator** under these rules; and

28.2.2 any other matter that in the **appointer's** opinion is relevant to the appointment.

28.3 To avoid doubt, an appointer must appoint a single **balancing operator** to carry out the functions in Part 2 for the whole **transmission system**.

29. Terms of appointment of balancing operator

29.1 An **appointer** and any person proposed to be appointed as the **balancing operator** must –

29.1.1 agree the terms and conditions of the **balancing operator's** appointment; and

29.1.2 record those terms and conditions in a **balancing operator** service provider agreement.

29.2 The terms and conditions of the **balancing operator** service provider agreement may provide for—

29.2.1 the **appointer** to pay reasonable remuneration to the **balancing operator**; and

29.2.2 the **appointer** to indemnify the **balancing operator** for any costs incurred by the **balancing operator** that are unable to be recovered from –

(a) **users** under rule 6.2.1(a); or

(b) contracting parties in relation to the purchase and sale of **balancing gas**; and

29.2.3 any other terms and conditions not inconsistent with these rules.

29.3 An **appointer** may at any time terminate, or change the appointment of, or reappoint, any person as the **balancing operator**, subject to the terms of the **balancing operator** service provider agreement.

29.4 The appointment of the **balancing operator** is also subject to termination under rule 31.1.

30. Publication of balancing operator service provider agreement[1]

30.1 An **appointer** must **publish** –

30.1.1 any **balancing operator** service provider agreement entered into by the **appointer**; and

30.1.2 any amendment to any **balancing operator** service provider agreement.

31. Consequences of change of application of subpart

31.1 On the day subpart 2 or 3 ceases to apply under rule 36.1 or 36.2, or 43.3, as applicable -

31.1.1 the appointment of any person as **balancing operator** by an **appointer** under that subpart (the **former appointer)** is terminated and ceases to have effect; and

31.1.2 any **balancing plan** in force that was prepared by the **former appointer** under that subpart ceases to apply.

31.2 A **balancing operator** whose appointment is terminated under rule 31.1.1 must –

31.2.1 cooperate with the **balancing operator** appointed by the person required under the subpart that remains in application to appoint a **balancing operator** (the **new appointer**); and

31.2.2 provide copies of all records kept under rule 24 to the **balancing operator** appointed by the **new appointer**; and

31.2.3 provide copies of all other relevant documents held by the **balancing operator** to the **balancing operator** appointed by the **new appointer**.

31.3 A **new appointer** must pay the former **balancing operator** reasonable costs associated with the transfer of the **balancing operator** function, including if agreed between the relevant parties, any transitional arrangements necessary in relation to **balancing gas** transactions and

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payment for **balancing gas** that have been entered into by the **balancing operator** before termination of the appointment.

31.4 Despite rule 31.1.1, and subject to any contractual arrangements entered into under rule 31.3, the **balancing operator** whose appointment is terminated by operation of that rule –

31.4.1 may exercise the powers of the **balancing operator** under Part 2 in relation to any **balancing actions** undertaken before the termination of the **balancing operator's** appointment; and

31.4.2 remains liable in respect of any breaches of these rules, or obligations incurred by the **balancing operator**, on or before the date of termination (including, in relation to any **balancing gas** transactions undertaken, the obligation to pay the **cash-out price** of any **sold balancing gas** allocated to affected **users** in accordance with rule 22); and

31.4.3 remains entitled to be paid the **cash-out amount** of any purchased **balancing gas** allocated to **users** on or before the termination date.

31.5 To avoid doubt if a **balancing operator** is appointed by the **new appointer** at a time when a **balancing operator** appointed by the **former appointer** is carrying out functions under these rules, the **balancing operator** appointed by the **new appointer** is not required to and may not carry out functions under Part 2 until the date the former **balancing operator's** appointment is terminated under rule 31.1.1.

Balancing plan approval

32. Criteria for approval of balancing plan

32.1 The **industry body** may approve a **balancing plan** or an amendment to a **balancing plan** under this rule if -

32.1.1 the plan, or if relevant, the plan following the proposed amendment, complies with rules 32.2 and 32.3; and

32.1.2 the **industry body** is satisfied that –

(a) the **balancing plan** will assist in meeting the purpose of these rules; or

(b) if the approval relates to amendment to a **balancing plan**, the amendment will assist the plan to better meet the purpose of these rules, or is necessary to reflect changes, for example, in the operational environment of the **balancing operator**, that affect the operation of plan.

32.2 A **balancing plan** must –

32.2.1 contain and comply with the requirements in the Schedule to these rules; and

32.2.2 be consistent with –

(a) the Gas Governance (Critical Contingency Management) Regulations 2008; and

(b) any relevant provisions of the Gas (Downstream Reconciliation) Rules 2008; and

(c) **MPOC**, **VTC**, or any other **transmission system code** except to the extent that the inconsistency is necessary or desirable to meet the purpose of these rules.

32.3 A **balancing plan** may –

32.3.1 contain transitional provisions; or

32.3.2 provide for different parts of the **balancing plan** to apply at different times.

33. Publication of balancing plan

33.1 As soon as practicable after the **industry body** has approved a **balancing plan** or an amendment to a **balancing plan** under rule 32, the **industry body** must –

33.1.1 notify each **transmission system owner** that the **balancing plan** or amended **balancing plan** has been approved; and

33.1.2 **publish** the approved **balancing plan** or approved amended **balancing plan**; and

33.1.3 if an amendment to a **balancing plan** (other than a minor or technical amendment) has been approved by the **industry body** before consultation under subpart 2 or 3 of this Part on the grounds that the amendment is urgent**, -**

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(a) notify each **transmission system owner** of the date that the amendment will expire under rule 35 unless reapproved by the **industry body** before that date; and

(b) **publish** with the approved amended **balancing plan**, a notice specifying the date that the amendment will expire under rule 35 unless reapproved by the **industry body** before that date.

33.2 No later than 5 **business days** after the **transmission system owners** receive a notice from the **industry body** under rule 33.1.1, each **transmission system owner** must–

33.2.1 ensure the **balancing plan** or amended **balancing plan** is **published** on any **information exchange** used by the **transmission system owner**; and

33.2.2 notify **users** via any **information exchange** used by the **transmission system owner** –

(a) of the publication of the **balancing plan** or amended **balancing plan**; and

(b) if relevant, of the date of expiry of the amendment notified under rule 33.1.3.

33.3 If the **balancing plan** approved under rule 32 is the first **balancing plan** approved by the **industry body** under these rules, the **industry body** must also–

33.3.1 together with the material published under rule 33.1.2, **publish** a statement specifying the **go-live date**; and

33.3.2 notify in the *Gazette*–

(a) that it has approved a **balancing plan**; and

(b) the **go-live date**.

33.4 The **go-live date** notified by the **industry body** under rule 33.3.2 must –

33.4.1 be the first day of a month; and

33.4.2 not be later than the date that is 6 months after the date on which the **industry body** approved the **balancing plan.**

34. Date balancing plan or amended balancing plan comes into force

34.1 A **balancing plan** or an amendment to a **balancing plan** that is approved by the **industry body** under rule 32 comes into force–

34.1.1 if it is the first **balancing plan** approved by the **industry body**, on the **go-live date**; or

34.1.2 if it is not the first **balancing plan** approved by the **industry body**, or if it is an amendment to a **balancing plan**, and it is approved on -

(a) a date that is before the 25th of a month, on the 1st day of the month following the month in which the plan or amended plan is **published** in accordance with rule 33.1.2 or such later date as the **industry body** may specify in the approval; or

(b) a date that is the 25th, or after the 25th, of a month, on the 1st day of the 2nd month after the month in which the plan or amended plan is **published** in accordance with rule 33.1.2 or such later date as the **industry body** may specify in the approval.

34.2 Despite rule 34.1.2 an amendment to a **balancing plan** that is specified by the **industry body** in the notice given under rule 33.1.3 to be urgent comes into force on the first **business day** after it is notified to the **transmission system owners** under rule 33.1.

35. Expiry of urgent amendments

35.1 An amendment to the **balancing plan** that is, in the **industry body's** opinion urgent, but not minor and technical, expires after 60 **business days** unless by that date the amendment has been -

35.1.1 consulted upon by the **appointer**; and

35.1.2 reapproved by the **industry body**.

35.2 If an urgent amendment expires, the **industry body** must –

35.2.1 notify each **transmission system owner** that the amendment has expired; and

35.2.2 **publish** the **balancing plan** as it was before the urgent amendment.

35.3 Each **transmission system owner** must as soon as practicable following receipt of notification under rule 35.2.1-

35.3.1 ensure the **balancing plan** as it was before the urgent amendment is **published** on any **information exchange** used by the **transmission system owner**; and

35.3.2 notify **users** via any **information exchange** used by the **transmission system owner** that the amendment has expired, and of the publication of the **balancing plan** under rule 35.3.1.

35.4 This subpart applies to reapproval of an urgent amendment to a **balancing plan** as if it were approval of an amendment to that plan.

Subpart 2

Appointment of balancing operator by joint transmission system owners

36. Application of subpart

36.1 This subpart applies in the period –

36.1.1 from on and after the **commencement date**;

36.1.2 until -

(a) if it is before the **go-live date,** the date of any notice given under rule 44.2.1 or 44.3; or

(b) if it is after the **go-live date,** the date that a **balancing plan** prepared by the **industry body** under subpart 3 comes into force.

36.2 This subpart also applies in the period–

36.2.1 from on and after the **reapplication date**;

36.2.2 until the earlier of the date –

(a) of any notice in the *Gazette* under rule 49.4; or

(b) that a **balancing plan** prepared by the **industry body** under subpart 3 comes into force.

36.3 To avoid doubt, no person is required to comply with this subpart unless it applies.

37. Joint obligations of transmission system owners in relation to appointment of balancing operator and preparation of balancing plan

37.1 If this subpart applies, all **transmission system owners** must together –

37.1.1 attempt to agree on –

(a) a person to act as the **balancing operator** under these rules and the terms of a draft service provider agreement; and

(b) the contents of a draft **balancing plan**; and

37.1.2 if they agree on a **balancing operator** and on a draft balancing plan, consult upon and seek approval of that plan from the **industry body** in accordance with the procedure in rule 38; and

37.1.3 if the **balancing plan** referred to in rule 37.1.2 is approved by the **industry body** under rule 32, as soon as practicable following notification of such approval, appoint the person named in the **balancing plan** to act as the **balancing operator** for the purposes of these rules; and

37.1.4 if they cannot agree on a person to act as the **balancing operator,** on the terms of a draft **balancing operator** service provider agreement, or on a draft balancing plan within 60 **business days** from the **commencement date**, notify the **industry body** accordingly, together with information about the status of their negotiations.

37.2 Nothing in rule 37.1.4 prevents a **transmission system owner** notifying the **industry body** before the expiry of 60 **business days** from the **commencement date** that, in the **transmission system owner's** opinion, the **transmission system owners** are deadlocked and will be unable to reach agreement on the matters in rule 37.1.1 within the 60 **business day** period.

37.3 If the **transmission system owners** have appointed a **balancing operator** under rule 37.1.3 (whether following the **commencement date** or the **reapplication date**), the **transmission system owners** must use best endeavours to ensure that there remains at all times that this subpart applies a **balancing operator** appointed by the **transmission system owners**.

Balancing plan approval process

38. Procedure for preparation and consultation on draft balancing plan

38.1 If the **transmission system owners** agree on a draft balancing plan, the owners must -

38.1.1 provide the following documents to the **industry body** -

(a) a copy of the draft balancing plan; and

(b) one or more documents setting out the changes (if any) to any **transmission system code** that relates to access to and use of a part of the **transmission system** owned by each **transmission system owner** that would be necessary to ensure consistency with the draft **balancing plan** were it approved by the **industry body**; and

38.1.2 **publish** the draft balancing plan**;** and

38.1.3 consult on the draft balancing plan with persons that the **transmission system owners** consider are representative of the interests of persons likely to be substantially affected by the draft balancing plan if it is approved by the **industry body**; and

38.1.4 give persons consulted with under rule 38.1.3 at least 20 but not more than 25 **business days** to make submissions to the **transmission system owners** on the draft balancing plan; and

38.1.5 **publish** any submissions as soon as practicable after those submissions are received; and

38.1.6 provide copies of the submissions to the **industry body**.

38.2 The **industry body** must **publish** -

38.2.1 the draft balancing plan provided to it under rule 38.1.1; and

38.2.2 any submissions provided to it under rule 38.1.6.

38.3 After the consultation required by rule 38.1, the **transmission system owners** must either -

38.3.1 submit the draft **balancing plan** unamended to the **industry body**; or

38.3.2 amend the draft balancing plan and –

(a) if the amendment does not materially affect the contents of the draft balancing plan, submit the draft **balancing plan** to the **industry body** for approval; or

(b) if the amendment materially affects the contents of the draft balancing plan, -

(i) produce a new draft balancing plan, and

(ii) one or more new documents setting out the changes to any **transmission system code** that relates to access to and use of a part of the **transmission system** owned by each **transmission system owner** that would be necessary to ensure consistency with the draft balancing plan were it approved by the industry body; and

(iii) follow again the procedure in this rule 38 (however, in this circumstance, the minimum number of days for the making of submissions under rule 38.1.4 is 10 **business days** and the maximum 20 **business days**).

38.4 To avoid doubt, rule 38.1.1(b) does not affect the process or requirements in any **transmission system code** in relation to changes to that code**.**

39. Decision by industry body on draft balancing plan

39.1 The **industry body** must consider a draft **balancing plan** submitted under rule 38.3.1, 38.3.2(a), or 39.2.3, and decide within 20 **business days**, whether to approve the draft balancing plan under rule 32 or decline it.

39.2 If the **industry body** declines to approve the draft **balancing plan** –

39.2.1 it must give reasons; and

39.2.2 it may propose any amendments to the draft balancing plan that in its view would ensure the plan met the requirements for approval; and

39.2.3 the **transmission system owners** must consider the reasons and any amendments proposed by the **industry body** and may amend the draft **balancing plan** accordingly, and –

(a) if the amendment does not materially affect the contents of the plan, may resubmit the draft **balancing plan** to the **industry body** for approval; or

(b) if the amendment materially affects the contents of the plan, must produce a new draft balancing plan and again follow the procedure in rule 38 (however, in this circumstance, the minimum number of days for the making of submissions is 10 **business days** and the maximum 20 **business days**).

Balancing plan amendments

40. Procedure for amendment to approved balancing plan

40.1 A **balancing plan** that has been prepared under this subpart and approved by the **industry body** may be amended at any time in accordance with the procedure in this rule 40.

40.2 An amendment to the **balancing plan** may be proposed by –

40.2.1 all **transmission system owners** together; or

40.2.2 the **industry body**.

40.3 One or more **transmission system owners** or other **users** may request the **industry body** to propose an amendment under rule 40.2.2, and for that purpose may submit a suggested amendment to the **industry body**, which may, if the proposed amendment in its opinion complies with rule 32, in its discretion decide whether or not to adopt the suggested amendment and propose it under rule 40.2.

40.4 If the **transmission system owners** wish to propose an amendment they must submit the proposed amendment to the **industry body**, together with –

40.4.1 an explanation for the proposed amendment; and

40.4.2 a statement as to whether in the **transmission system owners'** opinion the amendment is minor and technical, or needs to be made urgently; and

40.4.3 if in the **transmission system owners**' opinion the amendment is minor and technical, or needs to be made urgently, the reasons for that view; and

40.4.4 one or more documents setting out the changes to any **transmission system code** that relates to access to and use of a part of the **transmission system** owned by the **transmission system owner** that would be necessary to ensure consistency with the proposed amendment were it approved by the **industry body**.

40.5 If the **industry body** wishes to propose an amendment, the **industry body** must notify the proposed amendment to the **transmission system owners**, together with an explanation for the proposed amendment.

41. Procedure for minor and technical or urgent amendments to the balancing plan

41.1 If an amendment proposed by the **industry body** or the **transmission system owners** is in the **industry body's** opinion minor and technical or needs to be made urgently, the **industry body** –

41.1.1 may approve the amendment under rule 32; but

41.1.2 must also, if the amendment is in its opinion, urgent but not minor and technical, advise the **transmission system owners** that they are required to consult on the amendment under rule 42.

42. Procedure for non- minor and technical amendments to balancing plan

42.1 If, in the **industry body's** opinion, an amendment proposed by the **industry body** or the **transmission system owners** is not minor and technical, the **transmission system owners** must, as soon as practicable following notification by the **industry body** of its opinion on that point, follow the procedure in rule 38, which applies with any necessary modifications to the proposed **balancing plan** amendment, as if it were a draft **balancing plan**.

42.2 Rule 39 applies with any necessary modifications to any proposed amendment to the **balancing plan** submitted to the **industry body** by the **transmission system owners** in accordance with rule 38.3.1, 38.3.2(a), or 39.2.3 and rule 42.1.

42.3 If an urgent amendment has been approved by the **industry body** before consultation in accordance with rule 38 (as applied by rule 42.1), then the **industry body** may, on submission of the amendment to the **industry body** under rule 39, reapprove the amendment together with any

amendments made to it under rule 38.3.2 if satisfied that it meets the criteria in rule 32 and it has not expired prior.

Subpart 3
Appointment of balancing operator by industry body

43. Application of this subpart

43.1 This subpart applies if –

43.1.1 the **transmission system owners** have failed to submit a draft **balancing plan** to the **industry body** under rule 38.1.1 within 60 **business days** of the **commencement date**, or

43.1.2 the **transmission system owners** have failed to submit a draft **balancing plan** to the **industry body** for approval under rule 38.3 within 40 **business days** of the date of submission of the draft **balancing plan** under rule 38.1.1; or

43.1.3 whether it is before or after the dates referred to in rules 43.1.1 or 43.1.2, in the **industry body**'s opinion the procedure in rules 37 and 38 -

(a) is deadlocked; or

(b) is unlikely to be completed in a timely manner; or

43.1.4 there is no **balancing operator** appointed by the **transmission system owners** carrying out the functions in Part 2 following the **go-live date**; or

43.1.5 in the **industry body's** opinion the **balancing operator** appointed by the **transmission system owners** under subpart 2 is failing to carry out its functions in accordance with these rules.

43.2 Before coming to an opinion under rule 43.1.5, the **industry body** must –

43.2.1 consider –

(a) the results of any audit conducted under rule 56; and

(b) any relevant rulings of the Rulings Panel in relation to any breach of these rules by the **balancing operator**; and

(c) any relevant settlements approved by the Rulings Panel in relation to any alleged breach of these rules by the **balancing operator**; and

(d) any other relevant evidence that the **balancing operator** is failing to carry out its functions in accordance with these rules; and

43.2.2 give the **balancing operator** a reasonable opportunity to respond to such an audit, ruling or evidence.

43.3 This subpart ceases to apply on the earlier of –

43.3.1 the day that is 25 **business days** after the date of a notice under rule 44.2.2 (unless a further notice is given under rule 44.3 before that day); or

43.3.2 the day that a **balancing plan** prepared by the **transmission system owners** under subpart 2 of this Part comes into force under rule 34.1.

43.4 To avoid doubt, -

43.4.1 having ceased to apply under rule 43.3, this subpart may reapply in the circumstances in rule 43.1.4 or 43.1.5; and

43.4.2 no person is required to comply with this subpart unless it applies.

44. Industry body's obligations if subpart applies

44.1 If this subpart applies, the **industry body** must –

44.1.1 give the **transmission system owners** written notice that, if it is not satisfied by the date specified in the notice that there is or will shortly be a balancing operator appointed by the **transmission system owners** under subpart 2 carrying out its functions in accordance with these rules the **industry body** will -

(a) prepare and approve a **balancing plan** under rule 45; and

(b) appoint a **balancing operator** under this subpart; and

44.1.2 **publish** the notice given under rule 44.1.1; and

44.1.3 give the **transmission system owners** and any other interested persons 15 **business days** to make submissions to the **industry body** in response to the notice given under rule 44.1.1.

44.2 If the industry body is –

44.2.1 not satisfied, having regard to any submissions received from any person**,** on the date specified in the notice given under rule 44.1.1 that there is or will shortly be a **balancing operator** appointed by the **transmission system owners** in place who is carrying out functions in accordance with these rules give notice to the **transmission system owners** that it intends to prepare and approve a **balancing plan** and appoint a **balancing operator** under this subpart; or

44.2.2 satisfied, having regard to any submissions received from any person**,** on the date specified in the notice given under rule 44.1.1 that there is or will shortly be a **balancing operator** appointed by the **transmission system owners** in place who is carrying out functions in accordance with these rules give notice to the **transmission system owners** accordingly.

44.3 Despite rule 44.2.2, if within 20 **business days** after the date specified in the notice given under rule 44.1.1 the industry body is not satisfied that there is a **balancing operator** appointed by the **transmission system owners** in place who is carrying out functions in accordance with these rules, the industry body may, without any further consultation, notify the **transmission system owners** that it intends to prepare and approve a **balancing plan** and appoint a **balancing operator** under this subpart

44.4 The date specified in the notice under rule 44.1.1 must not be earlier than 30 **business days** from the date of the notice.

44.5 The **industry body** must **publish** every notice given under rule 44.2 or 44.3.

Balancing plan approval process, and appointment of balancing operator

45. Procedure for preparation and consultation on balancing plan and appointment of balancing operator

45.1 If the **industry body** has given a notice to the **transmission system owners** under rule 44.2.1, the **industry body** must –

45.1.1 prepare and **publish** a draft **balancing plan** that in its opinion would meet the criteria for approval of a **balancing plan** under rule 32.1; and

45.1.2 consult on the draft **balancing plan** with the **transmission system owners** and other persons that the **industry body** considers are representative of the interests of persons likely to be substantially affected by the proposed **balancing plan**; and

45.1.3 give persons consulted with under rule 45.1.2 at least 20 and not more than 25 **business days** to make submissions to the **industry body** on the draft **balancing plan**; and

45.1.4 **publish** any submissions received under rule 45.1.3; and

45.1.5 consider the submissions made and make any amendment to the draft balancing plan that the **industry body** considers necessary.

45.2 After following the procedure in rule 45.1, the **industry body** -

45.2.1 may approve the final **balancing plan** under rule 32; and

45.2.2 must, as soon as practicable following approval of a **balancing plan** in accordance with rule 45.2.1, appoint the person named in the **balancing plan** to act as the **balancing operator** for the purposes of these rules.

45.3 Despite anything in these rules, the **industry body** may, in the circumstances in rule 45.4 –

45.3.1 adopt the draft balancing plan consulted upon by the **transmission system owners** and make any amendments permitted by that rule; and

45.3.2 approve the **balancing plan** (including any amendments made under rule 45.3.1) under rule 32 without following the procedure in rule 45.1.

45.4 The circumstances for the purposes of rule 45.3 are –

45.4.1 if –

(a) a draft **balancing plan** has been consulted upon by the **transmission system owners** under rule 38, but

(b) the **transmission system owners** have failed to submit a draft balancing plan to the **industry body** under rule 38.3; and

(c) the amendments proposed to the draft **balancing plan** consulted upon are in the opinion of the industry body, necessary to it to ensure that the plan meets the criteria for approval of a **balancing plan** under rule 32; or

45.4.2 if –

(a) a **balancing plan** prepared by the **transmission system owners** under subpart 2 is in force; and

(b) this subpart applies because of rule 43.1.4 or 43.1.5; and

(c) the only significant amendment the **industry body** proposes to make to the **balancing plan** is in relation to the person who will act as the **balancing operator**.

45.5 On and after the date that the **industry body** appoints a **balancing operator** in accordance with rule 45.2.2 (whether before or after the **reapplication date**), the **industry body** must use best endeavours to ensure that there remains at all times a **balancing operator** appointed by the **industry body.**

Balancing plan amendments

46. Procedure for amendment to approved balancing plan

46.1 A **balancing plan** that has been prepared by the **industry body** under rule 45 may be amended at any time in accordance with the procedure in this rule 46.

46.2 An amendment to the **balancing plan** may be proposed by –

46.2.1 all **transmission system owners** together; or

46.2.2 the **industry body**.

46.3 One or more **transmission system owners** or other **users** may request the **industry body** to propose an amendment under this rule, and for that purpose may submit a suggested amendment to the **industry body**, who

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may, if the proposed amendment in its opinion complies with rule 32, in its discretion decide whether or not to adopt the suggested amendment and propose it under rule 46.2.2.

46.4 If the **transmission system owners** wish to propose an amendment they must submit the proposed amendment to the **industry body**, together with –

46.4.1 an explanation for the proposed amendment; and

46.4.2 a statement as to whether in the **transmission system owners'** opinion the amendment is minor and technical, or needs to be made urgently; and

46.4.3 if in the **transmission system owners**' opinion the amendment is minor and technical, or needs to be made urgently, the reasons for that view; and

46.4.4 a document setting out the changes to any **transmission system code** that relates to access to and use of a part of the **transmission system** owned by the **transmission system owner** that would be necessary to ensure consistency with the proposed amendment were it approved by the industry body.

46.5 If the **industry body** wishes to propose an amendment, the **industry body** must notify the proposed amendment to the **transmission system owners**, together with an explanation for the proposed amendment.

47. Procedure for minor and technical or urgent amendments to the balancing plan

47.1 If an amendment proposed by the **industry body** or the **transmission system owners** is in the **industry body's** opinion minor and technical or needs to be made urgently, the **industry body** –

47.1.1 may approve the amendment under rule 32; but

47.1.2 must also, if the amendment is in its opinion, urgent but not minor and technical, undertake consultation in accordance with rule 48

48. Procedure for non-minor and technical amendments to balancing plan

48.1 If an amendment proposed by the **industry body** or the **transmission system owners** is in the **industry body's** opinion not minor and technical, the **industry body** must follow the procedure in rule 45.1, which applies

with any necessary modifications to a draft **balancing plan** amendment, as if it were a draft **balancing plan**.

48.2 After following the procedure in rule 45.1 (as applied by rule 48.1) the **industry body** may approve the **balancing plan** amendment.

48.3 If an urgent amendment has been approved by the **industry body** before consultation in accordance with rule 45.1 (as applied by rule 48.1), then the **industry body** may, following consultation on the amendment, reapprove the amendment and any amendments to it made under rule 45.1.4 if satisfied that it meets the criteria in rule 32 and it has not expired prior.

49. Reversion to transmission system operator appointment

49.1 This rule applies if at any time that subpart 2 of this Part does not apply the **transmission system owners** agree that the preparation of a balancing plan and appointment by the **transmission system owners** of a **balancing operator** under subpart 2 would better meet the purpose of these rules.

49.2 If this rule applies the **transmission system owners** may submit to the **industry body** that in their view subpart 2 should apply, and the industry body must -

49.2.1 consult with the **transmission system owners** and other persons that the **industry body** considers are representative of the interests of persons likely to be substantially affected should subpart 2 apply; and

49.2.2 give persons consulted with under rule 49.2.1 at least 20 but no more than 25 **business days** to make submissions to the **industry body** on the matter; and

49.2.3 **publish** the submissions as soon as practicable after those submissions have been received; and

49.2.4 consider the submissions made and if, in the **industry body's opinion** appointment by the **transmission system owners** of a **balancing operator** under subpart 2 might better meet the purpose of these rules, the **industry body** may recommend to the Minister that the Minister give a notice in the *Gazette* under rule 49.3.

49.3 The Minister may, on the recommendation of the industry body, give a notice in the *Gazette* specifying that subpart 2 of this Part reapplies from

the date specified in the notice (the **reapplication date**), and subject to rule 49.4, from that date –

49.3.1 subpart 2 of this Part applies; and

49.3.2 each reference to the **commencement date** in rule 37 must be read as a reference to the **reapplication date**.

49.4 If, by the date 60 **business days** after the **reapplication date**, there is not a **balancing operator appointed** by the **transmission system owners** in place carrying out the functions in Part 2, -

49.4.1 the Minister may, in the Minister's discretion by a further *Gazette* notice, revoke the notice given in the *Gazette* under rule 49.3, and

49.4.2 from the date of the notice given under rule 49.4.1, subpart 2 of this Part ceases to apply.

Subpart 4
Funding

50. Development fee

50.1 The development fee is a fee to meet the balancing regime development costs.

50.2 The balancing regime development costs are—

50.2.1 if subpart 2 of this Part applies, -

(a) the costs of the **industry body** associated with reviewing and approving a **balancing plan** submitted to it under subpart 2; and

(b) the costs of the **industry body** in connection with the development and establishment of the balancing arrangements under subpart 2; and

(d) the costs payable by the **transmission system owners** to any **balancing operator** appointed under subpart 2 whose appointment is terminated under rule 31.1.1; and

50.2.2 if subpart 3 of this Part applies-

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(a) the costs of the **industry body** associated with the appointment of the **balancing operator** under subpart 3, including the costs of preparing and agreeing a balancing operator service provider agreement; and

(b) the costs (if any) payable by the **industry body** to the **balancing operator** to be appointed under subpart 3 before the date on which the **balancing operator** commences carrying out functions under these rules, for example, for development and establishment of any arrangements necessary under these rules in relation to information technology systems; and

(c) the costs of the **industry body** in connection with the preparation and consultation on a **balancing plan** under subpart 3; and

(d) the costs payable by the **industry body** to any **balancing operator** appointed under subpart 2 of this Part whose appointment is terminated under rule 31.1.1.

50.3 A person is –

50.3.1 liable to pay a development fee in relation to the costs in rule 50.2.1 if that person is a **transmission system owner** at –

(a) the **commencement date;** or

(b) the **reapplication date**, unless a notice is given under rule 49.5 revoking the application of subpart 2,; or

50.3.2 liable to pay a development fee in relation to the costs in rule 50.2.2 if the person is a **transmission system owner** at the date a **balancing plan** prepared by the **industry body** under subpart 3 comes into force.

50.4 To avoid doubt, -

50.4.1 the balancing regime development costs do not include costs incurred before the **commencement date**; and

50.4.2 if a development fee is payable for the costs in rules 50.2.1 and 50.2.2, the same costs may not be included in both development fees;

50.4.3 a **transmission system owner** may be liable to pay –

(a) a development fee under both rules 50.3.1 and 50.3.2; and

(b) more than one development fee under either rule 50.3.1 or 50.3.2, if subpart 2 or 3 of Part 3 having ceased to apply, reapplies in accordance with these rules.

51. How and when development fee must be paid

51.1 A development fee is payable to the **industry body**.

51.2 Every person to whom –

51.2.1 rule 50.3.1 applies must supply to the **industry body** a return as at a date that is as soon as practicable after the **commencement date** or **reapplication date,** as applicable, and no later than 38 days after that date; and

51.2.2 rule 50.3.2 applies must supply to the **industry body** a return as at a date that is as soon as practicable after the date a **balancing plan** prepared by the **industry body** under subpart 3 comes into force and no later than 38 days after that date (in each case, **the deadline for supplying returns**).

51.3 A return under rule 51.2 must state—

51.3.1 the total gigajoules of gas that were injected or received into any part of the **transmission system** owned by the **transmission system owner** other than from a part of the **transmission system** not owned by the **transmission system owner**, during the 12 months prior to the month in which **the deadline for supplying returns** occurred; and

51.3.2 the total gigajoules of gas that were taken out of any part of the **transmission system** owned by the **transmission system owner**, other than into a part of the **transmission system** not owned by the **transmission system owner**, during the 12 months prior to the month in which **the deadline for supplying returns** occurred.

51.4 As soon as practicable after any deadline for supplying returns, the **industry body** must determine and **publish** a breakdown of the relevant estimated balancing regime development costs .

51.5 As soon as practicable after a deadline for supplying returns, the **industry body** must invoice every **transmission system owner** to whom the

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relevant paragraph of rule 50.3 applies for that **transmission system owner's** share of the estimated balancing regime development costs calculated in accordance with the following formula:

S = A x B/C

where—

A is the estimated balancing regime development costs

B is the sum of –

(a) the total quantity of gas injected or received into the **transmission system owner's** part of the **transmission system** other than from a part of the **transmission** system not owned by the **transmission system owner** during the 12 month period covered by the return; and

(b) the total quantity of gas taken out of the **transmission system owner's** part of the **transmission system**, other than into a part of the **transmission system** not owned by the **transmission system owner**, during the 12 month period covered by the return; and

C is the sum of –

(a) the total quantity of gas injected or received into all parts of the **transmission system** other than from a part of the **transmission system** during the 12 month period covered by the return; and

(b) the total quantity of gas taken out of all parts of the **transmission system**, other than into a part of the **transmission system**, during the 12 month period covered by the return; and

S is the amount that must be invoiced to the **transmission system owner**

51.6 As soon as practicable after each of the following dates, the **industry body** must determine and **publish** the actual balancing regime development costs:

51.6.1 the **go-live date**:

51.6.2 if subpart 2 applies by operation of a notice under rule 49, the date that a **balancing plan** prepared by the **transmission system owners** under that subpart comes into force:

51.6.3 if subpart 3 applies and the **balancing plan** prepared under subpart 3 is not the first **balancing plan** approved by the **industry body**, the date the **balancing plan** comes into force.

51.7 No less than 10 **business days** after publication of the actual **balancing** regime development costs, the **industry body** must invoice or issue a credit note to every person to whom rule 50.3.1 or 50.3.2, as applicable, applies for the difference between—

51.7.1 that person's share of the actual balancing regime development costs calculated in accordance with the formula in rule 51.5, with the necessary modifications; and

51.7.2 the amount of the estimated balancing regime development costs invoiced to that person under rule 51.5.

52. Ongoing fees

52.1 The ongoing fees are monthly fees to meet the balancing regime ongoing costs.

52.2 The balancing regime ongoing costs are—

52.2.1 for any period in a year in which a **balancing operator** appointed by the **transmission system owners** is carrying out the functions in Part 2 -

(a) the costs of the **industry body** associated with its obligations under these rules, including in relation to any **balancing plan** amendments; and

(b) the costs payable to any auditor appointed by the **industry body** under rule 56; and

52.2.2 for any period in a year in which a **balancing operator** appointed by the **industry body** is carrying out the functions in Part 2 -

(a) the costs payable by the **industry body** to the **balancing operator** in respect of that period under the balancing operator service provider agreement; and

(b) the costs payable to any auditor appointed by the **industry body** under rule 56; and

(c) any other costs of the **industry body** associated with its obligations under these rules, including in relation to any **balancing plan** amendments.

52.3 Each person who is a **transmission system owner** in a month is liable to pay ongoing fees for that month in accordance with these rules.

52.4 In this rule and rules 53 to 55, **year** means the financial year of the **industry body** unless the context otherwise requires.

53. How and when estimated ongoing fees payable

53.1 The estimated ongoing fees are payable to the **industry body**.

53.2 Rule 53.3 applies to each month after (and including the month of) the **go-live date**.

53.3 Every person to whom rule 52.3 applies must supply to the **industry body** a return no later than the tenth day of each month, unless otherwise agreed by the **industry body**.

53.4 The return must state—

53.4.1 the total gigajoules of gas that were injected or received into any part of the **transmission system** owned by the **transmission system owner**, other than from a part of the **transmission system** not owned by the **transmission system owner**, during the preceding month; and

53.4.2 the total gigajoules of gas that were taken out of any part of the **transmission system** owned by the **transmission system owner**, other than into a part of the **transmission system** not owned by the **transmission system owner**, during the preceding month.

53.5 As soon as practicable after the **go-live date**, the **industry body** must determine and **publish** a breakdown of the estimated balancing regime ongoing costs for the first year or part year of operation of the **balancing plan**.

53.6 As soon as practicable after the publication of those estimated balancing regime ongoing costs, the **industry body** must notify every **transmission system owner** to whom rule 52.3 applies of the estimated balancing

regime ongoing costs, and that ongoing fees will be payable by that person in that year or part year in accordance with the following formula:

S = A x B/C

where—

A is the estimated balancing regime ongoing costs divided by the number of months in the applicable year or part year

B is the sum of –

(a) the total quantity of gas injected or received into the **transmission system owner's** part of the **transmission system**, other than from a part of the **transmission system** during the month before the month in which the relevant invoice is issued under rule 53.8; and

(b) the total quantity of gas taken out of the **transmission system owner's** part of the **transmission system**, other than into a part of the **transmission system** during the month before the month in which the relevant invoice is issued under rule 53.8; and

C is the sum of –

(a) the total quantity of gas injected or received into all parts of the **transmission system** other than from a part of the **transmission system** during the month before the month in which the relevant invoice is issued under rule 53.8; and

(b) the total quantity of gas taken out of all parts of the **transmission system**, other than into a part of the **transmission system**, during the month before the month in which the relevant invoice is issued under rule 53.8; and

S is the amount that must be invoiced to the **transmission system owner** for the month

53.7 For each year following the first year or part year of operation, the **industry body** must—

53.7.1 estimate and **publish**, at least 2 months before the beginning of the year, a breakdown of the estimated balancing regime ongoing costs for that year; and

53.7.2 as soon as practicable after publication of those estimated balancing regime ongoing costs, notify every person to whom rule 52.3 applies of the estimated balancing regime ongoing costs, and that ongoing fees will be payable by that person in that year calculated in accordance with the formula in rule 53.6.

53.8 The **industry body** must review the amount of the estimated balancing regime ongoing costs for a year at the end of each quarter and must, if the estimated costs differ materially from the costs **published** under rule 53.5 or 53.7.1 (or if relevant under rule 53.8.1) –

53.8.1 **publish** an updated breakdown of the estimated balancing regime ongoing costs for that year; and

53.8.2 as soon as practicable after publication of the updated estimated balancing regime ongoing costs, notify every person to whom rule 52.3 applies of the updated estimated balancing regime ongoing costs.

53.9 If during a year a **balancing operator** appointed under either subpart 2 or 3 of Part 3 ceases to carry out functions under these rules and a **balancing operator** appointed under the other subpart begins carrying out functions, the **industry body** must, having regard to rule 52.2,—

53.9.1 estimate and **publish**, as soon as practicable, a breakdown of the estimated balancing regime ongoing costs for the remainder of the year; and

53.9.2 as soon as practicable after publication of those estimated balancing regime ongoing costs, notify every person to whom rule 52.3 applies of the updated estimated balancing regime ongoing costs.

53.10 On the first **business day** of each month following the notification in rule 53.6, the **industry body** must invoice every person to whom rule 52.3 applies for that person's share of the estimated balancing regime ongoing costs payable during that month, calculated –

53.10.1 in accordance with the formula in rule 53.6; and

53.10.2 by reference to the last estimated balancing regime ongoing costs published under this rule 53.

54. How and when actual ongoing fees payable

54.1 The actual ongoing fees are payable to the **industry body**.

54.2 As soon as practicable after the end of each year of operation (including in relation to the first year, any part year of operation), the **industry body** must determine and **publish** a breakdown of the actual balancing regime ongoing costs for that year (or part year).

54.3 No less than 10 **business days** after publication of the actual balancing regime ongoing costs under rule 54.2, the **industry body** must invoice, or issue a credit note, to each person who has paid estimated balancing regime ongoing costs during the year for the difference between—

54.3.1 that person's share of the actual balancing regime ongoing costs calculated in accordance with the formula in rule 53.6, with the necessary modifications; and

54.3.2 the amount of the estimated balancing regime ongoing costs invoiced to that person in respect of the year.

55. General provisions regarding fees

55.1 The due date for the payment of any invoice or refund of any credit under this subpart is—

55.1.1 the 20th day of the month in which the invoice or credit note was received; or

55.1.2 if the day referred to in rule 55.1.1 is not a **business day**, the following **business day**.

55.2 The fees payable under rules 50 to 54 are exclusive of any goods and services tax payable under the Goods and Services Tax Act 1985, and goods and service tax on those fees (if any) must be added to the invoices or credit notes issued under rules 50 to 54.

55.3 The **industry body** must ensure that all information and returns supplied under rules 50 to 54 are used only for the purposes of collecting the development fee or fees and ongoing fees.

55.4 A **transmission system owner** may pass on the cost of any fees payable under these rules to **shippers** on its part of the **transmission system** in proportion to the quantities of gas **transmitted** by that **shipper** through the **transmission system owner's** part of the **transmission system** or on such other basis as may be agreed by the **industry body**.

55.5 The amount of any fees passed on by a **transmission system owner** must be net of any amount that the **transmission system owner** is able to recover from a **user** (for example, an amount that the **balancing operator** has been unable to recover under rule 6.2.1(a), and for which the **transmission system owner** is required to indemnify the **balancing operator** under a **balancing operator** service provider agreement or indirectly via the ongoing fee).

55.6 To avoid doubt, a person is not released from any obligation to pay a fee under this subpart because subpart 2 or 3 of Part 3, as applicable, no longer applies.

Part 4
Miscellaneous

Audit of balancing operator's performance

56. Industry body to commission performance audits

56.1 The **industry body** may, from time to time, arrange performance audits of the **balancing operator**.

56.2 The purpose of a performance audit is to assess–

56.2.1 the performance of the **balancing operator** in terms of compliance with these rules; and

56.2.2 the systems and processes of the **balancing operator** that have been put in place to enable compliance with these rules.

56.3 The **industry body** must -

56.3.1 appoint as auditor a person who –

(a) is independent of and not in a position of conflict of interest with the **balancing operator** or a **transmission system owner**; and

(b) is not an officer or employee of the **industry body**; and

56.3.2 **publish** the identity of any auditor it appoints under rule 56.3.1, together with the auditor's terms of reference.

56.4 In conducting an audit under this rule, the auditor must not consider any action, circumstance, event, or inaction that occurred 30 months or more before the date the audit was requested by the **industry body**.

57. Provision of information to auditor

57.1 In conducting an audit under rule 56, the auditor may:

57.1.1 request any information from the **balancing operator**, the **industry body** and any **transmission system owner**; and

57.1.2 request to examine any processes, systems and data of the **balancing operator**, provided such processes, systems and data are directly relevant to the performance of the **balancing operator** in terms of compliance with these rules.

57.2 Any request under rule 57.1 must be reasonable and strictly for the purposes of the audit.

57.3 The **balancing operator**, the **industry body** and every **transmission system owner** must comply with a request under rule 57.1 but nothing in this rule limits any claim for legal professional privilege.

57.4 In providing information to the auditor, a **transmission system owner** or the **balancing operator** may indicate to the auditor where such information is considered to be confidential.

58. Auditor to prepare draft audit report

58.1 The auditor must prepare, in writing, a draft audit report on its conclusions and recommendations formulated as a result of conducting an audit under rule 56.

58.2 Subject to rule 60, the auditor must give a copy of the draft audit report to -

58.2.1 the **balancing operator**; and

58.2.2 each **transmission system owner**; and

58.2.3 the **industry body**.

58.3 The persons referred to in rule 58.2, have 10 **business days** from the date the report is received to provide the auditor with comments on the report.

59. Auditor to prepare final audit report

59.1 Before the auditor prepares a final audit report on the conclusions reached and recommendations formulated as a result of conducting an audit under rule 56, the auditor must take into account any comments received on the draft audit report.

59.2 The final audit report must be in writing and, if so requested by the **balancing operator**, must include as an appendix any comments from the **balancing operator** on the draft audit report.

59.3 The auditor must give a copy of the final audit report to –

59.3.1 the **balancing operator**; and

59.3.2 any **transmission system** owner who the auditor considers has a material interest in the report; and

59.3.3 the **industry body**.

59.4 Subject to rule 61, once the auditor has given a final audit report under this rule, the report may not be altered in any way.

60. Confidential information in audit reports

60.1 In providing a draft audit report or final audit report, the auditor must provide a complete version to the **industry body**.

60.2 However, at the discretion of the auditor, the versions of the draft audit report and the final audit report provided to any other person or **published** under these rules may exclude any confidential information obtained in the conduct of the audit.

61. Publication of final audit reports

The **industry body** must **publish** a version of each final audit report received under rule 60 that does not contain confidential information obtained in the conduct of the audit.

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62. Use of final audit reports

62.1 To avoid doubt, a final audit report may be used –

62.1.1 for the purposes of the Gas Governance (Compliance) Regulations 2008;

62.1.2 for the purposes of considering any amendment to these rules or the **balancing plan**;

62.1.3 by the **industry body** -

(a) for the purpose of reviewing the performance of the **balancing operator** under these rules, or under the **balancing operator** service provider agreement;

(b) for the purpose of reviewing the performance of an auditor; and

(c) for any other purposes that it considers necessary.

Notices

63. Giving of ordinary notices

63.1 If these rules require any notice to be given, the notice must be in writing and be—

63.1.1 delivered by hand to the nominated office of the addressee; or

63.1.2 sent by post to the nominated postal address of the addressee; or

63.1.3 sent by fax to the nominated fax number of the addressee; or

63.1.4 sent by electronic transmission or any other similar method of electronic communication to the appropriate nominated electronic address of the addressee.

63.2 Despite rule 63.1, it is sufficient notice for the purposes of these rules if notice to **users** of the **balancing operator's** allocation of **balancing gas** and its associated **cash-out amount** is given via an **information exchange** accessible to the **user**.

63.3 This rule does not apply to the giving of urgent notices, but does apply to the confirmation of urgent notices under rule 65.

64. When ordinary notices taken to be given

64.1 In the absence of proof to the contrary, notices are taken to be given,—

64.1.1 in the case of notices delivered by hand to a person, when actually received at that person's address:

64.1.2 in the case of notices sent by post, at the time when the notice would in the ordinary course of post be delivered, and in proving the delivery, it is sufficient to prove that the notice was properly addressed and posted:

64.1.3 in the case of notices sent by fax, at the time indicated on a record of its successful transmission:

64.1.4 in the case of notices sent by electronic transmission or any other similar method of electronic communication, including via an **information exchange** —

(a) at the time the computer system used to transmit the notice has received an acknowledgment or receipt to the electronic address of the person transmitting the notice; or

(b) at the time the person who gave the notice proves the notice was transmitted by computer system to the electronic address provided by the addressee.

64.2 This rule does not apply to the giving of urgent notices, but does apply to the confirmation of urgent notices under rule 65.

65. Urgent notices

65.1 Despite rule 63 and 65, an urgent notice may be given orally where the person issuing a notice considers that the urgency of the situation means the notice should not be given in writing.

65.2 If an urgent notice is given orally under rule 65.1 the person who gave that notice must, as soon as practicable, confirm that urgent notice in writing in accordance with rules 63 and 64.

Miscellaneous

66. Safety override

66.1 No person is required to comply with a provision of these rules to the extent that compliance would unreasonably endanger the life or safety of that person or any other person.

66.2 However, rule 66.1 does not absolve a **user** (or in the circumstances in rule 19.3, a **transmission system owner)** from the liability to pay for any **balancing gas** allocated to it under rule 19.

67. Relationship with transmission system arrangements

All **transmission system arrangements** must be read subject to these rules and subject to all modifications necessary to give effect to these rules.

67.1 If both **transmission system arrangements** and these rules impose an obligation or liability in respect of the same matter, -

67.1.1 the obligation or liability under these rules prevails to the extent that the obligation or liability in the **transmission system arrangements** is inconsistent with or doubles up with an obligation in these rules; and

67.1.2 a party to the **transmission system arrangements** is not liable to comply with the **transmission system arrangements** to the extent that that obligation or liability in those **transmission system arrangements** is inconsistent with or doubles up with an obligation or liability under these rules.

67.2 In rules 67.1 and 67.2 t**ransmission system arrangements** do not include the Gas (Downstream Reconciliation) Rules 2008.

68. Relationship with Gas Governance (Critical Contingency Management) Regulations 2008

68.1 If the **balancing operator** receives notice under regulation 51 of the Gas Governance (Critical Contingency Management) Regulations 2008 that a critical contingency has been declared in respect of a part of the **transmission system** -

68.1.1 the **balancing operator** must cease to carry out its functions under rule 15 in relation to any **balancing zone** in which that part of the

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transmission system falls until a notice is received under regulation 62 of those regulations to advise that that the critical contingency has been terminated; and

68.1.2 to the extent that there is any inconsistency between the Gas Governance (Critical Contingency Management) Regulations 2008 and these rules in respect of the actions to be taken during a critical contingency, the Gas Governance (Critical Contingency Management) Regulations 2008 prevail.

68.2 Rule 68.1.1 does not affect the validity of any **balancing action** taken by the **balancing operator** in relation to a part of the **transmission system** in respect of which a critical contingency has been declared before receiving notice of the declaration of the critical contingency, or affect the **balancing operator's** ability to allocate **balancing gas** and the associated **cash-out amount** in respect of that **balancing action**.

SCHEDULE

Requirements for balancing plan

A **Balancing operator**

The name and contact details of the person appointed or to be appointed as the **balancing operator** under rule 28.

B **Information relating to balancing zones**

1. Details of the boundaries of each part of the **transmission system** that is to constitute a separate **balancing zone** which -

   a. must be set to ensure all parts of the **transmission system** are within a **balancing zone**; and

   b. to avoid doubt, may define the entire **transmission system** as a single **balancing zone**.

2. A statement as to whether each **balancing zone** will be **directly managed** or **indirectly managed** by the **balancing operator** (and at least one zone must be **directly managed)**.

3. The following information in relation to each **directly managed balancing zone**:

   a. the upper and lower threshold for the taking of **balancing action** by the **balancing operator**, which –

      (i) must be set to give the maximum practicable difference between the upper and lower thresholds without unreasonably interfering with the transmission of gas; and

      (ii) may be different for –

(A) different periods of the day, week or year; and

(B) different operating conditions within the **balancing zone** (for example, where the **balancing operator** has been notified of maintenance being carried out in the **balancing zone**); and

(iii) may be defined by reference to a formula with measurable variables:

b. the **target linepack**, which must be the midpoint between the upper and lower thresholds referred to in paragraph a.:

c any points for measuring pressure that are reasonably necessary for the purposes of the **balancing operator** carrying out its functions.

4. The following information in relation to each **indirectly managed balancing zone**:

a. the process by which the **balancing zone** will be managed (for example, by pressure regulator feed from a zone that is **directly managed**):

b. any functions or powers of the **balancing operator** in relation to the **balancing zone** (for example, to operate equipment):

c. the thresholds for the exercise of those functions and powers.

5 The processes for notification and coordination in relation to operational matters that may affect **linepack**.

C **Provision of information**

1. The methods and times for the giving of information required under rules 7 and 9 to the **balancing operator** by **users** and **transmission system owners**.

2. The methods and times of notification of information by the **balancing operator** to **users** and **transmission system owners** for the purposes of these rules, including –

   a. notifications of allocations of **balancing gas** under rule 20.1; and

   b. any new allocations of **balancing gas** under rule 25.

D **Balancing gas**

Details relating to the procurement of **balancing gas** including the following:

   a . reasonable technical requirements for the provision of **balancing gas**:

   b. the times and decision process for **balancing actions**:

   c. price thresholds for procuring **balancing gas**, which must be a dollar per gigajoule amount set –

      (i) in the case of purchase of **balancing gas**, at a level which is a pre-estimate of the critical contingency price that would be applied after a critical contingency under the Gas Governance (Critical Contingency Management) Regulations 2008; and

      (ii) in the case of sale, at a level which is a pre-estimate that is representative of the marginal cost of non-production of gas to producers of gas (and which, to avoid doubt, may be a negative number).

E **Allocation model**

An allocation model for the allocation of **balancing gas** and associated **cash-out amount** from each **balancing action** that has the following features:–

a. **balancing gas** is allocated based on the best information available under rule 9:

b**.** **balancing gas** is allocated–

(i) to the **users** who, the best information available shows, had an **imbalance** at the time the **balancing operator** committed to the **balancing action**; and

(ii) in the proportions that that information indicates the **user**'s **imbalance** contributed to the need to take the **balancing action**; and

(iii) only up to the quantity of the **user's** actual **imbalance**:

c. if a **balancing action** is made necessary in a **balancing zone** (**balancing zone A**) due in part or in whole to an **imbalance** in another **balancing zone** (**balancing zone B**) –

(i) the relevant proportion of **balancing gas** and its associated **cash-out amount** is allocated to the **users** in **balancing zone B** who contributed to the **imbalance** in **balancing zone** A, rather than **users** in **balancing zone A**; and

(ii) within **balancing zone B**, the **balancing gas** sold or purchased and its associated **cash-out amount** of that gas are allocated -

(A) to the **users** who, the best information available shows, had an **imbalance** at the time the **balancing operator** commits to a **balancing action**; and

(B) in the proportions that that information indicates the **user's imbalance** contributed to the need to take the **balancing action**; and

(iii) provides for the adjustment of title to gas between users in **balancing zone A** and **balancing zone B**, to reflect the allocation of **balancing gas** to users in **balancing zone B**:

d. if there is an **interconnection point** within a **balancing zone** -

(i) allocates the relevant proportion of **balancing gas** and its associated **cash-out amount** to any **users** downstream of the **interconnection point** who contributed to the need to take the **balancing action;** and

(ii) allocates **balancing gas** to any **interconnected party** in relation to any **imbalance** at the **interconnection point** only to the extent that that **imbalance** was not contributed to by the users allocated **balancing gas** in accordance with subparagraph (i); and

(iii) provides for the adjustment of the title to gas of any **interconnected party** in relation to any **imbalance** at the **interconnection point** to reflect the allocation of the **balancing gas** to the downstream **users**:

e. the model is, as relevant, consistent with the Gas (Downstream Reconciliation) Rules 2008.

Appendix F Draft Balancing Rules flow charts

Figure 1: Part 3, subpart 2- TSO balancing plan and appointment

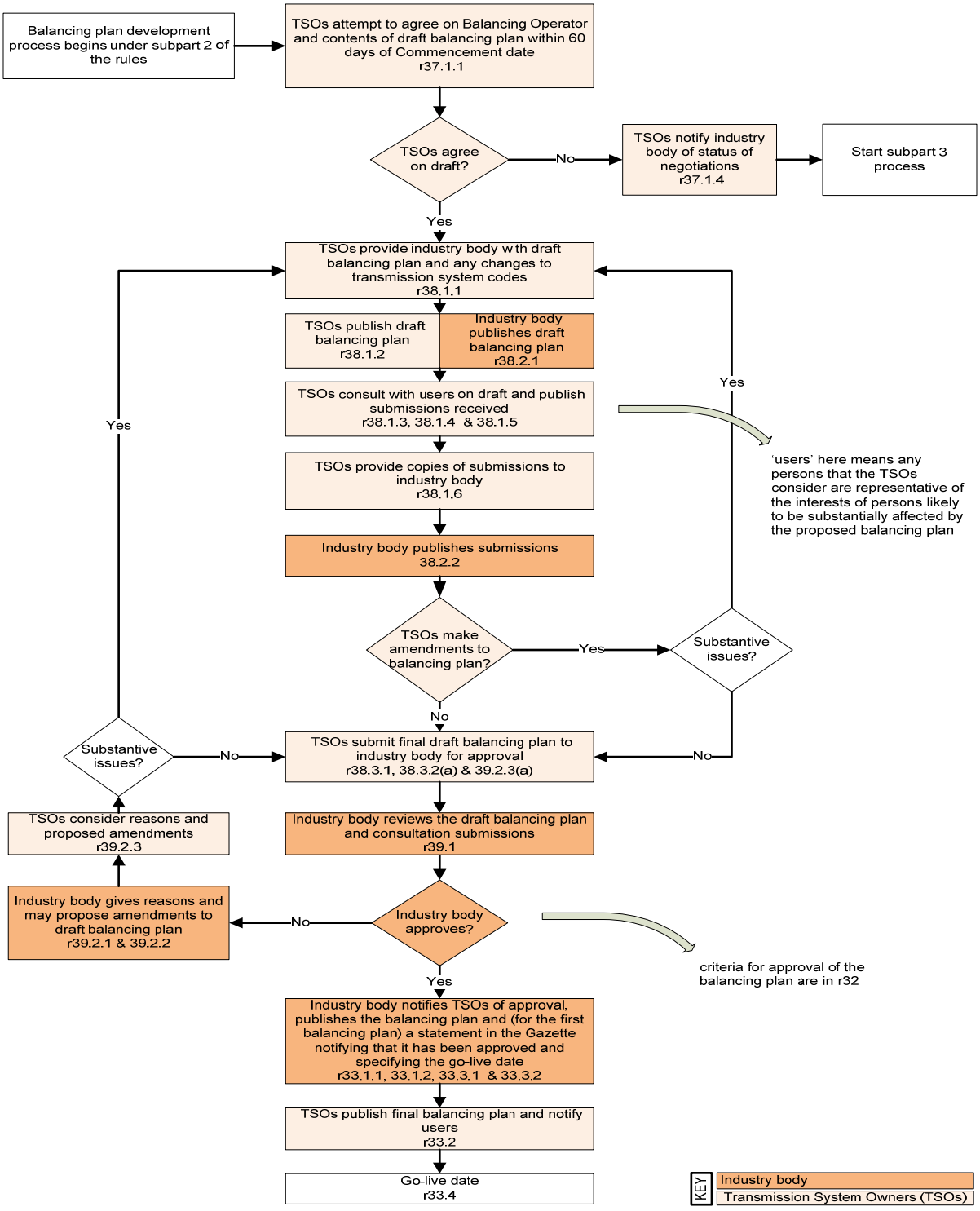

Figure 2: Part 3, subpart 3 – Industry Body balancing plan and appointment

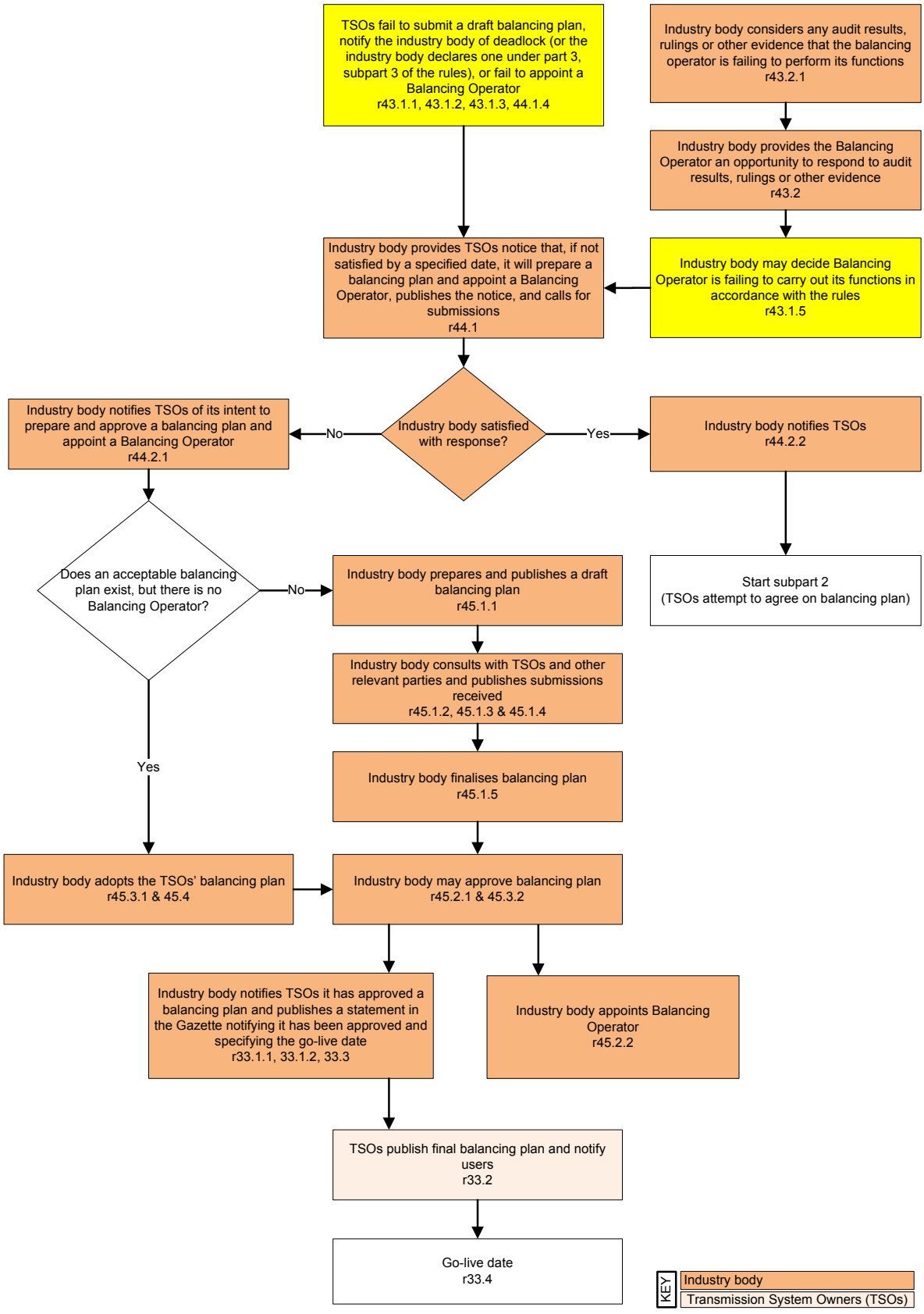

Figure 3: Amendments to TSO balancing plan

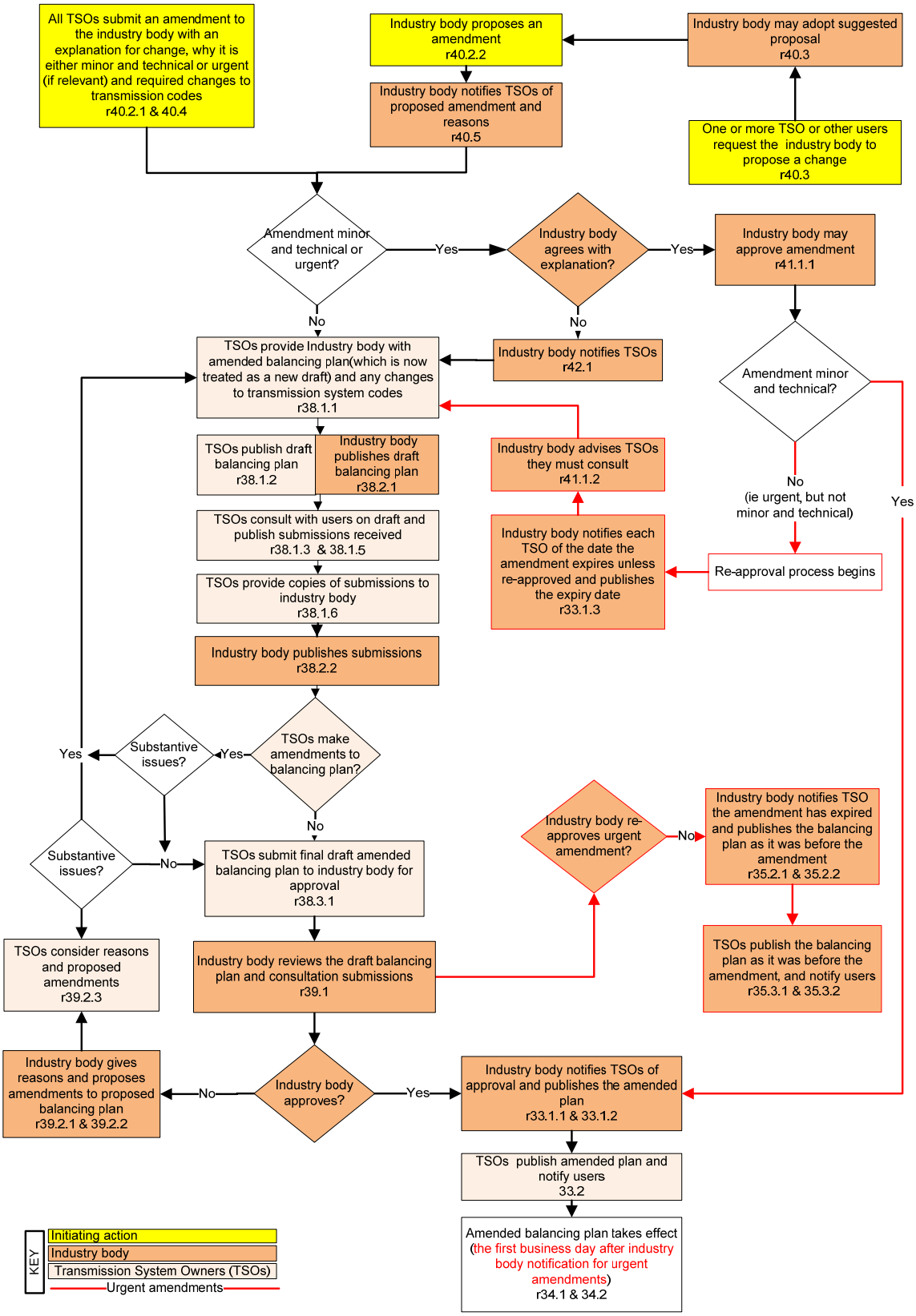

Figure 4: Amendments to Industry Body balancing plan

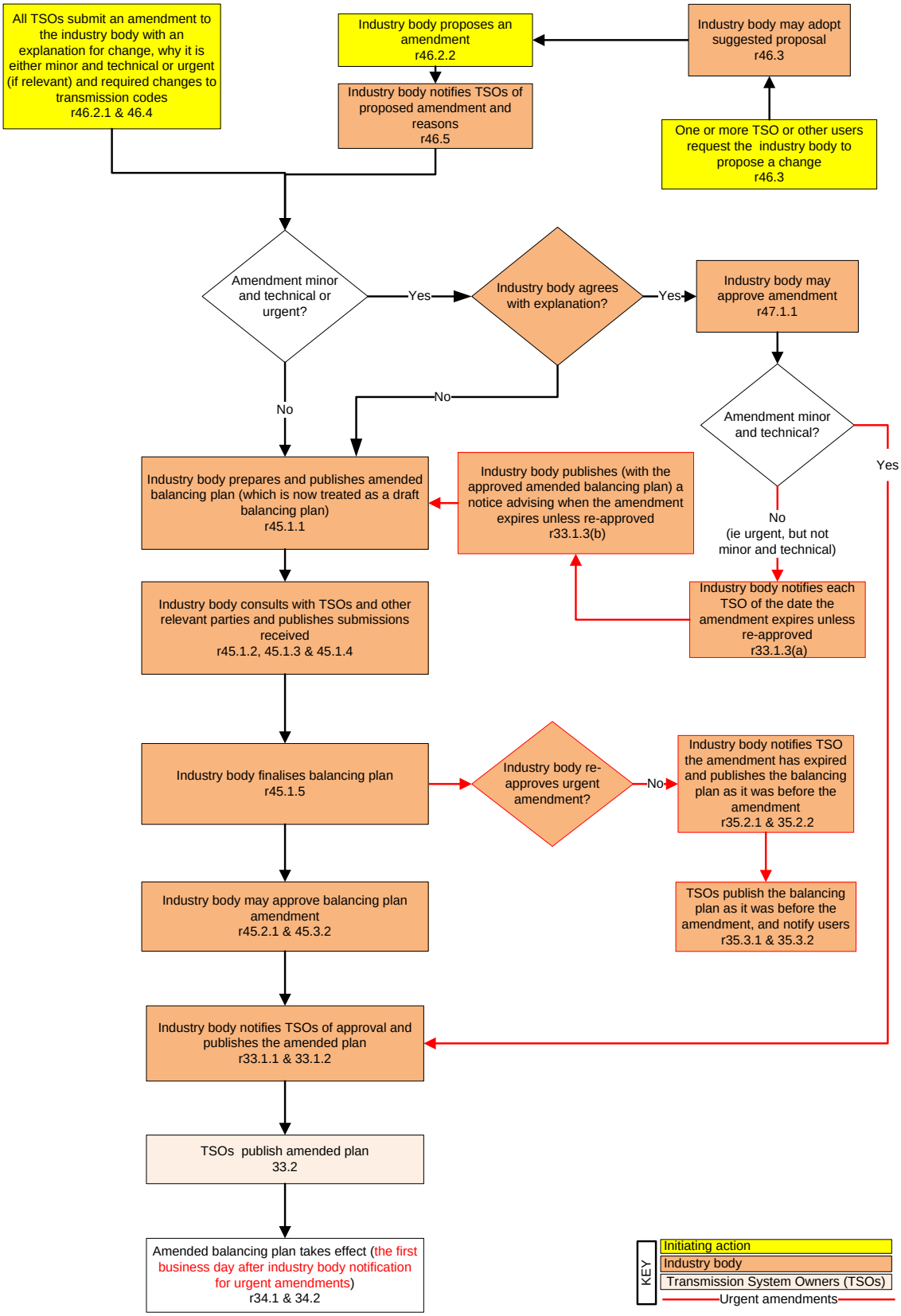

Figure 5: Reversion process