FINAL ASSESSMENT PAPER

Final Assessment of Gas Transmission Access Code (GTAC)

Issued on 25 May 2018

GAS INDUSTRY COMPANY LIMITED

Executive Summary

This is Gas Industry Co's final assessment paper (FAP) on the Gas Transmission Access Code (GTAC, or New Code) submitted to it on 8 December 2017 for assessment.[1] Our preliminary assessment paper (PAP) was published on 13 February 2018 and concluded that the New Code was not materially better than the existing arrangements.

Stakeholders have provided submissions and cross-submissions on the comparative assessment in the PAP, and the analysis and assessment in this FAP has benefitted enormously from that stakeholder input. In broad terms, the weight of submissions show strong underlying support for our assessment that the New Code is not materially better than the current terms and conditions. Submitters also generally agree with our view of which aspects of the New Code do not improve on current access arrangements.

There are also submissions, or aspects of submissions, that provide views on matters outside the scope of our comparison of the New Code against the current terms and conditions. While Gas Industry Co acknowledges the views expressed, our assessment role is necessarily limited to a comparison between the GTAC and the current terms and conditions.

Significance of this FAP

The process of replacing the MPOC and VTC with a new transmission code requires that the TSAs and ICAs under both the VTC and the MPOC are terminated. In the case of the VTC that will occur on 30 September 2018 (unless the VTC is extended further). In the case of the MPOC, those agreements will terminate on notice by First Gas once a series of preconditions have been satisfied. The substantive condition is an evaluation by Gas Industry Co that meets the requirements below:

> …following an appropriate consultation process which includes GIC publishing a draft determination and asking each Shipper and Welded Party whether it supports the New Code, GIC has published a final determination that the New Code is materially better than the current terms and conditions for access to and use of gas transmission pipelines having regard to the objectives in section 43ZN of the Gas Act 1992 and any objectives and outcomes the Minister has set in accordance with section 43ZO of the Gas Act 1992[2]

This FAP is the *"final determination"* referred to above in relation to the GTAC submitted on 8 December 2017.

Gas Industry Co's approach

The assessment process in the FAP follows the three-step process used in the PAP as summarised in the diagram below.

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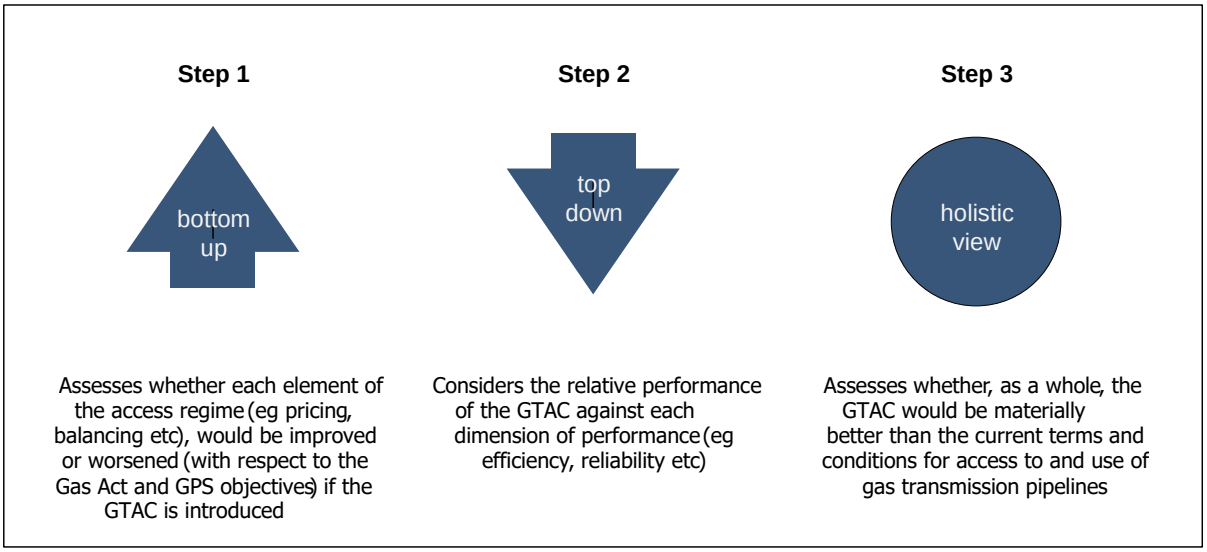
[1] Under section 22.16(b) of the MPOC, Gas Industry Co is tasked with preparing a comparative assessment of the proposed New Code against the current terms and conditions for access to and use of the gas transmission pipelines. In making that evaluation, Gas Industry Co must use the objectives in s43ZN of the Gas Act 1992 together with the objectives and outcomes set for Gas Industry Co in the Government Policy Statement on Gas Governance dated April 2008 (GPS).

[2] Section 43ZO of the Act refers to the Minister of Energy's ability to set objectives and outcomes for Gas Industry Co by publishing a Government Policy Statement.



The first step is a highly detailed, component-level analysis that compares each element of the GTAC against the corresponding elements of the MPOC and VTC, using the Gas Act and GPS objectives and outcomes. That assessment identifies, at a discrete level, the degree of improvement, stasis, or detriment relative to the status quo. In response to submissions, throughout the analysis we have endeavoured to make clearer if the MPOC, VTC, or both existing codes is the benchmark for comparison.

The second step changes the perspective by adopting the viewpoint of each objective and outcome. It considers how the GTAC would perform, compared with the MPOC and VTC, in terms of, say, efficiency.

The final step uses the results from steps 1 and 2, and brings it all together by taking a view of how the New Code, in its entirety, performs relative to the MPOC and VTC and addresses whether the New Code is materially better than the existing terms and conditions for access to, and use of, gas transmission pipelines.

Is the New Code materially better than the status quo?

Our view remains that the New Code is better than the status quo in many respects. These include:

1. streamlining of transmission products and processes, with a unified set of arrangements applying across the entire transmission system;
2. adopting daily nominated capacity as the primary transport product, which should promote more efficient use of the pipeline system and downstream competition;
3. widening and improving the tools available for management of pipeline congestion;
4. adopting a system-wide approach to gas balancing;
5. removing grandfathering provisions that can impede competition; and
6. facilitating the trading of gas via a single receipt zone.

In the PAP we identified four areas of concern that significantly reduced the overall net improvement. One of these, Park and Loan, has essentially been resolved by clarifying that the revenue for that service would fall under price-quality regulation. The remaining three were:

1. the transport incentive charge structure in non-congested situations appears to encourage inefficient behaviour by pipeline users;
2. aspects of the liability provisions are less certain in their effectiveness, undermining the incentives on pipeline users to act prudently; and
3. interconnection agreements are largely undefined.

Those areas still significantly reduce the net improvement of the New Code.

Overall, we confirm the earlier conclusion in the PAP that the New Code in its current form is not materially better than the current terms and conditions for access to and use of gas transmission pipelines. However, as we have mentioned previously, there is a lot to like about the New Code.

A comparison between the PAP and FAP assessments is provided in Appendix C.

Stakeholders who attended a GTAC workshop on 27 March 2018 indicated a strong preference to continue to develop the GTAC if our final assessment was negative. So we anticipate that stakeholders will have a further opportunity to present their views on the appropriate design of the GTAC in due course, including solutions to the issues identified in this FAP. Given the excellent progress that has been made to date to develop an industry-led solution, we think that stakeholders are capable of developing a transmission code that meets the materially better standard.

Contents

1. Introduction and purpose

1.1 The purpose of this Final Assessment Paper (FAP)

The open access gas transmission systems, previously owned by Maui Development Limited (MDL) and Vector Gas Limited (Vector), are now owned by First Gas. First Gas wishes to replace the Maui Pipeline Operating Code (MPOC) and Vector Transmission Code (VTC) with a single set of access arrangements covering the combined gas transmission systems. Most stakeholders recognise the efficiencies this could bring, and support First Gas' aspirations. First Gas and stakeholders began working in earnest to develop a single set of access arrangements (GTAC, or New Code) in August 2016.

Gas Industry Co's New Code assessment role

MPOC s22.16[3] provides for termination of contracts incorporating the MPOC provided that certain conditions are met. The full text of MPOC s22.16 is provided in Appendix A. The analysis in this FAP is pursuant to MPOC s22.16(b), which requires Gas Industry Co to make an assessment of the proposed new access arrangements, by:

1. Following an appropriate consultation process, including:

   (a) publishing a draft determination; and

   (b) asking each Shipper and Welded Party whether it supports the New Code.

2. Publishing a final determination that the New Code is materially better than the current terms and conditions for access to and use of gas transmission pipelines, having regard to the objectives in section 43ZN of the Gas Act 1992 and any objectives and outcomes the Minister has set in accordance with section 43ZO of the Gas Act 1992.

In the MPOC, the term "New Code" is defined (in MPOC s22.15(a), and s22.16(a)) as the set of terms and conditions that provide for:

> (i) All Shippers using the Maui Pipeline, and VTC Shippers using the Transmission Pipelines governed by the VTC, may continue to transport gas through those pipelines; and
>
> (ii) All Welded Parties may continue to connect their respective Pipelines to the Maui Pipeline
>
> (MPOC s22.16(a))

Generally these terms and conditions are set out in the proposed Gas Transmission Access Code (GTAC), but they may also be in Interconnection Agreements (ICAs) or other associated arrangements.

The VTC has no provision equivalent to MPOC s 22.16(b). Accordingly, the VTC and associated TSAs will expire on the date specified in VTC s 20.2.

[3] MPOC s22.16 was the main part of an MPOC change proposed by First Gas on 14 July 2017, known as the Transition Change Request. Full details can be found on the Gas Industry Co website at: http://gasindustry.co.nz/work-programmes/mpoc-change-requests/14-july-2017-mpoc-transition-change-request-tcr/

New Code submissions, PAP submissions and cross-submissions

The submissions we received on 22 January on the New Code (New Code submissions) were discussed in the PAP. That discussion is revisited in this FAP where it is informed by the submissions we received on 19 March critiquing our PAP analysis (PAP submissions), and by the cross-submissions we received on 16 April (cross-submissions). The latter two sets of submissions are summarised in Appendix B and discussed in Chapter 2.

1.2 Development of consultation process and assessment methodology

In respect of our MPOC s22.16(b) assessment, stakeholders asked us how we would assess whether the New Code was *"materially better"*, and what process we would follow to make that assessment. Our initial response was set out in a consultation document titled Gas Industry Co's Proposed Approach to GTAC Assessment, dated 2 August 2017 (Proposed Approach Paper).

Consultation process

The Proposed Approach Paper indicated that Gas Industry Co would follow a process like the MPOC change process. As we worked through the process various adjustments have been made to deadlines, but the process is otherwise strongly akin to the MPOC change process. The key process steps and deadlines that finally applied are as shown in Table 1.

Table 1 - New Code assessment, consultation process

Process step	Date
First Gas submits New Code to GIC	8 December 2017
Stakeholder submissions on New Code	22 January 2018
GIC publishes its MPOC s22.16(b) draft determination, referred to as the Preliminary Assessment Paper (PAP)	13 February 2018
Stakeholder submissions on PAP Stakeholder cross-submissions	19 March 2018 16 April 2018
GIC publishes its MPOC s22.16(b) final determination, referred to as the Final Assessment Paper (FAP)	25 May 2018

Assessment methodology

A number of submitters have different views on the best approach to assessing the New Code. We responded to previous submissions on the matter in our PAP. In submissions on the PAP, some stakeholders have argued that the assessment methodology set out in Chapter 2 of the PAP is still not valid, and have restated and/or clarified their views. We respond to these in section 2.1 of this FAP. The methodology used in this FAP is described in Chapter 3.

1.3 Guide to this Final Assessment Paper (FAP)

This FAP is organised as follows:

Chapter 1 explains the circumstances that have given rise to Gas Industry Co's assessment role and how the assessment methodology has evolved, including our consideration of stakeholder feedback.

Chapter 2 considers submissions on the PAP and cross-submissions and sets out our response.

Chapter 3 sets out the assessment methodology used in this FAP.

Chapter 4	Step 1: this is our bottom-up analysis of each major component of the GTAC. The PAP analysis benefitted from stakeholder submissions we received on 22 January (New Code submissions). In the FAP we update that analysis taking into account the further submissions we received on 19 March (PAP submissions), and the cross-submissions we received on 16 April (cross-submissions).
Chapter 5	Step 2: this is our top-down analysis.
Chapter 6	Step 3: this is our overall assessment.
Appendix A	provides the full text of MPOC s22.16.
Appendix B	provides a summary of submissions on the PAP and cross-submissions.
Appendix C	lists all items where we have changed our assessment between the PAP and this FAP.
Appendix D	provides supporting analysis of a number of issues that have proved significant, either in stakeholder discussions during the New Code development, or in submissions. This updates the analysis in the Significant Issues appendix of the PAP, with the benefit of the PAP submissions and cross-submissions.
Appendix E	lists all items that received a negative assessment.

A glossary of common term and acronyms is provided at the end of this FAP.

The FAP follows the same basic layout as the PAP, but we considered it unnecessary to repeat the PAP appendices on First Gas discretion[4], Information to be published[5], or the graphical representation of the code change processes[6]. Nor have we included our commentary on the various GTAC drafting matters raised in earlier submissions.[7]

As discussed in Chapter 2, in response to stakeholder suggestions, we have made some refinements to our analysis, including:

1. reassessing each component of the access arrangements;
2. identifying when the analysis is primarily comparing the GTAC to the MPOC and/or VTC;
3. noting where there are significant linkages between components of the regime (ie where a red arrow is necessary to achieve a green arrow, for example using a market mechanism to allocate scarce capacity requires the cost of running auctions);
4. identifying which access regime components have high, medium and low levels of influence on the overall assessment; and
5. giving a better explanation of how we weigh up the elements to come to an overall decision.

1.4 A word about terminology

Transmission access discussions are awash with acronyms. In this FAP we try to avoid all but the most commonly used and understood acronyms. However, the glossary at the back of the document is comprehensive and should help any reader who is less familiar with the terminology.

[4] PAP Appendix D

[5] PAP Appendix E

[6] PAP Appendix F

[7] Gas Industry Co's 28 March 2018 Memo to Industry Participants: Drafting comments raised in submissions on 8 December 2017 GTAC, available at http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/consultation-gtac-preliminary-assessment-paper-cross-submissions-closes-16-april-2018/

At times, particularly when discussing stakeholder feedback, we use the less rigorous description of our task as "*assessing whether the GTAC is better than the MPOC/VTC*". Generally this is the language used in submissions, but the reader should understand that it is a convenient shorthand for the test prescribed by MPOC s22.16(b), ie that "*the New Code is materially better than the current terms and conditions for access to and use of gas transmission pipeline having regard to the objectives in section 43ZN of the Gas Act 1992 and any objectives and outcomes the Minister has set in accordance with section 43ZO of the Gas Act 1992*".

1.5 Use of capitals

Terms are capitalised where they have a particular meaning in the relevant code. However, we have tried to spare the reader capitalisation fatigue by only capitalising terms where their exact meaning is important to the point being discussed.

1.6 Location of all referenced documents

Most documents, including the 8 December GTAC, our assessment papers and all relevant submissions and cross-submissions are available from the Gas Industry Co website at http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/.

A few documents, such as the MPOC and VTC, are available on the OATIS website.

Links to the documents are footnoted.

2. PAP Submissions and Cross-Submissions

In this chapter we discuss stakeholder feedback on the PAP. A summary of submissions on the PAP and cross-submissions is provided in Appendix A, following the same structure as the questions in our suggested submission template.

2.1 Assessment methodology: submissions

Weighting given to the various components of the New Code

Regarding the overall assessment (Step 3 of our assessment methodology), First Gas[8] suggests that it would help focus future development work, if our analysis identified which components of the New Code have high, medium and low levels of influence on the overall decision. MGUG[9] also asks for more explanation of how the Step 3 assessment is made.

Shell[10] considers that too much weight has been given to the benefits of unification of the two regimes.

GIC Response

We acknowledge that it is important to explain clearly which components of the New Code have been most influential to our overall assessment in Step 3. We hope this FAP does so more effectively than the PAP.

While we agree that there are inherent benefits arising from a single set of access arrangements, we think that our decision has largely been driven by a comparison between the various components of the New Code and the MPOC and VTC.

Consistency of costs and benefits

First Gas[11] is concerned that costs and benefits have not always been treated consistently. It cites the modest red arrow assessment against transmission products relating to the costs of transition, even though the benefits of a new transaction management system would seem to outweigh those costs (as judged by Vector, at least).

Shell[12] considers that the PAP analysis does not give sufficient weight to the unnecessary disruption to existing commercial arrangements. A similar point was raised by Vector.[13]

GIC response

We recognise the need for consistency in our analysis, and value the feedback. We still believe it is important to identify separately both the costs and the benefits of each feature. However, we have attempted to make it clear where we consider the costs and benefits to be intrinsically bound together.

[8] First Gas, 19 March PAP submission, p41, Q1.
[9] MGUG, 19 March PAP submission, p1 item 3(a)(iii).
[10] Shell, 19 March PAP submission, p3, Q1.
[11] First Gas, 19 March PAP submission, p15, s2.2.
[12] Shell, 19 March PAP submission, p3, Q1.
[13] Vector, 22 January Final GTAC submission, para 11.

In terms of Shell's and Vector's comments regarding the disruption to commercial contracts, we agree that this is a relevant consideration. However, we have not been provided with specific detail on the extent of the changes to stakeholders' commercial arrangements. In the absence of that information, we would expect any required changes to associated contracts to be minor.

Identifying whether a component is being compared to the MPOC or VTC

MGUG[14] acknowledges that our assessment approach is to consider whether the New Code is materially better than the current access arrangements as a whole, ie VTC and MPOC together. However, it believes that a missing feature is a better discussion of the comparisons between the GTAC and MPOC, since that would inform the design if a regulated code proved necessary.

Also, First Gas[15] suggests that, for each component under consideration, comparison should be made with the most relevant code.

GIC response

We accept that it could be helpful for stakeholders to know whether items are primarily being compared to the MPOC or VTC and we have tried to make that clear. We also agree with First Gas that comparisons should be made with the most relevant code (and with both codes where they are both relevant). In this FAP we make it clear when our comparison is referencing the MPOC and/or the VTC.

The "*materially better*" test

Methanex[16] believes that: "*a) GTAC should be materially better than each existing code in at least some material respects; b) GTAC should not be worse than either existing code in any material respect; and c) neither code is unworkable in its current form, and that the MPOC, in particular, is fundamentally sound.*" On a similar note to (b), Greymouth[17] considers that "*the materially better test would not usually be met if any parts of the new arrangements were worse for any or all parties.*"

Also Methanex[18] considers that MPOC s22.16(b), and the principle of fairness and equity, requires Gas Industry Co to assess the GTAC as materially better than each existing code.

Shell[19] considers that MPOC interconnected parties should not have to accept inferior arrangements, even though they may represent an improvement for VTC parties. It also considers that some individual flaws make the GTAC unacceptable in any circumstance (such as GTAC's early termination date with no standard for code replacement).

Regarding the incompleteness of some of the associated arrangements, Greymouth[20] considers that the wording in the MPOC s22.16(b) "*… that the New Code **is** materially better*" (emphasis added) requires that all associated arrangements are complete and available for assessment.

GIC response

At pages 6 and 7 of the PAP, we provided a discussion of our interpretation of the "*materially better*" standard in MPOC s22.16(b). We considered that Gas Industry Co is required to assess the GTAC as a whole to determine whether it is materially better. To provide further clarity, we noted that:

[14] MGUG, 19 March PAP submission, p1 item 3(a)(i) and p4, Q1.

[15] First Gas, 19 March PAP submission, p41, Q1.

[16] Methanex, 19 March PAP submission, p4, Q1, item 9.

[17] Greymouth, 19 March PAP submission, Q1.

[18] Methanex, 19 March PAP submission, p5, Q1, item 10.

[19] Shell, 19 March PAP submission, p3, Q1.

[20] Greymouth, 19 March PAP submission, Q1.

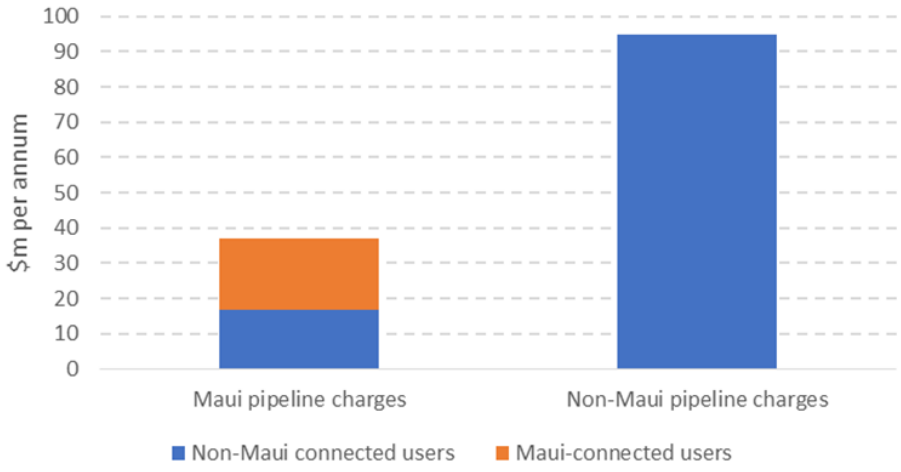
1. We would assess the relevant parts of the GTAC.
2. We would assess the GTAC against the MPOC and VTC as those codes apply to the participants who operate under those codes.
3. Gas Industry Co is looking for a set of terms and conditions that are materially better for the industry as a whole.

We do not interpret MPOC s22.16(b) as requiring that each part of the New Code is materially better than the current terms and conditions of access. Similarly, we did not consider that the New Code must be materially better than each of the MPOC and VTC.

In our view, the reading of MPOC s22.16(b) advanced by some stakeholders asks Gas Industry Co to interpret MPOC s22.16 in a way that redrafts that provision. We agree that Gas Industry Co needs to assess the New Code against the terms of the MPOC and the VTC as they apply to the relevant participants, but we do not agree that MPOC s22.16 requires each provision of the New Code to be materially better than each provision of the MPOC and the VTC, or that the New Code must be materially better than each of those codes. In our view, that would amount to splitting up the assessment in a way that is not prescribed by the MPOC.

Further, our assessment needs to recognise the importance of both sets of transmission pipelines. For example, while large volumes of gas are transported through the Maui pipeline, the non-Maui system accounts for approximately 72%[21] of total transmission charges. Of the Maui-system charges, slightly under half are associated with gas that will flow into the non-Maui system. As a result, pipeline users on the non-Maui system are ultimately responsible for paying around 85% of total transmission charges.[22]

Figure 1 - Revenue split between Maui and non-Maui pipelines (2016/17 disclosure year)



We have been clear that the "*current terms and conditions for access to and use of gas transmission pipelines*" includes the MPOC, VTC and associated arrangements that the transmission services provider (TSP) is responsible for. We don't agree with Greymouth's view that "*a proper assessment of the access arrangements cannot be made without all associated arrangements being complete and available for assessment*".[23] Gas Industry Co can assess a proposed transmission code without all associated arrangements (as we have done in relation to

[21] Transmission charges are a proxy for the value of services being provided by the pipelines. The total charges are based on the disclosed revenue caps for the Maui and non-Maui systems.

[22] The total Maui charges can be separated into those associated with flows entirely within the Maui system, and those associated with flows into non-Maui system, based on the published tariffs and gas flow data.

[23] Greymouth, 19 March PAP submission, Q1.

the New Code submitted on 8 December 2017). However, the absence of certain associated arrangements has impacted on our overall decision as to whether the New Code is materially better. As we stated in the PAP[24]:

> To the extent that associated arrangements have not been developed or need to be re-written, we would need to be satisfied that:
>
> 1. Specific processes for the development of the associated arrangements are included in the GTAC. The level of process required would depend on the nature of the associated arrangement (for example, we would expect a lower level of control in relation to the development of an operational policy compared to, for example, priority right (PR)auction rules).
> 2. In the absence of specific processes for development of the associated arrangements, we would need to be satisfied that the associated arrangement is a matter that is properly within the discretion of the relevant party

We think that the absence of associated arrangements needs to be assessed on a case-by-case basis. The absence of associated arrangements may have a significant impact on our determination of whether the New Code is materially better depending on the relative importance of the associated arrangement and any processes for development of that arrangement in the GTAC.

In summary, the comments received from various stakeholders have not persuaded us that we should fundamentally change our approach to the assessment.

2.2 Gas transmission products: submissions

Submitters mostly agree with the PAP assessment of gas transmission products. However, First Gas[25] believes the improvement would be "*substantial*" rather than "*moderate*", given that the daily product would provide more flexibility to customers and a better platform for upstream and downstream competition.

Nominations

There are contrasting views on whether the nominations workload would significantly increase the administrative burden for stakeholders. For example, Greymouth[26] and Trustpower[27] consider the PAP underestimated the added effort, while Todd[28] and Vector[29] consider that the concerns are overstated. (Vector considers the workload would not increase for shippers serving ToU customers (90% of load)). First Gas[30] suggests that shippers may already do the work necessary to make nominations in order to determine their daily gas requirements. Also, First Gas views nominations as integral to providing the New Code's more flexible daily transmission product.

SQ14 of our cross-submission template sought further information on the administrative burden of nominations. In its cross-submission, Greymouth[31] affirms that the party exposed to the

[24] PAP, p 11.

[25] First Gas, 19 March PAP submission, p8 and p41, Q2.

[26] Greymouth, 19 March PAP submission, Q2 & Q15.

[27] Trustpower, 15 March PAP submission, p7, s7.1.5.

[28] Todd, 19 March PAP submission, p1, Q2 & Q15.

[29] Vector, 19 March PAP submission, Q2 & Q15.

[30] First Gas, 19 March PAP submission, p5, Nominations.

[31] Greymouth, 17 April cross-submission, SQ14.

increased incentive fees would put more effort into minimising its exposure. Genesis[32] also believes the workload would increase where end-user contracts require customers to nominate their gas requirements, and that such instances would likely increase. The additional work arises not only from making nominations, but also from managing rebates and wash-ups. Similarly, MGUG[33] considers that the level of incentive charges would require more attention be given to nominations, and in confirming, reconciling and checking invoiced incentive charges.

In contrast, Vector[34] believes there would be no increase in workload, and possibly a reduction once new processes are bedded-in. Shell[35] also believes that a good operator should always be seeking to maintain a balanced position, so the workload should be the same. Similarly, Todd[36] notes the current administration required around daily cash-outs and, while it recognises that a few retailers may have an increased administrative burden, it expects that the work would be less in most situations.

GIC response

We agree that good portfolio management does require shippers to plan for the daily requirements of their customers. Some shippers currently do this to a more granular level than others, and may even require daily consumption estimates from their customers. These shippers (and their customers) should not face any significantly increased administrative burden unless the consequences of inaccurate nominations are increased. However, we believe that the financial consequences of inaccurate nominations would be increased under the New Code proposals (by the daily overrun (OR) and underrun (UR) fees and hourly OR fees). It may be, as some submitters suggest, that new systems would make the processes less burdensome, but we still believe that a shipper's administrative effort will likely increase to match the pay-off in reduced incentive charges.

We accept that nominations are integral to the transmission products design, but we consider it important to recognise both the costs and the benefits of that design.

Overall, we believe that the conclusion of the PAP is still valid; that the nomination regime is inherent to the GTAC transmission products and, while the shippers' nomination workload would increase, few shippers raise this as a serious issue per-se. Of more concern to submitters, and to us, is the strength of the economic incentives (OR/UR fees) to make those nominations accurate. This is discussed in relation to pricing in section 4.2.

Priority right (PR) auctions

Greymouth[37] considers that complete PR auction rules are necessary before the gas transmission products can be assessed.

GIC response

We agree that it is harder to assess PRs without the auction rules. We note the New Code prescribes the process by which such rules would be developed and approved, and we take this into account in our final assessment.

[32] Genesis, 16 April cross-submission, SQ14.

[33] MGUG, 16 April cross-submission, SQ14.

[34] Vector, 16 April cross-submission, SQ14.

[35] Shell, 16 April cross-submission, SQ14.

[36] Todd, 16 April cross-submission, SQ14.

[37] Greymouth, 19 March PAP submission, Q2.

Gas trading

Shell[38] considers that the improvements to gas trading anticipated in the PAP ignores the inadequate specification of the legal and process aspects of trading. This is a matter also relevant to balancing, and SQ15 of our cross-submission template sought further information on whether the proposed balancing arrangements would likely increase or decrease spot market trading.

First Gas[39] believes the excess running mismatch (ERM)charges would encourage shippers to balance their own positions. But Shell[40] thinks the incentives on shippers to resolve imbalances would reduce under the New Code, and Greymouth thinks that matters such as the tolerance settings, the level of incentive charges, and the park and loan service could influence trading either way. Todd[41], on the other hand, does not agree that the incentives on shippers would reduce. It also notes that the ERM fee could be amended over time to achieve the best outcome, and notes that trading under the New Code would not attract transport charges as it does under the MPOC. Vector[42] considers that the responsibility for system balancing will shift from First Gas to shippers but that this should not affect the volume of transactions.

Shell[43] also suggests that the absence of displaced gas nominations from the New Code would have a negative impact on gas trading, although it did not elaborate on why that would be. In SQ5 of our cross-submission template we asked for stakeholder views on that claim. In its cross-submission, Shell[44] reiterates its concern claiming that "*there could be potentially legal and governance issues*" relating to trading and, in that context, "*displaced gas nominations might be the only mechanism available that satisfies legal requirements*".

Greymouth[45] also considers that not having displaced gas nominations could prevent receipt points from optimising their position in certain instances.

Vector[46] suggests that an interconnected party could achieve the same outcome as a displaced gas nomination by simply trading gas on the market. Todd[47] also considers that shippers and/or producers could amend their positions simply by amending their nominations in the receipt zone and/or trading in the receipt zone. First Gas[48] offers a similar view to Vector and Todd. In particular, that trades are executed in the receipt zone and that is the way a shipper or interconnected party alters its running mismatch. Moreover, First Gas noted that as trades would no longer be linked to a point, it could not understand why a displaced gas nomination would be necessary.

GIC response

We conclude that:

1. As Vector suggests, there would be a shift in balancing responsibility to shippers;

[38] Shell, 19 March PAP submission, p3, Q2.
[39] First Gas, 16 April cross-submission, SQ15.
[40] Shell, 16 April cross-submission, SQ15.
[41] Todd, 16 April cross-submission, SQ15.
[42] Vector, 16 April cross-submission, SQ15.
[43] Shell, 19 March PAP submission, p5, Q5.
[44] Shell, 17 April, cross-submission, p3, SQ5.
[45] Greymouth, 17 April cross-submission, p3, SQ5.
[46] Vector, 17 April cross-submission, p4, SQ5.
[47] Todd, 17 April cross-submission, SQ5.
[48] First Gas, 17 April cross-submission, p2, SQ5

2. While we accept that undetermined factors such as tolerance levels could influence the result, we agree with Todd that the absence of associated transmission changes within the receipt zone should reduce the cost of trades, and stimulate activity; and
3. The absence of displaced gas nominations is more likely to stimulate trading than otherwise, since, as First Gas, Vector and Todd point out, shippers and welded parties can trade gas to achieve the same outcome as a displaced gas nomination.

Supplementary Agreements (SAs)

Most submitters agree with the PAP, that the proposed changes to the SA arrangements (between the VTC and GTAC) are not significant, and that the ability to also enter into SAs on the Maui pipeline is not inherently efficiency enhancing. However First Gas[49] considers that the important difference is that the GTAC would require a party requesting an SA to demonstrate the need for it. And Vector disagrees that there are no benefits from SAs being available for the Maui pipeline (although it does not explain why).

Greymouth[50] considers that existing SAs would need to be fully reviewed before transitioning into a GTAC world, and that entering new SAs would destroy integrity of the GTAC. In SQ11 of our cross-submission template we asked submitters if a review of SAs would be necessary. Genesis[51] and Todd[52] agreed with Greymouth. Vector[53] considered that all existing SAs should be honoured.

GIC response

We assume that a shipper requesting an SA under the VTC would have to explain why it is needed, so we are not convinced that this is a distinguishing feature of the GTAC. Nor is it explicit in the GTAC that such evidence would be published (which would be a positive distinguishing feature), so we see no improvement in that regard.

As discussed in Appendix D, section D.2, SAs have the potential to be efficiency enhancing on the Maui pipeline, but First Gas may also agree to an SA that does not improve efficiency. Although any new SA would be published, it is not subject to any prior independent assessment, so we find no reason to assume that their availability on the Maui pipeline is necessarily an improvement.

We agree with Greymouth that any SA that would transition across to the GTAC would need to be reviewed by the parties for consistency with the new arrangements and, in all likelihood, at least some provisions would need to be renegotiated. We do not have access to, and have not reviewed, those SAs. For the purpose of our comparison between the New Code and the MPOC and VTC, First Gas already has wide discretion to negotiate SAs, and would have similarly wide discretion under the GTAC, so we do not consider that the renegotiation of these contracts is necessarily a positive or negative factor.

2.3 Pricing: submissions

Basic pricing structure

In its submission on the PAP, Methanex[54] disagrees that peaky usage should be discouraged only in congestion. It considers that peaky and/or unpredictable usage should always be discouraged

[49] First Gas, 19 March PAP submission, p43, Q14.
[50] Greymouth, 19 March PAP submission, para 2.
[51] Genesis, 16 April cross-submission, p5, SQ11.
[52] Todd, 16 April cross-submission, SQ11.
[53] Vector, 16 April cross-submission, p6, SQ11.
[54] Methanex, 19 March PAP submission, pp 6-7.

to facilitate pipeline management and maintain stable linepack/pressure. We sought views on this specific issue in cross-submissions. Most submitters (eg Genesis[55], Greymouth[56], Todd[57], Vector[58]) support the approach set out in the PAP, while MGUG[59] notes the importance of distinguishing between seasonal peakiness and intraday peakiness.

First Gas[60] comments that Methanex's underlying concern may be to ensure appropriate price signals when "*gas energy*" (rather than transmission "*capacity*") is scarce. It notes that under MPOC, the two concepts are linked, whereas they are separated under the New Code (ie receipt point (RP) nominations can be made independently of delivery point (DP) nominations).

GIC response

We note that most submitters agree with the PAP that peak period usage should not be discouraged until there is scarcity (ie they prefer the daily GTAC charge for daily capacity requirements rather than the annual VTC charge for annual peak capacity requirements).

We consider Methanex's concern about the possible effect of peaky usage on line pack relates more to intra-day peaking, and address it in relation to hourly overrun charges below.

Daily overrun (OR) and underrun (UR) charges

Submitters broadly agree with the PAP assessment that, in an uncongested situation, the daily OR/UR charges would likely prompt shippers to direct more effort towards refining their nominations than is justified.

Some submitters (eg First Gas[61], Vector[62]) consider the charges would not be a concern if they are adjusted to become symmetrical (as has been subsequently proposed by First Gas). Other submitters (eg Genesis[63], Greymouth[64], MGUG[65]) consider the proposed fee levels to be punitively high (as well as being asymmetrical). Genesis[66] notes that the OR/UR fees could be around $4/GJ while the ERM fee is $0.60/GJ. Given the objectives of the fees, it considers that the relativity is wrong, and has not been fully considered.

Vector[67] is also concerned that the higher fees intended to apply in congested situations should only apply when strictly necessary, and not at Congested DPs at times when there is no actual congestion. In SQ3 of the cross-submissions template, we sought other views on this potential concern. First Gas[68] indicates that the intended outcome is for the higher charges to only apply during periods of forecast congestion, and states that if the current drafting is unclear or does not achieve this outcome, it would consider changes.

[55] Genesis, 16 April cross-submission, SQ2.
[56] Greymouth, 16 April cross-submission, SQ2.
[57] Todd, 16 April cross-submission, SQ2.
[58] Vector, 16 April cross-submission, SQ2.
[59] MGUG, 16 April cross-submission, p4, SQ2.
[60] First Gas, 16 April cross-submission, SQ2.
[61] First Gas, 19 March PAP submission, p41, Q3.
[62] Vector, 16 April cross-submission, p10, SQ19.
[63] Genesis, 19 March PAP submission, p8-9, SQ19.
[64] Greymouth, 16 April cross-submission, p8, SQ19.
[65] Major Gas Users Group, 16 April cross-submission, p9, SQ19.
[66] Genesis, 16 April cross-submission, p8, SQ19.
[67] Vector, 19 March PAP submission, Q3.
[68] First Gas, 16 April cross-submission, p2, SQ3.

GIC response

We note that all submitters agree that the OR/UR fee asymmetry should be removed by lowering the underrun penalty, and that the higher incentive fees that would apply at a Congested DP should only apply at times when there is congestion (eg peak demand days).

We agree with the submissions (Genesis[69], Greymouth[70], MGUG[71]) that consider that both OR and UR fees are unnecessarily high, and likely to encourage inefficient behaviour in non-congested situations.

We note First Gas[72] has stated that "*GTAC incentives can be recalibrated to maintain (rather than increase) incentive charge revenue. This is potentially achieved by changing the incentive charge applied to underruns*". If First Gas elects to recalibrate the incentives, we would not necessarily view maintenance of the current incentive charge revenue in the VTC as the best measure of efficiency effects, because it is an "*apples with oranges*" comparison.[73] However, we do agree with First Gas that setting the incentive charges is a matter of "*striking the right balance between the accuracy of nominations and the administrative effort*."[74]

We also agree with Genesis that the relativity of OR/UR fees and the ERM fee requires further consideration in the design.

Hourly overrun charges

Methanex[75] considers that the PAP too lightly dismisses problems with the hourly overrun charges. It considers these problems are not limited to the level of charges (that can be easily fixed), but include the selective application of the charge (only applying to Shippers to large Dedicated DPs), and First Gas' discretion to agree Specific HDQ/DDQ allowances.

Methanex also considers that peaky usage should always be discouraged. In SQ2 of our cross-submissions template we sought the views of other stakeholders on this matter. Genesis[76] disagrees, and presents an analysis which suggests that hourly overrun charges are not necessary at the Huntly DP. It is unclear whether the same type of analysis at other dedicated DPs would show similar or different results. Greymouth[77] and Todd[78] suggest that peaky usage should not be penalised unless it impacts on other users. Shell[79] also suggests this, proposing that the MPOC type liquidated damages arrangement could be considered. Vector[80] also disagrees with Methanex and notes that a number of pre-conditions apply before peaking charges are applied under the MPOC. First Gas[81] suggests that Methanex's concerns may relate to gas energy rather than pipeline capacity.

In its cross-submission, Methanex[82] clarified its position. It believes that under the MPOC, peaking behaviour is fairly and consistently addressed, and suggests that a similarly broad and consistent hourly overrun incentive could apply to all DPs and RPs. It recognises that this may be

[69] Genesis, 19 March PAP submission, p8-9, SQ19.

[70] Greymouth, 16 April cross-submission, p8, SQ19.

[71] Major Gas Users Group, 16 April cross-submission, p9, SQ19.

[72] First Gas, 19 March PAP submission, p3.

[73] As discussed in Appendix D, section D.4, under the VTC pricing structure shippers would optimally seek to incur some incentive charges, whereas under the New Code users would optimally seek to pay no incentive charges.

[74] First Gas, 19 March PAP submission, p3.

[75] Methanex, 19 March PAP submission, p6-7, Q3.

[76] Genesis, 16 April cross-submission, p2, SQ2.

[77] Greymouth, 17 April cross-submission, p2. SQ2

[78] Todd, 16 April cross-submission, SQ2.

[79] Shell, 16 April cross-submission, p2, SQ2.

[80] Vector, 16 April cross-submission, p3, SQ2.

[81] First Gas, 16 April cross-submission, p1-2, SQ2.

[82] Methanex, 16 April cross-submission, p2, para 1.2.

difficult to apply at non-Dedicated DPs, it should be done up to the point where the cost of doing so outweighs the benefit.

GIC response

We note that there is a degree of consensus that any peaking charges should reflect costs. We consider that the Genesis analysis, which indicates that peaking charges for Huntly have no physical rationale based on recent data, is a significant contribution to the debate. While this analysis has yet to be fully tested, we agree with Genesis that we should view the hourly OR proposal as more negative than we did in the PAP.

We have considered Methanex's view that the treatment of peaking behaviour in the MPOC is more fair and consistent than the GTAC. In the PAP we considered that the application of hourly overrun charges at dedicated delivery points, but not shared delivery points, reflected the practical difficulties in identifying the causer(s) of overruns when many of the downstream sites do not have meters capable of logging hourly consumption.[83] However, we agree with Methanex that the approach in the MPOC, where peaking charges are capable of being incurred by a welded party at any physical welded point, could be more fair and consistent

We also note Vector's observation that peaking charges under the MPOC are subject to a pre-condition that Line Pack falls below the Low Line Pack Threshold on a day, so they only apply when they are contributing to a pipeline issue.

Congestion management charges

See discussion on congestion management in section 2.8 below.

ERM charges

The PAP provided an analysis of ERM charges (see PAP, p 114-117, section A.8, largely reproduced in this FAP at Appendix D section D.5) concluding that that they would improve efficiency. Some submitters think the analysis is reasonable (eg Contact[84], Genesis[85], Todd[86]), others disagree with the methodology. For example, First Gas[87] notes that the choice facing a shipper is not based on the ERM charges alone, but must also take into account the possibility of First Gas taking a balancing action. And Greymouth[88] argues that comparing ERM charges and spot market spreads is invalid because the latter includes a title transfer, and the former includes inherent uncertainty arising from the D+1 allocations.

Genesis[89] considers ERM charges are unfair unless targeted to those who are contribute to a pipeline issue.

More broadly, Shell[90] considers the ERM charges to be an "*unproven and unconventional*" mechanism for incentivising balancing (see also discussion on balancing in section 4.5), while Greymouth[91] considers that they may be a penalty, and MGUG[92] believes they will interact with the gas trading market to create gaming incentives in a thin market.

[83] PAP, p 109.

[84] Contact, 19 March PAP submission, Q20.

[85] Genesis, 19 March PAP submission, Q20.

[86] Todd, 19 March PAP submission, Q20.

[87] First Gas, 19 March PAP submission, Q20.

[88] Greymouth, 19 March PAP submission, Q20

[89] Genesis, 19 March New Code submission, p2-3, Q3.

[90] Shell, 19 March PAP submission, Q3.

[91] Greymouth, 19 March PAP submission, Q3.

[92] MGUG, 19 March PAP submission, Q6.

Regarding the asymmetry of the charges. Trustpower[93] raises a concern that it may create upward pressure in the gas spot market by incentivising market offers to be $0.60/GJ above the last trade, while bids will only be $0.20/GJ below the last trade. SQ9 of our cross-submissions template sought stakeholder feedback on the matter. In its cross-submission Shell[94] considers Trustpower's concern is valid. However, Genesis[95] doubts that Trustpower is right, since its concern implies that the party making the bid or offer would know that the counterparty intended to buy or sell gas for the purposes of balancing. Todd[96] similarly distrusts Trustpower's reasoning, arguing that the ERM charges would act as a cap on the acceptable buy/sell spread rather than a floor.

First Gas[97] points out that the charges were based on historic cash-out, so the asymmetry is already present.

GIC response

In relation to the effect of ERM charges on spot market prices, we agree with Trustpower that ERM charges may affect bids and offers in the spot market at times, but we think the interactions are likely to be more complex than suggested. In essence, the ERM mechanism can be viewed as a "*no notice*" park and loan service. By paying the ERM charge, a pipeline user can "hold" its excess running mismatch until the following day (assuming First Gas does not take a physical balancing action). It will presumably do this if the difference between current and expected future spot prices is large enough to justify payment of the relevant ERM charge(s). Furthermore, the asymmetry in ERM charges means there is more likelihood of "park" than "loan" activities being undertaken. This is likely to mean that the pipeline operates towards the higher end of the acceptable pressure range.

If users continue to seek to "park" ever more gas each day, it will trigger a physical balancing action to disgorge surplus linepack gas, which would put downward pressure on the spot price.

As regards the incentive charge asymmetry pointed out by First Gas under the MPOC, we note that this reflects historical cash-out prices, rather than being a deliberate design feature of the MPOC.

In regard to the claimed unfairness of ERM charges, we consider that they are intended to encourage good behaviour (improved balancing) rather than punish bad behaviour (contributing to a pipeline issue). We do not consider that as unfair.

While we accept that our ERM charge analysis (see Appendix D, section D.5) is simplistic, we still believe that it provides a reasonable basis for concluding that they would reduce the instances where users inefficiently incur costs to balance their positions.

Rebate mechanism

Some submitters (eg Todd[98]) agree with assessment of the rebate mechanism in the PAP. In contrast, MGUG[99] considers that a portion of any incentive fee rebate is likely to be captured by retailers, because they can "pass through" incentive charges but end-users will not have full knowledge of their shipper's portfolio position (eg to account for offsetting effects of different end-users in a delivery zone). This issue already exists, but MGUG is concerned that incentive

[93] Trustpower, 15 March submission, p8, s8.1.3.

[94] Shell, 16 April cross-submission, SQ9.

[95] Genesis, 16 April cross-submission, SQ9.

[96] Todd, 16 April cross-submission, SQ9.

[97] First Gas, 16 April cross-submission, p4, SQ9.

[98] Todd, 19 March PAP submission, p1, Q2.

[99] MGUG, 19 March PAP submission, Q3.

fees (and revenue capture by retailers) may be higher under the New Code because incentive fees would be outside First Gas' revenue cap.

Trustpower[100] considers that the rebate scheme means that smaller shippers will face higher incentive charges than larger shippers (because rebates are proportional to shares of lower DNC charges).

First Gas[101] disagrees with the PAP's assessment that it is unfair to exclude parties using supplementary agreements from rebate eligibility (since rebates will be allocated based on DNC). First Gas states that this exclusion already applies under the status quo.

GIC response

In section 2.11 we summarise the points made by Truspower's economic adviser, The Lantau Group. As noted in point 10 of that section, The Lantau Group's report concludes that the PR rebate mechanism makes the marginal cost of capacity different for each shipper, frustrating competition. In the PAP we also concluded that the PR rebate mechanism would result in different marginal prices signals for different retailers. However, we concede that this problem is also a feature of the current rebate arrangements, with the main difference being that VTC rebates occur with a lag of more than 12 months. Arguably, the more immediate rebate under the New Code may affect competition to a larger extent (see Appendix D, section D.6).

However, we expect the size of the incentive fee pool to be the more relevant consideration. The MGUG[102] submission on the PAP appears to support this view. It notes that incentive fees under the New Code will fall outside the revenue cap, making First Gas financially indifferent to their level (at least in the short run). It perceives a risk that incentive fees may be unduly high. In addition, gas consumers are reliant on retail competition to obtain their fair share of rebates – and would be exposed to an increased risk of not receiving the full value of the rebate.

We have some sympathy with this view, but consider the incentive fee level, rather than the rebate mechanism, to be the more concerning problem. In that respect, we expect that reducing OR and UR fees to an efficient level (as noted above) should reduce this concern.

In relation First Gas' point regarding rebate ineligibility for those using supplementary agreements, we agree there is no substantive change from the status quo. We have taken this into account in the final assessment.

2.4 Energy quantity determination: submissions

Submitters generally agreed with the assessment in the PAP, that:

1. little would change regarding DDRs, HDRs and gas composition data;
2. having a single set of metering requirements across the system should modestly improve efficiency and reliability, but it is a concern that these were not available as part of the 8 December New Code package; and
3. the 9 month interval before special tests is worse than under the MPOC (60 days) or VTC (90 days).

However, Methanex[103] considers that, without sighting the metering requirements, Gas Industry Co cannot safely draw any conclusion. Methanex believes the outcome would likely be worse,

[100] Trustppower, 15 March PAP submission, p7.

[101] First Gas, 19 March PAP submission, p35.

[102] MGUG, 19 March PAP submission, Q21.

[103] Methanex, 19 March PAP submission, p7, Q4.

because the metering requirements would be outside the code, reduce rights to call for unscheduled meter testing, and place uncertain obligations on meter owners.

Shell[104] is concerned that changes to the metering requirements may require it to incur costs.

GIC response

We accept that there is a measure of unfairness if parties to existing (known) arrangements do not know exactly what they will be replaced with, or are not provided with assurance that there is an appropriate process for making changes to those arrangements. Our concern is heightened where participants could incur costs as a result of changes to existing arrangements. We accept that MPOC parties could have less influence on the content of metering requirements if they are to be outside the code and the code does not include an appropriate process for making changes to the metering requirements.

2.5 Energy allocation: submissions

The majority of submitters either make no comment or agree with the analysis in the PAP.

However, Greymouth[105] and Vector[106] express concern that either the D+1 wash-up agreement needs to be progressed before the New Code is finalised, or Gas Industry Co needs to formalise the daily allocation processes within the DRRs.

MGUG[107] does not agree with Gas Industry Co's assessment, considering that the "*exclusive use of OBAs [operational balancing agreements] under MPOC … helps avoid the issue of over/under-run on daily nominations*". MGUG considers that OBAs under MPOC are a positive feature that outweigh the mixed arrangements under the New Code.

Shell[108] and Methanex[109] would both prefer alternative arrangements[110], but in this FAP we will focus on their reasons why they believe the New Code proposals are inferior to current arrangements. In essence they consider that it is impractical for the allocation method to be determined by the agreement of (multiple) shippers using the relevant RP or DP, and that the optionality of allocation method would be a source of uncertainty, complication and dispute. In particular, Maui pipeline interconnected parties are better placed than shippers to manage physical flows, including balancing and curtailment. Furthermore, Methanex regards the drafting of the OBA party rights and obligations under the New Code to be inconsistent and incomplete and, therefore, inferior to the existing arrangements under the MPOC.

Shell also opines that Gas Industry Co erred in considering that energy allocation arrangements had only weak relevance to criterion 17 (which relates to upstream reconciliation arrangements, ie energy allocations at pipeline receipt points).

[104] Shell, 19 March PAP submission, p4, Q4.

[105] Greymouth, 19 March PAP submission, Q5.

[106] Vector, 19 March PAP submission, Q5.

[107] MGUG, 19 March PAP submission, p8, Q5.

[108] Shell, 19 March PAP submission, p5, Q5.

[109] Methanex, 19 March PAP submission, p7, Q5.

[110] Our analysis is of the New Code proposal as it stands, but we appreciate that both Shell and Methanex would prefer that it looked different. In respect of allocation, they would prefer that OBAs are remain compulsory, at least for the Maui pipeline, or that it is left to the interconnected party to determine the allocation mechanism (with shippers formally agreeing to that methodology before being able to nominate to/from that point). And Shell considers that the proposal would be improved if the GTAC prescribed a list of approved allocation mechanisms, and that the transaction management system should publish a graphical comparison of aggregate approved nominations ("*scheduled quantity*") with metered flow throughout the gas day.

Shell expresses concern that the lack of a mechanism for displaced gas nominations (as exists in the MPOC) has *"negative implications for gas trading"* although it did not explain the basis of this assertion.

In the PAP[111], we concluded that Methanex[112] had legitimate concerns when it noted that it would not elect for an OBA under the New Code because it: would not be entitled to agreed hourly profiles (AHPs); would not have access to the meter testing aspects of New Code s5; and, could not request confirmation that another interconnected party is meeting its gas quality obligations. In response, First Gas[113] notes that:

1. the concerns are more related to Methanex's preference for MPOC-style OBAs rather than issues concerned with energy allocation; and
2. it considers that the issue could be resolved *"…if the terms of interconnection are clearly separated from allocation of gas"*.

GIC response

Regarding wash-up agreements, we discuss associated agreements under section 6.2. Our view is unchanged from the PAP where we concluded that the wash-up arrangements would very likely be quite similar to the current arrangements, and that we would be prepared to make a recommendation for any consequential amendments to the DRR, if and when necessary. However, we agree that the ideal situation would be for the wash-up agreement to be agreed well before a new code is implemented. At the same time, it is clear that the wash-ups are a simple, administrative process that, primarily, reflects the effects of changes in downstream allocations. As a result, there should be no reason for parties to hold-up resolution of a wash-up agreement.

Regarding the allocation method, we continue to believe that introducing a choice of allocation methods is positive. However, we concede that shippers are not always best placed to make the choice. In particular we agree that, for RPs and DPs with a single injecting party or end-user, it is interconnected parties who have the long term interest in the allocation method, and so they should be permitted to choose it.[114]

We also remain concerned about the perceived shortcomings of the OBA (no entitlement to AHPs etc). While we appreciate that, as First Gas points out, the issues may be resolved, we think that the debate suggests that the New Code provisions lack clarity.

2.6 Balancing: submissions

In relation the generally positive assessment of balancing in the PAP there was a wide range of responses from those who agree to those who strongly disagree. One aspect of the New Code balancing arrangements that appears to have broad support is the change to a single balancing zone as opposed to the current arrangements where balancing is resolved under the MPOC at each Welded Point[115] and then under the VTC for each balancing pool.

[111] PAP, p42.

[112] Methanex, 22 January New Code submission, para 24.

[113] First Gas, 19 March PAP submission, p41, Q5.

[114] While shipper(s) would no doubt be inclined to select the allocation method that an interconnected party prefers, it seems simpler to allow the interconnected party to select it.

[115] While there is a grouping of some TP Welded Points under the MPOC, this is an exception.

Balancing tolerances

Several parties (Genesis[116], Greymouth[117], MGUG[118], Todd[119], and Vector[120]) raise concerns about balancing tolerances, including First Gas' broad discretion to set those tolerances. However, First Gas[121] notes that the extent of its discretion would be tempered by the obligation on it to act impartially.

In SQ6 of the cross-submission template, we asked whether the obligation on First Gas to act impartially mitigated the concerns about the extent of First Gas' discretion to set balancing tolerances.

Genesis[122] thinks that even if First Gas acts impartially, there would be winners and losers from any allocation of balancing tolerances. Todd[123] echoes this concern, saying that it would prefer to have the tolerance setting mechanism defined in advance and subject to the code change process. Todd also suggests that, due to the issues being complex, the process of tolerance-setting would benefit from input broader than First Gas' own analysis. Vector also suggests that "*…review and input from parties other than First Gas"* is required.

Greymouth[124] also considers the New Code drafting is *"wide"* and allows First Gas to set tolerances so as to drive business to its unregulated activity (Ahuroa gas storage).

Methanex[125] thinks the wording of GTAC s2.6 means that First Gas wouldn't have to deal with shippers on *"an arms' length basis"* in respect of setting tolerances. And Shell[126] notes that the impartiality obligation would only provide protection to shippers, not interconnected parties.

First Gas'[127], on the other hand, considers that the discretion afforded it would be *"…integral to our ability to do a good job as system operator"* and *"…allow parties to gain benefit from the flexibility of the gas transmission system … while also ensuring that the system maintains high levels of reliability…"*.

GIC response

We note that First Gas currently holds considerable discretion to influence balancing outcomes. For example, it frequently grants running operational imbalance limit (ROIL) multipliers in respect of RPs on the Maui pipeline. But in respect of the balancing tolerances, these are currently known and contained in MPOC Sch 7. In contrast, the New Code tolerances are unknown and would not be contained in the GTAC. We consider that it is unreasonable that the tolerance levels (or at least the principles or methodology for deriving them) have not been specified in the New Code. Also, absent any other information about First Gas' approach to tolerances, we must recognise the potential for them to be set at inefficient levels.

[116] Genesis, 19 March PAP submission, p3, Q6.
[117] Greymouth, 19 March PAP submission, Q6.
[118] MGUG, 19 March PAP submission, p8, Q6.
[119] Tod, 19 March PAP submission, p5, Q6.
[120] Vector, 19 March PAP submission, Q6.
[121] First Gas, 19 March PAP submission, p42, Q6.
[122] Genesis, 16 April cross-submission, p4, SQ6.
[123] Todd, 16 April cross-submission, SQ6.
[124] Greymouth, 17 April cross-submission, SQ6.
[125] Methanex, 16 April cross-submission, p4, SQ6.
[126] Shell, 16 April cross-submission, p4, SQ6.
[127] First Gas, 16 April cross-submission cover letter, and p3, SQ6.

ERM charges

Vector[128] considers that the relationships between ERM charges, ERM tolerances, and park and loan fees is such that First Gas should remove itself from setting the positive and negative ERM charges, and that an existing formula in the MPOC could be adapted and used as the basis for adjusting ERM charges.

Trustpower[129] considers that the proposed ERM charges would incentivise market offers to be $0.60/GJ above the last trade, while bids will only be $0.20/GJ below the last trade.

MGUG[130] suggests that with the ERM mechanism, the TSP would face greater uncertainty about when a party will self-balance (ie clear some or all of its running mismatch). MGUG also considers that the interplay between ERM charges and the thin gas market could create opportunities for gaming.

Greymouth[131] advances the view that, because ERM charges do not transfer title to gas they are *"…more akin to a penalty…".*

Methanex[132] and Shell[133] strongly disagree with the PAP balancing analysis.

1. Shell argues that there is no need for a wholesale change to the current balancing arrangements since the problems the PAP attributes to those arrangement are overstated, and no justification is provided as to why the New Code arrangements would be better;
2. Methanex believes that interconnected parties and First Gas are generally better placed to manage the physical state of the pipeline than shippers, and this is a particular concern when line pack limits are approached. Shell also anticipated the New Code arrangements would lead to more pressure fluctuations, imposing costs on producers, increasing the frequency of critical contingencies and reducing spot market trading;
3. Methanex notes the MPOC s3 principles[134], which establish what is required of a Reasonable and Prudent Operator (RPO) in respect to balancing, would be lost, and that GTAC s8.5 sets no objective standards (safe, efficient, reliable) to determine what the linepack limits should be.

<u>GIC response</u>

Given that the volumes cashed-out by First Gas under the MBB balancing arrangements are significantly greater than the balancing volumes transacted by First Gas itself, we conclude that the MBB arrangements in the MPOC result in unnecessary transactions (a view expressed in our original assessment of the MBB code change request). The level of cash-outs suggest that shippers and welded parties are cashed-out at prices that are acceptable to them (ie they accept cash-outs as a reasonable way to meet their primary balancing obligations).

By contrast, under the proposed New Code balancing arrangements, shippers and interconnected parties would be cashed-out only in response to First Gas having undertaken a balancing action. On other days they would face ERM charges, without any adjustment to their running mismatch positions. So each day they must choose whether to reduce their respective running mismatch positions or to face the risk of either being cashed-out or being levied further ERM charges. We consider that these incentives would incline shippers and welded parties to be

[128] Vector, 19 March PAP submission, Q6.

[129] Trustpower, 15 March PAP submission, para 8.1.3.

[130] MGUG, 19 March PAP submission, p8, Q6.

[131] Greymouth, 19 march PAP submission, Q20.

[132] Methanex, 19 March PAP submission, p8-9, Q6.

[133] Shell, 19 March PAP submission, p6, Q6.

[134] Methanex notes that the principles are similar, but softer, than those in Chapter III, Article 6 of the EU Network Code.

more proactive in primary balancing. The PAP therefore concluded that the New Code balancing regime would likely see more spot market activity.

With regard to MGUG's concern that the New Code would increase uncertainty for First Gas as to whether, and when, pipeline users might elect to clear their positions, we would expect that, over time, First Gas would develop a clear understanding of how pipeline users would respond. Gas Industry Co remains of the view that introducing the ERM charge will provide pipeline customers with arrangements that incentivise them to balance themselves rather than be subject to repeated incentive charges that confer no title to gas.

Greymouth is not alone in suggesting that ERM charges are more akin to a penalty. However, there is a reasonable counter-argument that the ERM charge represents the cost of providing a service, ie unauthorised park or loan. And if evidence emerges that the ERM charges are not at an efficient level, they can be modified through the code change process.

We are not persuaded by arguments that the daily cash-out aspect of the MPOC balancing arrangement is superior because it is common practice overseas. Our market has significant differences. For example, the relative thinness of the NZ trading market has resulted in MPOC daily cash-outs being priced using the default rule most of the time. However, we do accept that interconnected parties and First Gas are generally more able to manage the physical state of the pipeline than shippers. But Shippers have the relationship with end-users, so are best placed to adjust their nominations to reflect customer demand.

2.7 Curtailment: submissions

Submitters generally agree with the PAP assessment of curtailment arrangements. However First Gas[135] thinks the New Code curtailment arrangements cannot be less fair than the current arrangements since both the MPOC and VTC require immediate compliance with an operational flow order (OFO). Also, GTAC s9.5 provides for a shipper to use its best endeavours to comply with an OFO *"in the shortest practicable time"* whereas the VTC s10.2 specifies *"immediately (acknowledging in the case of major plant the need to shut down in accordance with safe operating procedures)"*. Nonetheless, First Gas[136] agrees with the overall assessment, that it is unreasonable to expect that shippers can always comply with an OFO.

Methanex[137] and Shell[138] both note that interconnected parties are better placed to respond to OFOs than shippers. Methanex particularly questions the veracity of statements in the PAP claiming that the complexity of the MPOC curtailment algorithms would be avoided, given that the MPOC specifies a simple *pro rata* curtailment. It also cautions against attributing any shortcomings of OATIS to the MPOC.

Methanex also notes that the PAP did not expressly address the implication of replacing MPOC s15.2 with an option for GTAC shippers to request an additional intra-day (ID) nomination cycle. In its opinion, interconnected parties are better placed to respond to emerging physical constraints than shippers; the coordination of multiple shippers at a RP or DP is complicated; the ability of First Gas to reject a request adds uncertainty; and, the added time lag makes the outcome more uncertain

GIC response

We continue to believe that it is unfair to expect that a shipper would always be able to comply with an OFO, and, if it fails to comply, to deem it not to have acted as an RPO, and to indemnify

[135] First Gas, 19 March PAP submission, p36 OFO compliance, and p42, Q7.

[136] First Gas, 19 March PAP submission, p7 Curtailment.

[137] Methanex, 19 March PAP submission, p 9-10, Q7.

[138] Shell, 19 March PAP submission, p7, Q7

First Gas for any loss. However, we agree with First Gas that it cannot be less fair than the current arrangements since both the MPOC and VTC require immediate compliance with an OFO.

Regarding the complexity of the MPOC curtailment algorithms claimed in the PAP, we acknowledge that the claim was made without a clear explanation of where the complexity arose. The MPOC allows for several different types of nominations; daisy chain, pooled (including the possibility to rank nominations to/from the pool) and displaced. The MPOC also distinguishes between Category A Nominations (part of a Nominated Quantity within a Shipper's Authorised Quantity) and Category B Nominations (part of a Nominated Quantity that is not either a Category A Nomination or a Nominated Quantity of Balancing Gas). The MPOC also sets out certain curtailment priorities depending on the nomination cycle, the type of nominations and the operational conditions at any given point in time. Such operational conditions include whether there is a general shortage of pipeline capacity or a particular shortage at an individual interconnection point. Other relevant factors include whether the curtailment needs to be initiated by either First Gas or the welded party outside of set nomination cycles (sections 15.1 – 15.2). So, we consider that the claim in the PAP, that the proposed GTAC curtailment arrangements would be less complex, is essentially correct. The key reasons are that:

1. receipt and delivery nominations would not be linked;
2. curtailment actions at the receipt zone would be balanced by the shipper in the delivery zone or they would go into mismatch;
3. curtailment would be *pro rata* to the most recently approved nominated quantity;
4. the displaced gas nomination concept would no longer apply; and
5. the gross and historical usage allocation would no longer feature.

Regarding the loss of MPOC s15.2, we accept that the PAP did not adequately respond to the concerns expressed by Shell[139] and Methanex[140] in their New Code submissions.

Shell succinctly described the issue, and its view of the consequences:

> Under the current MPOC, the Welded Party is permitted to curtail nominations under a MPOC S15.2 Force Majeure notification. Provided this is advised to the system operator ~15-30 minutes before the end of each hour, it can be enacted quickly, curtailing to Deemed Flow. This approach makes sense in that by reducing the scheduled quantity it efficiently communicates to all operators in the system that a source of supply (or demand) is down.
>
> However, under the proposed GTAC, this mechanism has been replaced with the Extra Nominations Cycle. Under this mechanism all parties must be given at least 60 minutes prior warning. This delay means that for any outage that requires a curtailment, there will be an hours delay and uncertainty in enacting the curtailment. This will:
>
> - Increase risk to all pipeline users, in that the impact of outages may be exacerbated.
> - Place additional financial risk on the Interconnected Party in terms of deemed flow that cannot be delivered (exposure to excess imbalance charges or cash-outs).
> - Increase workload for the operator's nominations team (who will have to wait until the nomination cycle is in effect, and then process it). Previously they could advise

[139] Shell, 22 January New Code submission, p4, Section 4: Nominations.

[140] Methanex, 22 January New Code submission, s4–Nominations.

the pipeline operator, and then concentrate on managing other aspects of the outage.

- Lead to an uncertain result depending on the response from gas customers taking gas from the receipt point.

Methanex makes similar points, in addition noting that interconnected parties are generally best placed to react to an emerging physical constraint, and that delays would be introduced while shippers are notified of the issue and request the additional nominations cycle, for First Gas to consider and approve the request, and followed by a minimum of two hours delay for the associated nominations to take effect.

We accept that these concerns are valid, in some if not all circumstances, and that we should recognise that the outcomes may be moderately less reliable as a result. We have amended our assessment accordingly.

2.8 Congestion management: submissions

Submitters have mixed views on the PAP assessment of congestion management issues.

MGUG[141] disagrees that the congestion management products are a substantial improvement and thinks the benefits are more theoretical than real until the rules around PRs are known.

Some submitters share the concerns in the PAP about the position of mass-market retailers under PRs (eg Contact[142], Genesis[143], Greymouth[144], MGUG[145], Trustpower[146]). For example, Greymouth suggests that being able to obtain annual capacity well in advance of when it is required, and the presence of grandfather rights, means that a retailer can more pro-actively manage its risk under the VTC.

Other submitters feel the PAP assessment was too negative, and that concerns regarding the ability of mass-market retailers to secure PRs are overstated. Shell[147] considers the arrangements to be an improvement over the VTC. Todd[148] considers that PRs are workable, and thinks shippers serving commercial customers may find it more difficult to judge the value of PRs than those serving residential users. And First Gas[149] considers that the PAP *"incorrectly concludes that PRs lead to worse outcomes for customers that are unable to reduce demand"*, because it doesn't properly consider the difficult position that such shippers already face under the VTC.

GIC response

Although we agree with submitters that it is difficult to assess some aspects of PRs until the full rules are known, the GTAC sets out some detail on PRs and specifies a process for developing the remaining detail. This enables an assessment of likely benefits and detriments to be made – albeit with some areas of judgement. In respect of other aspects of the congestion management provisions there is more certainty (such as the interruptible agreements and the removal of grandfathering).

[141] MGUG, 19 March PAP submission, Q8.

[142] Contact, submission on Preliminary Assessment of Gas Transmission Access Code, Q8.

[143] Genesis, 16 April cross-submission.

[144] Greymouth, 16 April cross-submission.

[145] MGUG, 19 March PAP submission, Q8.

[146] Trustpower, 15 March PAP submission, p7, s7.1.5.

[147] Shell, 19 March PAP submission, p4, Q8.

[148] Todd, 16 April cross-submission.

[149] First Gas, 16 April cross-submission, SQ20.

In regard to risk that mass-market retailers may be unable to secure PRs, we agree with First Gas[150] that the counter-factual, ie how a shippers would manage congestion risk under the VTC, was not adequately considered in the PAP. As First Gas point out, a mass-market shipper who does not hold capacity (be it DNC under the GTAC or MDQ under the VTC) would face overruns and potential liability both under the GTAC and under the VTC. Neither of these situations could be fully avoided. Under the VTC the shipper can try to secure capacity in the secondary market, and under the GTAC it would try to secure priority via the PR market, but the outcome is uncertain.

Our final assessment of congestion management arrangements considers all of these factors.

2.9 Gas quality and odorisation: submissions

Submitters generally agree with the PAP assessment of gas quality and odorisation arrangements. However, Methanex[151] strongly disagrees with the neutral assessment of this matter in the PAP. In SQ18 of our cross-submissions template we asked whether stakeholders consider that Methanex is correct to say that the proposed arrangements would bring a substantial reduction in First Gas' obligations to protect its customers from non-specification gas.

Vector[152] agrees that GTAC s12.11 substantially reduces First Gas obligations to protect its customers from non-specification gas. In its New Code submission it commented on this in the context of liabilities[153], rather than gas quality, and it suggested that other submitters may also have done so. We agree that at least Fonterra[154] did so, and we apologise if our delineation of the issues caused confusion on this issue.

First Gas[155] provides a point by point response to the Methanex submission on the PAP. Many of the differences arise from different legal interpretations of the MPOC clauses; Methanex believing that the MPOC places stronger obligations on First Gas to monitor gas quality.

In its cross-submission, Methanex[156] restates its view that, as an RPO under the MPOC, First Gas is required to monitor the composition of gas flows. It also explains why it believes that, if First Gas fails to comply with GTAC s12.2 (ie it does not ensure that any ICA it enters into requires the injection of only specification gas, and allow it to request the interconnected party to demonstrate that it has adequate monitoring systems etc), it will have no liability.

In relation to odorisation, First Gas agrees that the GTAC is very like the VTC, but notes that, in the event First Gas wished to cease odorisation, under the GTAC the notice period is 18 months compared to 12 months in the VTC.

GIC response

We have considered First Gas' response to Methanex's submission:

1. We agree that both the GTAC and the MPOC require an interconnected party to monitor gas quality. The GTAC requires the interconnected party to demonstrate that it has monitoring.
2. The MPOC (in particular MPOC s17.6) does not clearly require First Gas to monitor gas quality. There are express obligations on other parties to do so (eg MPOC s17.2 and 17.15). We note that there is an express statement in the VTC that First Gas will not be required to

[150] First Gas, 19 March PAP submission, p29-31, para 4.2.

[151] Methanex, 19 March PAP submission, p10-12, Q9.

[152] Vector, 16 April cross-submission, p9-10, SQ18

[153] Vector, 22 January New Code submission, para 33-37.

[154] Fonterra, 23 January New Code submission.

[155] First Gas, 16 April cross-submission p8-10, SQ18.

[156] Methanex, 16 April cross-submission, p5, SQ18.

monitor the quality of gas. Accordingly, we do not consider GTAC s12.8 to be a step backwards.

3. We agree with First Gas that, based on the structure of the 8 December 2017 GTAC, we would expect any obligation on the injecting party to mitigate to be included in an ICA. However, we think that Methanex's concern highlights the fact that, in some instances, the precise wording of ICAs is important to other system users. That is a point that we make in the supporting analysis of ICAs in Appendix D.
4. MPOC s17.7 places obligations on direct injecting parties, not First Gas. We don't agree with Methanex's view that MPOC s17.7 places an obligation on First Gas to mitigate the effects of Non-specification Gas. We do not believe there is a material omission from the GTAC.
5. We agree with Methanex that the right for shippers to seek confirmation of compliance in the GTAC is more limited than the right allocated to welded parties in the MPOC given the introduction of a limit to a 9 month interval in the GTAC. However we agree with First Gas that the extension of the right to shippers is positive.
6. We think that the concerns around GTAC s12.11 need to be considered together with our general comments on the liability provisions in section 4.9 and section D.8 of Appendix D, including the express indemnities that First Gas offers in the MPOC and the VTC. Unless it can be shown that First Gas caused gas to become non-specification gas, we think that GTAC s12.11 effectively excludes any liability that First Gas may have for loss that a shipper suffers in relation to the taking of Non-Specification Gas (whether the RPO standard has been breached or not). We have added this to the list of issues in section D.8 of Appendix D

We accept that our assessment in the PAP that the requirement on First Gas to act as an RPO should address Methanex's gas quality concerns, was wrong. Having reviewed the evidence provided by Methanex, Vector and First Gas, we conclude that the obligations on First Gas to protect customers from non-specification gas have, in some instances, been reduced. We have revised our assessment downwards accordingly.

We recognise that it is modestly more fair that shippers would be given a minimum 18 months' notice if First Gas decides to cease odorisation of a pipeline (GTAC s13.5), compared to 12 months under the VTC. We considered whether this was significant enough to alter our assessment but considered that, while positive, it did not quite warrant a revised assessment.

2.10 Governance: submissions

Submitters generally agree with the PAP assessment of the governance arrangements.

Methanex[157] notes that there is a consistency issue between Gas Industry Co's conclusion in relation to the timeframes for lodging change requests. Methanex does not consider that Gas Industry Co has raised sufficient concern regarding the short-term nature of the GTAC. In particular, Methanex disagreed that the length of term provides no increased certainty regarding the form of the gas transmission access arrangements. Methanex considers that Gas Industry Co has understated the consequences of changes to the confidentiality arrangements for the following reasons:

1. Interconnected parties have no confidentiality protections at all.
2. First Gas has sought to impose public disclosure requirements in respect of producer and end-user outages which may have significant commercial and legal consequences for those parties that First Gas has not considered.

[157] Methanex, 19 March PAP submission, p 12-14.

3. Where a participant considers its information is confidential the final determination on whether the information is confidential is made by First Gas at its absolute discretion.
4. First Gas is not required to provide specific confidentiality undertakings or provide a process for auditing confidentiality procedures, which are requirements set out in the MPOC.

Methanex does not agree to Gas Industry Co's neutral assessment in relation to the assignment provisions due to the exclusion of the MPOC provision regarding partial assignment.

Shell[158] mentions that there is no restriction or prescription in the GTAC as to what might be acceptable prudential arrangements under any ICA to be negotiated. It also considers that the early termination date should justify a *"substantial deterioration"*, particularly as there is no standard for what replaces the GTAC. Production assets require certainty of access. In terms of the liability arrangements, Shell has particular concerns around deeming a producer not to have acted as an RPO.

Todd[159] objects the inclusion of drafting in the GTAC that deems parties not to be an RPO. Todd provides two examples (injection of non-specification gas and compliance with OFOs) as examples of situations where participant may not be able to comply for reasons outside that participant's control.

Trustpower has raised a number of issues in relation to governance:

1. it considers the use of advisory groups to be beneficial;
2. there should be a more targeted set of regulatory objectives to guide the development of an access code;
3. the need to adopt reasonable terms and conditions of access having regard to the cost and benefit of alternatives;
4. advantages of a multilateral monitoring and compliance regime for what are multilateral obligations;
5. the prohibitive costs of self-enforcement/dispute resolution;
6. the value of having a set of access arrangements approved by the Minister as a further check and balance on the industry design process; and
7. the risk of needing authorisation under the Commerce Act.

Vector does not agree that the code change process under the GTAC is materially better than the VTC change process. The GTAC is a commercial contract and decisions on change requests should rest with the signatories. Together with the issues regarding the liability provisions, that should change the assessment from a *"moderate"* to a *"substantial"* deterioration.

GIC response

We agree with Methanex's view that there is a consistency issue between the bottom-up and top-down analysis in relation to the code change provisions. The top-down analysis does not acknowledge that some of the timeframes have a negative impact on fairness. We have amended the top-down analysis to address this issue.

Our response to Methanex's various concerns around the confidentiality provisions is as follows:

[158] Shell, 19 March PAP submission, p7 and 9.

[159] Todd, 19 March PAP submission, p10, Q18.

1. We think the concern regarding the absence of confidentiality arrangement for interconnected parties needs to be considered with our general concerns regarding lack of detail regarding the terms of ICAs discussed in Appendix C1.
2. We have considered Methanex's concerns regarding GTAC s7.13(g), which proposes that ICAs include an obligation that Interconnected Parties disclose outage information that would be published on OATIS. Firstly, as we have mentioned in our assessment of interconnection agreements in Appendix D section D.1, GTAC s7.13(g) is quite loosely drafted, so it is difficult to be certain regarding the information that is required to be disclosed. In our view, that is an issue reflected in our analysis of ICAs. Methanex's concern is GTAC s7.13(g) may require the disclosure of information that may have commercial and legal consequences. Our view is that transparency around significant plant outages would be beneficial for the operation of the gas transmission system and the wholesale gas market. Therefore, in principle, we would consider disclosure of that information to be an improvement. In the absence of specific detail regarding the nature of the information to be disclosed, or Methanex's concerns with the disclosure of that information, we cannot reach a firm view on whether there is an improvement or detriment when compared to the current codes. We do not consider this matter to have a material impact on our assessment of the governance arrangements as it is more relevant to our assessment of the terms of ICAs.
3. The PAP agreed that the determination of whether information is confidential under the MPOC was preferable (ie the disclosing party, acting reasonably determines whether the information is confidential). That contributed to our view that the confidentiality arrangements in the GTAC are modestly less fair.
4. We continue to hold the view that there does not seem to be a need for the GTAC to include the ring-fencing provisions in the MPOC for the reasons discussed in the PAP. We do not see the absence of those provisions from the GTAC as providing any material detriment. However, we agree with Methanex that there are some additional issues that we did not identify in the PAP. The following additional concerns around the confidentiality provisions have been added to the list of concerns that we identified in the PAP[160]:

   (a) The MPOC is clearer regarding the obligation on First Gas not to disclose confidential information.

   (b) The ability of a shipper or an interconnected party to appoint an auditor to undertake an audit of First Gas' operating procedures in MPOC s24.6 appears to have merit, particularly in incentivising appropriate behaviours. An equivalent right is not included in the GTAC.

We agree with Shell and Methanex that the term of the GTAC is unreasonably short. In the PAP we considered the short term of the GTAC to have a modest impact on efficiency. Shell and Methanex are of the view that short-term nature of the GTAC should be considered to be a substantial deterioration. We agree with Methanex's comment that we placed too much emphasis on the change process providing stakeholders with no certainty regarding the form of the access arrangements. If a party did wish to change the terms of the GTAC it would require consultation and a supporting recommendation by Gas Industry Co. We still hold the view that the term is an improvement on the annual renewal process in the VTC, which requires an inefficient annual vote to extend the term of that agreement. However, the short-term nature of the New Code means that the improvement over the VTC is not significant. A four year term does seem short given the level of industry investment in development of the New Code and the long-life of the assets and associated contractual arrangements. We think that the uncertainty as to what happens after 2022 should result in a modest negative impact on efficiency and a modest negative impact on fairness (we did not acknowledge the impacts on fairness in the

[160] Preliminary Assessment Paper, p 77-78.

PAP). We accept the possibility that any party could raise a change request to extend the term beyond 2022 (subject to Gas Industry Co's approval and First Gas' right of veto), but we think that consideration should be given to the appropriateness of that mechanism.[161]

The MPOC requires any assignment to assign and transfer all TSAs and ICAs to the same person. We don't agree with Methanex that the absence of that provision is a material deterioration in the rights of shippers and interconnected parties across all criteria. While that provision is included in the MPOC, we struggle to see how First Gas could fragment its obligations under the GTAC without making changes to the GTAC itself (which is subject to Gas Industry Co's prior approval).

Both Shell and Todd have concerns regarding drafting in the GTAC that deems parties not to be an RPO. Todd has acknowledged that equivalent drafting is contained in the MPOC (s17.21, which relates to a direct injecting party's obligations relating to the injection of non-specification gas). Given that the drafting is contained in the MPOC, it is difficult for us to say that the inclusion of equivalent drafting in the GTAC is a worse outcome. While our role is not to propose drafting solutions, we think the general intention is to avoid the need to establish a breach of the RPO threshold for the purpose of the liability provisions in the GTAC. It would seem possible to achieve that outcome without deeming a party not to be an RPO. In terms of deeming non-compliance with OFOs to be a breach of the RPO standard, we agreed with the concerns with this provision in the PAP.[162]

A number of Trustpower's comments on the governance provisions suggest an alternative process for transition to the GTAC. At this point in time, we are assessing the GTAC in accordance with the process in MPOC s22.16. Some of Trustpower's comments would need to be considered in the context of a regulated set of transmission access arrangements, but that is not the current process. In terms of the comments that are relevant to the current assessment of the GTAC against the MPOC and the VTC, we don't consider that the costs associated with enforcement or dispute resolution under the GTAC are materially greater than the current codes.

We do not agree with Vector that the GTAC change process is worse than the VTC change process. In our view, the voting process in the VTC creates a hurdle for improvements to the code being progressed.[163] It also creates the situation where a small group of users can block a proposal that has real benefits for the industry as a whole. While we acknowledge that the GTAC is a commercial contract, we think that the GTAC change process is a better process for making changes to a common set of terms that address a number of competing interests. On that basis, we see the GTAC change process as an enhancement on both the MPOC and VTC change processes.

2.11 The Lantau Group report: submissions

In its submission on the New Code, Trustpower[164] advised that its views were guided by a report developed for it by The Lantau Group, an economic consultancy with a particular focus on providing advice to electricity, gas, and associated network assets throughout the Asia Pacific region. Although we had considered The Lantau Group report (TLGR)[165], we did not describe it in our PAP. However, we consider that it provides valuable insights for the on-going development

[161] Although outside the scope of our assessment, we note that First Gas's submission on the PAP (at page 8) suggested the adoption of the MPOC termination provisions (i.e. termination only in the event of being supplanted by materially better arrangements).

[162] Preliminary Assessment Paper, p 57.

[163] Because of the need to establish industry support before progressing the proposal.

[164] Trustpower, 22 January New Code submission, para 1.1.4.

[165] TLGR is published on our website together with the other New Code submissions here: http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/gtac-assessment-consultation-closed-22-january-2018/

of access arrangements, and a number of matters more directly relevant to our New Code assessment. We describe these here.

Matters TLGR raises that may be relevant to the on-going development of access arrangements

TLGR's perspective is that:

1. Without the market depth and diversity of major integrated markets of Europe and North America, the NZ market design should aim to achieve a holistic compromise between the features of fully competitive markets and maintaining simple low transactions cost, risk management, and capacity allocation. That design may include both market-based and regulated elements.
2. The Gas Act and GPS objectives are numerous, often ambiguous and overlapping. A more useful distillation would be to aim for a design that clearly enhances or promotes or facilitates competition and the discovery of information.
3. The assessment should consider not only whether the benefits exceed the costs, but also whether additional net-benefits could be obtained.
4. Mass-market retailers should have access to a firm product at a firm price, including a premium related to the avoided risk of interruption.
5. It would be virtually costless to delay PRs until other design matters are settled.

Matters TLGR raises that are directly relevant to our assessment

6. The GTAC introduces unnecessary uncertainty of price and priority in a way that does not enhance competition, particularly harming smaller new entrants and mass-market retailers (the absence of an ex-ante firm product with a known ex-ante price introduces an open-ended risk to the mass-market).
7. First Gas has no *"skin in the game"* to ensure PRs provide truly firm capacity.
8. First Gas has too much discretion to affect the price of PRs, for example by creating artificial scarcity of PRs.
9. The PR scheme is conceptual and likely to become complex and anti-competitive.
10. The PR rebate mechanism makes the marginal cost of capacity different for each shipper, frustrating competition (PR revenue should be rebated in a manner consistent with the objective of the PR charge, thereby sharpening the market signal).
11. First Gas is already motivated to assess capacity v demand and identify investment opportunities, so those benefits should not be claimed for PRs.

<u>GIC response</u>

In relation to items 1 to 5, readers will appreciate that this FAP is a product of the MPOC s22.16(b), as described in section 1.1. In that context our role does not involve market design, and in particular does not involve proposing or considering alternatives to the New Code. We therefore offer no comment on these matters here.

In relation to items 6 to 10, much of the concern appears to centre on a perceived risk that the detail of the PR rules, when they are developed, will have adverse consequences. Furthermore, there is a concern that Gas Industry Co will be bound to approve the rules, despite the imperfections, as long as they are better than the status quo. TLGR also provides no consideration of why First Gas would be incentivised to encourage inflated prices for PRs or to over-complicate the design, given that revenue from PRs is recycled and offers no additional benefit to First Gas. We also believe this analysis overlooks one important point. Under the New Code governance provisions, any pipeline user can propose a Code change. This provides an

avenue for the *"best"* Code change proposals to supplant proposals that are merely *"better"* than the status quo. This should provide an important check on all aspects of Code evolution, including the development of PR rules.

3. Assessment Methodology

In the PAP we described how the New Code assessment methodology has evolved. The previous chapter also identifies some further refinements we have made to the methodology in response to stakeholder feedback. In this chapter we describe the resulting assessment methodology used in this FAP.

3.1 Meaning of "materially better" standard

Our assessment considers the component parts of the GTAC and existing access arrangements but then makes a holistic assessment on whether the New Code is, overall, materially better. We consider "materially better" to mean more than just "better": we are looking for a substantial improvement.

3.2 Assessment criteria

As in the PAP, the methodology used in this FAP references the following Gas Act objectives and the objectives and outcomes in the GPS.

Table 2 – Assessment criteria

Criterion	Objective/Outcome	Text
1	**Gas Act s43ZN(a)**	the principal objective is to ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner
2	**Gas Act s43ZN(b)(i)**	facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements
3	**Gas Act s43ZN(b)(ii)**	barriers to competition in the gas industry are minimised
4	**Gas Act s43ZN(b)(iii)**	incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced
5	**Gas Act s43ZN(b)(iv)**	delivered gas costs and prices are subject to sustained downward pressure
6	**Gas Act 43ZN(b)(v)**	risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties
7	**Gas Act s43ZN(b)(vi)**	consistency with the Government's gas safety regime is maintained
8	**GPS Item 12(a)**	energy and other resources used to deliver gas to consumers are used efficiently
9	**GPS Item 12(b)**	competition is facilitated in upstream and downstream gas markets by minimising barriers to access to essential infrastructure to the long-term benefit of end-users
10	**GPS Item 12I**	the full costs of producing and transporting gas are signalled to consumers

Criterion	Objective/Outcome	Text
11	**GPS Item 12(d)**	the quality of gas services where those services include a trade-off between quality and price, as far as possible, reflect customers' preferences
12	**GPS Item 12I**	the gas sector contributes to achieving the Government's climate change objectives as set out in the New Zealand Energy Strategy, or any other document the Minister of Energy may specify from time to time, by minimising gas losses and promoting demand-side management and energy efficiency
13	**GPS Item 9**	it is also the Government's objective that Gas Industry Co takes account of fairness and environmental sustainability in all its recommendations. To this end, the Government's objective for the entire gas industry is as follows: To ensure that gas is delivered to existing and new customers in a safe, efficient, fair, reliable and environmentally sustainable manner
14	**GPS Item 13 point 1**	pursue: An efficient market structure for the provision of gas metering, pipeline and energy services
15	**GPS Item 13 point 2**	pursue: The respective roles of gas metering, pipeline and gas retail participants are able to be clearly understood
16	**GPS Item 13 point 3**	pursue: Efficient arrangements for the short-term trading of gas
17	**GPS Item 13 point 4**	pursue: Accurate, efficient and timely arrangements for the allocation and reconciliation of upstream gas quantities
18	**GPS Item 13 point 5**	pursue: Gas industry participants and new entrants are able to access transmission pipelines on reasonable terms and conditions
19	**GPS Item 13 point 6**	gas governance arrangements are supported by appropriate compliance and dispute resolution processes

In this FAP we refer to these items as the Criteria. Stakeholders will note that the list does not include all of the objectives and outcomes in the Gas Act and GPS. We have excluded specific outcomes on the basis that they are unlikely to be directly relevant to our assessment of the New Code, for example, the GPS outcome that requires contracts between gas retailers and small gas consumers to protect the long-term interest of consumers. We think it unlikely that New Code terms would adversely affect small consumer contracts.

In addition, when setting out our analysis, we find it helpful to group the Criteria under the five category headings shown in Table 3 – Categorisation of assessment criteria. This approach avoids duplication and provides a more readable document. However, our assessment process has been conducted by reference to each of the Criteria individually and, where relevant, our analysis will refer to the specific objective or outcome under consideration.

Table 3 – Categorisation of assessment criteria

	Efficiency	Reliability	Safety	Environment	Fairness
Gas Act	Criterion 1 Criterion 2 Criterion 3	Criterion 1 Criterion 2 Criterion 6	Criterion 1 Criterion 7		

	Efficiency	Reliability	Safety	Environment	Fairness
	Criterion 4 Criterion 5				
GPS objective	Criterion 8 Criterion 9 Criterion 10 Criterion 11			Criterion 8 Criterion 12 Criterion 13	Criterion 13
GPS outcome	Criterion 14 Criterion 15 Criterion 16 Criterion 17 Criterion 19				Criterion 18

3.3 What is being compared?

MPOC s22.16(b) requires us to compare the New Code with the current terms and conditions for access to and use of gas transmission pipelines. Our role is not to impose our own view, or the view of any stakeholder, as to what a theoretically optimal set of terms and conditions should contain. Accordingly, we are unable to take into account alternative proposals put forward by stakeholders for achieving the objectives and outcomes.

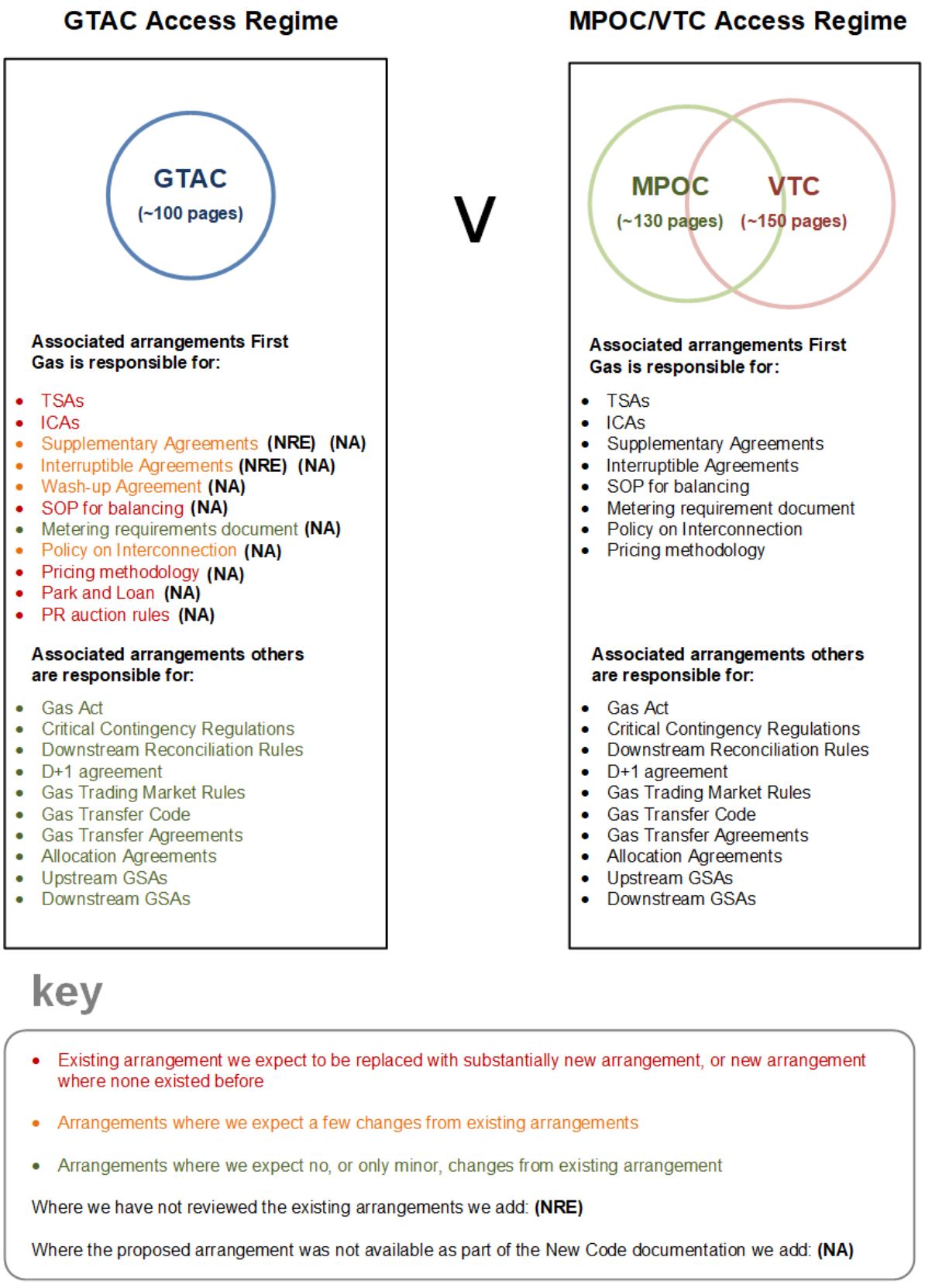
However, we consider that the terms and conditions for access to and use of gas transmission pipelines (commonly referred to as the "access regime") may encompass some associated arrangements, as illustrated in Figure 2.

While many of these associated arrangements would remain largely unchanged, a few would be substantially re-written (for example, the balancing operating procedure), others would require adjustment (for example, the Policy on Interconnection), and others would be entirely new (for example, the PR auction rules). To the extent that associated arrangements have not been developed or need to be re-written, we need to be satisfied that:

1. Specific processes for developing the associated arrangements are included in the GTAC. The level of process required would depend on the nature of the associated arrangement (for example, we would expect a lower level of control in relation to the development of an operational policy compared to, for example, PR auction rules); or
2. In the absence of specific processes for developing the associated arrangements, we would need to be satisfied that the associated arrangement is a matter that is properly within the discretion of the relevant party.

Our assessment of the process for developing or amending associated arrangements has regard to the treatment of those arrangements under the current MPOC and VTC. For example, if those arrangements may be determined at the discretion of a party under the MPOC and VTC, then that is relevant to our assessment.

Figure 2 – What is being compared?



The code versions relevant to this FAP are:

1. GTAC dated 8 December 2017[166];
2. MPOC dated 4 January 2018 (ie as updated by the Transition Change Request)[167]; and
3. VTC dated 1 October 2017[168].

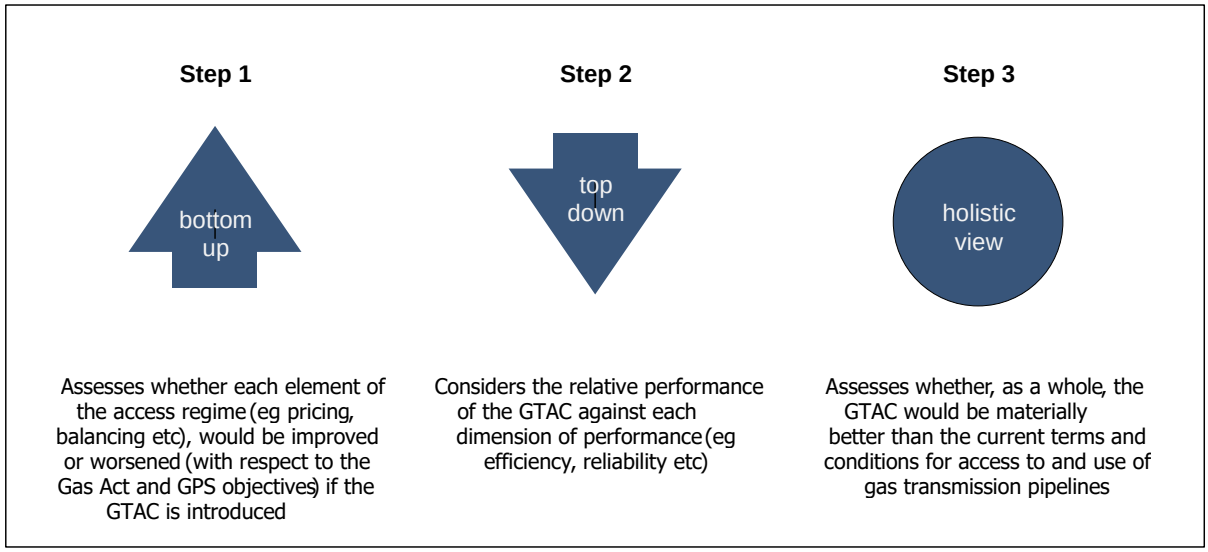
Some of associated arrangements referred to are:

1. Interconnection Agreement for Receipt Points, December 2017 (RP ICA)[169];
2. Interconnection Agreement for Delivery Points, December 2017 (DP ICA)[170];

3.4 Three step analysis

To arrive at a holistic assessment, we follow a three step analysis as illustrated in Figure 3.

Figure 3 - Three step analysis



Step 1 – A "bottom-up" analysis

For each major component of the access regime, the bottom-up analysis describes the arrangements in the GTAC, MPOC, and VTC and considers whether the New Code would better meet the Criteria than the MPOC/VTC regime (the current arrangements).

Table 4 lists the components that have been considered and references the section of this FAP where our analysis of that that component can be found.

[166] 171208 Final GTAC clean, available at http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/8-december-2017-gtac-package/

[167] MPOC working version 04-01-2018, available at https://www.oatis.co.nz/Ngc.Oatis.UI.Web.Internet/Common/Publications.aspx

[168] VTC Effective 1 October 2017, available at https://www.oatis.co.nz/Ngc.Oatis.UI.Web.Internet/Common/Publications.aspx

[169] 171222 Interconnection Agreement for Receipt Points clean, available at http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/8-december-2017-gtac-package/

[170] 171222 Interconnection Agreement for Delivery Points clean, available at http://gasindustry.co.nz/work-programmes/transmission-pipeline-access/developing/8-december-2017-gtac-package/

Table 4 – Where to find our bottom-up analysis of each GTAC component

Component		see section
Gas transmission products		
GTAC s2 GTAC s3 GTAC s4 GTAC s7	Transmission Services Transmission Products and Zones Nominations Additional Agreements (Supplementary Agreements (SAs) and Interruptible Agreements (IAs))	Section 4.1
Pricing		
GTAC s11	Fees and Charges	Section 4.2
System operation		
GTAC s5 GTAC s6 GTAC s8 GTAC s9 GTAC s10 GTAC s12 GTAC s13	Energy Quantity Determination Energy allocations Balancing Curtailment Congestion Management Gas Quality Odorisation	Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8
Governance		
GTAC s14 GTAC s15 GTAC s16 GTAC s17 GTAC s18	Prudential Requirements Force Majeure Liabilities Code Changes Dispute Resolution	Section 4.9

Step 2 – A "top-down" analysis

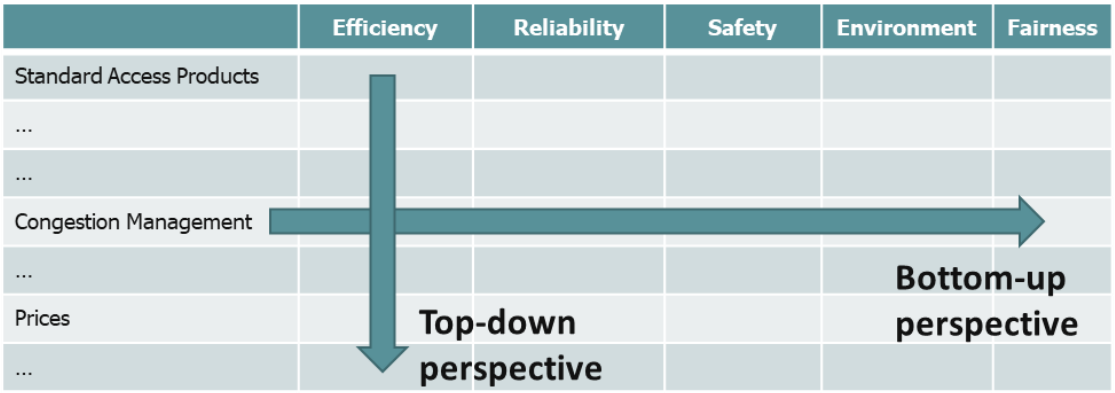
This analysis provides a different perspective on the material presented in the "bottom-up" analysis. Rather than beginning at each major component of the access regime – for example, Congestion Management – and exploring how it meets the Criteria, the top-down analysis takes the reverse perspective, beginning at each category of assessment criteria – Efficiency, say – and looks at how it is advanced (or otherwise) by each component of the access regime. By looking from two perspectives we get a more balanced view of the whole regime.

It is also in this step that we introduce weightings. While all significant aspects of the New Code have been examined in our assessment process, in the "top-down" analysis we identify which components we believe to be more significant in how they affect the objectives and outcomes.

Because the detailed description of the arrangements and analysis has been done in Step 1, Step 2 can be much shorter.

The difference between the two steps is illustrated in Table 5.

Table 5 – top-down v bottom-up analysis



Step 3 – An overall assessment

This final step draws on the previous steps to take a more holistic view of the New Code, considering whether any relevant matters might not have been captured in steps 1 and 2. This will include consideration of:

1. Matters that are dealt with in the MPOC/VTC regime that are not present, or not dealt with to the same level of detail in the New Code;
2. Matters in the New Code that are not present in the MPOC/VTC regime;
3. Overall cost and benefits, giving weight to the more substantial aspects of the access regime, and more important Criteria (as per the hierarchy set down in the Proposed Approach Paper).

It is also at this point that consideration can be given to the overall balance of the assessment; whether the questions we have asked ourselves capture the essence of the objectives and outcomes in relation to the particular aspect of the access arrangements under consideration; whether any benefits or detriments have been double counted or missed.

4. Bottom-up analysis

In this chapter we look at how each aspect of transmission access would be dealt with under the New Code, and consider whether each aspect would be better than the current arrangements under the MPOC and VTC. This chapter is the core of the FAP, supported by our consideration of stakeholder submissions (Chapter 2) and our analysis of specific issues (Appendix D). Readers who prefer to begin with a summarised version of the analysis should move on to Chapter 6, and can then refer back to this chapter when more detail is required.

The coverage of each section in the bottom-up analysis is broadly in the same order as the sections of the New Code, as set out in Table 4.

We begin each section with a description of how the matter under consideration would be treated under the GTAC, and how it is treated under the MPOC and VTC. For ease of navigation, these descriptive sections are coloured **blue**.

We then consider the Criteria from Table 3 and assess whether the matter under consideration would improve on, or detract from current arrangements in respect to those Criteria. Note that not all of the Criteria will be relevant to every matter under consideration, in that case we describe those Criteria as having "weak relevance". Where it is possible to do so, we have bundled related Criteria together to avoid repetition. Some Criteria may only be addressed in the summary table at the end of the relevant section to avoid repeating our analysis.

Our assessments use the scale below.

Substantial improvement	
Moderate improvement	
Modest improvement	
Neutral	
Modest deterioration	
Moderate deterioration	
Substantial deterioration	

When we assess a feature of the New Code we might find that some aspects of it are a deterioration while others are an improvement relative to the status-quo. In that case we show both a red arrow and the green arrow. This avoids hiding aspects of the GTAC that would degrade our assessment behind aspects that would improve it. It is only in Chapter 6 that we weigh all aspects to come to an overall view.

For the convenience of those readers who want to know why we have concluded that certain aspects of the GTAC degrade the assessment, we have corralled all the reasons for each red arrow into Table 32 in Appendix D.

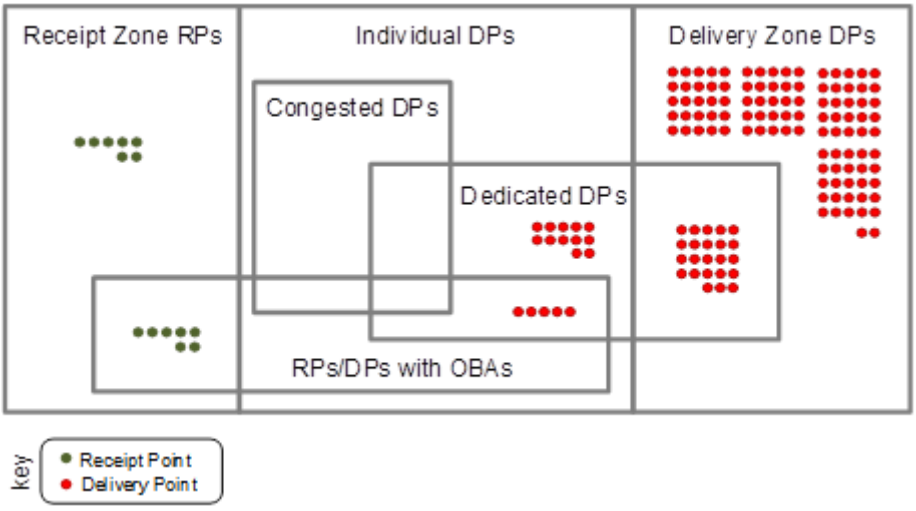
We also provide a comparison of the FAP assessments with the PAP assessments in Appendix C

Some commonly used terms

Readers may find the Figure 4 Venn diagram helpful in differentiating some terms the GTAC commonly uses in relation to Receipt Points (RPs) and Delivery Points (DPs).

Figure 4 also aims to give readers an indication of how many RPs and DPs would currently fall into each category. For example, it indicates that there are currently no Congested DPs (ie DPs where flows or Nominated Quantities (NQs) are, or are expected to, exceed Available Operational Capacity). There would be 40 Dedicated DPs (ie DPs that supply gas to a single end-user) of which 23 would lie within Delivery Zones. Of the 17 Individual DPs (ie DPs that are not in a Delivery Zone), 5 currently have OBAs.

Figure 4 – Relationship of GTAC DP definitions



4.1 Gas transmission products: analysis

(Principally GTAC s2 Transmission Services; GTAC s3 Transmission Products and Zones; and GTAC s4 Nominations; and GTAC s7 Additional Agreements.)

Gas transmission products – description of arrangements

GTAC gas transmission products

Standard GTAC gas transmission product

Daily Nominated Capacity (DNC) would be the core product offered to shippers. DNC would be available at each Delivery Zone and each Individual DP (ie any DP not in a Delivery Zone) and is defined by a Maximum Daily Quantity (MDQ) and Maximum Hourly Quantity (MHQ). The standard MHQ is 1/16th of the MDQ, but shippers to Dedicated DPs may apply for an Agreed Hourly Profile (AHP).

The GTAC also provides a supporting product known as a Priority Right (PR), which is only available at auction, and only for a Congested DP (or group of Congested DPs). A shipper with a PR would be "at the head of the queue" to have its DNC nominations approved, up to the amount of its PR. The operation of PRs is set out in more detail in section 4.6 below.

Non-standard GTAC gas transmission products

The GTAC provides that First Gas may, at its discretion, enter into Supplementary Agreements (SAs) that vary certain standard terms and conditions of the GTAC (GTAC s7.4). GTAC s7.1 provides certain criteria that First Gas must apply in considering requests for SAs. SAs must be published in full (GTAC s7.6).

First Gas may also, at its discretion, enter into Interruptible Agreements (IAs). GTAC s7.7 sets out criteria for First Gas to determine whether an IA will be offered: essentially to maximise capacity, or as a Congestion Management measure, and/or where the end-user has alternative fuel.

The Interruptible Capacity Allocation Policy, March 2012, would no longer apply since First Gas considers that the matters it covers are largely dealt with in the GTAC[171]. In particular, IA is a defined term in the GTAC, meaning an agreement between First Gas and a shipper in relation to a specific end-user or site where transmission capacity may be curtailed, where the terms of the GTAC listed in GTAC s7.9 may be varied.

Where First Gas enters into an IA for the purposes of Congestion Management, it will publish the agreement and the DP where Available Operational Capacity has increased as a result (Beneficiary DP) (GTAC s3.11). First Gas will recover any amounts payable to such an IA holder from shippers using the Beneficiary DP as set out in GTAC s11.11.

GTAC nominations

Shippers must nominate at RPs (GTAC s4.1), delivery zones (GTAC s4.3), and Individual DPs (GTAC s4.4). Unlike the MPOC, there is no requirement for receipt and delivery nominations to be equal. There must be at least 4 nomination cycles each day (GTAC s4.11), as under the MPOC. Also, First Gas may provide one or more additional intra-day cycles where a Shipper's or OBA Party's circumstances change in a material and unforeseeable way (in relation to production or customer outages), or where First Gas experiences technical problems (GTAC s4.18).

MPOC gas transmission products

Standard MPOC gas transmission product

The core product offered to shippers is Daily Approved Nominations at each relevant RP or DP. The MPOC also provides for a supporting product known as Authorised Quantity (AQ), which is a zone based priority right similar to GTAC PRs. However, AQ has never been fully detailed, so has never been used.

Non-standard MPOC gas transmission products

All ICAs and TSAs must incorporate only standard MPOC provisions, except for identified exceptions specified in MPOC s2.1 (eg Bertrand Rd, Virtual Welded Point). Non-standard provisions must be disclosed under MPOC s4.1. No further new exceptions are allowed.

MPOC Nominations

Shippers must nominate at all relevant RPs and DPs (including interconnection points between the Maui and non-Maui pipelines). Receipt and delivery nominations must be equal (MPOC s8.2). There must be a minimum of 4 nomination cycles each day (MPOC s 8.14).

VTC gas transmission products

Standard VTC gas transmission product

The core product available to VTC shippers is Reserved Capacity. It is an annual entitlement to ship gas between each specified RP and DP up to an amount of MDQ specified in the Shipper's TSA on each day of the Gas Year.

[171] The policy is "… *a guideline of the general steps that [First Gas] will follow and how [First Gas] will offer and allocate interruptible capacity*" and "… *is provided for information purposes only and is not legally binding on [First Gas].*" It sets out when, and how much, interruptible capacity will be offered.

Non-standard VTC gas transmission products

SAs, which in the VTC include fixed term and interruptible agreements (IAs), may be offered at First Gas' discretion. SAs generally incorporate standard TSA conditions, but First Gas can vary certain terms (generally related to the nature, volume and duration of capacity rights, and transmission charges) as set out in VTC s2.7I. SAs must be published (VTC Sch 5, Table A). The arrangements for First Gas considering and processing SAs are set out in an SA Policy, dated March 2012, published on OATIS.

Similarly, an Interruptible Capacity Allocation Policy, March 2012, is published on OATIS, together with several interruptible contract templates (an Interruptible Shipper Contract and an Interruptible User Contract), but these are outside the VTC. The policy is described as a guideline of the general steps First Gas would follow and how it would offer and allocate interruptible capacity.

VTC Nominations

The annual MDQ service is a "no-notice service", ie once the capacity is reserved there is generally no need for a shipper to nominate its daily requirements (although First Gas can require it to do so, if necessary, for informational purposes only). However, nominations are required at Pokuru #2 (s5.6), and at interconnections with the Maui pipeline if they are Displaced Gas Nominations (VTC s9). Nominations may also be required at large meter stations (>1TJ/day) (VTC s5.1), but generally are not.

Gas transmission products – assessment

This section assesses whether the GTAC gas transmission products, ie the basic arrangements that First Gas offers to transport gas across its transmission system, would be an improvement on current MPOC/VTC gas transmission products, with reference to the relevant Criteria. The analysis does not address pricing, which is dealt with separately in section 4.2.

Gas transmission products – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

In situations where there is no congestion

In relation to the VTC: the DNC/zone design would provide shippers with greater flexibility than point to point annual capacity. In particular, a shipper would buy its capacity daily (for transport from the Receipt Zone to each of its Delivery Zones and Individual DPs), rather than buying annual blocks of capacity once a year (for transport from each RP to each DP under the VTC). This would allow a shipper to tailor its capacity purchases to its demand each day, more easily accommodating any changes in demand and any new customers that it may acquire. Also, in the absence of congestion, there would be no unnecessary incentives for a shipper to reduce its peak demand. In contrast, under the VTC, a shipper has to buy a full year's capacity, reflecting demand that only occurs at peak. More consideration is given to this issue where pricing is discussed in section 4.2.

DNC would also facilitate maximum use of the pipeline by shippers over time. Previous work by the Panel of Expert Advisers (PEA) described how the VTC's annual capacity reservation arrangement, including grandfather rights to capacity, led to the "sterilisation" of capacity, or "contractual congestion", where a shipper holds more capacity rights than it is using. In particular, if all available capacity has been sold, a shipper who holds more capacity than it is using will be reluctant to relinquish any of that unused capacity to a competitor. In this situation, a new shipper cannot readily enter the market and an existing shipper cannot

compete for a rival's market share unless it holds spare capacity. This was the situation in 2009 when constrained capacity in the Auckland region prevented end-users from having the ability to switch to a new supplier.

With DNC a shipper cannot sterilise capacity ahead of a constraint emerging, as it can with annual capacity reservations under the VTC. However, once congestion develops there is some scope for such behaviour, as discussed below.

New Code submissions recognise the benefits and the costs of adapting to and operating under the new arrangements. For example, Vector[172] advises that, for it, the number of chargeable delivery points would reduce from approximately 55 under the VTC to 15 under the GTAC. It notes that a significant investment in new systems would be required to manage its DNC nominations, and to develop new processes, products and services. Overall, it expects its operational costs to be lower in the future, breaking even within five years.

Genesis[173] expects that the absence of grandfather rights would remove a major barrier to entry, benefitting new entrants and existing players by promoting competition and growth in the gas market. However, it considers that the strict requirements for accurate nominations would increase costs for shippers and ultimately consumers, particularly for mass-market customers.

In relation to the MPOC: while the DNC/zone design has strong similarities to the MPOC design, there are a few differences that should be noted. Although both the MPOC and the GTAC require nominations, under the MPOC nominations for gas and transmission capacity are one. In contrast, under the GTAC nominations for gas are made in the receipt zone while nominations for transport are made in the delivery zone or at Individual DPs. And while the MPOC requires that receipt and delivery nominations are always balanced, the GTAC has no such constraint. Some MPOC Welded Parties see no benefit in the New Code. Methanex notes that point-to-point nomination by Shippers and deemed flow to nomination, together with operational balancing as a responsibility of the Welded Party has proven to be a safe, reliable and efficient arrangement on the Maui Pipeline for more than a decade, and First Gas has provided no justification for abandoning it[174].

We agree that the core Maui concepts of OBAs and flow-on-nominations have been successful for the set of users whose activities are confined to the Maui pipeline. However, we consider that the products described in the GTAC preserve these core concepts as options, but also allow alternatives that may be more attractive to other pipeline users. Importantly, the GTAC proposes a coherent set of products that can operate across the entire transmission system. While we do not assess all aspects of the GTAC as improvements, we believe the design of the standard products is generally well-considered, well-supported by system users, and overall would allow gas to be delivered more efficiently and enhance competitive market arrangements.

In situations where there is congestion

The GTAC tools for managing congestion are: IAs (where end-users willing to be interrupted can be found) and PRs, available via auction. The operation of these tools is discussed in section 4.7, below. Here we consider whether the availability of the tools is an improvement, ie are they a useful adjunct to the design.

[172] Vector, 22 January New Code submission, para 4 and 11.

[173] Genesis, 22 January New Code submission, p2, Access products and services.

[174] It is worth noting that an MPOC party has the option, under the GTAC, of operating in a manner identical to the MPOC, i.e. making balanced nominations and managing its interconnection point to flow to the scheduled quantity.

IAs are available under the VTC but not the MPOC. Since the Maui pipeline has never been capacity constrained, we should consider whether the IAs would bring any practical benefit over the VTC IAs. The important conceptual difference is that the GTAC IAs allow for the Interconnected Party to be paid to interrupt, whereas the VTC IAs only allow for a discounted transmission price. We think this provides a moderate benefit.

If the auction rules are efficient, PRs would allow capacity to be allocated to its highest value use. The GTAC also aims to discourage a shipper from nominating more capacity than it needs. GTAC s10.4 provides for each shipper to warrant that for any Congested DP its nominations will represent its best estimate of its end-users' requirements and that it will not inflate its nominations with the intention of securing a greater share of the Available Operational Capacity.

However, we do not know how rigorously GTAC s10.4 will be policed by First Gas, and there would not be sufficient transparency for Gas Industry Co or other stakeholders to detect whether a shipper is over-nominating[175]. So over-nomination behaviour could go undetected and undisclosed (although the daily underrun fee in the GTAC would make over-nominating costly for a shipper).

Also, we do not think that an end-user at a Congested DP would always be in a better situation if it wished to change its supplier. GTAC s6.18 requires shippers to acknowledge that an end-user at any Dedicated DP has the right, subject to the terms of its gas supply agreement, to buy gas from more than one shipper. At best, this seems just to acknowledge reality. At worst, since it only applies to Dedicated DPs, it might mistakenly suggest that a different situation exists elsewhere. However, if an end-user at a congested DP requires firm supply, it will rely on its supplier having PRs, and that supplier might be reluctant to relinquish them to a competing retailer. So while competition between shippers to obtain PRs may be vigorous, we would expect that once PRs have been allocated end-users may find it more difficult to change their supplier than they would at uncongested locations.[176]

Nonetheless, overall we consider that the GTAC design would better promote efficient use of gas pipelines in congested situations than the current VTC arrangements, and avoid the more complex arrangements seen in other jurisdictions.[177]

Nomination work load

The GTAC product design incorporates nominations on a par with the MPOC, but to a much greater extent than the VTC. Shippers on the Maui pipeline and who supply large users are already well-prepared to make nominations, but shippers to mass-market customers would need to put some new processes in place. The level of effort shippers put into the task depends on the pay-off from more accurate nominations (avoiding OR/UR charges and getting a greater share of rebates).

In the PAP we concluded that the additional work in providing accurate nominations would bring some benefits over current arrangements. However, in relation to Delivery Zone nomination, ie where capacity is not constrained, we were not persuaded that there would be an overall net benefit.

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[175] Although Daily Delivery Reports will be published, underruns will not, so it will not be possible to detect if a shipper is over-nominating capacity.

[176] An alternative "*capacity follows the end-user*" approach was proposed in the MGUG New Code submission, but alternative proposals are not relevant to our analysis.

[177] In the EU, the 2007 sector inquiry recognised similar problems, including inefficient allocation of primary capacity, particular where allocated on a First-Come-First-Served basis, and with incumbents trying to block market entry by hoarding capacity. In response Congestion Management Procedures were introduced into the Gas Regulation in 2012 mandating: use-it-or-lose-it (UIOLI), capacity surrender, and overcapacity and buyback arrangements.

Informed by the submissions on the PAP and cross-submissions (described in section 2.2), and acknowledging that good portfolio management does require shippers to plan for the daily requirements of their customers, we still believe that the conclusions of the PAP are valid: that, while the nomination regime is inherent to the design of the GTAC, it would increase the workload for some shippers. Since shippers will pitch their administrative effort to match the pay-off in reduced incentive charges, the increased cost would be a function of the strength of the economic incentives (ie the OR/UR fees and rebate arrangements). This is discussed in relation to pricing in section 4.2.

Supplementary Agreements (SAs)

SAs are a feature of the VTC and GTAC, but not the MPOC. The GTAC also adds criteria that First Gas would apply when considering if an SA is warranted (GTAC s7.1). A full discussion of these factors is provided in Appendix A.

In summary, the PAP concluded that SAs could enhance or undermine efficiency. While the New Code's SA assessment criteria are a helpful addition, the discretion First Gas has to agree an SA would remain very wide. Therefore, without any checks or balances, we considered that allowing SAs on the Maui pipeline would not necessarily enhance overall efficiency.

Interconnection Agreements (ICAs)

Except for the limited detail contained in GTAC s7.13, ICAs are subject to individual negotiation and cannot be assessed. That issue is discussed in in Appendix D, section D.1, and Chapter 6. Our analysis concludes that the individually negotiated ICAs has the potential to create efficiency issues.

Conclusion in relation to Criteria 1, 2 and 14

Overall, in relation to Criteria 1, 2 and 14, we find that:

1. the DNC/zone design would be more flexible for users and allow for more efficient use of the combined Maui/non-Maui pipelines. Most submitters have a similar view;
2. in uncongested situations the DNC product is inherently more pro-competitive than the VTC annual capacity product; and
3. in congested situations, IAs and PRs at a conceptual level allow for more flexible and efficient outcomes (the practical operation of these tools is discussed in section 3.7 Congestion Management, below).

However, these substantial improvements are partially offset by modest cost considerations.

4. Transition to the new design will be costly both in term of initial set-up costs (renegotiating contracts, introducing new procedures and systems etc), and on-going increased transaction costs, although savings are available in the longer term (for example, in its submission, Vector notes that it anticipates its business would break-even within five years of the GTAC being introduced). We think it is important to recognise that this is a one-off and not an on-going cost.

We conclude that aspects of the transmission product design should bring both substantial improvements and modest detriments to efficiency.

In relation to Criterion 3 (reducing barriers to competition):

The GTAC's DNC product, like the MPOC's Daily Approved Nominations, would allow shippers to change the amount of service they require at each nomination cycle. There is no requirement, as there is under the VTC, to commit to an annual reservation of capacity. The replacement of annual capacity booking with DNC makes it a lower cost proposition for a new shipper to enter the market, and for an existing shipper to enter new geographical areas and new market segments. The barriers to competition would therefore be lower.

The daily nature of the GTAC standard product would make it intrinsically less open to hoarding of capacity than the annual VTC product. However, a new element that the GTAC would introduce is the auctioning of PRs by First Gas, and their secondary trading between shippers. While the PR concept is new, and some stakeholders have voiced concerns about the potential for PRs to raise entry barriers, we note that the auction terms and conditions are to be determined in accordance with the GTAC change provisions, and would therefore be evaluated against the Gas Act and GPS objectives. We believe this gives adequate assurance that they should not raise inefficient entry barriers.

Barriers to competition are also reduced where information asymmetries are removed. Transparency of contracts is somewhat improved since the GTAC, like the MPOC, commits to making all TSAs and ICAs public. The VTC only makes TSAs public, so the publication of future ICAs is also positive.

We conclude that the transmission product design should moderately reduce barriers to competition.

In relation to Criterion 4 (providing incentives for investment):

Regarding First Gas investments (in pipeline capacity), we consider that the incentives for First Gas to invest are largely a function of the price-quality economic regulation regime administered by the Commerce Commission. However, we think that the structure of the gas transmission products will help to identify where investment is justified. In particular, the GTAC provides for the identification of likely congestion and allows for interruptible load to be identified and contracted. Where there is still insufficient Available Operational Capacity, Shippers indicate the value of that capacity by bidding for PRs. Based on that willingness to pay, and a positive assessment of the congestion being long-term, First Gas could more confidently assess the justification for investment. The structure of the existing MPOC and VTC transmission products do not provide incentives for investment decisions to quite the same extent.

We conclude that the transmission product design should modestly increase the incentives for pipeline investments.

In relation to Criterion 5 (sustained downward pressure on costs and prices):

As noted in relation to the Criteria discussed above, we believe that the design of the transmission products generally enhances competition when compared to the current arrangements, which should tend to reduce costs and prices. However, there are offsetting increases to transaction costs.

A move to the GTAC would change the overall level of transaction costs and the incidence of those costs. We would expect savings to shippers and to First Gas in managing a single GTAC access product, compared to the cost of managing disparate MPOC and VTC access products. RP nominations would be required more or less as at present but nominations would no longer be required at interconnection points between the Maui and non-Maui pipelines and, as First Gas notes in its submission, the absence of capacity transfers would save it the administrative burden of approving those transfers.

However, additional nominations would be required at each delivery zone (GTAC s4.3), and each Individual DP (GTAC s4.4) (including any Congested DP (GTAC s4.6)). As in the MPOC, there would be at least 4 nomination cycles each day.

While accepting that the nominations provide clear benefits at Congested DPs, some stakeholders have argued that they are unnecessary at delivery zones. We agree that requiring shippers to make delivery zone nominations increases transaction costs for no compelling immediate benefit. It is interesting to note that in the UK it is the system operator rather than the shipper who makes such estimations.[178]

The increased nomination workload would largely fall on shippers who ship gas to shared DPs. While these shippers currently need to estimate their demand for the purpose of nominating gas from their gas supplier (generally at a Maui pipeline RP), and nominating (probably the same numbers) at an interconnection point between the Maui and non-Maui pipelines, they only need to reserve capacity once a year under the VTC. In contrast, under the GTAC they would need to nominate for deliveries every day. That said, we also acknowledge that (some) VTC shippers actively manage their reserved capacity portfolio during the year, which can entail significant effort in managing capacity transfers.

We conclude that aspects of the transmission product design should bring both moderate improvements and detriments to costs and prices.

In relation to Criterion 8 (efficient use of energy and other delivery resources):

In the PAP we considered that, with only one set of transmission products to manage, rather than the MPOC and VTC products, modest operational savings in the use of compressors could be achieved. On reflection we do not believe that conclusion is justified. Our understanding is that the compressors between the Maui pipeline and the non-Maui pipelines are managed to maintain pressures at downstream delivery points, and that would not change. There may be some minor optimisation between the Mokau compressors and those at Rotowaro, but we have no evidence to suggest it would be of any significance.

We conclude that the transmission product design should bring no noticeable change to resource efficiency.

[178] In the UK shippers enter daily nominations for entry and exit and are responsible for forecasting their daily flows at all entry points covering gas production, LNG terminals, cross border interconnections and storage withdrawals. But for distribution networks supplying the mass-market a different set of arrangements apply. There shippers forecast the daily flows to their largest end-users, who will have daily metering (DM) or time-of-use metering. The expected flows to non-daily metered (NDM) end-users are made by the pipeline operator through a top-down estimation and allocation process. The NDM nominations for each shipper are made by the pipeline operator based on the number and class of registered end-users for that shipper. (The network code requires all end-users with annual consumption in excess of 210,000 GJ to be DM, and provides for voluntary DM down to 2,600GJ.)

In relation to Criterion 9 (facilitating competition in upstream and downstream markets):

The GTAC would introduce a single Receipt Zone that includes all RPs, including for the wholesale market, so trading of gas between RPs in the Receipt Zone should be frictionless, attracting no transport charges. In contrast, wholesale market trades currently attract transport fees, as do other RP to RP trades (unless managed via gas swaps). We agree with Todd[179] that *"the provision of a single Receipt Zone will make it significantly easier to trade gas between Shippers on a daily basis".*

In relation to downstream gas markets, as described in relation to Criteria 1, 2 and 14 above, we expect that the GTAC access products will generally facilitate competition between shippers (retailers).

We conclude that the transmission product design should bring moderate improvements to competition in upstream and downstream markets.

In relation to Criterion 16 (efficient arrangements for short-term trading of gas):

While we accept that undetermined factors such as tolerance levels could influence the result (described in section 2.2), we conclude, as in the PAP, that the New Code provides that gas can be traded within the single Receipt Zone without attracting transport charges. The arrangement is similar to the entry-exit approach taken in Europe which was designed with the express purpose of facilitating gas trading. It would bring the benefits of transactional simplicity, including reducing the need for gas swaps, and provides a level playing field, independent of where a producer is located. This is a moderate improvement on current arrangements where short-term trading is discouraged because it attracts transport charges even though there should be negligible transmission costs associated with such trades.

We conclude that the transmission product design should bring moderate improvements to the short term trading of gas.

Overall efficiency assessment of gas transmission products

Based on our consideration of each of the efficiency Criteria, our overall assessment for efficiency is that the GTAC gas transmission products should have a substantial positive aspect, but also a modestly negative aspect. The factors with the greatest influence on this conclusion are those that have a pervasive influence on efficient outcomes (such as the creation of a single receipt zone), rather than those that have an occasional, or short-term, influence (such as transitional costs).

[179] Todd, 19 January New Code submission, GTAC s6.

Gas transmission products – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

Because PRs would only be offered at Congested DPs (GTAC s3.15), the notification of such Congested DPs and the subsequent PR auctions would pre-signal the possibility of scarcity, and should allow shippers to better manage their security of supply risks. Also, if congestion arises or abates during a Year, First Gas will notify all shippers as soon as practicable (GTAC s3.24). Neither the MPOC nor the VTC contains similar arrangements to pre-notify an increased risk of congestion.

However, some submitters have argued that the PR auctions may not result in an efficient allocation of risk because if mass-market shippers are unable to secure PRs they have no effective means of reducing their demand. We agree this is a concern, but, as discussed in section 2.8, it would not introduce significantly more risk than the current arrangements.

We conclude that aspects of the transmission product design should both moderately improve reliability.

Gas transmission products – Safety assessment

In relation to Criteria 1 and 7 (providing access in a safe manner and consistent with the Government's gas safety regime):

We do not think the transmission product design should noticeably affect the safety related risks.

Gas transmission products – Environmental assessment

In relation to Criteria 8, 12 and 13 (contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management):

The GTAC IAs provide for end-users to interrupt their demand in return for compensatory payments ie it allows for demand side management. This is not provided for in the MPOC or VTC.

We conclude that the transmission product design should modestly improve environmental outcomes.

Gas transmission products – Fairness assessment

In relation to Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions):

Standard products

As discussed above, we consider the daily nature of the GTAC standard product would make DNC intrinsically less open to hoarding than the annual VTC product. We also believe the absence of the capacity grandfathering feature of the VTC provides new entrant shippers with more fair access to capacity, although we recognise that some shippers consider grandfathering to be more fair, as discussed in relation to curtailment, in section 3.6, below.

PRs and PR auctions

A new element that the GTAC would introduce is the auctioning of PRs by First Gas, and their secondary trading between shippers.

A number of submitters consider it to be unfair that *"retail load at a congested point is not protected"*, as Contact put it in its submission. We take this to mean that there is no guarantee that the shipper/retailer supplying that load would be able to obtain PRs.

The fairness of the PR auctions will largely depend on whether appropriate checks and balances on market behaviour are in place. The terms and conditions of PR auctions would be developed by First Gas in consultation with shippers and subject to approval by Gas Industry Co. Changes to the rules would follow the same process. The rules would be published at least 30 Business Days prior to any auction (GTAC s3.18). We consider that these arrangements would provide adequate assurance that the PR rules would be fair to market participants.

The notification of PR auctions, the basic structure of PR auctions, and the risks for mass-market shippers are discussed in relation to congestion management, in section 4.7 below.

Supplementary Agreements (SAs)

We consider SAs in Appendix D, section D.2, and in section 2.2. We have not reviewed the SAs that would carry forward under the New Code, so cannot say with certainty to what extent they would need to be modified. (First Gas[180], advises that 8 SAs would carry over, with a total value of $10m/annum.) However, there is wide discretion to negotiate SAs under both the current arrangements and the New Code. And since there is no oversight on SAs either under the current arrangements or under the New Code. SAs are therefore considered to be neutral in our analysis.

Interconnection Agreements (ICAs)

Except for the limited detail contained in GTAC s7.13, ICAs are subject to individual negotiation and cannot be assessed. That issue is discussed in in Appendix D, section D.1, and Chapter 6. Our analysis concludes that the limited detail contained in GTAC s7.13 creates issues in terms of fairness. Our assessment of ICAs is fully accounted for in Chapter 6, and to avoid double-counting we do not give it weight elsewhere.

Agreed Hourly Profiles (AHPs)

Under the GTAC, a shipper's MHQ is generally 1/16th of its MDQ. However, at a Dedicated DP, at any nomination cycle, a shipper may apply for an AHP for the rest the current day and subsequent days, up to a maximum of 7 days (GTAC ss3.26-3.28). First Gas will approve an AHP request unless it affects any shipper's DNC, exceeds the physical deliverability of the DP, or unduly increases the risk of breaching an Acceptable Line Pack Limit (GTAC s3.31).

[180] First Gas, 16 April cross-submission, p4-5, SQ11.

Hourly overrun charges apply only to Dedicated DPs, and only where the metered quantity is 200 GJ or more. We consider AHP in Appendix A. Our conclusion is that submitters have raised a number of legitimate concerns about AHP that suggest that further design work is required before the product can be judged fair and reasonable.

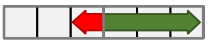
Overall fairness assessment of gas transmission products

In summary, we find that fairness should be moderately improved by the removal of grandfather rights, the daily nature of the standard product, and the availability of PRs. However, uncertainty of AHP arrangements would modestly reduce fairness.

Assessment	

Table 6 – Summary of GTAC Gas transmission products assessment

Summary of GTAC Gas transmission products assessment	comment	assessment
Efficiency		
Criterion 1, 2 & 14	The transmission product design should bring substantial benefits in uncongested and congested situations, but these benefits would be modestly moderated by initial set-up costs and increased transaction costs.	
Criterion 3	The product design (daily rather than annual capacity bookings) should reduce barriers to competition, bringing moderate competition benefits, particularly for new entrants.	
Criterion 4	Incentives for investment should modestly increase due to the extra information provided by PR auctions to aid investment decisions.	
Criterion 5	Pressure on costs and prices should moderately improve through increased competition. These gains could be offset by moderately increased nomination workload.	
Criterion 8	No noticeable changes to the use of delivery resources would be expected.	
Criterion 9	Moderate improvements to competition in upstream and downstream markets should result from the receipt zone trades attracting no transmission fees, and the downstream retail markets having more flexible transmission products.	
Criterion 10	Weak relevance to transmission products.	-
Criterion 11	Weak relevance to transmission products.	-
Criterion 15	Weak relevance to transmission products.	-
Criterion 16	Frictionless trading in the receipt zone should moderately improve short-term gas trading.	
Criterion 17	Weak relevance to transmission products.	-
Criterion 19	Weak relevance to transmission products.	-

Summary of GTAC Gas transmission products assessment		
	comment	assessment
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	Early notification of congestion should moderately improve reliability.	
Safety		
Criteria 1 & 7	No noticeable change expected.	
Environment		
Criteria 8, 12 & 13	Allowing for demand side management contracts meets the GPS objective and should provide a modest improvement.	
Fairness		
Criterion 13 & 18	Fairness should be moderately improved by the removal of grandfather rights and daily nature of the standard product, but modestly reduced by the uncertainty regarding AHP arrangements.	

4.2 Pricing: analysis

(Principally GTAC s.11 Fees and Charges, and some parts of GTAC s.8 Balancing.)

Pricing – description of arrangements

GTAC pricing terms

Transmission charges would be determined annually by First Gas, using the then prevailing Gas Transmission Pricing Methodology (GTPM), in compliance with the current price-quality path set by the Commerce Commission, and as far as practicable the Commerce Commission's pricing principles (GTAC s11.15). The setting of fees would be subject to the New Code's general dispute resolution provisions.

Broadly, the charges can be categorised as transport charges, congestion charges and balancing charges.

Transport charges

Transmission charges would be based on Daily Capacity Nominations, with fees set for each Delivery Zone and/or Individual DP (GTAC s11.1).

In addition, several incentive charges would apply. Daily Overrun and Underrun charges, and Hourly Overrun charges, would apply for differences between shippers' actual delivery quantities and DNC. (GTAC s11.4-11.6). At Dedicated DPs, Over-Flow Charges would apply for differences between hourly deliveries and maximum design flowrate of a DP (GTAC s11.7).

Congestion charges

At Congested DPs where shippers are allocated PRs, PR charges would apply (GTAC s11.2-11.3).

At Congested DPs where First Gas pays pipeline users under an IA (a Beneficiary DP), Congestion Management charges would apply to recover the cost (GTAC s11.11).

Balancing charges

For gas balancing, Excess Running Mismatch (ERM) charges would apply to Running Mismatch that exceeds tolerances (GTAC s8.11-8.14). In addition, cash-outs of ERM may occur when First Gas takes a balancing action (GTAC s8.8-8.10).

MPOC pricing terms

Transmission fees are based on daily approved nominations (MPOC s19). Peaking charges also apply (MPOC s13). First Gas may change transmission fees and charges at no more than 12 monthly intervals, with at least 60 days' written notice, in accordance with tariff principles in Schedule 10 (MPOC s19.9).

Schedule 10 provides for capital related costs to be recovered by $/GJ.km charges, and operating costs from $/GJ charges. The setting of fees is subject to the MPOC's general dispute resolution provisions.

For gas balancing, the Accumulated Excess Operational Imbalances are cashed out daily at a market related price (MPOC s12).

VTC pricing terms

Transmission charges are based on annual capacity reservations made on a point to point basis. Additional charges apply for Authorised and Unauthorised Overruns, Throughput, Alternative Transmission Services, and Corrections.

First Gas may propose transmission fee adjustments in June for application in the next transmission year commencing 1 October (VTC s15.6). Fee proposals can be challenged (but not the methodology itself) under the VTC's general dispute resolution procedures (VTC s15.7).

For gas balancing, balancing and peaking pool (BPP) cost allocations are separate to transmission charges (VTC s8).

Pricing – assessment

The following sections assess the structure of the fees and charges in the New Code, and the provisions for setting and amending those fees and charges. The assessment does not consider the specific level of fees and charges for each DP and delivery zone because:

1. gas transmission services are subject to price-quality control under Part 4 of the Commerce Act, and would remain controlled if the New Code comes into force; and
2. First Gas is yet to notify such charges and, even if this information was available, a comparison against current charges would be of limited value because First Gas can annually amend charges under the New Code (as is the case with MPOC and VTC). Hence, any assessment of specific charges would only provide a snapshot at a moment in time.

Pricing terms – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

Efficient use would be promoted if the New Code provides for distinct prices to be set for each major service provided by the gas pipeline system, and for those prices to be broadly cost-reflective.

The table below summarises the types of services provided by the gas pipeline system, the applicable charges under the New Code and the MPOC/VTC, and the rebate arrangements for credits.

Table 7 – Services and charge structures in GTAC and MPOC/VTC

Service	New Code charges	MPOC(M) /VTC(V) charges
Gas transport		
Transport (standard)	DNC charge	Tariffs 1 & 2[M] Capacity Reservation charge[V] Throughput charge[V]
Using more than *"booked"* pipeline capacity	Daily Overrun charge	Overrun Authorisation charge, Authorised Overrun charge, and/or Unauthorised Overrun charge[V]
Using less than *"booked"* pipeline capacity	Daily Underrun charge	N.A.[M,V]
Exceeding within-day flex limit	Hourly overrun charge	Peaking charge[M,V]
Exceeding design limit of DP	Over-flow charge	N.A.[M,V]
Transport (non-standard)	As per relevant bilateral agreement	As per relevant bilateral agreement [M,V]
Management of capacity scarcity		
Procuring interruptible capacity	Congestion Management charge	N.A.[M] Discount to standard rates[V]
Obtaining priority right to standard transport service	PR charge	AQ Fee[M]
Gas balancing		
Injecting less (or more) gas from the system than is withdrawn	Cash-outs when a balancing action is taken	Cash-outs[M] (daily) Allocation of balancing pool costs[V] (as required)
	Excess Running Mismatch charge	N.A.[M,V]
Other		
Recalculation of transmission charges due to incorrect or late information from shippers	N.A.	Corrections charge[V]

Service	New Code charges	MPOC(M) /VTC(V) charges
Credits		
Treatment of incentive charges for transport services	Incentive charge receipts are outside the revenue cap and credited monthly based on shipper shares of primary transport charges	Incentive charges are inside the revenue cap, and primary transport charges are adjusted in a later year for any over/under-recovery relative to Part 4 cap[V]
Treatment of incentive charges for balancing services	Incentive charges are outside cap and credited monthly based on shipper shares of total gas flows	N.A. [M,V]

Key observations are[181]:

Basic pricing structure

The New Code applies a DNC charge as the primary pricing component for transport services. MPOC also applies charges based on daily quantities of approved nominations, whereas the VTC's primary charge is based on annual reserved capacity. In the PAP, we concluded that, on balance, the New Code's daily fee structure would likely improve the efficiency of pipeline usage decisions, because the annual fee structure in the VTC discourages usage by parties with peakier demand profiles, irrespective of whether such usage imposes any additional system costs.[182] By contrast, we noted that the pricing structure in the New Code would not have a strong signal to discourage peaky usage unless capacity is likely to be scarce. In such cases, various forms of congestion management charge may apply (see below for further discussion).

Overall, the PAP rated the DNC charge structure as a substantial improvement on the VTC because it does not discourage usage by parties with peaky demand profiles, unless such usage is expected to raise system costs.

Daily overrun (OR) and underrun (UR) charges

The New Code includes daily incentive charges to encourage shippers to provide accurate nominations (ie operate in accordance with their approved DNC quantities). In situations where capacity may be scarce, there are good grounds for such incentives. Conversely, where capacity is not likely to be scarce (which appears to be the case for much of the pipeline system for the foreseeable future), such incentive charges could encourage inefficient pipeline usage decisions, and/or excessive effort by shippers to forecast their capacity needs, with little or no offsetting system operational benefits.

Although the New Code provides for lower incentive charges when capacity scarcity is not expected, those base charges are substantial – 100% of the DNC fee applies to underrun quantities (in addition to paying the *"normal"* DNC fee for the unused capacity) and 200% of the DNC fee will apply to overrun quantities. This also creates asymmetrical incentives.

[181] The following discussion applies to all standard charges. Non-standard charges may apply for gas transported under existing or new supplementary agreements. This issue is considered in [Appendix D, section D.2].

[182] This assessment considers usage decisions over the medium term (e.g. a party deciding whether to expand its gas use) rather than day to day or hour to hour.

The VTC has explicit overrun charges and financially encourages users to avoid underruns. The MPOC does not contain either overrun or underrun charges. The relevant issue is how the New Code compares to the MPOC and VTC. Our analysis, presented in Appendix D.5 indicates that the likelihood of inefficient outcomes is appreciably higher under the New Code than the status quo. Submissions on the PAP, described in section 2.3, reinforce our view.

We also agree with Genesis[183] that the relativity of OR/UR fees and the ERM fee requires further consideration, and with Vector[184] that the higher incentive fees that would apply at a Congested DP should not apply at times when there is no congestion (eg non-peak demand days).

Overall, we consider the asymmetry in incentive fees to be undesirable, and the incentives in uncongested situations to be too strong.

Hourly overrun charges

The New Code includes hourly overrun charges that only apply at Dedicated DPs where metered quantities are 200 GJ/hour or more. The New Code provides for hourly overrun charges to be 200% of the DNC charge when the DP is not affected by congestion, and 500% otherwise. These charges raise similar concerns to the daily overrun charge, ie shippers may incur costs that are not offset by system-wide gains.

In principle, the New Code has mechanisms (the HQ/DQ ratio setting process, and AHPs) that provide flexibility for shippers to avoid hourly overrun charges where no congestion applies. However, there is uncertainty about the effectiveness of these mechanisms because First Gas is yet to provide guidance on how they will be applied.

Furthermore, as highlighted in some submissions on the PAP (described in section 2.3), the case for applying hourly overrun charges is not well justified, and evidence suggesting that it is counter-productive has been presented for at least one DP (the Huntly Power Station DP).

We remain concerned that hourly overrun charges could drive inefficient behaviour. We are persuaded by submissions that we should view the hourly OR proposal as more negative than we did in the PAP.[185]

Congestion management charges

The New Code provisions are expected to improve the efficiency of pipeline usage decisions by providing clearer price signals about the value of interruptible and firm capacity, when capacity scarcity is expected. This assessment is based on the following:

1. If any payments are made to shippers/users under an IA, the costs will be recovered from other shippers (the "beneficiaries") at the relevant Beneficiary DPs – this is an improvement relative to VTC where the cost of providing a discount to interruptible users may be borne by parties other than those who directly benefit.
2. Payments to shippers to voluntarily interrupt usage under the New Code are not capped at the size of the standard transport charge, unlike the VTC. The New Code provision is therefore more flexible than the VTC, and is expected to be much more useful in situations where it is desirable to incentivise the provision of interruptible transport rights.

[183] Genesis, 19 March PAP submission, p8-9, SQ19.

[184] See Vector, 19 March PAP submission, Q2.

[185] Although not relevant to our analysis, we note that the possible ways to address this concern include providing: modelling of the consequences of intra-day peaks; more clarity about how HQ/DQ ratios and AHPs would operate; and/or, reconsidering the form or application of hourly overrun charges.

3. PRs must be allocated by auction – compared to the MPOC provision that requires AQ to be allocated in accordance with queueing rules approved by Gas Industry Co. The New Code provides more explicit assurance that available capacity will flow to parties who value it the most, which should enhance efficiency. The New Code auction terms and conditions and MPOC queuing rules would both require Gas Industry Co approval. Overall, the degree of improvement on this dimension is rated as moderate.
4. A common congestion management regime will apply across the entire system, which should assist in minimising transaction costs.

Other aspects of the congestion management provisions are discussed in section 4.7.

ERM charges

All three codes incorporate pricing mechanisms to encourage pipeline balancing. The MPOC has daily cash-outs at prices that incorporate an adjustment related to the average market price on the day. The adjustments are intended to provide some incentive for parties to self-balance rather than be cashed-out. The adjustments increase the price of cash-outs where the pipeline is selling gas to a customer, and they reduce the price of cash-outs where the pipeline is purchasing gas from a customer. Because the charges under the VTC reflect the cash-outs at the TP Welded Points, those premiums and discounts carry across to balancing transactions under the VTC.

Under the MPOC, when First Gas takes a balancing action it is able to pass on the cost/revenue (and associated title) to the causing party or parties. That approach is replicated in the New Code with one difference: under the New Code, the prices associated with balancing actions that are passed on to Shippers or OBA Parties will reflect the weighted average price of balancing gas puts/calls on the day; whereas under the MPOC, the transactions use the lowest/highest price at which balancing gas was sold/purchased on the day.

From a pipeline usage perspective, efficiency will be enhanced if causers of system mismatch/imbalance bear any associated costs, and if arrangements seek to minimise overall transaction costs.

In the PAP, we expected the New Code to have the following efficiency effects:

1. A reduction in pipeline users inefficiently incurring costs to manage their running mismatch positions. Under current arrangements, users on the Maui system face daily cash-outs, irrespective of whether any physical balancing action is taken by First Gas. As a result, users can be driven to incur costs to balance their own positions, even though the system does not require any balancing action. Under the New Code, users would only face cash-outs on days that First Gas needs to take a physical balancing action (ie when the system requires a corrective action). On other days, users would incur ERM charges. For the reasons set out in Appendix D, we expect this to reduce the likelihood of pipeline users inefficiently incurring costs.
2. Although the effect in point 1 above is positive, the ERM charges have another element that raises a potential efficiency concern. The New Code sets the positive ERM charge at $0.20/GJ and the negative ERM charge at $0.60/GJ. This asymmetry may bias users' positions in aggregate towards carrying positive ERM, which could lead to system line pack and pressure typically tending toward the upper end of the acceptable range. This may result in higher system costs, relative to a balanced incentive position.However, the New Code provides First Gas with discretion to alter ERM charges with 5 business days' notice (subject to caps of $1/GJ in both cases). Accordingly, if inefficient behaviour does

become apparent from asymmetric ERM charges, the New Code provides an avenue to address the issue relatively quickly.

While a few submitters consider the ERM charges may influence spot market prices, we are not convinced that would occur (as explained in section 2.3). If anything, pipeline users should benefit from the increased flexibility of not facing mandatory daily cash-outs (since these would only occur if the operator undertakes a physical pipeline balancing action), and therefore reduce their exposure to the thin market.

Some submitters (eg First Gas and Genesis) suggest that incentives should reflect the potential consequences of a critical contingency that triggers a relight event. We agree that a major relight would be very costly, but we are not persuaded that this necessarily justifies asymmetric ERM charges. Some parties have previously indicated that over-pressure increases the risk of gas treatment plants trips, noting that such plants may not restart in short order. On this view, both under- and over-pressure situations may increase the risk of costly disruptions. ERM charges also interact with other aspects of the pipeline management regime – such as the operational pressure limits.

Overall, while the rationale for the asymmetry of ERM charges has not been clearly articulated, our concern is tempered by First Gas' ability to make the fees symmetric at relatively short notice if required. We also acknowledge First Gas' point that charges under the MPOC regime have been asymmetric in practice (although this is not by design, and instead simply reflect market outcomes). Accordingly, we rate the structure of ERM charges as modestly negative.

Over-Flow charges

These charges (GTAC s11.7-11.8) would apply in any hour where deliveries at a Dedicated DP exceed the maximum design flow rate. First Gas advises that such situations have arisen in the recent past, and that the MPOC and VTC contain no provisions to incentivise appropriate behaviour. First Gas also advises that over-flow charges are likely to apply very rarely.

Conclusions in relation to Criteria 1, 2 and 14

Taking all of the factors noted above into account, we assess the GTAC pricing structure to be significantly better at promoting the efficient use of the pipelines. However, we have offsetting negative concerns in relation to the asymmetry and level of incentive fees (daily and hourly overrun, daily underrun fees) that apply in non-congested situations, and the asymmetry in ERM charges.

In relation to Criterion 3 (reducing barriers to competition):

Single Receipt Zone

The New Code would create a single receipt zone within which all current gas production and storage facilities are located. This is also the zone in which gas in the wholesale spot market is traded. All gas sold within this zone would be perfectly substitutable, which should facilitate gas trading and competition among suppliers. Although it is not possible to quantify this benefit, we note that the commodity value of gas is typically a multiple of the transmission charge. This in turn suggests that competition effects in the wholesale market are an important factor to consider in the overall assessment. Some GTAC and PAP

submissions also drew attention to the benefits of a single receipt zone in promoting competition[186].

Common framework

The New Code would apply a common transport pricing framework across the entire pipeline system – rather than the two quite different pricing systems at present. The New Code seeks to elicit unbiased transmission nominations, which should allow shippers to align their transmission capacity and gas commodity nominations.[187] This should reduce overall transaction costs, and therefore be pro-competitive. Of submissions that address this matter, the majority supported this view. The streamlined regime could also make it easier for end-users to become shippers – which would also be pro-competitive.

Daily nominations

The New Code would no longer apply annual capacity reservation fees on the non-Maui parts of the system, instead basing transport fees on daily capacity nominations. This is likely to be beneficial for new entrant retailers supplying smaller gas consumers. This is because an annual capacity fee regime tends to favour parties that have larger customer portfolios (because of diversity benefits) and those with established and predictable customer bases (who therefore have less relative forecasting risk). Furthermore, as noted by MGUG in GTAC submissions[188], the move away from annual capacity bookings will make it easier for end-users to run tenders for their gas supply, rather than being tied to capacity booking cycles. Hence, the move from annual to daily capacity charges under the New Code is expected be pro-competitive.

Competitive market for scarce capacity

The New Code would allocate PRs for scarce capacity based on willingness to pay, and replace the current allocation via grandfathering (under the VTC) which favours incumbent shippers. The removal of grandfathering of itself is expected to be pro-competitive, a point noted by a number of submitters including Greymouth[189] and MGUG[190]. Concerns have been raised previously that the auction terms and conditions might be formulated in a way that has the unintended effect of hindering competition. While this is a potential risk, it appears relatively low given that the New Code requires First Gas to develop the auction terms and conditions in consultation with shippers, and to submit them to Gas Industry Co for approval. Accordingly, the New Code's pricing terms for congestion management are assessed as a moderate improvement for competition. (We discuss the effect of rebates separately, below.)

Benefits of diversity

The OR/UR incentive charges under the New Code apply at zonal/DP level rather than the DP level as under VTC. Of itself, this reduces the benefit of an incumbent shipper having an established customer portfolio (with associated customer diversity effects). This is a gain relative to the VTC, but the effect is expected to be offset by the New Code incentive fee levels (see earlier).

[186] For example, the Todd, 22 January New Code submission, s3, and MGUG, 19 March PAP submission, Q3.

[187] Although, as noted in Appendix A, the daily incentive fees are not symmetric in their effect.

[188] MGUG, 22 January New Code submission, p4.

[189] Greymouth, 22 January New Code submission.

[190] MGUG, 22 January New Code submission, p4.

Rebates

Under the New Code, receipts from transport OR/UR charges, ERM charges, and PRs would be credited to shippers each month based on their respective share of total DNC charges, and would therefore be treated as nil under the Commerce Act Part 4 revenue cap. In contrast, under the VTC the OR charges are accounted for within the revenue cap, and any over/under estimate is carried forward as a throughput fee credit/debit in a future regulatory period. Under the MPOC there are currently no incentive fees.

Concerns have been raised by some submitters[191] that this approach in the New Code may hinder competition and/or be harmful for consumers. As explained in section 2.3, while we have some sympathy with this view, we consider the incentive fee level rather than the rebate mechanism to be the most concerning problem. In that respect, we expect that if OR and UR fees were set at an efficient level (as noted above), that should reduce this concern.[192] This is illustrated by the example in Appendix D.

Overall, we consider the rebate mechanism to be worse than the current rebate mechanism. Although both distort the marginal cost signals, the greater quantum of the rebate, coupled with its more immediate effect, make the proposed New Code rebate mechanism more of a concern. While not a hurdle to market entry, it would mean that an entrant would face a marginally less competitive market than otherwise. However, we judge that this issue would be less of a concern if the incentive charges were a lower proportion of revenue.

Conclusion in relation to Criterion 3

We conclude that a moderate improvement should be achieved through a single receipt zone, single pricing regime, charges based on daily rather than annual capacity, and allocating scarce capacity rights via auction. All should reduce barriers to competition. However, moderate concerns arise from the quantum of incentive charges, and the effect of the rebate mechanism on smaller shippers and end-users.

In relation to Criterion 4 (providing incentives for investment):

The New Code pricing provisions are not expected to materially alter incentives for investment in gas processing, transmission and distribution since these are largely determined by factors outside the transmission code (eg wholesale gas price outlook, Part 4 of the Commerce Act).

In relation to Criterion 5 (sustained downward pressure on costs and prices):

See discussion in relation to Criterion 3. We expect the pricing terms to facilitate competition in some respects, but the quantum of incentive charges, coupled with the rebate mechanism gives us concern.

[191] For example, see MGUG, 19 March PAP submission, Q2.

[192] Although not relevant to our analysis, we note that First Gas may be able to reduce concerns by publishing a Gas Transmission Pricing Methodology which provides more clarity about how incentive fees will be set in future.

In relation to Criterion 8 (efficient use of energy and other delivery resources):

We would not expect a noticeable change.

In relation to Criterion 9 (facilitating competition in upstream and downstream markets):

In relation to gas transmission product design, we concluded (see Criterion 9 assessment in section 4.1) that the design would generally facilitate competition in upstream and downstream markets. In relation to the pricing of those products we consider that certain aspects would moderately support increased competition. In particular, the zero price for transport within the receipt zone would reduce the cost of gas trading, thus facilitating upstream competition. We see the move from annual capacity charges to daily capacity charges as generally making it possible for a wider range of retailers, including new entrants, to bid to supply end-users.

On the other hand, we consider that un-necessarily high incentive charges would modestly reduce competition because prices would not reflect costs. Although high incentive charges are not so much of a concern because the code can be changed.

In relation to Criterion 10 (full cost of producing and transporting are signalled to consumers):

As noted earlier, the transport incentive charges appear to be disproportionately high in non-congested situations. The New Code is rated as a moderately worse than current arrangements on this dimension.

In relation to Criterion 11 (price/quality trade-off reflects customer preferences):

The New Code has more developed pricing provisions than either MPOC or VTC in relation to capacity pricing if scarcity arises. In principle, this should enable pipeline users to make better trade-offs between price and service quality (ie the priority of their access to capacity if scarcity arises).

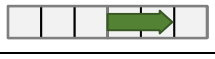
Overall efficiency assessment of pricing arrangements

Based on our consideration of each of the efficiency criteria, our overall assessment for efficiency is that the New Code pricing terms would have a moderately positive aspect, but also a moderately negative aspect. The factors with the greatest influence on this conclusion are those that have a pervasive influence on efficient outcomes (such as overrun and underrun charges), rather than those that have an occasional influence (such as PR auction pricing).

Pricing – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

As discussed above, the New Code pricing provisions should enable better management of capacity scarcity situations, therefore reducing the risk of interruption or contingency. However, the terms and conditions for PR auctions are not fully specified, so the New Code is rated as a moderate improvement on current arrangements on this dimension.

Assessment	

Pricing – Environmental assessment

In relation to Criteria 8, 12 and 13 (contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management):

Allowing payments to be made for demand side management when congestion occurs should have a modestly positive effect.

Assessment	

Pricing – Fairness assessment

In relation to Criteria 13 and 18, ie gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions:

In terms of procedural fairness, the New Code, MPOC and VTC all have similar provisions, with First Gas annually setting the level of individual charges, subject to a requirement for charges to be consistent with the relevant price-quality path approved by the Commerce Commission, and pre-defined pricing methodologies etc. The New Code, MPOC and VTC also have similar provisions in relation to pipeline users' ability to challenge First Gas' charges under the dispute provisions, except that the VTC has a prohibition on challenging balancing charges.

As regards the charge structures, we consider that adopting a daily nominated capacity charge as the primary transport fee will be fairer because it would not discourage peakier users of transport capacity, unless such usage genuinely imposes higher costs.

However, we consider high OR/UR charges combined with the rebate mechanism, and hourly overrun charges that only apply to subset of parties shipping to Dedicated DPs on standard TSAs, to also be unfair.

Our overall assessment is that charging based on usage (unless congestion applies) is moderately fairer. But this is offset by high OR/UR fees combined with the rebate mechanism, and the scope of hourly overrun fees being moderately negative.

Assessment	

Table 8 – Summary of GTAC Pricing assessment

Summary of GTAC Pricing assessment		
	Comment	Assessment
Efficiency		
Criterion 1, 2 & 14	The GTAC pricing structure should be significantly better at promoting the efficient use of the pipelines. However, offsetting moderately negative concerns are that incentive fees (daily and hourly overrun, and daily underrrun fees) may be disproportionately high (particularly in non-congested situations), and that ERM charges are asymmetric.	
Criterion 3	A moderate reduction in barriers to competition should be achieved through a single receipt zone, single pricing regime, charges based on daily rather than annual capacity, and allocating scarce capacity rights via auction. However, moderate concerns arise from the quantum of incentive charges, and the effect of the rebate mechanism on smaller shippers and end-users.	
Criterion 4	Would not expect any noticeable change.	
Criterion 5	The positive effects of pricing on competition should moderately increase downward pressure on prices, but the quantum of incentive charges, coupled with the proposed rebate mechanism is expected to have a moderately opposing effect.	
Criterion 8	Pricing is not expected to noticeably change fuel costs.	
Criterion 9	Receipt zone trading free of transport charges should facilitate upstream gas trading, and the move to daily capacity charges should facilitate downstream competition. Against this moderate improvements, we record a modest decline because un-necessarily high incentive charges distort prices and damage competition (at least until the fees are changed).	
Criterion 10	Incentive charges appear disproportionately high where congestion is not expected – moderately increasing the divergences between costs and prices.	
Criterion 11	The GTAC's more developed pricing provisions should allow customers to make a moderately better price/quality trade-off.	
Criterion 15	Weak relevance to pricing terms.	-
Criterion 16	Weak relevance to pricing terms.	-
Criterion 17	Weak relevance to pricing terms.	-
Criterion 19	Weak relevance to pricing terms.	-

Summary of GTAC Pricing assessment		
	Comment	**Assessment**
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	The proper allocation of risk should be moderately strengthened by the GTAC's pricing provisions during congestion.	
Safety		
Criteria 1 & 7	Weak relevance to pricing terms.	-
Environment		
Criteria 8, 12 & 13	Allowing for demand side management payments would give modestly better compliance with Criterion 12.	
Fairness		
Criterion 13 & 18	Charges based on usage (unless congestion applies) would be moderately fairer – but high OR/UR charges combined with the rebate mechanism, and the scope of hourly overrun fees would be moderately unfair.	

4.3 System operation – Energy quantity determination: analysis

(Principally GTAC s5 Energy Quantity Determination.)

Energy quantity determination – description of arrangements

GTAC energy quantity determination

The GTAC specifies:

- Metering is required at every RP, DP and Bi-directional Point, unless First Gas considers it impractical or uneconomic (GTAC s5.1-5.2);
- Shippers may request unscheduled testing (no more frequently than 9 months). If the meter is found to be accurate, the shipper will pay the costs of testing; otherwise, First Gas will pay for the testing and adjust the meter. If First Gas is not the meter owner, the shipper will exercise its rights or, failing that, First Gas will exercise its contractual rights to get the test done (GTAC s5.3-5.4);
- At points monitored by telemetry, First Gas will publish Daily Delivery Reports (DDRs) and Hourly Delivery Reports (HDRs), on the next Business Day, otherwise at month-end (GTAC s5.5-5.7);
- For all DPs, First Gas will publish Gas Composition Data on the next Business Day (GTAC s5.8); and
- Corrections for inaccurate metering will be as per the Metering Requirements document (as also referenced in the VTC) (GTAC s5.9).

MPOC energy quantity determination

The MPOC specifies:

- the requirements on station owners (MPOC Sch1, Part1);

- metering standards (MPOC Sch1, Part 2);
- testing arrangements (MPOC Sch 1, Part 3); and
- corrections for inaccurate metering (MPOC Sch1, Part 4).

VTC energy quantity determination

The VTC specifies:

- metering ownership, standards, special testing, and metering corrections (VTC s11);
- the timing of Daily Delivery Reports (DDRs) is specified in VTC Sch 4.

The VTC references a Metering Requirements document, outside the VTC, for more detail.

Energy quantity determination – assessment

In essence, the energy quantity determination arrangements, including the issuing of DDRs, MDRs and gas composition data, would not significantly change. However, metering standards and procedures would become common, which should lead to some efficiencies. Some of these arrangements would be set out in a new Metering Requirements document, which was not available as part of the New Code material presented on 8 December 2017.

Energy quantity determination – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

Although the MPOC and VTC metering arrangements are substantially similar, the GTAC requirement that all metering is subject to the same technical standards (rather than MPOC Sch 1 and the VTC Metering Requirements document), the same testing requirements, correction methodology etc, should modestly reduce costs.

Energy quantity determination – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

In general, we expect that having a single set of Metering Requirements will improve reliability[193]. However, we are concerned that the Metering Requirements document:

1. was not part of the New Code documentation, so could not be reviewed even though it could have cost consequences for market participants; and
2. will not be a schedule to the GTAC or ICA, so can be changed without consultation.

We also acknowledge the stakeholder concern that the 9 month interval before special tests is worse than under the MPOC (60 days) or VTC (90 days).

[193] While not relevant to our comparative analysis, we note that there are opportunities to improve reliability that were not proposed in the New Code arrangements. For example, Vector's New Code submission suggested that First Gas should be able to improve on the publication times for gas composition data as well as hourly and daily delivery reports, and could make a service level commitment to do so.

Energy quantity determination – Fairness assessment

In relation to Criteria 13 and 18, ie gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions:

The GTAC does not deal directly with the exceptions provided for in the VTC (VTC s11.1(b) and s11.3) in relation to legacy arrangement that existed at a DP as at 30 November 2005. The VTC requires, for example, that owners of such meters use reasonable endeavours to keep them accurate. However, First Gas has advised us that these legacy arrangements will still be provided for.

Under the GTAC, the accuracy requirement would be effected through the Metering Requirements (see the relevant GTAC definitions). We assume that, where a meter is not owned by a party to the GTAC, the accuracy requirements would be dealt with in the relevant ICA. However, as noted in section 2.4, we accept that there is a measure of unfairness where parties to existing (known) arrangements do not know exactly what they will be replaced with.

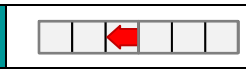
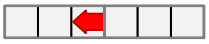
Assessment 

Table 9 – Summary of GTAC energy quantity determination assessment

Summary of GTAC energy quantity determination assessment		
	Comment	**Assessment**
Efficiency		
Criterion 1, 2 & 14	The GTAC would introduce one set of technical standards, testing requirements, and correction methodology, which should modestly reduce costs.	
Criterion 3	Weak relevance to energy quantity determination arrangements.	-
Criterion 4	Weak relevance to energy quantity determination arrangements.	-
Criterion 5	Weak relevance to energy quantity determination arrangements.	-
Criterion 8	Weak relevance to energy quantity determination arrangements.	-
Criterion 9	Weak relevance to energy quantity determination arrangements.	-
Criterion 10	Weak relevance to energy quantity determination arrangements.	-
Criterion 11	Weak relevance to energy quantity determination arrangements.	-
Criterion 15	Weak relevance to energy quantity determination arrangements.	-

Summary of GTAC energy quantity determination assessment		
	Comment	**Assessment**
Criterion 16	Weak relevance to energy quantity determination arrangements.	-
Criterion 17	Weak relevance to energy quantity determination arrangements.	-
Criterion 19	Weak relevance to energy quantity determination arrangements.	-
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	A single set of technical standards, testing requirements etc. is expected to modestly improve reliability, but the 9 month interval before special tests is worse than under the MPOC (60 days) or VTC (90 days), and the absence of a completed Metering Requirements document, or an appropriate process for development of that document, are modest detriments.	
Safety		
Criteria 1 & 7	Weak relevance to energy quantity determination arrangements.	-
Environment		
Criteria 8, 12 & 13	Weak relevance to energy quantity determination arrangements.	-
Fairness		
Criterion 13 & 18	Fairness is modestly decreased because meter owners may be affected by the Metering Requirements document, as yet unavailable.	

4.4 System operation – Energy allocation: analysis

(Principally GTAC s6 Energy Allocations.)

Energy allocation – description of arrangements

GTAC energy allocation

The GTAC specifies:

- Shipper receipts would be determined by:
  - **OBA** (GTAC s6.1); or
  - **GTA** (GTAC s6.2). For GTAs, First Gas will be the Gas Transfer Agent unless shippers at the RP agree an alternative acceptable to First Gas (GTAC s5.5). GTAs are required to set out the rules the Gas Transfer Agent will apply to allocate the metered quantity among shippers (GTAC s6.3) and notify those quantities (GTAC s6.4).

- Shipper deliveries would be determined by:
    - **Downstream Reconciliation Rules** (DRRs) (GTAC s6.10), with initial allocations determined by industry agreement (GTAC s6.11(a)) or in proportion to DNCs (GTAC s6.11(b)). And, if an SA or IA applies to an end-user supplied from a Distribution Network, First Gas will advise the Allocation Agent of the daily delivery quantities (GTAC s6.16);
    - **OBA** (GTAC s6.9); or
    - **Allocation Agreement** (GTAC s6.11). And if end-users at a Dedicated DP buys gas from more than one shipper (GTAC s6.18), those shippers will enter into an Allocation Agreement (GTAC s6.19).
- Secondary trades would be determined by:
    - **GTA**;
    - **Gas Market**; or
    - **OATIS trading functionality**.

    Trades are final and will not be altered by wash-up or otherwise (GTAC s6.7). Buyers and sellers are responsible for notifying First Gas of any trade.
- Wash-ups would be determined by:
    - **Wash-up Agreement** defined as an agreement between all Shippers, OBA Parties and First Gas or, if agreement can't be reached, in the manner reasonably determined by First Gas (GTAC s1.1).
- For all OBA Parties, receipts and/or deliveries are determined by metered quantities.

MPOC energy allocation

The MPOC specifies:

- For shippers, at all RPs and DPs, energy is allocated according to OBA principles (MPOC s10.1) with shippers being allocated their Approved Nominations (MPOC s10.2); and
- For all Welded Parties, receipts and/or deliveries are determined by metered quantities.
- Wash-ups are not addressed.

VTC energy allocation

The VTC specifies:

- Shipper receipts will be determined by a GTA (VTC s6.1); and
- Shipper deliveries will be determined by the metered quantity where it is the only shipper to that point (VTC s6.5(a)), or by an Allocation Agreement where it shares the point with other shippers (VTC s6.5(b)). Special arrangements apply at Frankley Road, Kapuni and Pokuru #2.
- Wash-ups are not addressed.

Energy allocation – assessment

The major change to allocation arrangements under the New Code would be that OBAs would no longer be required at all Maui pipeline RPs and DPs. Instead, OBAs would be an optional allocation method at all RPs and DPs.

Energy allocation – Efficiency assessment

In relation to Criteria 1, 2, 14 and 17 (delivering gas efficiently, facilitating ongoing supply by providing access and competitive market arrangements, and accurate, efficient and timely arrangements for reconciliation of upstream gas quantities):

Whereas OBAs are compulsory at every RP and DP under the MPOC, and do not feature in the VTC, New Code shippers could agree to use an OBA or alternative allocation method at any RP or DP. We continue to regard this choice as positive, however (as discussed in section 2.5):

1. We remain concerned about the perceived shortcomings of the OBA (no entitlement to AHPs etc). While we appreciate that, as First Gas points out, the issues may be resolved, the debate suggests that the GTAC provisions lack clarity.
2. We concede that shippers are not always best placed to choose the allocation method; for RPs and DPs with a single end-user it is the interconnected party who will have a long term interest in the allocation method. (Although we still consider that the interconnected party at a point could insist that shippers adopt its preferred allocation method.)

Criterion 17 seeks that the arrangements for upstream reconciliation are accurate, efficient, and timely. The MPOC provides for shippers to be allocated their approved nomination at a welded point each day. The GTAC provides that *"[w]here an OBA applies at a Receipt Point, a Shipper's Receipt Quantity will be its Approved NQ"* which is fundamentally the same as the MPOC provision. To the extent that an existing gas sales agreement reflects the precise wording in the MPOC, it is possible that some renegotiation of that agreement might be required so as to conform with the GTAC. However, given that such a change would be about conforming with the process steps under the new regime, it should be able to be worked through quickly and efficiently. Given the strong similarity in the wording, we see no reason why the upstream reconciliation arrangements under GTAC would be any less *accurate, efficient, and timely* than the arrangements that currently exist under the MPOC. This indicates that the comparative assessment should find no change under this criterion.

We conclude that aspects of the transmission product design should bring both moderate improvements and detriments to efficiency.

Energy allocation – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

Gas Industry Co has carefully considered the comments on the need to advance D+1 alongside the GTAC development, and we discuss this topic further in Section 6.2. While we agree that D+1 will be a necessary adjunct to the GTAC, it is also necessary under the current arrangements. If the New Code is approved and First Gas proceeds to adopt it, Gas Industry Co would make progress with developing the necessary changes to the downstream reconciliation rules so that the consultation process would commence in parallel with IT development for the GTAC. However, we accept that in a world where daily OR/UR fees apply, the absence of agreed wash-ups are a more significant concern. We continue to assess this aspect of energy allocation as being modestly negative because a wash-up agreement should be straightforward to prepare.

Assessment	

Energy allocation – Fairness assessment

In relation to Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions):

No significant change.

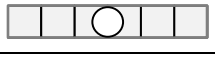
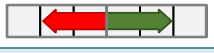
Assessment	

Table 9 – Summary of GTAC energy allocation arrangements assessment

Summary of GTAC energy allocation arrangements assessment		
	Comment	**assessment**
Efficiency		
Criterion 1, 2 & 14	The optionality of using OBA allocation or alternative allocation methods at any RP or DP should moderately improve efficiency. However, interconnected parties may be discouraged from using OBAs because they would have no entitlement to AHPs, and would not be primarily responsible for choosing the allocation method, even when the RP of DP is owned and controlled by them. These matter counter the improvement with a moderate reduction.	
Criterion 3	Weak relevance to energy allocation arrangements.	-
Criterion 4	Weak relevance to energy allocation arrangements.	-
Criterion 5	Weak relevance to energy allocation arrangements.	-
Criterion 8	Weak relevance to energy allocation arrangements.	-
Criterion 9	Weak relevance to energy allocation arrangements.	-
Criterion 10	Weak relevance to energy allocation arrangements.	-
Criterion 11	Weak relevance to energy allocation arrangements.	-
Criterion 15	Weak relevance to energy allocation arrangements.	-
Criterion 16	Weak relevance to energy allocation arrangements.	-
Criterion 17	No noticeable change.	-
Criterion 19	Weak relevance to energy allocation arrangements.	-
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	The absence of the Wash-up Agreement is modestly negative for reliability.	
Safety		
Criteria 1 & 7	Weak relevance to energy allocation arrangements.	-

Summary of GTAC energy allocation arrangements assessment		
	Comment	assessment
Environment		
Criteria 8, 12 & 13	Weak relevance to energy allocation arrangements.	-
Fairness		
Criterion 13 & 18	No noticeable change.	

4.5 System operation – Balancing: analysis

(Principally GTAC s8 Balancing.)

Balancing – description of arrangements

GTAC gas transmission balancing

Scope

The balancing arrangements apply in respect of the entire transmission system. Each shipper would aim to match its daily system-wide receipts and deliveries. Each OBA Party (an interconnected party with an OBA) would aim to match its daily scheduled and metered quantities, and First Gas would aim to buy sufficient gas each day to meet its operational use. First Gas would also buy and sell balancing gas where necessary to manage the system line pack within limits.

Primary balancing obligation

The GTAC provides that shippers will use reasonable endeavours to match their gas receipts and deliveries each day (GTAC s8.2). Similarly, First Gas is required to ensure that OBA Parties must use reasonable endeavours to match metered quantities and daily scheduled quantities (GTAC s8.3). Both shippers and OBA Parties are required to minimise their running mismatch but may create mismatch on a day in order correct their running mismatch. First Gas is also under an obligation to minimise its running mismatch by matching its purchases for operational purposes on a day to the quantities it uses on that day (GTAC s8.4). First Gas is also permitted to have mismatched quantities in order to reduce its running mismatch.

Line pack management

First Gas would use reasonable endeavours to maintain line pack between the upper and lower acceptable limits. First Gas would determine those limits taking into account the need to: provide all DNC and supplementary capacity, provide Running Mismatch Tolerance for shippers and OBA Parties and comply with and any other obligations under the GTAC (GTAC s8.5). If a breach of the acceptable line pack limit is likely, First Gas would take corrective action, including: moving gas from one part of the transmission system to another; issuing high or low line pack notices; and/or buying or selling balancing gas. Balancing gas transactions would be executed effectively, efficiently, and transparently, including via a gas market (GTAC ss8.6-8.7).

A related matter, Target Taranaki Pressure (TTP), is not covered in GTAC s8 but is referred to in GTAC s7.13(e) as one of the items to be stipulated in any interconnection agreement concerning a Receipt Point on the First Gas 400 line between Oaonui and the Turangi Mixing

Station. That clause requires First Gas to use reasonable endeavours to maintain pressure in that region of the pipeline to between 42 and 48 bar gauge.

Cash-outs

If First Gas buys/sells balancing gas on a day it would pass on the associated cost/receipt by selling/buying gas to/from each party that had negative/positive running mismatch at the end of the previous day. The cash-out volumes would be allocated *pro rata* to each relevant party's respective running mismatch. These transactions would be subject to the effects of any wash-ups (GTAC ss8.8-8.10).

Incentive charges

Each shipper and OBA Party would be subject to Excess Running Mismatch (ERM) charges whenever it has running mismatch in excess of its running mismatch tolerance. The aggregate tolerances for shippers and interconnected parties would be determined and published by First Gas. Each shipper or interconnected party would be allocated a share of the aggregate tolerances based on its respective delivery quantity (shipper) or metered quantity (interconnected party). The standard fee for excess negative/positive running mismatch would be $0.60/$0.20 per GJ. However, the fee for negative/positive running mismatch on a day when a low/high line pack notice has been issued would be multiplied by 5. Negative ERM charges would not apply on days when a high line pack notice has been issued and positive ERM charges would not apply on days where a low line pack notice has been issued (GTAC ss8.11-8.15). It is worth noting that ERM charges may be levied multiple times, ie if a Shipper does not correct its running mismatch then it would be subject to ERM charges on successive days.

Transparency

Mismatch would not be confidential information under the GTAC and First Gas will publish each shipper's and interconnected party's running mismatch each day (GTAC s8.15 & Sch Two).

Park and loan

The GTAC provides for First Gas to offer Park and/or Loan services to shippers and OBA Parties (GTAC ss8.16-8.22). First Gas would be the party who determines the aggregate quantities of gas that may be temporarily parked in, or borrowed from, the pipeline, and those quantities would be published. Park and Loan would only be available on application and the service would be offered on a first come, first served basis. Fees for Park and Loan would be determined by First Gas and published.

The Park and Loan service would only be available to the extent that it would not compromise First Gas' ability to provide transmission capacity and to manage line pack within acceptable limits.

MPOC gas transmission Market Based Balancing (MBB)

Scope

The balancing arrangements apply in respect of the entire Maui pipeline. Each shipper aims to match its daily system-wide receipts and deliveries. Each OBA party (a Welded Party in the MPOC) aims to match its daily scheduled and metered quantities. In practice, shippers very rarely have mismatch, so balancing is primarily a matter for OBA parties. First Gas buys and sells balancing gas where necessary to manage the line pack within limits.

Primary balancing obligation

With the change to market-based balancing (MBB) in 2015, the MPOC provided for tolerances (Running Operational Imbalance Limits (ROIL)) at receipt and DPs, outside of which parties are subject to automatic end-of-day cash-out. Thus MBB sharpened the previous primary balancing obligation under the MPOC that a Welded Party must use reasonable endeavours to manage its ROI towards zero over a reasonable period of time.

Line pack management

Under the MPOC First Gas is required to maintain flow line pack (necessary to support the day's nominated flows), a contingency volume (to provide for contingencies, maintenance, etc), plus 10TJ. First Gas also has an obligation to use reasonable endeavours to manage the TTP within the range of 42 to 48 bar gauge in the southern section of the Maui pipeline. The mechanics of how these balancing constraints are managed are set out in a Standard Operating Procedure (SOP)[194].

Cash-outs

At the end of each day, any OBA party that has accumulated excess operational imbalance will have that excess amount cashed-out. This is executed as a sale to, or purchase from, that party by First Gas, ie the transaction includes title transfer for that volume of gas. Prices for cash-outs are intended to reflect the value of gas in the spot market or the price that First Gas has actually bought or sold balancing gas, but are adjusted up or down in order to provide an incentive for parties to undertake their own transactions. First Gas publishes a default rule from time to time that determines what the cash-out price will be on days when there has been insufficient spot market activity (which is the vast majority of days).

Transparency

The MPOC provides for the BGIX, an information platform, on which the cash-outs and balancing gas transactions are published. On any day, an interested party can see the cash-out transactions that occurred at the end of the prior day. The platform also shows the net position, ie the closing imbalance position of the Maui pipeline as a whole together with the net volume cashed-out.

VTC gas transmission balancing

Scope

The balancing arrangements apply in respect of each BPP. Each shippers aims to match its daily BPP receipts and deliveries. Although the VTC provides for First Gas to buy or sell balancing gas to maintain the line pack, in practice this is rarely done and the non-Maui pipelines effectively rely on there being sufficient pressure in the Maui pipeline at each interconnection point where it feeds into a non-Maui pipeline BPP to maintain balance.

Primary balancing obligation

Shippers under the VTC have an obligation to manage their BPP receipts and deliveries to reduce their running mismatch towards zero. The incentives for this were heightened once MBB came into effect under the MPOC, as the interconnections between the Maui and (then) Vector systems (so-called TP Welded Points or TPWP) became subject to daily cash-outs of excess imbalance. Those cash-outs were passed to VTC shippers (and Vector in respect of its running imbalance as pipeline operator (VRI)).

[194] The current Balancing SOP, dated 15 September 2015, is available on OATIS

Line pack management

Operation of the ex-Vector pipelines is often more about providing sufficient pressure in those pipelines to deliver the expected load rather than First Gas undertaking active secondary balancing. The result of that pressure management can mean that volumes of gas can move across a TPWP and create imbalance that is not reflective of either shipper imbalance or VRI.

Cash-outs

For each BPP, the VTC provides for the daily cash-out at any associated TPWP to be spread *pro rata* among those shippers and the pipeline owner with mismatch, or VRI, in the direction of the cash-out.

Transparency

There is little transparency concerning the BPP arrangements as each shipper's BPP information is included in the list of information that is confidential under the VTC.

Balancing – assessment

The major change to balancing arrangements under the New Code would be for each user's balance position to be assessed system wide (rather than by pipeline or balancing pool), and for balancing to be encouraged by ERM charges, with cash-outs only occurring when First Gas takes a balancing action.

Balancing – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

At the outset it is worth noting that progress has been made on improving the balancing arrangements over recent time. For many years Gas Industry Company had concerns over the MPOC balancing arrangements as they did not always target costs to causers and, as a result, created a degree of cross-subsidisation. The introduction of MBB aimed to address that concern but at the cost of a high number of cash-out transactions, many of which were arguably not essential. The improvements wrought by MBB limits the scope for further improvement, but the arrangements under the New Code appear to improve some of the shortcomings of MBB, while reducing the scale of cash-out transactions. That said, contrary views have been advanced in submissions, most particularly in relation to perceived differences in maintenance of the TTP as between the MPOC and the New Code. The TTP issue is examined more closely in Appendix D.

How the scope of the New Code balancing would affect efficiency

Because the New Code considers the overall system balance, a party would be assessed on its overall running mismatch position at the end of the day. By contrast, the combined MPOC and VTC arrangements are more complex with OBA parties on the Maui pipeline being balanced in the first instance, and then shippers in each non-Maui pipeline BPP being balanced.

Under the MPOC and VTC it is quite possible for a shipper to have positive positions in one or more BPPs and negative positions in the rest. As a result, that shipper might be cashed-out for having both positive and negative mismatch on the same day. Under the New Code, that same shipper (or OBA party) would be exposed to either a balancing cash-out or an ERM fee on a day, and that would be based on its overall running mismatch.

To give some indication of the significance of the change, we look at the 2017 calendar year as an example: cash-outs totalling 1.77 PJ were transacted (with a total of $10.1 million changing hands), whereas Maui balancing transactions totalled 1.02 PJ with a total value of $5.65 million.[195] So the pipeline required a much smaller level of physical balancing activity than the volume of the cash-outs. Those unnecessary cash-out transactions would not occur under the New Code.

The change to addressing balancing across the transmission system as a whole would relieve non-Maui shippers (and, in some cases, their customers) of another inefficiency. Under the MPOC, the cash-outs that take place at TPWPs are occasionally of a magnitude that exceeds the aggregate of the downstream shipper mismatch and VRI. The effect of this, when First Gas cashes out shippers, is that shippers can be cashed out for more than (and sometimes multiples of) their running mismatch position. Under the New Code, because it would be based on comparing each shipper's receipts into, and deliveries from, the transmission system, a shipper should never be cashed-out for more than its net running mismatch on a day. This would be an improvement over the MPOC and VTC. While this is not a frequent occurrence (as the system is now operated so as to minimise these situations while staying within operational constraints) it is something that the New Code explicitly avoids.

We consider system wide balancing would be more efficient than the current two-stage allocation.

How the New Code incentives for primary balancing would affect efficiency

Efficient pipeline operation requires that pipeline users take responsibility for maintaining balanced positions, with the pipeline operator having the secondary role of managing any residual imbalance. The New Code would encourage primary balancing in two ways:

1. Encouraging pipeline users to self-balance by charging a fee for ERM (GTAC ss8.11–8.14); and
2. Where residual balancing actions are taken, allocating the cost of such actions, and title, to the parties who caused them, or contributed to causing them (GTAC ss8.8–8.10).

In relation to point 1 above, we note that the ERM fee is set in the GTAC, so there will likely be times when it provides a more attractive alternative to self-balancing, and times when it is less attractive. This issue is examined in detail in Appendix D. There we conclude that we expect that the New Code arrangements would reduce the instances where users inefficiently incur costs to balance their positions, when there is no system wide need for balancing actions.

In addition, since we consider that the ERM charges would encourage more primary balancing, we would expect some increased activity in the spot market by shippers seeking to self-balance (which would offset some First Gas trading due to a reduced need for secondary balancing).

In relation to point 2 above, ie when there is a need for residual balancing, the cost and title would be passed directly to the causer, rather than being allocated through the two stage allocation process we have at present (MPOC followed by VTC).

We consider the results would be positive for primary balancing.

[195] Data was sourced from the Balancing Gas Information Exchange (www.bgix.co.nz) operated by First Gas.

How the New Code arrangements for secondary balancing affect efficiency

Currently, by cashing-out excess imbalance following the end of each day, First Gas, transfers the resulting net imbalance position to itself. Under the New Code, First Gas would only cash-out a shipper or OBA Party when it takes a balancing action. On other days, First Gas would charge ERM charges on any excess running mismatch. Given the potential for an ERM fee to be charged multiple times on successive days if an excess mismatch position is not corrected, and taking into account that paying the ERM fee does not involve any title transfer, there appears to be a clear incentive to take action to minimise exposure to ERM charges. We consider this should minimise the amount of secondary balancing that First Gas is required to perform.

We consider the results would be positive for secondary balancing.

(We continue to have some concern regarding the asymmetry of ERM charges for positive and negative mismatch. The ERM charges for carrying negative running mismatch is three times the rate for positive running mismatch. In some circumstances, particularly where a party is uncertain of its position, it may be logical to err on the side of accumulating a net positive mismatch position. However, we address this issue in section 4.2.)

Balancing tolerances

The high degree of uncertainty regarding how tolerance levels would be set remains a concern. This uncertainty stems mainly from First Gas having yet to define the aggregate quantities of line pack that will be provided for shipper and OBA party running mismatches (as per GTAC s8.5), or having any constraint on its discretion to set those quantities (ie no principles or methodology has been set out in the GTAC). Also, since the quantities are set outside the GTAC, we doubt that the obligations on First Gas to act in a neutral fashion (GTAC s2.6) would be a constraint, although the information disclosure provisions (GTAC Sch 2) which would at least facilitate scrutiny by users.

As discussed in section 2.6, we consider that the uncertainty around the balancing tolerances is inefficient.

Conclusion in relation to Criteria 1, 2 and 14

From the above, we consider that a move to system-wide balancing and introduction of the ERM mechanism would be positive for efficiency. However, given the 2015 improvements for balancing incentives under the MPOC, we would expect the arrangements under the New Code only to give a moderate incremental improvement to balancing outcomes.

We consider that the uncertainty of tolerance levels, or how they would be set, moderately diminishes the overall efficiency improvement.

In relation to Criterion 3 (reducing barriers to competition):

The change to system-wide balancing should ensure that shippers do not get cashed-out for more than their running mismatch. Removing this uncertainty should modestly reduce this barrier to entry and improve competition. In this final assessment, we have left the modest positive arrow unchanged, reflecting the fact that GTAC s8.8 limits any balancing gas cash-out to be no more than a party's running mismatch.

In relation to Criterion 4 (providing incentives for investment):

Because the incentives for First Gas to invest are expected, largely, to be a function of the price-quality economic regulation regime, we do not think that the design of the balancing arrangements will have a substantial bearing on First Gas' incentive to invest.

In relation to Criterion 5 (sustained downward pressure on costs and prices):

The potential for increased activity in the spot market brought about by the replacement of mandatory daily cash-outs with incentive charges would make it more attractive to non-traditional players. If that were borne out then we would expect such parties would be better able to compete in the retail market. In addition, a more vibrant spot market would be expected to facilitate entry by new retailers, leading to increased competition. More competition should increase the downward pressure on prices.

In relation to Criterion 8 (efficient use of energy and other delivery resources):

Under the MPOC and VTC, when First Gas cashes-out a user it takes responsibility for that user's mismatch, so the user no-longer needs to balance that mismatch in the primary market. However, the system still needs to balance so, to the extent the net mismatch position that First Gas has assumed responsibility for needs to be balanced. First Gas will take balancing actions to do this.

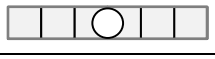
Under the New Code cash-outs would not occur every day, as they generally do under the MPOC, so a user would have a greater incentive to balance its mismatch in the primary market (or face the cost of paying ERM charges). To the extent that this reduces the amount of secondary balancing done by First Gas, we would expect some modest reduction in the use of compressor fuel.

In relation to Criterion 9 (facilitating competition in upstream and downstream markets):

It was noted in relation to Criteria 1, 2 and 14 above that the ERM charges in the New Code balancing arrangements are likely to incentivise increased primary balancing activity through the spot market. Assuming that proves to be the case then we would expect to see a corresponding increase in the rate of balancing-related transaction through the spot market (given that under MBB First Gas both takes on the net position across all of the parties and does not necessarily clear that position through the market). Increased transactions in the spot market would assist in increasing liquidity and depth and that would make the market more attractive to a broader range of participants. While some of that activity could be trades between shippers, we would still expect this to result in a modest increase in upstream competition.

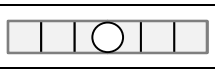
In relation to Criterion 10 (full cost of producing and transporting gas are signalled to consumers):

No noticeable change is expected.

Assessment	

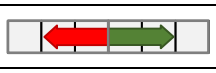
In relation to Criterion 11 (price/quality trade-off reflects customer preferences):

No noticeable change is expected.

Assessment	

Overall efficiency assessment of balancing arrangements

Based on our consideration of each of the efficiency criteria, our overall assessment for efficiency is that the New Code balancing arrangements would have a moderately positive aspect, but also a moderately negative aspect. The factors with the greatest influence on this conclusion are those that have a pervasive influence on efficient outcomes (such as the move to system-wide balancing), rather than those that have an occasional influence (such as the initial setting of ERM charges).

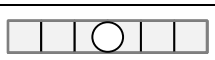
Assessment	

Balancing – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

The New Code places a reasonable endeavours obligation on First Gas to maintain line pack within pre-defined lower and upper limits. MPOC s3.1 does not define any specific obligation, and simply states that the TSP *"may undertake"* balancing actions to fulfil defined goals. More generally, the New Code, MPOC and VTC all require First Gas to act as an RPO in relation to balancing (and other) obligations.

We expect no noticeable change against this criterion.

Assessment	

Balancing – Environmental assessment

In relation to Criteria 8, 12 and 13 (contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management):

As discussed earlier in relation to Criterion 8, we consider that New Code balancing would bring a modest reduction in compressor fuel use.

Assessment	

Balancing – Fairness assessment

In relation to Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions):

As noted earlier, the MPOC and VTC occasionally cause shippers to be cashed-out for volumes greater than their running mismatch, which appears unfair.

The construct in the New Code is such that parties should never be cashed-out for more than their running mismatch on a day and, therefore, the unfairness inherent in the existing VTC balancing arrangements would be eliminated.

As discussed in section 2.6, although tolerances would necessarily be resolved by the time a New Code came into effect, the absence of a methodology or process for determining them coupled with limited opportunity for users to challenge unreasonable tolerances is assessed as modestly unfair.

Assessment	

Table 10 – Summary of New Code balancing arrangements assessment

Summary of New Code balancing arrangements assessment		
	Comment	**assessment**
Efficiency		
Criterion 1, 2 & 14	The proposed system-wide balancing should bring on-going moderate efficiency benefits. However, the initial uncertainty of tolerance entitlements, or how they would be set, would moderately reduce efficiency.	
Criterion 3	The New Code should ensure that shippers are not cashed-out for more than their running mismatch, modestly reducing a possible barrier to entry.	
Criterion 4	Weak relevance to balancing arrangements.	-
Criterion 5	More spot market activity is expected, improving wholesale and retail competition and facilitating entry, overall bringing moderately increased downward pressure on prices.	
Criterion 8	New Code balancing would allow for modestly more efficient use of compressors.	
Criterion 9	We expect competition in upstream and downstream market to be modestly improved by the New Code balancing arrangements.	
Criterion 10	No change to cost signalling.	
Criterion 11	No change to price/quality trade-offs.	
Criterion 15	Weak relevance to balancing arrangements.	-
Criterion 16	Weak relevance to balancing arrangements.	-
Criterion 17	Weak relevance to balancing arrangements.	-
Criterion 19	Weak relevance to balancing arrangements.	-
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	No noticeable change expected.	
Safety		
Criteria 1 & 7	Weak relevance to balancing arrangements.	-

Summary of New Code balancing arrangements assessment		
	Comment	assessment
Environment		
Criteria 8, 12 & 13	New Code balancing should bring a modest reduction in compressor fuel use.	
Fairness		
Criterion 13 & 18	It would be moderately more fair that parties would no longer be cashed-out for more than their running mismatch on a day, but modestly unfair that the initial balancing tolerances are unknown.	

4.6 System operation – Curtailment: analysis

(Principally GTAC s9 Curtailment.)

Curtailment – description of arrangements

GTAC curtailment arrangements

In the GTAC curtail *"includes to reduce either partly or to zero and to shut or close down"* (GTAC s1.2). So, depending on the context, the term may refer to:

- reducing a physical flow of gas;
- reducing a shipper's nominations (DNC, Supplementary Capacity, or Interruptible Capacity); or
- reducing a previously approved AHP.

Curtailment of physical flow

Curtailment of physical flow is primarily dealt with in GTAC s9. First Gas may curtail the injection of gas at an RP, the flow of gas through the system, or the delivery of gas at a DP because (GTAC s9.1):

- an Emergency is occurring or is imminent;
- a Force Majeure Event has occurred;
- a breach of any Security Standard Criteria and/or a Critical Contingency would otherwise occur;
- an Interconnected Party's ICA expires or is terminated; and/or
- a Shipper's TSA, Supplementary Agreement, GTA or Allocation Agreement expires or is terminated; or
- Congestion is occurring (GTAC s10).

Operational Flow Orders (OFOs)

In the event of any of the above, First Gas may issue an OFO (GTAC s9.5) to Shippers, or Interconnected Parties at Dedicated DPs. If a Shipper fails to comply with an OFO, First Gas may (to the extent practicable) curtail the Shipper's gas take, and the Shipper would be deemed not to have acted as an RPO and would indemnify First Gas for any resulting losses (GTAC s9.12(b)). Similarly, if an Interconnected Party fails to comply the RP and DP ICAs

provide for First Gas to curtail gas flows and for the Interconnected Party to be deemed not to have acted as a RPO.

Curtailment of nominations

Nominations would only be curtailed where an OFO has been issued (GTAC s9.8 and s9.9), or where there is Congestion (GTAC s10.3), or a Critical Contingency has occurred (GTAC s10.5). And First Gas will use reasonable endeavours to avoid curtailing any Shipper's DNC or Supplementary Capacity (GTAC s9.1).

GTAC s4.15 states that where First Gas must curtail nominations, it will do so in accordance with GTAC s10.3. GTAC s10.3 sets out a hierarchy of steps First Gas will follow to align NQs (or actual offtake) with Available Operational Capacity. In essence, this involves curtailing all requests for Interruptible Capacity, converting requests for AHP to DNC, curtailing requests for Supplementary Capacity (where the relevant contract allows), *pro rata* curtailment of Shipper NQs not covered by PRs, and, if necessary, *pro rata* curtailment of Shipper NQs that are covered by PRs.

First Gas may also curtail interruptible capacity at any time, for any reason (GTAC s7.9(d)).

OBA Parties could also curtail nominations for any reason up to 30 minutes after any nomination deadline (GTAC s4.12(a)). But there is no equivalent to MPOC s15.2, which would allow an OBA Party to reduce its Scheduled Quantity in certain circumstances simply by notifying the system operator. (First Gas has said that it is a gas supply matter between the OBA Party and its shippers.)

Curtailment of AHP

First Gas may curtail a previously approved AHP to avoid breaching an Acceptable Line Pack Limit or having to curtail DNC or Supplementary Capacity. In that case, it would convert the AHP into Approved NQ (GTAC s3.33).

MPOC curtailment arrangements

The MPOC refers to *"curtailing"* a Welded Party's Scheduled Quantity, and/or a Shipper's Nominated Quantity and *"interrupting"* a physical gas flow.

Interruption of physical flow

Physical flows may be interrupted because of:

- A Pipeline Contingency Event (including an Emergency) (MPOC s15.1(b)(iv)));
- Non-specification gas (MPOC s15.1(b)(i));
- Maintenance (MPOC s15.1(b)(ii));
- A Force Majeure Event (MPOC s15.1(b)(iii));
- Welded Party Excess Daily Imbalance or exceeding Peaking Limit (MPOC s15.1(b)(v)); or
- Potential Operational Imbalance at Notional Welded Points (MPOC s15.1(b)(vi)).

Operational Flow Orders (OFOs)

Under the MPOC First Gas can issue OFOs to Welded Parties for any of the above matters. If a Welded Party is in breach of an OFO, First Gas is entitled to suspend injections/offtakes at the Welded Point if that is necessary to protect the operational integrity of the Maui Pipeline or the wider New Zealand gas pipeline system (MPOC s15.1 and s2.23).

Curtailment of nominations

First Gas may curtail Approved Nominations and associated Scheduled Quantities due to any of the above matters and a shortage of capacity in the pipeline (MPOC s8.24(a)) or at a particular Welded Point (MPOC s8.24(b)).

The Welded Party may also reduce its Scheduled Quantity (with a consequent reduction of Approved Nominations) at any time by notifying the system operator:

- to prevent non-specification gas from entering/exiting;
- for unscheduled maintenance; or
- where a FM or Contingency Event occurs (MPOC s15.2)

The amount of curtailment is shared according to a capacity allocation algorithm which gives priority to:

- Balancing Gas nominations (MPOC s8.23(a))
- Nominations covered by AQ, curtailed in proportion to AQ (MPOC s8.23(b))
- Other nominations, curtailed in inverse proportion to Net Historical usage (MPOC s8.24I)

VTC curtailment arrangements

Interruption of physical flow

VTC s10 addresses interruptions of transmission. *"Curtailment"* under the VTC refers to reducing the physical flow of gas, and not nominations (since nominations are not a standard feature of its core no-notice service).

The possible reasons for curtailment may be:

- An Emergency (VTC s10.1(a)(i));
- A Force Majeure Event (VTC s10.1(a)(ii));
- To avoid a Critical Contingency (VTC s10.1(a)(iii));
- A Shipper exceeding its MDQ or MHQ (VTC s10.1(b)(i));
- An Operational Imbalance (VTC s10.1(b)(ii));
- Low Line Pack (VTC s10.1(b)(iii));
- Maintenance (VTC s10.1(c));
- an Interconnection Agreement ceases (VTC s10.1(d)); or
- a Gas Transfer Agreement or Allocation Agreement ceases (VTC s10.1(e)).

Operational Flow Orders (OFOs)

First Gas can issue OFOs under the VTC for any of the above matters. The OFO may require a Shipper to ensure that its offtake at a DP is curtailed and/or its Maui Pipeline nominations are reduced (VTC s10.2).

Curtailment – assessment

The New Code curtailment arrangements relate to both curtailment of physical flows and to the curtailment of nominations. They are most similar to the MPOC arrangements since the VTC does not commonly require nominations, so does not deal with curtailing them. However, whereas the MPOC arrangements primarily address Welded Parties, the GTAC arrangements primarily address

Shippers, with the curtailment arrangements for interconnected parties being dealt with in the RP and DP ICAs. Another difference is that the GTAC would essentially apply a simple *pro rata* on nominations rule except where PRs give priority, simpler than the arrangements provided for in the MPOC.

Curtailment – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

Curtailment is more efficient where it better matches supply/demand to the capability of the system, and where it is directed at those who value continuous service least.

The reasons for physical curtailment are very broad in the GTAC, MPOC and VTC because they all include Emergency, which is drafted widely in the GTAC, MPOC and VTC.

The reasons for curtailing nominations are difficult to compare since they are tailored to each access regime. To us, they seem appropriate.

In relation to Criterion 3 (reducing barriers to competition):

The GTAC approach of curtailing nominations on a *pro rata* basis is more competitively neutral than the MPOC approach of curtailing based on historic usage. So barriers to competition would be modestly reduced.

In relation to Criterion 5 (sustained downward pressure on costs and prices):

It is well known in the industry that the complexity of the MPOC curtailment algorithms considerably increased the OATIS design and testing costs. It also made MPOC code changes that required any OATIS refinement to be very costly, since the operation of the curtailment algorithms had to be tested each time. This is fully discussed in our response to submissions on curtailment, in section 2.7. We conclude that the GTAC curtailment algorithms would be much simpler and less costly, providing a moderately sustained downward pressure on costs and prices.

In relation to Criterion 9 (facilitating competition in upstream and downstream markets):

Since the GTAC approach of curtailing nominations on a *pro rata* basis is more competitively neutral, it should modestly improve downstream competition.

Overall efficiency assessment of curtailment arrangements

Based on our consideration of each of the efficiency criteria, our overall assessment for efficiency is that the GTAC curtailment arrangements would have a modestly positive aspect. The factors

with the greatest influence on this conclusion are those that have a pervasive influence on efficient outcomes (such as the replacement of the MPOC curtailment algorithms).

Assessment	

Curtailment – Reliability assessment

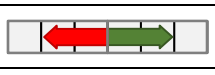
In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

Curtailment arrangements should provide sufficient incentive to provide a physical response. Each regime does this in its own way. The ultimate GTAC sanction is that a shipper or interconnected party indemnifies First Gas for any loss incurred by it if that party fails to curtail its demand. And, where a party does not comply with an OFO, it is deemed not to have acted as an RPO. Neither of these sanctions apply under the MPOC or VTC, so we would expect a moderately more reliable response to OFOs.

In the PAP we noted that we did not necessarily agree with Methanex's[196] view that Shippers are poorly placed to respond to curtailment directions. We pointed out that at shared DPs, Shippers are best placed to respond since action from Shippers' customers (ie end-users) are required, rather than action from the interconnected party (ie a gas distributor). Only at Dedicated DPs could it be argued that an OFO should be targeted at the interconnected party rather than the Shipper, and GTAC s9.7 provides for this.

We also noted that, from a practical viewpoint, the Shippers and Interconnected Parties at Dedicated DPs need to act in close cooperation, so it is probably not material who receives the first notification of curtailment. And, in any case, the draft RP ICA and DP ICA allow for OFOs to be sent to Interconnected Parties, and that would clearly be appropriate at RPs.

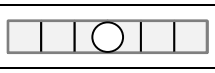
However, on consideration of the PAP submissions (as discussed in section 2.7), we accept that in situations where the interconnected party is best placed to react to an emergency, the GTAC procedures would introduce delays relative to the MPOC arrangements. We consider this would have a moderately negative effect on reliability.

Assessment	

Curtailment – Safety assessment

In relation to Criteria 1 and 7 (providing access in a manner consistent with the Government's gas safety regime):

No noticeable change anticipated.

Assessment	

Curtailment – Environmental assessment

In relation to Criteria 8, 12 and 13 (contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management):

No noticeable change anticipated.

[196] Methanex submission on 8 December 2017 GTAC, para 35.

Assessment	

Curtailment – Fairness assessment

In relation to Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions):

> Curtailment would be more fair if it better protected the majority of pipeline users and if it better targeted those most capable of making a physical response.
>
> Generally we consider the arrangements are equally fair. In the PAP we thought it modestly unfair to expect that a shipper would always be able to comply with an OFO, and therefore unfair to deem it not to have acted as an RPO, and to indemnify First Gas for any loss, if it failed to comply However, as discussed in section 2.7, we now agree with First Gas that New Code curtailment arrangements cannot be less fair than the current arrangements since both the MPOC and VTC require immediate compliance with an OFO.

Assessment	

Table 11 – Summary of GTAC curtailment arrangements assessment

Summary of GTAC curtailment arrangements assessment		
	Comment	**Assessment**
Efficiency		
Criterion 1, 2 & 14	The GTAC, MPOC and VTC all have tailored curtailment arrangements.	
Criterion 3	The GTAC pro rata curtailment rules are expected to modestly decrease barriers to competition.	
Criterion 4	Weak relevance to curtailment arrangements.	-
Criterion 5	Removing the complexity of the MPOC curtailment algorithms should moderately reduce costs and prices over time.	
Criterion 8	Weak relevance to curtailment arrangements.	-
Criterion 9	Modest benefit to downstream competition should arise from more neutral treatment of curtailments.	
Criterion 10	Weak relevance to curtailment arrangements.	-
Criterion 11	Weak relevance to curtailment arrangements.	-
Criterion 15	Weak relevance to curtailment arrangements.	-
Criterion 16	Weak relevance to curtailment arrangements.	-
Criterion 17	Weak relevance to curtailment arrangements.	-
Criterion 19	Weak relevance to curtailment arrangements.	-

Summary of GTAC curtailment arrangements assessment		
	Comment	**Assessment**
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	Compliance with OFOs should moderately improve because of the stronger GTAC sanctions. However, reliability would be moderately reduced if OFOs are not directed to the party best able to respond.	
Safety		
Criteria 1 & 7	No noticeable change anticipated.	
Environment		
Criteria 8, 12 & 13	No noticeable change anticipated.	
Fairness		
Criterion 13 & 18	No noticeable change anticipated.	

4.7 System operation – Congestion management

(Principally GTAC s10 Congestion Management.)

Congestion management – description of arrangements

GTAC congestion management arrangements

Notification of congestion

- Under the New Code, Congestion means a situation where aggregate NQs, or current offtake associated with DNC exceed, or are expected to exceed the Available Operational Capacity (GTAC s1.1). Congestion can apply to a single DP or a group of DPs.
- First Gas would use reasonable endeavours to predict congestion (GTAC s10.1), and notify shippers if it intends to initiate Congestion Management (GTAC s10.2);

Priority Rights (PRs)

- A PR would give its holder priority to have its NQ approved ahead of other shippers. A shipper may use its PRs in any nomination cycle (GTAC s 3.14).
- First Gas would offer PRs for Congested DPs exclusively by auction (GTAC s3.17). First Gas would develop the terms and conditions of a PR auction, and Gas Industry Co would consider them (following the same process as a code change). Subject to Gas Industry Co's approval, they would be published at least 30 business days prior to the auction (GTAC s3.18).
- First Gas would schedule a PR auction for the first business day of the month prior to the first month in which it expects congestion to occur (but may cancel the auction if it considers there is no longer a threat of congestion) (GTAC s3.17).
- At least 10 days prior to an auction, First Gas would notify shippers which DPs were affected, the estimated Available Operation Capacity at those DPs, the

amount of PRs on offer and how that amount had been determined. It would also notify the start date, term, and reserve price of each PR. (GTAC s3.19).

- The basic structure of PR auctions is set out in GTAC s3.20, including that shippers may bid for 5 tranches of PRs at different prices, and that PRs will be allocated to the highest value bids. Each shipper's current PR holdings would be available on OATIS (GTAC s3.20).
- Once a shipper has acquired PRs, those PRs would be tradeable on a trading platform specified by First Gas (GTAC s3.21). First Gas would not be involved in any trade, but would publish the number of PRs traded and the trade price (GTAC s3.22).
- A shipper would pay for its PRs monthly based on previously established auction clearing prices (GTAC s11.2) (and together with revenue from other incentive charges, First Gas would credit that revenue to shippers in proportion to their DNC charges (GTAC s11.13))

Interruptible Agreements (IAs)

- First Gas, at its sole discretion, may offer IAs (GTAC s7.7 – 7.11). Where First Gas enters into an IA for the purposes of Congestion Management, it will publish the agreement and the DP where Available Operation Capacity has increased as a result (Beneficiary DP) (GTAC s3.11). First Gas will recover any amounts payable to such an IA holder from shippers who use the Beneficiary DP, as set out in GTAC s11.11.

Supplementary Agreements

- Shippers may apply for Supplementary Agreements, which (among other matters) can set priority in relation to DNC, with and/or without PRs during congestion (GTAC s7.4(g)), term of agreement (including renewal rights) and transmission fees payable.

MPOC congestion management arrangements

- Primary transmission service is based on daily nominations.
- If physical congestion occurs on a day, First Gas may reduce nominations, while respecting priorities for service:
  - 1st balancing gas;
  - 2nd category A nominations; and
  - 3rd category B nominations based on *pro rata* net historic usage. (MPOC s8.20-8.28).
- Category A nominations are those subject to Authorised Quantities (AQ). First Gas is required to obtain approval from Gas Industry Co for queuing rules before issuing AQ (such rules have not been proposed or approved).

VTC congestion management arrangements

- Annual Reserved Capacity is the primary transmission service. Contractual congestion may arise if shippers seek an aggregate amount of reserved capacity that exceeds available pipeline capacity. Each shipper has a right to reserve capacity up to the amount it held in the previous year (VTC s4.5).
- If physical congestion occurs (ie, insufficient capacity to flow desired volume on the day), First Gas may reduce gas receipts, flows or deliveries *"on a fair basis"*

(VTC s10.1(g)). If such action is required, First Gas will use all reasonable endeavours to first curtail or shut down gas receipts, subject to the terms of any IA.

Congestion management – assessment

In section 4.1, we considered the relative merits of having PRs and IAs as part of the GTAC's gas transmission product mix. Here we look more specifically at PRs and IAs from a system operations viewpoint, considering whether they would likely better meet the Criteria than the current congestion management arrangements.

Congestion management – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

When congestion occurs, efficiency will be promoted if:

1. Firm capacity is allocated to users who value it the most;
2. Physical capacity is fully utilised;
3. First Gas receives signals to inform its capacity investment decisions; and
4. Undue cost and complexity are avoided.

We consider that the New Code arrangements score higher than the current arrangements against some of these criteria:

1. The IAs should provide an efficient demand management option in some cases. The GTAC IA provisions are better than those in the VTC because they are more flexible and allow for price signals to be sent to the beneficiaries. The GTAC is better than the MPOC because the latter does not allow for IAs.
2. The PR auction mechanism is positive in principle and should permit those who value capacity most to obtain it (either in the primary auction or in secondary trading).
3. Capacity is more likely to be efficiently managed if physical congestion arises because under the New Code:
   (a) Congestion is more likely to be signalled well in advance, allowing shippers to assess their options and put a value on PRs;
   (b) First Gas would have more comprehensive nomination information on which to base its curtailment decisions; and
   (c) There is no grandfathering of capacity and less opportunity for shippers to sit on capacity rights that they will not use.
4. The PR auctions should provide price signals to all market participants that should be a useful guide to decision making, including to inform First Gas in its capacity investment decisions.

These substantial benefits are achieved at some incremental cost, including the costs of additional nominations and of running auctions to allocate PRs. However, as we note in our discussion below, the costs of the current congestion management arrangements, particularly the MPOC curtailment algorithms, are significant, even in the absence of congestion.

Shell[197] and Todd[198] submissions on the PAP agree with our assessment that the GTAC's congestion management provisions are a substantial improvement. (We also note that, although it is not directly relevant to our assessment, the proposed congestion management arrangements avoid the cost and complexity of such arrangements seen in other jurisdictions.)

In its submission on the PAP, Greymouth[199] considered that PRs could not be assessed until the PR auction rules are developed. We agree the rules are important, but we consider that, since those rules are to be developed in consultation with shippers and would be subject to Gas Industry Co approval (GTAC s3.18), it is possible to make some (albeit constrained) assessment of PRs.

Our reservations about the proposed PR design are that:

1. First Gas has considerable discretion to negotiate SAs and IAs. First Gas can sell scarce capacity via SAs at a price that is less than its scarcity value. Or First Gas may negotiate IAs at a price that overestimates the scarcity value. Discretion over SA and IA terms and conditions is also a feature of the VTC, but the potential effect of that discretion on the effectiveness of PRs is a new matter to the GTAC.
2. Mass-market shippers need to bid for PRs, and they may not be able to obtain them in either the primary or secondary market. In that case, such shippers would be left with a risk that they cannot readily manage since they have no practical means of turning down the demand of their mass-market customers.

However, in regard to the second of these, as discussed in section 2.8, we agree with First Gas that the counter-factual, ie how a shippers would manage congestion risk under the VTC, was not adequately considered in the PAP. As First Gas point out, a mass-market shipper who does not hold capacity (be it DNC under the GTAC or MDQ under the VTC) would face overruns and potential liability both under the GTAC and under the VTC.

Our conclusion, in relation to Criteria 1, 2 and 14, is that the GTAC congestion management arrangements could allocate scarce capacity on a willingness to pay basis, allow better use of available physical capacity, and provide improved price signals. These are substantial improvements. However, the First Gas discretion to negotiate SAs and IAs could lead to outcomes that undermine the benefits of PRs to a modest extent.

In relation to Criterion 3 (reducing barriers to competition):

Since rights to constrained capacity would be more contestable (allocated via auction rather than being grandfathered), we believe the barriers to competition would be moderately reduced. However, as discussed above, in certain circumstances SAs and IAs could modestly increase barriers to competition.

[197] Shell 19 March PAP submission, Q8.

[198] Todd 19 March PAP submission, Q8.

[199] Greymouth 19 March PAP submission, Q2.

In relation to Criterion 4 (providing incentives for investment):

We consider that the incentives for investment in the transmission system are mostly determined by price-quality regulation and would not be substantially affected by the New Code congestion management arrangements. However, we believe the New Code arrangements would generally increase the awareness of the market needs, and this may incline First Gas towards investment where there is a customer demand (and vice versa).

In relation to Criterion 5 (sustained downward pressure on costs and prices):

While the running of PR auctions will introduce some new costs, we do not think they will be substantial in relation to total system costs. While there will be costs in running auctions, including costs to participants, the incidence of these costs would be limited to occasions where there is congestion. In contrast, the cost of maintaining the MPOC curtailment algorithms is more pervasive and would be avoided if the New Code is introduced (see discussion in relation to Criterion 5 in the Curtailment assessment).

While the PR auctions provide an opportunity for shippers to compete, we are not persuaded that the increase in competition will result in a noticeable reduction in prices in downstream markets. In fact, the overall level of end-user prices at congested DPs would be expected to increase, although this should be offset by the re-cycling of PR revenues.

In short, we anticipate that there would be a mix of modest cost increases and reductions as well as modest price increases and reductions.

In relation to Criterion 9 (facilitating competition in upstream and downstream markets):

As noted in section 4.1, we believe that an end-user at a congested DP may still find it difficult to switch its supplier in some circumstances. However, in the absence of grandfathered capacity, and with the greater daily flexibility, we think that new arrangements would generally make it easier for end-users to switch suppliers.

In relation to Criterion 10 (the full costs of producing and transporting gas are signalled to consumers):

We consider that managing congestion via IAs would introduce costs, but that these costs would only arise when congestion looms. Further, the costs would be targeted towards the beneficiaries of the arrangements, so they would better signal the full costs than current arrangements (where the congestion management costs are not explicit and not directed to beneficiaries). We consider this would moderately improve the efficient signalling of costs.

In relation to Criterion 11 (price/quality trade-off reflects customer preferences):

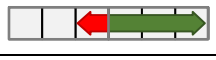
Consumers would need to discuss with their suppliers at what price they may be willing to curtail supply (if an IA is an option), or how much extra they would be willing to pay for a

more secure supply (if PRs are to be bought). In either case the customer's preference for un-interrupted supply is revealed and traded-off against price. We also believe that the proposed congestion management arrangements would make the prices more transparent and better directed towards the beneficiaries. We consider this would be a substantial improvement on the current situation.

Assessment	

Overall efficiency assessment of congestion management arrangements

Based on our consideration of each of the efficiency criteria, our overall assessment for efficiency is that the New Code congestion management terms would have a substantial positive aspect but also a moderately negative aspect. The factors with the greatest influence on this conclusion are those that have a pervasive influence on efficient outcomes (such as the availability of demand side management IAs), rather than those that have an occasional influence (such as the added cost of running PR auctions).

Assessment	

Congestion management – Reliability assessment

In relation to Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently):

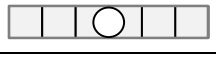
The New Code congestion management arrangements would moderately better direct the cost of congestion towards the beneficiaries (those willing to pay for a more reliable supply).

Assessment	

Congestion management – Safety assessment

In relation to Criteria 1 and 7 (providing access in a manner consistent with the Government's gas safety regime):

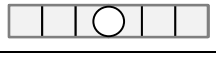
No significant change.

Assessment	

Congestion management – Environmental assessment

In relation to Criteria 8, 12 and 13, ie contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management:

No significant change.

Assessment	

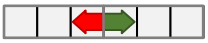
Congestion management – Fairness assessment

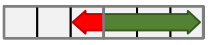
In relation to Criteria 13 and 18, ie gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions:

Allocation of scarce capacity on the basis of willingness to pay is seen as moderately more fair than basing it on historic usage.

Assessment	

Table 12 – Summary of GTAC congestion management arrangements assessment

Summary of GTAC congestion management arrangements assessment		
	Comment	assessment
Efficiency		
Criterion 1, 2 & 14	The GTAC congestion management arrangements provide for the options of demand management IAs, and market pricing of scarce capacity via PRs. We regard this as a substantial addition to competitive market arrangements. However, a modest reduction could arise from the discretion that First Gas has to negotiate SAs and IAs. This could lead to outcomes that undermine the benefits of PRs.	
Criterion 3	Barriers to competition would be moderately reduced by making access to scarce capacity more contestable, but the First Gas discretion to negotiate SAs and IAs has the potential to modestly increase barriers to competition.	
Criterion 4	Incentives for investment are mostly determined by price-quality regulation, but a modest improvement in awareness of the need for investment is expected.	
Criterion 5	PR auctions allow for more competition, but prices will increase to reflect the added costs. Modest opposing outcomes could occur.	
Criterion 8	Weak relevance to congestion management arrangements.	-
Criterion 9	Absence of grandfathering and greater flexibility of DNC should modestly facilitate competition.	
Criterion 10	Costs should be moderately better targeted and signalled to consumers.	
Criterion 11	More awareness of, discussion about, and pricing of supply security should result in moderately better price/quality trade-offs.	
Criterion 15	Weak relevance to congestion management arrangements.	-
Criterion 16	Weak relevance to congestion management arrangements.	-
Criterion 17	Weak relevance to congestion management arrangements.	-
Criterion 19	Weak relevance to congestion management arrangements.	-

Summary of GTAC congestion management arrangements assessment		
	Comment	**assessment**
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	Risks should be moderately better managed by directing congestion management cost towards beneficiaries.	
Safety		
Criteria 1 & 7	No noticeable change anticipated.	
Environment		
Criteria 8, 12 & 13	No significant change anticipated.	
Fairness		
Criterion 13 & 18	Allocation of scarce capacity on the basis of willingness to pay is moderately more fair than basing it on historic usage.	

4.8 System operation – Gas quality and odorisation: analysis

This section addresses the GTAC provisions relating to gas quality (GTAC s12) and odorisation (GTAC s13).

Gas quality and odorisation – description of arrangements

GTAC gas quality and odorisation terms

Gas quality

The GTAC requires that shippers and First Gas ensure that contracts with third parties to buy or sell gas in pipeline system include a requirement that only specification gas may be bought or sold (GTAC s.12.1). First Gas must also ensure that ICAs at RPs require interconnected parties to ensure injected gas meets specification, and (on First Gas request) to promptly demonstrate they have adequate facilities, systems, procedures and monitoring to comply (GTAC s12.2). If First Gas becomes aware that non-specification gas has entered a pipeline, it must promptly notify all shippers (GTAC s12.4). First Gas shall have no liability to any shippers taking non-specification gas at a DP, except where it is shown that First Gas caused gas to become non-specification (GTAC s12.11). If First Gas caused gas to become Non-Specification Gas, it will indemnify a Shipper (GTAC s12.10)

Odorisation

First Gas will continue to odorise gas in the pipelines that are currently odorised. First Gas can cease odorisation of gas in a pipeline or at a DP if all shippers agree (GTAC s13.1), or by providing 18 months' notice (GTAC s13.5). First Gas can commence odorisation in unodorised parts of system if all shippers agree. First Gas must inject odorant to meet (in normal circumstances) NZS detectability standard. If First Gas becomes aware that detectability standard is not being met, it will promptly advise each affected shipper and take all reasonable steps to remedy situation (GTAC s.13.3).

MPOC gas quality and odorisation terms

Gas quality

Parties injecting gas into Maui system (directly or indirectly) must ensure that they comply with the NZ specification and monitor their injections. Injecting parties must be able to demonstrate upon reasonable request that they have adequate facilities, systems and procedures to ensure compliance (MPOC s17.9). First Gas may enter relevant premises, conduct its own tests and/or request party to immediately cease gas injections (s17.13). Any failure to comply with s.17 by an injecting party shall constitute a failure to act as an RPO (s17.21). First Gas indemnifies welded parties for Loss arising from the injection of Non-Specification Gas. In turn, injecting parties indemnify First Gas for any Loss arising from the injection of Non-Specification Gas (MPOC s17.22 and 17.33).

Odorisation

Not applicable to Maui pipeline system.

VTC gas quality and odorisation terms

Gas quality

Shippers and First Gas must ensure that contracts with third parties to buy or sell gas in pipeline system include a requirement that only specification gas may be bought or sold (VTC s12.1). First Gas must ensure that ICAs at Receipt Points require interconnected parties to ensure injected gas meets specification, and require the injecting counterparty (if asked by First Gas) to promptly demonstrate they have adequate facilities, systems and procedures to comply. If First Gas becomes aware that non-specification gas has entered pipelines, it must promptly notify all shippers. First Gas shall indemnify shippers for loss arising out of them taking non-specification gas at a DP, except to extent that shippers did not mitigate loss (VTC s12.7). First Gas indemnities are subject to limitations and exclusions which vary depending on whether First Gas caused gas to become non-specification (VTC s12.8-12.9).

Odorisation

First Gas will not odorise gas in an unodorised pipeline, or cease odorisation in an odorised pipeline, unless each shipper using the pipeline agrees – although First Gas can cease odorisation of a pipeline with 12 months' notice. First Gas must inject odorant to meet (in normal circumstances) NZS detectability standard. If First Gas becomes aware that standard is not being met, it will advise each affected shipper and take all reasonable steps to remedy situation (VTC s13.3).

Gas quality and odorisation – assessment

In respect of gas quality, the key features of GTAC s12 reflect those of MPOC s17 and VTC s12, except that the MPOC contains some provisions specifically related to interconnected parties. For example, MPOC s17.13(a) provides an express right to enter premises, conduct tests etc if First Gas suspects the injecting party of not satisfying obligation to monitor compliance with injection quality obligation. That right would need to be provided for in an ICA rather than the GTAC (see for example GTAC RP ICA s6.7).

In respect of odorisation, GTAC s13 is essentially the same as VTC s13, except that:

1. If First Gas becomes aware that NZS5263:2003 is not being met, it is required to take reasonable steps to remedy the situation (GTAC s13.3)
2. A minimum 18 months' notice period applies if First Gas decides to cease odorisation of a pipeline (GTAC s13.5), compared to 12 months under the VTC; and

3. The specific liability disclaimer in VTC s13.4 is removed.

Gas quality and odorisation – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements):

Gas quality

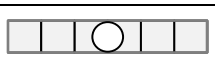
Non-specification gas can cause significant costs for pipeline users. It is important for pipeline arrangements to provide robust incentives on injecting parties and First Gas to maintain gas specification, and to promptly detect and remedy any situation where non-specification gas is flowing. The GTAC arrangements are functionally similar to those in the MPOC and VTC, with obligations on interconnected parties at receipt points to only inject specification gas, and to put in place the systems etc. needed to ensure compliance.

We acknowledge the differences of opinion between First Gas and, in particular, Methanex and Vector, in relation to the obligation of First Gas in respect of gas quality (see section 2.9). In our view gas quality arrangements will be efficient if they put responsibilities on the parties who are best able to manage gas quality at least cost. Both the current arrangements and the New Code recognise that it is largely the interconnected parties who are in this position. First Gas would mostly only influence gas quality through the (unintended) addition of compressor oil or dust and (intentional) addition of odorant. While we accept that the obligations of First Gas would be diminished, we regard this as a reliability issue rather than an efficiency issue and address it below.

Odorisation

The odorisation provisions in GTAC largely mirror those in the VTC (the Maui pipeline would continue to be unodorised). The First Gas obligation to remedy lack of odorisation under GTAC requires it to *"take reasonable steps"*, compared to obligation under VTC to *"take all reasonable steps"*. This is a lower obligation. On the other hand, the GTAC removes the specific liability exclusion in relation to loss of odorisation.

We consider the gas quality and odorisation provisions would not noticeably influence efficiency.

Assessment	

Gas quality and odorisation – Reliability assessment

In relation to Criteria 1, 2 and 6, ie providing reliable and competitive arrangements and allocating risks properly and efficiently:

Having reviewed the evidence provided by Methanex, Vector and First Gas, we conclude that the obligations on parties to protect customers from non-specification gas have, in some instances, been reduced. In particular, the right for shippers to seek confirmation of compliance in the GTAC is more limited than the right allocated to welded parties in the MPOC or Shippers under the VTC.

Our assessment is that the deterioration is modest. However, that view does not take into account the following:

(a) Our concerns regarding the lack of detail in GTAC s7.13 and GTAC s12.2 regarding the obligations on Interconnected Parties in relation to non-specification gas as discussed in

Appendix D section D.1. In our view that is an issue that is primarily related to the lack of detail regarding the terms of ICAs.

(b) Our comments on the liability arrangements that are relevant to non-specification gas incidents addressed in the assessment of the GTAC liability provisions in Section D.8, Appendix D.

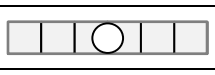
The above concerns are relevant to the non-specification gas arrangements, but are more appropriately addressed in our discussion of liability (governance) arrangements and ICAs in Chapter 6.

Assessment 

Gas quality and odorisation – Safety assessment

In relation to Criteria 1 and 7, ie providing access in a manner consistent with the Government's gas safety regime:

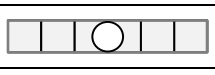
The provisions relating to odorisation of gas are a key item from a safety perspective. The GTAC provisions largely mirror those in the VTC (and the Maui system is not odorised). The GTAC also provides for odorisation to continue in previously odorised pipelines and at previously odorised DPs, on establishment date if the GTAC comes into force. Accordingly, the GTAC is rated as neutral on this dimension.

Assessment 

Gas quality and odorisation – Environmental assessment

In relation to Criteria 8, 12 and 13, ie contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management:

The system operation terms are not expected to materially alter the risk of harm to the environment, so GTAC is rated as neutral on this dimension.

Assessment 

Gas quality and odorisation – Fairness assessment

In relation to Criteria 13 and 18, ie gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions:

We recognise that it is somewhat more fair that shippers would be given a minimum 18 months' notice period if First Gas decides to cease odorisation of a pipeline (GTAC s13.5), compared to 12 months under the VTC. However, as discussed in section 2.9, we don't think this quite warrants recognition as a modest improvement.

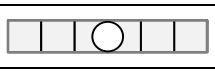
Assessment 

Table 13 – Summary of GTAC gas quality and odorisation arrangements assessment

Summary of GTAC gas quality and odorisation arrangements assessment		
	Comment	**Assessment**
Efficiency		
Criterion 1, 2 & 14	We do not expect that changes to the gas quality and odorisation arrangements to noticeably influence efficiency.	
Criterion 3	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 4	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 5	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 8	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 9	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 10	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 11	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 15	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 16	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 17	Weak relevance to gas quality and odorisation arrangements.	-
Criterion 19	Weak relevance to gas quality and odorisation arrangements.	-
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	The New Code modestly reduces the obligations on parties to protect customers from non-specification gas incidents.	
Safety		
Criteria 1 & 7	No noticeable change expected.	
Environment		
Criteria 8, 12 & 13	No noticeable change expected.	
Fairness		
Criterion 13 & 18	Only very minor change expected.	

4.9 Governance: analysis

This section addresses the GTAC provisions relating to prudential requirements (GTAC s14), force majeure (FM) (GTAC s15), general liability terms (GTAC s16) code changes (GTAC s17), dispute resolution (GTAC s18), termination (GTAC s 19), confidentiality (GTAC s 20) and assignment (GTAC s 20). For brevity, we collectively refer to these as *"governance"* terms.

Stakeholders will note that the discussion of the liability arrangements in this section is brief, as liability is a matter that is given specific attention in Appendix D, section D.8.

Governance – description of arrangements

GTAC governance terms

Prudential

Shippers are required to have a minimum long term credit rating equivalent to Baa3 (Moody's) BBB- (Standard & Poors), B (AM Best or Fitch) or provide an equivalent credit rating or reference acceptable to First Gas, or provide credit support equivalent to three times their estimated monthly transmission charges plus $100k (GTAC s14.1-14.4).

FM

Shippers or First Gas may seek relief from liability due to an event or circumstance beyond their reasonable control, including (in the case of a Shipper) the inability to inject or take gas (GTAC s15.1). The party claiming FM must take all reasonable steps to minimise loss (GTAC s15.3I). Shippers cannot claim FM due to performance or non-performance of their customers (GTAC s15.5). FM claims must be notified as soon as practicable and no later than 48 hours after an event occurs (GTAC s15.3(a)).

Liability

Liability will only arise where a party failed to act as an RPO (GTAC s16.1). Parties will only be liable for direct Loss, except in relation to Overrun or Over-Flow that causes Loss to First Gas (GTAC s16.2). The maximum liability of a Party will be $10 million for a single event or related events or $30 million in a gas year (GTAC ss16.4 and 16.5). The caps may be adjusted in certain circumstances to reflect First Gas' recovery (GTAC ss16.7 to 16.11). In certain circumstances, a Shipper may defend a claim in the name of First Gas or bring a claim against another Shipper or Interconnected Party (GTAC ss16.11 and 16.12).

Code change

See Table 14 below for a summary of the code change provisions.

Dispute resolution

Disputes that cannot be resolved by negotiation will be referred to an independent expert jointly appointed by the parties, or failing that to arbitration for determination (GTAC s18.2).

Term and Termination

The GTAC will expire on 30 September 2022 (GTAC s19.2). TSAs will expire on that date unless an earlier termination date is specified (GTAC s 19.1). A Shipper may terminate on any date that is more than three months after the date on which First Gas receives written notification, subject to the expiry or sale of any PRs held by the Shipper (GTAC s19.3). Either party may terminate for specified events of default (including a material breach that is not remedied within 20 Business Days), or First Gas may exercise a right of suspension (GTAC ss19.4 and 19.5)

Confidentiality

The GTAC defines certain information as *"Confidential Information"* with a general catch-all of *"any other material a Party wishes to disclose to First Gas on the basis that it is Confidential Information and which First Gas agrees (prior to actual disclosure of the information) is Confidential Information"* (GTAC s20.3). First Gas' use or disclosure of Confidential Information is permitted in certain circumstances (GTAC s20.4).

Assignment

A Shipper must not assign or transfer its rights and obligations under a TSA without First Gas' consent (GTAC s20.14). First Gas must not assign or transfer any of its rights or obligations

under any TSA, unless it can reasonably demonstrate that the assignee is capable of meeting First Gas' obligations under that TSA (GTAC s20.15). Liability remains with the assignor on assignment, unless prior written consent has been obtained (GTAC s20.16). Prior to assignment, the Assignor must execute a deed of covenant binding the assignee to perform the Assignor's obligations (GTAC s20.17).

MPOC governance terms

Prudential

Shippers and Welded Parties are required to have a minimum long term credit rating equivalent to Baa2 (Moody's) or BBB (S&P) or B (AM Best), or (for shippers) provide a security equivalent to three months' transmission charges, or such other arrangements as agreed by the parties (MPOC s20).

FM

Shippers, interconnected parties and First Gas may seek relief from liability due to an event or circumstance beyond its reasonable control, or any inability take or deliver gas (MPOC s27.1–27.3). Claims must be as soon as reasonably practicable and no later than 2 days of becoming aware of an event. A party claiming FM must take all reasonable steps to minimise loss (MPOC s27.3).

Liability

Liability will only arise where a party failed to act as an RPO (MPOC s28.1(a)). Parties will only be liable for direct Loss, except in relation to breaches of the provisions regarding the injection of Non-Specification Gas (MPOC s28.2). The maximum liability of a Party will be $10 million for a single event or related events or $30 million in a gas year (MPOC s28.4). The caps may be adjusted in certain circumstances to reflect First Gas' recovery (MPOC ss28.4 to 28.6). In certain circumstances, a Shipper may defend a claim in the name of First Gas (MPOC s28.14). First Gas provides an indemnity to Welded Parties in relation to Loss arising from Non-Specification Gas, but receives an indemnity from Injecting Welded Parties (MPOC ss17.22 and 17.33). First Gas administers an *"Incentives Pool"* to compensate Welded Parties due to another Welded Party having Excess Daily Imbalance or exceeding a Peaking Limit (MPOC s14)

Code change

See Table 14 - Summary of code change provisions.

Dispute resolution

Disputes between the First Gas and shippers or Welded Parties that cannot be resolved by negotiation will be referred to any available standard industry dispute resolution procedure, or failing that a jointly agreed mediation or independent expert determination process. If the parties cannot agree a process, either party may refer the matter to a court for resolution (MPOC s23.3). Some issues are reserved for expert determination, including metering disputes and matters arising in relation to compliance with Gas Specification (MPOC s23.4).

Termination

There is no provision under the MPOC, TSAs or ICAs that contemplates expiry of those arrangements. A Shipper may terminate a TSA that has an AQ Volume of zero on 30 Days' notice, otherwise termination may not be before the AQ Expiry Date (MPOC ss22.10 and 22.11). Either party may terminate for a material events of default (MPOC s22.1). For events of default, there is a 30 day period for the breaching party to remedy the default (MPO s22.4).

Confidential Information

Much of the confidentiality arrangements in the MPOC are directed at ring fencing the control of the Maui Pipeline from the influence of the Maui Mining Companies (including a detailed Confidentiality Protocol in Schedule 4). In terms of the general confidentiality provisions, Confidential Information shall not be disclosed other than with the consent of the other party or in other particular circumstances (MPOC s24.2). *"Confidential Information"* includes specific information and *"other information identified by a Shipper or Welded Party (acting reasonably), and notified to the TSP, to be confidential"* (MPOC s1.1). The MPOC provides for an audit of First Gas' operating procedures.

Assignment

A Shipper or Welded Party must not assign or transfer its rights and obligations under a TSA without First Gas' consent, not to be unreasonably withheld (MPOC s36.1). First Gas must not assign or transfer any of its rights or obligations under any TSA, unless it assigns or transfers all TSAs and ICAs, ensures that the assignee is capable of meeting First Gas' obligations and executes a deed of covenant (MPOC s36.2). A deed of covenant must also be executed by a Shipper or Welded Party in the event of any transfer or assignment by that party (MPOC s36.3)

VTC governance terms

Prudential

Shippers are required to have a minimum long term credit rating equivalent to Baa3 (Moody's) or BBB- (S&P) or B (AM Best or Fitch), or provide security equivalent to three times the estimated monthly transmission charge plus $115k, or such other arrangements as agreed by the parties (VTC s14).

FM

Shippers or First Gas may seek relief from liability due to an event or circumstance beyond its reasonable control, or (in the case of a Shipper) an inability to take or deliver gas (VTC s22.1). FM claims must be made as soon as practicable, and no later than 48 hours after an event occurs. A party claiming FM must take all reasonable steps to minimise loss (VTC s22.3I). Shippers cannot claim FM due to customer performance (VTC s22.4).

Liability

Liability will only arise where a party failed to act as an RPO (VTC s23.1). Parties will only be liable for direct Loss, except in relation to breaches of the provisions regarding the injection of Non-Specification Gas or a Shipper's obligation to indemnify First Gas for Loss where that Shipper caused or contributed to a Force Majeure (VTC s23.2). The maximum liability of a Party will be $10 million for a single event or related events or $30 million in a gas year (VTC s23.4(a) to (d)). The caps may be adjusted in certain circumstances to reflect First Gas' recovery (VTC ss23.4I and 23.5). In certain circumstances, a Shipper may defend a claim in the name of First Gas (VTC). First Gas provides an indemnity to Shippers in relation to Loss arising from Non-Specification Gas (VTC s12.7). First Gas administers a *"Balancing and Peaking Pool"* to compensate a Shipper who is unable to take gas to which it was entitled (VTC ss8.14 to 8.16)

Code change

See Table 14 - Summary of code change provisions.

Dispute resolution – Disputes between First Gas and shippers that cannot be resolved by negotiation will be referred to any available standard industry dispute resolution procedure, or failing that a jointly agreed mediation or independent expert determination process (VTC

s17). If the parties cannot agree a process, either party may refer the matter to arbitration (VTC s18). Invoicing issues are reserved for expert determination (VTC s16.17 and 17.1).

Term and Termination

The VTC expires on 30 September 2018 (VTC s20.2).[200] TSAs will expire on that date unless terminated earlier (VTC s20.1). A Shipper may terminate at the end of any gas year provided that it has given written notice by the second Friday in August of the relevant gas year. Either party may terminate for specified events of default (including a material breach), or First Gas may exercise a right of suspension (VTC ss20.3 and 20.4). For events of default, there is a 30 day period for the breaching party to remedy the default (VTC s20.3(g) to (j)).

Confidentiality

The starting position in the VTC is that First Gas and a Shipper may disclose information made available by the other party except for certain types of information (VTC s19.1). There is a limited set of circumstances in which Confidential Information may be disclosed, which includes the consent of the other party (VTC s19.2). There is a requirement that First Gas only use confidential information for the purpose of the VTC and not to advance any gas trading business (VTC s19.4). There is also a specific complaints procedure (VTC s19.5).

Assignment

A Shipper must not assign or transfer its rights and obligations under a TSA without First Gas' consent, not to be unreasonably withheld (VTC s24.1). First Gas must not assign or transfer any of its rights or obligations under any TSA, unless it can reasonably demonstrate that the assignee is capable of meeting First Gas' obligations under that TSA (VTC s24.2). Liability remains with the assignor on assignment, unless prior written consent has been obtained (VTC s24.3). Prior to assignment, the Assignor must execute a deed of covenant binding the assignee to perform the Assignor's obligations (GTAC s24.4).

Table 14 - Summary of code change provisions

Issue	GTAC (s.17)	MPOC (s.29)	VTC (s.25)
Who can propose Code changes?	Shippers, ICA parties or First Gas	Shippers, ICA parties or First Gas	Shippers or First Gas
How are change requests formulated?	Proposer is required to follow a progressive refinement process involving notification to interested parties	Proposer decides whether to confer with other parties or directly lodge a final change request	Proposer is required to follow a progressive refinement process involving notification to interested parties
Who makes final decision on change request (excl. any First Gas veto)?	Gas Industry Co	Gas Industry Co	Shipper vote
What criteria must be used to assess change request?	Objectives in s.43ZN of Gas Act and s.43ZO Government Policy Statements	Not specified in the MPOC, but separate MoU requires Gas Industry Company to *"have regard to"* the objectives in s43ZN	Not specified

[200] The VTC has been extended on an annual basis through the VTC change process.

Issue	GTAC (s.17)	MPOC (s.29)	VTC (s.25)
On what grounds may First Gas veto a final change request that is otherwise valid?	First Gas may only withhold its consent if First Gas has given prior notice of not supporting a draft change, and it considers the change request would cause a party to breach its RPO obligation, or if First Gas is required to incur expenditure it could not recover, or be likely to adversely affect current or future provision of transmission services, pricing structure or revenue recovery	First Gas may withhold its consent to a change request provided that it does not do so unreasonably. Specific grounds on which First Gas may withhold consent are: if First Gas required to incur capex, or opex that cannot be recovered, or materially adversely affect pipeline business or tariffs, or open access compatibility.	First Gas may withhold its consent to a change request provided that it does not do so unreasonably. Specific grounds on which First Gas may withhold its consent are: if First Gas is required to incur capex, or opex that it cannot reasonably expect to recover, or be likely to adversely affect structure of transmission services, business structure, transmission revenue, or open access compatibility. First Gas may also withhold consent if it considers any shipper has not acted in good faith during the change process.
When can First Gas change Code outside full change request process	To correct a drafting error or reflect law change or court order – any such change will not take effect if any party objects. Such change may be proposed by any party First Gas can make urgent change to address an unforeseen issue that threatens integrity of, or proper operation of transmission system – provided that change lapses after 6 months unless ratified via full change request process. GIC may revoke urgent change at any time.	To reflect change in law or court order – no consultation or notice is required	To reflect change in law or court order – consultation and notice are required

Governance – assessment

Governance – Efficiency assessment

In relation to Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements) and Criteria 19 (appropriate compliance and dispute resolution processes)

Prudential – efficiency could be impaired if prudential requirements are unduly tight (hindering competition) or relaxed (encouraging risky behaviour). GTAC requirements for shippers are less restrictive than those in MPOC and similar to those in VTC, and appear reasonable in overall terms.

Force Majeure – efficiency is expected to be promoted by allocating risks to those with best ability, information and incentives to control them, and by sharing *"long-tail"* risks that are genuinely beyond the reasonable control of any party. GTAC provisions are similar to those in MPOC and VTC, and appear consistent with these principles.

Liability – liability arrangements are efficient when risks are allocated to those parties who are best able to manage them. An efficient set of liability arrangement are legally robust, reduce the risk of disputes and incentivise appropriate behaviour. The GTAC includes a new subrogation process that purports to give rights to shippers and interconnected parties to enforce breaches of the GTAC against other shippers and interconnected Parties (in First Gas' name). As mentioned in Appendix D, we have the following concerns:

1. The effectiveness of the subrogation provisions, particularly when compared to the back-to-back indemnities in the MPOC and VTC that apply to the injection of Non-Specification Gas.
2. Even if the subrogation process is effective, whether this new process (and the reallocation of risk) is an improvement on the MPOC and VTC.

Those concerns lead us to conclude that the changes to the liability arrangements will have a negative effect on efficiency. Under the MPOC and VTC there is a clear contractual chain between First Gas and interconnected parties that can be used to ensure that the incentives rest with the appropriate party. We have also identified a number of additional concerns regarding the liability arrangements in the GTAC that are discussed in section D.8, Appendix D.

Code change – efficiency is generally promoted where code evolution is guided by pipeline users and First Gas, while ensuring checks are in place to ensure code changes do not inhibit competition. Arrangements should also avoid undue cost and complexity that can hinder adoption of desirable code improvements. GTAC provisions appear reasonable across these criteria. Change requests are initiated by pipeline users or First Gas, and refined via engagement among interested parties. Final decisions will be made by an external party (Gas Industry Co) that is required to consult interested parties and apply the objectives in the Gas Act and any applicable Government Policy Statement. We think that mitigates the risk of any one participant, or group of participants, being able to block a change proposal that has benefits for the wider industry (as may occur under a voting regime like the VTC). First Gas' right to block a code change is tighter than in the VTC and MPOC[201], and notification must be made at an early point to minimise wasted costs. While the GTAC would allow First Gas to unilaterally amend the code to address an urgent and unforeseen issue, any such change automatically lapses after six

[201] Although section 7.14(a) of the GTAC could be considered to provide some loosening of First Gas' right to veto, we think that limiting the veto to three criteria rather than "*consent not be unreasonably withheld*" (or similar drafting in the VTC) does result in an, overall, narrower right of veto.

months unless ratified by the full change request process. In addition, Gas Industry Co may revoke an urgent change made by First Gas at any time.

Dispute resolution – efficiency is typically promoted where parties first seek to resolve disputes via negotiation or via alternative lower cost means (eg mediation), and failing this, can refer disputes to an independent decision maker for binding resolution. GTAC's provisions are similar to those in MPOC and VTC, and appear consistent with these principles (noting that GTAC and VTC both provide for arbitration as the ultimate backstop, whereas as the MPOC provides for parties to refer unresolved matters to the courts). In our opinion the dispute resolution provisions in the GTAC are, overall, less complicated than the MPOC and VTC and less likely to result in unnecessary delay. Accordingly, we believe that efficiency is enhanced.

Termination – submitters have expressed concerns regarding the short term that applies to the GTAC and TSAs (these expire on 30 September 2022) and have referred to the evergreen nature of the MPOC. The term of the GTAC is longer than the VTC, which is typically renewed annually using the change process. Like the VTC, there is the possibility for parties to the GTAC to submit a change request to extend the term of the GTAC. Overall, we consider that the term of the GTAC is more efficient than the VTC as renewal will not need to occur on an annual basis, but is less efficient than the MPOC where no renewal process is necessary. While there is an efficiency improvement in relation to the term in the VTC, we are concerned that the short-term of the GTAC introduces uncertainty for all participants in terms of the situation post 2022. Accordingly, we consider there to be a modest negative impact on efficiency when compared to the current arrangements.

Confidentiality and Assignment – we do not consider that the confidentiality or assignment provisions directly impact our efficiency analysis.

Overall efficiency assessment of governance arrangements

Our overall assessment is that the GTAC governance terms have both positive and negative impacts on efficiency. The main improvements relate to the change process in the GTAC, while the concerns regarding the liability provisions and the short term of the GTAC have a negative impact on efficiency. In the PAP, we concluded that aspects of the proposed governance arrangements had a moderate negative impact on efficiency. We have reconsidered that position and have upgraded our assessment to a substantial. We think the number and significance of our concerns regarding the liability arrangements (as highlighted in section D.8, Appendix D) justifies a more negative assessment.

Assessment	

Governance – Reliability assessment

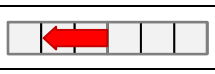
In relation to Criteria 1, 2 and 6, ie providing reliable and competitive arrangements and allocating risks properly and efficiently:

Liability – the GTAC materially changes the liability arrangements in relation to the injection of Non-Specification Gas. As outlined in section D.8, Appendix D, we have concerns regarding the process for enforcing breaches under those arrangements when compared to the back-to-back indemnities in the MPOC and the VTC. Accordingly, we think that this aspect of the liability framework has a moderately negative impact on the proper and efficient management of risks relating to security of supply.

Other governance terms are not expected to directly alter the risk of interruption or contingency.

The express requirement in the GTAC for all code change requests to be assessed against the Gas Act and GPS objectives should be positive for reliability (although we do not think that this is enough to justify a positive assessment).

Overall, our concerns regarding the liability arrangements lead us to rate the GTAC's governance terms as being moderately negative for reliability. We have assessed the proposed liability arrangements to be more negative than we did in the PAP. We think that PAP did not adequately recognise the role that the liability arrangements have to incentivise good behaviour in relation to the injection of non-specification gas. We have also considered the widespread impact that a non-specification gas event would have on the industry.

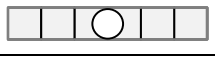
Assessment	

Governance – Safety assessment

In relation to Criteria 1 and 7, ie providing access in a manner consistent with the Government's gas safety regime:

Liability – Section 41 of the Gas (Safety and Measurement) Regulations 2010 (Safety Regulations) requires a retailer or wholesaler to ensure that gas it supplies at a consumer's point of supply complies with NZS 5442. The current MPOC and VTC support this requirement through a clear chain of liability that places appropriate incentives on those parties responsible for ensuring that gas complies with the Gas Specification. While we have concerns regarding the liability arrangements in the GTAC in relation to Non-Specification Gas, we think that the proposed framework does not materially affect consistency with the Safety Regulations. For example, contracts for the sale or purchase of gas will need to ensure compliance with the gas specification (as required by GTAC s12.1).

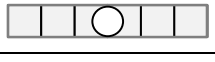
Other governance terms are not expected to directly alter the risk of harm to people or property. Overall, we rate the GTAC's governance terms as being neutral for safety.

Assessment	

Governance – Environmental assessment

In relation to Criteria 8, 12 and 13, ie contributing to environmental sustainability by using energy and resources efficiently, minimising gas losses and promoting demand side management:

The governance terms are not expected to directly alter the risk of harm to the environment. Overall, we rate the GTAC's governance terms as being neutral for the environment.

Assessment	

Governance – Fairness assessment

In relation to Criteria 13 and 18, ie gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions:

The GTAC gives existing pipeline users and First Gas similar rights in respect of force majeure, prudential requirements and dispute resolution – and is therefore not expected to materially alter fairness for these parties.[202]

Code changes – One aspect of the GTAC which could arguably improve fairness is that there is less risk of code changes that favour incumbent pipeline users, because all changes will be assessed against the Gas Act and GPS objectives by an external party (Gas Industry Co). Voting processes, like the VTC change process, have the potential to favour the incumbent pipeline users or a subset of the existing pipeline users. Some submitters had concerns regarding the time constraints in section 17 of the GTAC. We agree with some of those concerns. In our view the following timeframes have a negative impact on fairness:

1. Section 17.6 of the GTAC requires a Change Requestor to provide First Gas and Gas Industry Co with additional information requested by the Interested Party in relation to the proposed change no later than 5 Business Days following the request being made. In our view, the appropriate timeframe for provision of the additional information will depend on the scope of the additional information that the Interested Party asks the Change Requestor to provide. That is reflected by the equivalent provision in the VTC, which refers to *"as soon as reasonably practicable"*, rather than imposing an absolute deadline. We consider that the introduction of the 5 Business Day deadline has a negative effect on fairness.
2. Section 17.9 of the GTAC imposes a deadline for submission of a Draft Change Request to Gas Industry Co of 25 Business Days following First Gas' publication of a Draft Change Request. We do not consider that timeframe to be fair as it will mean that the Change Requestor will only have 3 Business Days (taking into account the 20 Business Day window for Interested Parties' views on the change request and the requirement that First Gas publish the views of Interested Parties within 2 Business Days) to review submissions on the Draft Change Request and decide whether to submit the Change Request to Gas Industry Co.

Liabilities – We think that First Gas' inclusion of a provision that purports to give Shippers a general right to claim Losses arising from breaches of the GTAC by other Shippers and Interconnected Parties is a positive step in terms of fairness. There was no right of that nature under the MPOC and the VTC. However, we have concerns regarding the process for enforcing breaches under the subrogation provision. Given that the subrogation arrangements are intended to replace the existing back-to-back indemnities in relation to the injection of Non-Specification Gas (a key source of potential liability), we consider the overall impact on fairness to be negative. A range of other concerns are raised in section D.8 of Appendix D of this paper. We think that, overall, the balance of the liability arrangements is not as fair as the MPOC and the VTC.

Termination – we reiterate our concerns regarding the expiry date of the GTAC here. Although we are generally comfortable that the termination provisions in the GTAC are reasonably balanced (when compared to the current arrangements), we do have the following concerns and queries:

1. We think that the absence of an opportunity for a default to be remedied (as currently exists under the MPOC and the VTC) has a modestly negative effect on fairness.
2. Section 19.1(a) permits any party to immediately terminate on written notice if any money remains unpaid for 10 Business Days. In our view that provision in unreasonable and unfair when compared to the equivalent provisions in the MPOC and VTC (particularly as the

[202] Stakeholders have suggested that referral of a dispute to arbitration is likely to be prohibitive for some stakeholders. We think that the position in the GTAC is no more prohibitive than the current MPOC and VTC, which refer disputes to court or arbitration.

termination right will be triggered after 10 Business Days and there is no opportunity to remedy).

3. Whether it is necessary for termination to be conditional on the expiry or sale of all PRs held by the Shipper. A similar approach was adopted in relation to AQ under the MPOC. Nevertheless, we think that the Shipper's right to terminate is more flexible than the VTC where termination must be notified before the second Friday in August for the following gas year.

Confidentiality – we have considered stakeholder views that the confidentiality provisions in the GTAC are insufficiently detailed. While stakeholders are correct that the arrangements in the GTAC do not have the same level of detail as the MPOC or the VTC, we think that is largely due to the fact that the MPOC and the VTC were drafted in the context of a transmission owner that had interests at a production and retail level through related companies. In that context, it was deemed appropriate to include additional checks on the use of confidential information, such as confidentiality protocols and audit requirements. We think that the same concerns do not apply in the context of First Gas' ownership of the transmission system. Accordingly, the exclusion of some detail in the MPOC and VTC from the GTAC can be expected without a detrimental impact on fairness. However, we consider that the following matters have a minor impact on fairness:

1. The VTC lists specific information that is confidential with no ability for the parties to identify other information as confidential. While we favour transparency, there may be some situations where information other than that listed is genuinely confidential and should be protected from disclosure. In the MPOC and GTAC, a right exists for the parties to determine information to be confidential. The MPOC and GTAC contain an obvious tension in terms of whether the disclosing party (acting reasonably) should be able to determine that the information is confidential (MPOC) or First Gas makes that determination (the GTAC). On balance, we think that the approach in the MPOC is fairer, particularly as First Gas has certain permitted uses of Confidential Information.
2. We think that the MPOC's requirement (in relation to any authorised disclosure of Confidential Information) that the recipient of that information execute a confidentiality undertaking, is reasonable. The absence of this requirement in the GTAC has a minor negative impact on fairness.
3. The MPOC is clearer regarding the obligation on First Gas not to disclose confidential information.
4. The ability of a Shipper or an Interconnected Party to appoint an auditor to undertake an audit of First Gas' operating procedures in MPOC s24.6 appears to have merit, particularly in incentivising appropriate behaviours. An equivalent right is not included in the GTAC.

We consider the confidentiality arrangements in the GTAC to be an improvement on the VTC in relation to the fairness objective and modestly less fair than the MPOC.

Assignment – we think that the assignment provisions are similar to the equivalent provisions in the MPOC. We do not expect these provisions to have any notable influence on our assessment of the GTAC. We do not think that assignment of TSAs and ICAs to different parties (as prohibited by the MPOC) is a realistic possibility without other changes to the New Code (that would be subject to Gas Industry Co's approval). The GTAC itself is not capable of assignment and nor should it be. The concern on the assignment provisions is First Gas' rights and obligations, not the underlying ownership of the pipeline infrastructure.

Overall, we rate the GTAC governance terms to be moderately negative for fairness.

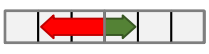
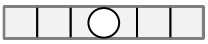
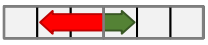
Assessment	

Table 15 – Summary of GTAC governance assessment

Summary of GTAC governance assessment		
	Comment	**Assessment**
Efficiency		
Criterion 1, 2 & 14	We think that proposed code change process would moderately enhance the efficient delivery of gas to consumers. Barriers to making changes to the arrangements that existed under the MPOC and VTC (the extent of First Gas' veto and the requirement for a vote under the VTC) have been reduced. However, we consider that efficiency would be significantly reduced by the proposed changes to the liability arrangements and modestly reduced by the short term of the GTAC.	
Criterion 3	No noticeable change expected	
Criterion 4	No noticeable change expected	
Criterion 5	No noticeable change expected	
Criterion 8	No noticeable change expected	
Criterion 9	No noticeable change expected	
Criterion 10	No noticeable change expected	
Criterion 11	No noticeable change expected	
Criterion 15	No noticeable change expected	
Criterion 16	No noticeable change expected	
Criterion 17	No noticeable change expected	
Criterion 19	We think that efficiency is enhanced by a dispute resolution process that has, overall, less complexity, that the processes in the VTC and the MPOC.	
	Overall Efficiency assessment	
Reliability		
Criteria 1, 2 & 6	Changes to the liability arrangements in relation to the injection of Non-Specification Gas could modestly decrease reliability.	
Safety		
Criteria 1 & 7	No noticeable change expected	
Environment		
Criteria 8, 12 & 13	No noticeable change expected	

Summary of GTAC governance assessment		
	Comment	**Assessment**
Fairness		
Criterion 13 & 18	It is modestly more fair that the code change process would not favour incumbent pipeline users or a subset of users. However, some of the timeframes in the code change process have a negative impact on fairness, as do aspect of the liability framework, termination and confidentiality arrangements. We rate these as contributing to moderately unfair assessment.	

5. Top-down analysis

This chapter discusses whether the New Code will promote the objectives and outcomes.

As set out in Chapter 3 for each of the five major topics (efficiency, reliability, safety, environment and fairness), we assess whether the GTAC is likely to be better than, the same as, or worse than current transmission access arrangements.

We compile this assessment by considering the results of the bottom-up analysis from the preceding chapter, and then considering the relative significance of the various positive and negative aspects of the GTAC, in terms of promoting efficiency, reliability etc.

5.1 Relative significance of different components of the code

While all significant aspects of the New Code have been examined in our assessment process, we consider some components to be more significant in how they affect the objectives and outcomes. In particular, we consider additional emphasis should be placed on components of the code that:

1. significantly affect many (if not all) pipeline users on a daily basis (eg transmission products); and/or
2. are central to ensuring the reliable and safe operation of the pipeline system (eg balancing).

The components of the code that fall into one (or both) of these categories are:

1. Gas transmission products;
2. Pricing;
3. Balancing;
4. Gas quality and odorisation; and
5. Liabilities.

As we discuss below, the performance ratings in these five categories have been given additional emphasis in determining the aggregate rating of the New Code against each topic (efficiency, reliability etc).

5.2 Top-down assessment – efficiency

Table 16 summarises the assessment of the New Code against efficiency criteria. Readers should refer to Chapter 4 for the fuller explanation of reasoning in relation to each component of the GTAC.

Table 16 – Top-down efficiency assessment

Assessment	Key reasons
Gas transmission products (considered to be more significant to the overall assessment)	
	The GTAC's transmission product design is pro-competitive relative to annual capacity bookings, provides increased flexibility for shippers, and reduces the risk of capacity sterilization. However, adoption of the new products will result in transition costs and modestly increase transaction costs due to the nomination requirement.
Pricing (considered to be more significant to the overall assessment)	
	The GTAC improves pricing provisions in some areas (eg single receipt zone, balancing, allocation of scarce capacity based on willingness to pay). The GTAC also applies a common pricing framework across the entire system, which is pro-competitive. But these gains are offset by the size of the overrun and underrun charges in non-congested situations and (to a lesser extent) the asymmetry of ERM charges.
Energy quantity determination	
	The GTAC would introduce one set of technical standards, testing requirements, and correction methodology, which should modestly reduce costs.
Energy allocation	
	The optionality of using OBA allocation or alternative allocation methods at any RP or DP should moderately improve efficiency. However, interconnected parties may be discouraged from using OBAs because they would have no entitlement to AHPs, and would not be primarily responsible for choosing the allocation method, even when the RP of DP is owned and controlled by them. These matters counter the improvement with a moderate reduction.
Balancing (considered to be more significant to the overall assessment)	
	The balancing arrangements, particularly system-wide balancing and ERM incentives, should increase in spot market activity, and downstream competition. These moderate efficiency improvements are countered by uncertainties regarding the allocation of tolerances, seen as moderately negative.
Curtailment	
	The GTAC's curtailment arrangements are more competitively neutral, are less complex than status quo, and should lower IT costs, bringing moderate efficiency improvements.
Congestion management	
	The GTAC congestion management arrangements provide for the options of demand management IAs, and market pricing of scarce capacity, via PRs. We regard this as a substantial addition to competitive market arrangements, reducing barriers to entry, signaling the need for investment, targeting cost to causers, and generally opening up discussions on the pricing of supply security. However, a modest reduction could arise from the discretion that First Gas has to negotiate SAs and IAs, and some cost increases.
Gas quality and odorisation (considered to be more significant to the overall assessment)	
	No noticeable change expected.

Assessment	Key reasons
Prudential requirements	
	No noticeable change expected.
Force majeure	
	No noticeable change expected.
Liabilities (considered to be more significant to the overall assessment)	
	The GTAC provides less certainty that pipeline users can recover certain types of loss. This weakens incentives for prudent behavior by pipeline users.
Code changes	
	Code change process blends the respective strengths of MPOC and VTC processes which is positive.
Dispute resolution	
	Some reduction in the complexity of the dispute resolution process.
Term and termination	
	Modest impact on efficiency arising from the short-term nature of the GTAC.
Confidentiality	
-	Weak relevance to efficiency.
Assignment	
	No noticeable change expected.
Overall	
	

Overall, from a top-down perspective, we assess the New Code as providing substantial efficiency gains, and moderate efficiency losses. On the positive side, this assessment reflects our expectation that the New Code will promote:

1. stronger competition from the DNC structure, single gas receipt zone, and removal of grandfathering provisions etc; and
2. efficiency improvements from a common pipeline regime and system-wide gas balancing.

We rate both factors as important because they affect many pipeline users and are important from an operational perspective. We expect the New Code to also yield less substantial efficiency gains in some other areas, including better arrangements for congestion management,

curtailment and code changes. But overall we consider the products will provide substantial efficiency gains.

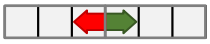
On the negative side, we expect the New Code to have adverse efficiency effects in some areas, including:

1. the transport incentive fees in non-congested situations appear likely to encourage a greater level of inefficient behaviour by pipeline users and, combined with the rebate mechanism, raise some competition concerns. We regard this issue as important because the incentive charges will potentially affect all pipeline users every day; and
2. GTAC's liability provisions appear less certain in their effectiveness than present arrangements. This is an important issue, because the maintenance of robust incentives on pipeline users to act prudently is critical to efficient and reliable operations.

5.3 Top-down assessment – reliability

Table 17 summarises the assessment of the New Code against the reliability criteria compiled at a component level in Chapter 4. Readers should refer to Chapter 4 for the fuller explanation of reasoning in relation to each component of New Code.

Table 17 Top-down reliability assessment

Assessment	Key reasons
Gas transmission products (considered to be more significant to the overall assessment)	
	The early notification of congestion under the GTAC should moderately improve reliability.
Pricing (considered to be a more significant to the overall assessment)	
	The proper allocation of risk should be moderately strengthened by the GTAC's pricing provisions during congestion.
Energy quantity determination	
	A single set of technical standards, testing requirements etc. is expected to improve reliability, but the 9 month interval before special tests is worse than under the MPOC (60 days) or VTC (90 days), and the absence of a completed Metering Requirements document, or an appropriate process for development of that document, are modest detriments.
Energy allocation	
	The absence of the Wash-up Agreement is modestly negative for reliability.
Balancing (considered to be a more significant to the overall assessment)	
	No noticeable change expected
Curtailment	
	Compliance with OFOs should moderately improve because of the stronger GTAC sanctions. However, reliability would be moderately reduced if OFOs are not directed to the party best able to respond.

Assessment	Key reasons
Congestion management	
	Risks should be moderately better managed by directing congestion management cost towards beneficiaries.
Gas quality and odorisation (considered to be more significant to the overall assessment)	
	The New Code modestly reduces the obligations on parties to protect customers from non-specification gas incidents.
Prudential requirements	
	No noticeable change expected.
Force majeure	
	No noticeable change expected.
Liabilities (considered to be more significant to the overall assessment)	
	Material changes have been made to the liability arrangements in relation to the injection of Non-Specification Gas. We have concerns that the arrangements undermine the proper and efficient management of risks relating to security of supply.
Code changes	
	No noticeable change expected.
Dispute resolution	
	GTAC provisions similar to current arrangements.
Term and termination	
-	Weak relevance to reliability.
Confidentiality	
-	Weak relevance to reliability.
Assignment	
-	Weak relevant to reliability.
Overall	
	

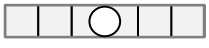
Overall, from a top-down perspective, we assess the GTAC as providing both moderate reliability improvements, and moderate reliability detriments. This assessment reflects a range of impacts including:

1. the moderate gains in relation to gas transmission products, pricing, curtailment and congestion management; and
2. the moderate detriments in relation to curtailment and liabilities that undermine reliability.

5.4 Top-down assessment – safety

Table 18 summarises the assessment of the New Code against the safety criteria compiled at a component level in Chapter 4. Readers should refer to Chapter 4 for the fuller explanation of reasoning in relation to each component of New Code.

Table 18 – Top-down safety assessment

Assessment	Key reasons
Gas transmission products (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Pricing (considered to be more significant to the overall assessment)	
-	Weak relevance to safety.
Energy quantity determination	
-	Weak relevance to safety.
Energy allocation	
-	Weak relevance to safety.
Balancing (considered to be more significant to the overall assessment)	
-	Weak relevance to safety.
Curtailment	
	No noticeable change expected.
Congestion management	
	No noticeable change expected.
Gas quality and odorisation (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Prudential requirements	
	No noticeable change expected.

Assessment	Key reasons
Force majeure	
	No noticeable change expected.
Liabilities (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Code changes	
	No noticeable change expected.
Dispute resolution	
	No noticeable change expected.
Term and termination	
-	Weak relevance to safety.
Confidentiality	
-	Weak relevance to safety.
Assignment	
-	Weak relevant to safety.
Overall	
	

Overall, from a top-down perspective, we assess the New Code as neutral in relation to safety. This assessment reflects that GTAC is not expected to noticeably change safety performance.

5.5 Top-down assessment – environment

Table 19 summarises the assessment of the New Code against the environmental criteria compiled at a component level in Chapter 4. Readers should refer to Chapter 4 for the fuller explanation of reasoning in relation to each component of New Code.

Table 19 – Top-down environmental assessment

Assessment	Key reasons
Gas transmission products (considered to be more significant component)	
	By allowing for demand side management contracts, the GTAC would meet the GPS objective and should provide a modest efficiency improvement.

Assessment	Key reasons
Pricing (considered to be more significant to the overall assessment)	
	Allowing for demand side management payments would give modestly better compliance with Criterion 12.
Energy quantity determination	
-	Weak relevance to environment.
Energy allocation	
-	Weak relevance to environment.
Balancing (considered to be more significant to the overall assessment)	
	The New Code balancing arrangements should bring a modest reduction in compressor fuel use.
Curtailment	
	No noticeable change expected.
Congestion management	
	No noticeable change expected.
Gas quality and odorisation (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Prudential requirements	
	No noticeable change expected.
Force majeure	
	No noticeable change expected.
Liabilities (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Code changes	
	No noticeable change expected.
Dispute resolution	
	No noticeable change expected.

Assessment	Key reasons
Term and termination	
-	Weak relevance to environment.
Confidentiality	
-	Weak relevance to environment.
Assignment	
-	Weak relevance to environment.
Overall	
	

Overall, from a top-down perspective, we assess the New Code as a modest improvement in relation to environmental issues. This reflects:

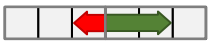
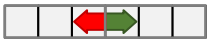
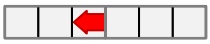
1. Our expectation that the GTAC will better enable the use of demand-side management tools, while recognising that such tools are likely to be required on a relatively infrequent basis; and
2. Our expectation that the GTAC will enable a modest reduction in fuel used by compressors.

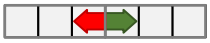
5.6 Top-down assessment – fairness

Table 20 summarises the assessment of the New Code against the fairness criteria compiled at a component level in Chapter 4. Readers should refer to Chapter 4 for the fuller explanation of reasoning in relation to each component of New Code.

Table 20 – Top-down fairness assessment

Assessment	Key reasons
Gas transmission products (considered to be more significant to the overall assessment)	
	Fairness should be moderately improved by the removal of grandfathering and daily nature of the standard product, but modestly reduced by the uncertainty regarding AHP arrangements.
Pricing (considered to be more significant to the overall assessment)	
	Charges based on usage (unless congestion applies) would be moderately fairer – but high OR/UR charges combined with the rebate mechanism, and the scope of hourly overrun fees would be moderately unfair.
Energy quantity determination	
	Fairness is modestly decreased because meter owners may be affected by the Metering Requirements document, as yet unavailable.

Energy allocation	
	No noticeable change expected.
Balancing (considered to be more significant to the overall assessment)	
	It would be moderately more fair that parties would no longer be cashed-out for more than their running mismatch on a day, but modestly unfair that the initial balancing tolerances are unknown.
Curtailment	
	No noticeable change expected.
Congestion management	
	Allocation of scarce capacity on the basis of willingness to pay is seen as moderately more fair than basing it on historic usage.
Gas quality and odorisation (considered to be more significant to the overall assessment)	
	No noticeable change expected.
Prudential requirements	
	No noticeable change expected.
Force majeure	
	No noticeable change expected.
Liabilities (considered to be more significant to the overall assessment)	
	Reduced clarity regarding liability chain could mean that parties do not bear consequences of losses they cause. Overall, the balance of the liability arrangements is not as fair as the MPOC and the VTC.
Code changes	
	Does not favour incumbent users (as is the case under the VTC), but some matters have a minor impact on fairness.
Dispute resolution	
	No noticeable change expected.
Term and termination	
	The short term of the GTAC has a modest impact on fairness. The GTAC is generally equivalent to the MPOC and VTC in relation to termination rights, but there are some negative effects on fairness.

Confidentiality		
		The GTAC is considered to be an improvement on the VTC, and modestly less fair than the MPOC.
Assignment		
		No noticeable change expected
Overall		
		

Overall, from a top-down perspective, we assess the New Code as having both moderately positive and moderately negative effects on fairness due to factors such as:

1. the removal of grandfathering and the daily nature of the standard product;
2. parties no longer being cashed-out for more than their running mismatch on a day;
3. aspects of the incentive fee rebate arrangements;
4. uncertainty regarding AHP arrangements; and
5. changes to the existing liability arrangements.

6. Overall assessment

This chapter sets out Gas Industry Co's overall assessment of whether the New Code is materially better than the current terms and conditions for access to and use of gas transmission pipelines, having regard to the objectives for the industry body in the Gas Act 1992 and the objectives and outcomes in the GPS.

We have compiled our overall assessment by considering:

1. The bottom-up and top-down analyses of the GTAC itself (discussed in Chapters 4 and 5 respectively); and
2. The extent to which *"associated arrangements"* would be altered if the GTAC comes into force, and how these would affect the terms and conditions of access to and use of the gas transmission system.

We have also considered the extent of any inherent benefits from moving to a single code.

Each of these topics is addressed in the following sections.

6.1 Bottom-up and top-down analyses

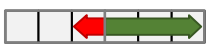
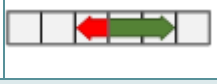
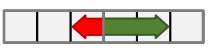
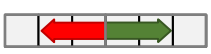
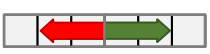
Table 21 summarises the results of the bottom-up and top-down analyses of the New Code components discussed in Chapters 4 and 5. The *"all criteria"* assessments in the right-hand column of the table show the result for each major component (ie the bottom-up assessment). These *"all criteria"* assessments apply broadly equivalent weightings to the efficiency, reliability, safety, environmental and fairness objectives for each component.

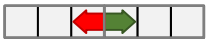
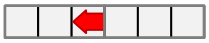
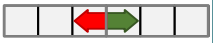
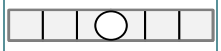
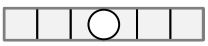
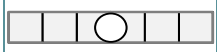
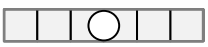
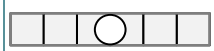
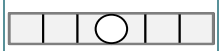
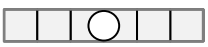
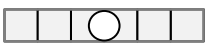
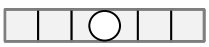
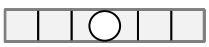
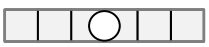
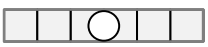
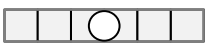
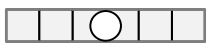
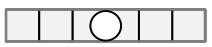
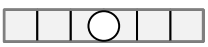
As discussed in Chapter 5, in our top-down assessment we have placed additional emphasis on components that:

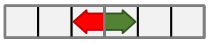
1. significantly affect many (if not all) pipeline users on a daily basis (eg transmission products); and/or
2. are central to ensuring the reliable and safe operation of the pipeline system (eg balancing).

We have noted in the table where a component is considered to be a more significant component. For explanations regarding other cells in the table, readers should refer to Chapters 4 and 5.

Table 21 – Summary of bottom-up and top-down assessment of GTAC

	Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Gas transmission products (considered to be a more significant component)						
						
Pricing (considered to be a more significant to the overall assessment)						
			-			

Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Energy quantity determination					
		-	-		
Energy allocation					
		-	-		
Balancing (considered to be a more significant to the overall assessment)					
		-			
Curtailment					
					
Congestion management					
					
Gas quality and odorisation (considered to be a more significant to the overall assessment)					
					
Prudential requirements					
					
Force majeure					
					
Liabilities (considered to be a more significant to the overall assessment)					
Code changes					
Dispute resolution					
Term and termination					

	Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Confidentiality						
	-	-	-	-		
Assignment						
	-	-	-	-		
Overall						
						

Bottom-up assessment

Our bottom-up component level assessment shows that the New Code is neutral or moderately positive for most items. Two important exceptions relate to pricing and liability provisions. As discussed in Appendix D, we believe the incentive charge structures and levels are likely to encourage inefficient behaviour in non-congested situations. We regard this issue as significant because it will affect all pipeline users on a daily basis.

In relation to liability provisions, the GTAC replaces back-to-back indemnity provisions in the MPOC and VTC which apply to the injection of Non-Specification Gas with a subrogation process. This purports to give rights to Shippers and Interconnected Parties to enforce breaches of the GTAC against other Shippers and Interconnected Parties in First Gas' name.

Our concerns around the effectiveness of the subrogation provisions, together with other concerns regarding the liability arrangements outlined in Appendix D, lead us to conclude that the liability arrangements will have a negative effect relative to the MPOC and the VTC. We regard this issue as significant, because the maintenance of robust incentives on pipeline users to act prudently is critical to ensuring efficient and reliable pipeline operations.

Top-down assessment

Turning to the top-down assessment for each of the major assessment criteria (ie reading down the table, with net impacts in the bottom row), we assess the New Code as providing:

3. modest overall efficiency improvements (significant improvement outweighing moderate loss);
4. a balanced position on reliability (moderate improvement balanced by moderate loss);
5. a neutral position on safety;
6. a modest environmental improvement; and
7. a balanced position on fairness (moderate improvement balanced by moderate loss).

A further important observation from the table is the sizeable number of red arrows – ie detrimental elements in the New Code. In its submission, First Gas suggested that some detrimental effects may be inevitable in order to make gains elsewhere. For example, it is inevitable that the change to a New Code would cause some transition costs (re-training, possible re-negotiation of contracts, development of new systems etc). However, on examination we found that this is often not the case. For example, the negative aspects of the pricing provisions largely relate to the size and asymmetric structure of the incentive charges. In our

view, these issues could be addressed without compromising the positive aspects of the New Code's pricing provisions, such as the usage-based DNC structure and adoption of a single receipt zone.

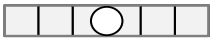
6.2 Associated arrangements

As discussed in Chapter 3, we are required to assess *"the terms and conditions for access to and use of gas transmission pipelines"*. Some terms and conditions are part of the New Code arrangements, but fall outside the GTAC into so-called *"associated arrangements"* (see Figure 2).

In most cases, we expect there to be little or no impact on associated arrangements if the GTAC comes into force. For example, it will not affect the Gas Act or GPS because these are determined by Parliament and the Government respectively. Similarly, where First Gas has very similar levels of discretion under the GTAC and the status quo, we consider that the nature of the associated arrangement is unlikely to be significantly altered.

Applying this framework, we have identified the seven areas listed in Table 22 where associated arrangements could appreciably alter if the GTAC comes into force. For each, we have considered whether the associated arrangements would improve on, or detract from, the current terms and conditions, using the assessment criteria discussed in Chapter 3.

Table 22 – Associated arrangements – key areas with potential for change under GTAC

Associated arrangement	Treatment under GTAC	Treatment under MPOC/VTC	Assessment
Transmission Services Agreements	Major terms and conditions set out in GTAC	Major terms and conditions set out in MPOC/VTC	
Interconnection Agreements	GTAC s7.13 lists the matters that any ICA must address, but these are not very prescriptive	MPOC – prescribes major terms and conditions of ICAs VTC – only prescribes that any ICA must require the interconnected party to only inject specification gas and to demonstrate to First Gas that it can do so, otherwise ICAs are negotiable bilaterally	
Gas transmission pricing methodology	Outside the GTAC	MPOC – prescribes *"tariff principles"* (MPOC Sch10), but these are a cost allocation description rather than a pricing methodology VTC – outside the Code	
Priority rights auction rules	Outside the GTAC, but subject to GTAC Change process	Not addressed in either the MPOC or VTC	
Wash-up Agreement	Defined in GTAC as an agreement between all Shippers, OBA Parties and First Gas or, if agreement can't be reached, in the manner reasonably determined by First Gas	MBB D+1 Pilot Agreement	
First Gas discretion and	Outside the GTAC	Outside the MPOC/VTC	

standard operating procedures for balancing			
Park and loan service provisions	Outside the GTAC	Not addressed in either the MPOC or VTC	

Each item is discussed further below.

Transmission service agreements

Strictly speaking, any TSA signed pursuant to the GTAC will be outside the GTAC, incorporating the GTAC terms by reference. These terms were assessed as part of the bottom-up and top-down analysis of the GTAC, so we do not regard TSAs as a source of any other concerns.

Interconnection agreements

The GTAC and VTC are codes that apply principally to shippers, and ICAs are separate, individual agreements. The MPOC is a combined code for both shippers and interconnected parties.

As discussed in Appendix D, section D.1, we see no inherent problem with the GTAC containing terms that apply principally to shippers, with interconnected parties' rights and obligations largely defined within ICAs. However, at the present point in time, it is difficult to compare the ICAs contemplated by the GTAC with current terms and conditions, because the former have yet to be negotiated.

The level of uncertainty is also affected by the degree to which the GTAC prescribes the minimum content of ICAs. While GTAC s7.13 places some requirements on the content of ICAs, it still leaves sizeable uncertainty about the negotiated outcomes. Some submissions have stated that the negotiating strength of parties to ICAs is not balanced, because gas transmission is a natural monopoly. We have some sympathy with this view, though we note that First Gas has strong incentives to encourage use of the gas transmission system.

Submissions have also contrasted the need for ICA negotiations under the GTAC with the present situation for Maui interconnected parties, for whom the MPOC defines all major interconnection terms. These submissions note that MPOC ICA terms can only be varied by mutual consent of First Gas and the interconnected party, or via an MPOC change request which requires approval from Gas Industry Co. Again, we have some sympathy with this view.

In summary, we consider that there is significant uncertainty about ICA terms because:

1. The GTAC at s7.13 provides a relatively narrow range of minimum prescribed terms, meaning that the ICAs themselves will define much of the detail; and
2. The ICAs contemplated by the GTAC are yet to be negotiated.

Overall, we see the uncertainty about interconnection terms as detrimental to efficiency and fairness, and consider it to be a substantial negative factor in the assessment of the GTAC.

Gas transmission pricing methodology

Under the GTAC, the Gas Transmission Pricing Methodology (GTPM) is outside of the code. The VTC takes the same approach. Under the MPOC, there are *"tariff principles"* in MPOC Sch 10, but we consider these to be a description of a cost allocation (ie how costs are allocated into the various tariffs), rather than a pricing methodology (ie how economic principles are applied to determine the prices).

We have considered the implications of placing the GTPM outside the code for the GTAC. Key factors we regard as relevant are:

1. The GTAC would maintain the approach that is currently applied to the non-Maui system, noting that this system accounted for over 70% of combined transmission charges paid in 2016.[203]
2. Although the MPOC contains tariff principles within the code, it is not clear whether adherence to these principles would necessarily promote the assessment criteria in Table 2 of this paper.
3. If the GTAC comes into force, First Gas' transmission pipeline business will remain subject to the Commerce Act's information disclosure provisions, including a requirement to report on how closely its pricing compares to the Commerce Commission's pricing principles.

Overall, we do not believe that placing the GTPM outside the GTAC raises any major concerns, relative to the status quo.

Priority Right auction rules

The GTAC makes provision for the auctioning of PRs to shippers, based on auction terms and conditions that are outside the code. Neither the MPOC nor the VTC include any PRs.

As discussed in Chapter 4, we believe that providing for PRs is a positive feature of GTAC, relative to the status quo. However, we also regard the detail of the auction terms and conditions as being important, to ensure they achieve their purpose and minimise any adverse effects.

Under GTAC s3.18, First Gas is tasked with developing the auction terms and conditions in consultation with Shippers. These require the approval of the Gas Industry Co under the code change provisions before they can come into effect. We believe this process provides adequate safeguards to minimise the scope for adverse outcomes.

Wash-up Agreement

In May 2015, following the introduction of Market Based Balancing arrangements on the Maui pipeline, Gas Industry Co formed the Daily Allocation Working Group (DAWG) to assist with the design and implementation of a trial to enable daily Balance and Peaking Pool (BPP) calculations, then performed at the end of each Month, to be done on a day in arrears basis (the D+1 Pilot). It was agreed that Gas Industry Co would review the D+1 Pilot with a view to developing a statement of proposal for a change to the Downstream Reconciliation Rules to provide for daily allocations.

GTAC s1.1 defines a Wash-up as any adjustments to previously determined Daily Delivery Quantities:

1. determined by an Allocation Agent, including adjustments arising from *"interim allocations"* and *"final allocations"* (as those terms are defined in the DRR); and
2. to correct for Metering errors or the miscalculation of energy quantities; or
3. any adjustment to a previously determined Receipt Quantity, where the effect of such adjustments shall be as set out in the Wash-up Agreement or, in the absence of such an agreement, in the manner reasonably determined by First Gas.

Commenting on wash-ups, Greymouth[204] notes that the GTAC *"… defers the policy to a future document or puts the methodology at First Gas' discretion. This is materially worse than current arrangements as there is no certainty as to the possible nature or implications of Wash-ups and no transitional arrangements pending the entry into a Wash-up Agreement."*

[203] Based on disclosed annual line charge revenues for Maui system to December 2016, and for non-Maui system to June 2016.

[204] Greymouth, 22 January New Code submission, Appendix = Summary of Critique of GTAC Sections, s1.1 – "Wash-up".

Our experience of the DAWG suggests that industry participants will take a pragmatic view of wash-ups. While we agree with Greymouth that the outcome is uncertain, we think that the arrangements are very likely to be quite similar to the current arrangements, and we would maintain a keen interest in the development of the Wash-up Agreement, and be prepared to make recommendation for any consequential amendments to the DRR. We are therefore not concerned that the Wash-up Agreement is still to be negotiated.

Standard operating procedures for gas balancing

Standard operating procedures (SOP) for gas balancing are outside of the GTAC and MPOC. In this respect, the codes are similar in the discretion conferred on First Gas. Furthermore, while ideally we would be able to compare the SOPs for the MPOC and VTC with the GTAC (the SOP for which is yet to be developed), any conclusion would be qualified by the fact that it is open to First Gas to amend the SOPs for the MPOC and VTC.

Of greater significance in our view is the difference between the GTAC and the MPOC and VTC in relation to the setting of balancing tolerances. As we discussed in Chapter 4, tolerances are defined within the codes themselves in the MPOC, whereas the GTAC provides First Gas with some discretion when it comes to set balancing tolerances.

Hence, our concern in this area was not about SOPs *per se*, but the degree of flexibility afforded to First Gas in setting Park and Loan service provisions, if associated fees are outside the revenue cap, which they are not.

Park & Loan service provisions

The GTAC contemplates that First Gas may offer a Park and Loan service to pipeline users, and key provisions for the service would be defined by First Gas (ie they are not in the GTAC). The Park and Loan service would allow parties to temporarily add to, or borrow from, system line pack. The service is not provided for under either the MPOC or VTC.

In principle, the provision of such a Park and Loan service would be a positive development, as it would provide pipeline users with a new tool to address their short-term gas flexibility requirements. If a Park and Loan service is offered, First Gas will need to reserve some of the system's total line pack flexibility to support the service. All other factors being equal, that would reduce the line pack flexibility available for other purposes (such as supporting gas transport services, or providing gas balancing tolerances).[205] This is recognised in GTAC s8.5(b)(iv).

If Park and Loan revenues are subject to the Part 4 revenue cap applying to transmission services, we would expect First Gas to allocate the total line pack flexibility across the various sources of demand in a relatively neutral manner. Accordingly, we would not have any undue concerns.

However, if Park and Loan revenues are outside the Part 4 revenue cap, First Gas would have a financial incentive to a dedicate a larger proportion of line pack flexibility to supporting Park and Loan services. Not only would First Gas be able to retain associated revenues, such an action would likely reduce Running Mismatch Tolerance (under GTAC s8.5(b)(iv)), which could in turn stimulate the demand for Park and Loan services. This could compromise efficiency because pipeline line-pack flexibility would not necessarily be deployed to its best overall use. More generally, First Gas' incentives to exercise discretion in other areas of pipeline operation may be skewed (such as the setting of ERM charges) in order to earn higher unregulated Park and Loan revenues, causing further inefficiencies.[206]

[205] In principle, First Gas could create increased flexibility via changes to operational practices and/or capital expenditure – both of which would involve it incurring a cost.

[206] In making these observations, we are not suggesting that First Gas would necessarily act in this way. We are simply making observations about the incentive arrangements under the GTAC and associated arrangements.

We sought clarification regarding the status of Park and Loan revenues during the assessment process. First Gas advised that it raised the matter with the Commerce Commission and that the Commission has confirmed that Park and Loan revenues would be included within the revenue cap.

Accordingly, we consider the Park and Loan service provisions to be a neutral in the assessment of the New Code.

Ahuroa underground gas storage

Although there is no associated arrangement relating to the Ahuroa underground gas storage (UGS) facility, we have considered whether First Gas' planned acquisition of this facility would affect our assessment of the New Code. Our core question is whether, relative to the status quo, the New Code would provide additional scope for First Gas to stimulate the demand for flexibility services from Ahuroa. We note that revenue from such services would fall outside the Part 4 revenue cap, and any non-neutral behaviour by First Gas could be prejudicial to gas pipeline users.[207]

In broad terms, to stimulate additional demand for UGS services, it would be necessary to either restrict the supply of line pack flexibility to pipeline users, or increase the cost of accessing that flexibility.

In relation to restricting supply, our view is that GTAC s8.5 requires First Gas to act reasonably in making the pipeline's line pack flexibility available to meet its obligations under the GTAC, including:

1. Supporting all current DNC and Supplementary Capacity
2. Providing Running Mismatch Tolerances, subject to:
   (a) not affecting its ability to provide additional transmission capacity;
   (b) not unduly increasing the risk of breaching an Acceptable Line Pack Limit;
   (c) providing a reasonable allowance for Specific HDQ/DDQ and AHPs; and
   (d) providing for park and loan service (where First Gas elects to offer such service).

Aside from the provision in relation to Park and Loan (discussed immediately above), we do not see these provisions as fundamentally altering the present position. We also note that First Gas is required to act in a neutral fashion under GTAC s2.6, and is required to disclose the information in GTAC Sch 2. We would expect users to scrutinise and challenge any actions that appear unreasonable.

In relation to increasing the cost of accessing pipeline line pack flexibility, a possible avenue would be to raise balancing charges. As we discuss in Appendix D, section D.5, as the GTAC is presently drafted, pipeline users in aggregate appear likely to see reduced balancing costs because of the introduction of the ERM mechanism.

We acknowledge this effect may be partially negated if First Gas increases the ERM charges, using the discretion in GTAC s8.14. However, such charges are capped at $1/GJ, and even at this level we would still expect some benefits relative to the MPOC. The GTAC does not provide any discretion to increase ERM charges beyond $1/GJ without using the GTAC change process, which should provide a sufficient safeguard to users.

[207] In making our assessment, we have not considered the extent to which Ahuroa can practically compete to provide additional flexibility services – we have simply assumed that such potential exists.

In theory, pipeline users' desire to avoid transport incentive charges may also stimulate demand for UGS services. This will only be relevant for users located within the receipt zone.[208] However, such users would presumably re-nominate to address any known quantity deviations, and *"unknown"* deviations could not be addressed by UGS, because a storage nomination would presumably be required.

Overall, based on present information, we do not consider that the assessment of the GTAC is significantly affected by the potential acquisition of Ahuroa by First Gas.

6.3 Inherent benefits of single code

Some stakeholders have expressed the view in workshops and submissions that a single code offers significant inherent benefits, because one common approach applied across the entire pipeline system will make it easier to transport and trade gas. Furthermore, these benefits are likely to grow over time as parties become more familiar with a single code.

Gas Industry Co agrees with the view that a single code should provide inherent benefits. One of the key areas where the GTAC is better than the MPOC and VTC relates to the streamlining of transmission access products and processes and we have factored that into our overall conclusion.

6.4 Overall conclusion

We now come to the question of whether the GTAC is materially better than the current terms and conditions for pipeline access and use.

Our view is that the New Code is appreciably better than the status quo in many areas. These include:

1. Streamlining of transmission products and processes, with a unified set of arrangements applying across the entire transmission system;
2. Adopting daily nominated capacity as the primary transport product, which should promote more efficient use of the pipeline system and downstream competition;
3. Widening and improving the tools available for management of pipeline congestion;
4. Adopting a system-wide approach to gas balancing;
5. Removing grandfathering provisions that can impede competition; and
6. Facilitating the trading of gas via a single receipt zone.

While these and other positive features of the New Code would offer considerable overall benefits, the gains would be offset by some negative elements. Indeed, these negative elements in aggregate are sufficiently serious to act as a material drag on the overall assessment. The aspects of greatest concern are:

1. The incentive charge structure in non-congested situations appears likely to encourage inefficient behaviour by pipeline users – detracting from the efficiency improvement that would otherwise occur.
2. Aspects of the liability provisions are less certain in their effectiveness than under the existing codes, undermining the incentives on pipeline users to act prudently – detracting from efficiency and reliability.

[208] Gas injections/withdrawals at Ahuroa cannot affect pipeline users' nomination errors in other zones – and even within the single receipt zone will not affect users at single delivery points.

3. Shippers and interconnected parties do not have sufficient certainty regarding the terms of interconnection agreements. This is detrimental to efficiency and fairness.

Accordingly, we conclude that the New Code taken as a whole is not materially better than the current terms and conditions for access to and use of gas transmission pipelines.

Appendix A MPOC s22.16

TSP [Transmission Service Provider ie First Gas] may terminate every ICA and TSA simultaneously with effect at 0:00 hours on the New Code Date provided that it has published the functional specifications and data interface of the information technology system selected to implement the New Code not later than 120 Business Days before the New Code Date and provided that the following conditions have been satisfied not later than 40 Business Days before the New Code Date:

(a) TSP has published the New Code on the TSP IX which provides for the following:

(i) all Shippers using the Maui Pipeline, and VTC Shippers using the Transmission Pipelines governed by the VTC, may continue to transport gas through those pipelines; and

(ii) all Welded Parties may continue to connect their respective Pipelines to the Maui Pipeline, on and after the New Code Date;

(b) following an appropriate consultation process which includes GIC publishing a draft determination and asking each Shipper and Welded Party whether it supports the New Code, GIC has published a final determination that the New Code is materially better than the current terms and conditions for access to and use of gas transmission pipelines having regard to the objectives in section 43ZN of the Gas Act 1992 and any objectives and outcomes the Minister has set in accordance with section 43ZO of the Gas Act 1992;

(c) the VTC and all transmission services agreements incorporating the VTC shall terminate on the New Code Date;

(d) TSP has published the New Code Date on the TSP IX;

(e) TSP certifies that the information technology systems required to implement the New Code are fit for purpose and ready to be put into production on the New Code Date;

and

(f) TSP has delivered an executable contract to:

(i) Each Shipper and VTC Shipper for it to continue to transport Gas through the Maui Pipeline and the Transmission Pipelines covered by the VTC;

(ii) Each Welded Party for it to continue to connect its Pipeline(s) to the Maui Pipeline; and

(iii) emsTradepoint to allow the Trading Platform to continue functioning, on and after the New Code Date.

(MPOC s22.16)

Appendix B Submissions on the PAP and cross-submissions

The table below provides a summary of submissions on the PAP and cross-submissions. We provide this for the reader's convenience and have tried to distil the stakeholder comments that are directly relevant to the assessment. However, we recommend that readers refer to the original submissions in full.

In the submissions template we provided as an optional guide for submitters on the PAP we included three questions posed by First Gas (Q24-26) relating to the possible future development of the GTAC in the event that the FAP did not find in its favour. We have not included these questions or summary responses in the table since they do not relate to the PAP.

As in the PAP, the FAP does not record or comment on alternatives to the New Code proposed in submissions[209], as these are not relevant to our MPOC s22.16(b) assessment.

GIC questions and Stakeholder responses on Preliminary Analysis	
Q1: **Do you have any comment on our approach to the analysis?**	
Contact:	PAP is clear and well set out.
First Gas:	For the FAP, First Gas suggests: identifying which components of the code have high, medium and low levels of influence on the overall decision; identifying whether items are primarily being compared to the MPOC or VTC; identifying trade-offs (where red arrows are linked to green), and; ensuring consistency between costs and benefits.
Fonterra:	PAP is logical and systematic but conclusion is surprisingly negative.
Genesis:	PAP is well thought out.
Greymouth:	Assessment: can't be complete until all related arrangements are complete, and; can't be materially better if any part is worse for any party.
MGUG:	PAP assesses GTAC v MPOC+VTC, should be GTAC v MPOC & GTAC v VTC. Regulatory Objective developed in SCOP 1 and SCOP 2 should have been used as criteria. More explanation of step 3 required. Synergies between components of GTAC are ignored in analysis
Methanex:	GIC has misinterpreted Methanex's view of how the comparison should be made. Methanex considers that GTAC should be; materially better than each code in some material respects, and; no worse than either code in any material respect. Also notes that neither MPOC nor VTC is unworkable (and MPOC is fundamentally sound). The principle of fairness and equity requires GIC to determine that GTAC is materially better than each code. GIC's *"significant"*, *"moderate"* and *"modest"* grading is unhelpful.
Shell:	MPOC parties should not have to accept a worse outcome to achieve a GTAC that is better for VTC parties. Analysis doesn't give weight to the needless disruption of long-standing commercial arrangements.

[209] For example, Shell and Methanex advocate an evolutionary approach rather than a single step transition to the New Code.

Todd:	Comprehensive and balanced.
Trustpower:	-
Vector:	Generally ok.

Q2: **Do you agree with our assessment of the GTAC gas transmission products?**

Contact:	Yes.
First Gas:	Products should bring substantial improvement (resolves problems identified over last 8 years).
Fonterra:	Yes.
Genesis:	Yes, mostly.
Greymouth:	Generally agree, but: PR auction rules can't be assessed, and; nominations workload would increase significantly.
MGUG:	Yes, if compared to VTC, but likely little improvement over MPOC.
Methanex:	MPOC nomination and balancing regime is safe, reliable and efficient. This has not been demonstrated for GTAC. OBAs should continue to apply as at present – GTAC OBA rules are ill-defined, and optionality is not necessarily better than standardisation and universality.
Shell:	Assessment is overly positive… First Gas does not explain the legal concepts underpinning gas trading, particularly since it claims to own all the gas in the pipe, and there is no confidence that IT will provide necessary functionality.
Todd:	Mostly agrees, but: nominations workload is overstated, and; mass-market shippers should be able to secure PRs.
Trustpower:	Do not believe that products meet objectives and outcomes or provide reasonable terms and conditions of access. Cost of nominations outweighs benefit of DNC and zones.
Vector:	Generally agree. But administrative costs should decrease, not increase.

Q3: **Do you agree with our assessment of the GTAC pricing arrangements?**

Contact:	Yes.
First Gas:	Improvement should be substantial (high flexibility, simplicity and low transaction costs).
Fonterra:	Yes. Zoning is good, but question need for incentive charges when there is no congestion.
Genesis:	More concerned about: fairness of ERM charges (should only be charged when contributing to problem); proportionality of OR and UR fees, and; justification for hourly overrun charges.
Greymouth:	Generally agrees, but: more weight to concerns on SAs, particularly ability for parties to contract out of future codes, and; insufficient weight to ERM penalties.
MGUG:	Yes, but worse than neutral. Incentive charges are inefficient, and particularly iniquitous in combination with rebate regime.
Methanex:	Peaky usage should be discouraged whether capacity is scarce or not. Arrangements are inconsistent and discriminatory. More significant issue than daily charges, and not adequately considered by GIC.
Shell:	No. OR fees excessive. ERM unproven and unconventional.
Todd:	No. Efficiency concerns are overstated: OR/UR much less of an issue when asymmetry is fixed, and; balancing charges are easily amended if issues emerge. Barriers to competition concerns are overstated: most of the benefits of diversity are achieved with < 10 customers; PAP rebate assessment is worse than the PAP Appendix A analysis suggests; incentive costs are unlikely to be passed to customers as much as they are now; residential customers are unlikely to cause incentive costs; some incentive is warranted.

Trustpower:	Concerned about level of OR/UR fees and rebate scheme.
Vector:	Generally ok. But notes: punitive level of OR fees at times when a DP declared as a Congested DP, is not congested; and Hourly OR Charges only applying to a few users (MPOC applies peaking evenly and VTC doesn't have a charge at all)

Q4: **Do you agree with our assessment of the GTAC energy quantity determination?**

Contact:	Yes.
First Gas:	Metering and testing requirements will be available shortly.
Fonterra:	Yes.
Genesis:	-
Greymouth:	Yes.
MGUG:	Yes.
Methanex:	GIC can't assess or say there is one standard without seeing the Metering Requirements document.
Shell:	Don't want to incur any cost as a result of a change to the energy quantity determination method.
Todd:	Yes.
Trustpower:	Yes.
Vector:	Yes.

Q5: **Do you agree with our assessment of the GTAC energy allocation arrangements?**

Contact:	Yes.
First Gas:	OBA discussion really relates to interconnection. Wash-up agreement is a minor matter that will be dealt with if the GTAC is taken forward.
Fonterra:	-
Genesis:	-
Greymouth:	Yes, but: more focus on D+1 needed, and; fall-back allocation methodology should have been compared to current methodology.
MGUG:	No. Compulsory OBAs are better than choice.
Methanex:	No. See Q2. IPs are best placed to determine allocation.
Shell:	No. Removal of displaced gas nominations is bad for trading. Incorrect to ignore Criterion 17. Proposal creates uncertainty unless: IP determines allocation mechanism; allocations driven from nominations; IP can approve or curtail nominations; # mechanisms is limited and each defined, and; SQ v Metered Quantity is shown by IT system.
Todd:	Yes.
Trustpower:	Yes.
Vector:	Generally ok but notes that significant work is required by GIC to formalise daily allocation process.

Q6: **Do you agree with our assessment of the GTAC balancing arrangements?**

Contact:	Yes.
First Gas:	Uncertainties over tolerances are balanced by the obligation on First Gas to act impartially.
Fonterra:	Yes. Supports MGUG position.
Genesis:	Concerned about absence of balancing tolerances.

Greymouth:	Generally, but analysis underrates: barriers to new entrants caused by tolerance uncertainty and link to previous day, and; inefficiency of tolerance uncertainty.
MGUG:	Yes, but TPS has greater uncertainty about when to take a balancing action and ERM charges create gaming incentive.
Methanex:	Harsh overruns and balancing charges are inconsistent with lax obligations on First Gas to balance. No expectations (elaborating RPO), or objective standards (safe, efficient, reliable) are set.
Shell:	No. No need to change from daily balancing which is good international practice. Failure of unproven ERM incentives will worsen TTP outcomes. Burden of proof should be on proponents. Benefits should be quantified. Spot market activity will not increase as claimed, but would decrease because incentives to balance are reduced.
Todd:	Yes, but incentive for greater trading is undervalued.
Trustpower:	Yes, and the ERM charges will put upward pressure on market prices.
Vector:	Generally ok. Concerned about Park and Loan and First Gas discretion to set tolerances (using a flawed methodology), and ERM charges.

Q7: **Do you agree with our assessment of the GTAC curtailment arrangements?**

Contact:	Yes.
First Gas:	Do not agree that the arrangements are less fair since the MPOC and VTC require immediate compliance with an OFO.
Fonterra:	Yes. Curtailment for congestion needs to be distinguished from curtailment for other reasons.
Genesis:	Underestimates retailers' inability to comply with OFOs.
Greymouth:	Yes.
MGUG:	Yes.
Methanex:	No. Optionality is significantly detrimental, GTAC should specify which party is first notified of curtailment. GTAC arrangements are incomplete and inefficient. Removal of MPOC s15.2 not addressed.
Shell:	No. Shippers are not well placed to respond to curtailment directions. Loss of right of IPs to curtail for FM (MPOC s15.2) will reduce efficiency.
Todd:	Yes, particularly the possibility that shippers could receive OFOs they cannot respond to.
Trustpower:	Agree that First Gas needs to clarify what *"using best endeavours to immediately comply with"* an OFO means in practice.
Vector:	Yes, particularly in the unfairness of Shipper obligation to comply with OFO.

Q8: **Do you agree with our assessment of the GTAC congestion management arrangements?**

Contact:	Yes, except criterion 13 and 18 may be more limiting in respect of the retail mass-market.
First Gas:	Do not believe mass-market shippers are disadvantaged, providing they value PRs correctly.
Fonterra:	Better tools than VTC, with transparent PR auctions.
Genesis:	PRs may be unsuitable for mass-market. Need to see auction rules.
Greymouth:	Yes.
MGUG:	No. Benefits are theoretical until PR auction rules are developed.
Methanex:	-
Shell:	Yes. Proposed congestion management arrangements are an improvement on the VTC.
Todd:	Value of PRs is understated.

Trustpower:	No. First Gas has too much discretion to negotiate SAs and IAs. Mass-market retailers will over-bid for PRs. Not confident PR auction rules will be adequately monitored, administered and enforced.
Vector:	Generally ok. But more work is required on design of PRs, including a definition of when a DP is congested (should be limited to specific months).

Q9: **Do you agree with our assessment of the GTAC gas quality and odorisation arrangements?**

Contact:	Yes.
First Gas:	Notes GTAC gives longer notice to shippers if odorisation is to cease (18 months v 12 months under VTC).
Fonterra:	-
Greymouth:	Yes.
Genesis:	-
MGUG:	Yes.
Methanex:	Strongly disagrees. Gas Quality obligations on IPs and the TSP would deteriorate significantly.
Shell:	No. *"Deeming"* a party not to be an RPO for injecting non-spec gas is unacceptable.
Todd:	Yes.
Vector:	Generally ok. Retailers should have a right to audit Vector's odorisation arrangements (for compliance with Safety Regulations), or Vector could provide an independent audit.

Q10: **Do you agree with our assessment of the GTAC governance arrangements?**

Contact:	Yes.
First Gas:	Generally agree.
Fonterra:	Yes. Suggests MPOC/VTC liability provisions be retained.
Genesis:	-
Greymouth:	Yes.
MGUG:	Yes.
Methanex:	Liability – removal of B2B indemnity for non-spec gas is a particular concern. Code Change – timeframes unfair, GIC inconsistent in top-down analysis. Termination – short term of GTAC is a significant concern, giving the TSP substantial leverage. Confidentiality – GIC has not considered commercial and legal consequences of outage disclosure. Assignment – GIC has not considered that MPOC prohibits partial assignment.
Shell:	No prudential requirements for IPs are provided in the GTAC. GTAC termination v MPOC is a substantial deterioration.
Todd:	Yes.
Trustpower:	No. Assessment should have addressed: consulting including the use of advisory groups; a more targeted regulatory objective; costs and benefits considering alternative as well as status-quo; use of proper multilateral monitoring and compliance regime; costs of disputes for small players; using MBIE to approve access agreements; need for Commerce Act authorisation.
Vector:	Generally ok. But GTAC is commercial document, so code change process should not involve GIC.

Q11: **Do you agree with our top-down analysis?**	
Contact:	Yes.
First Gas:	Should be improved.
Fonterra:	Supports MGUG – GTAC offers substantial improvement.
Genesis:	Yes, on the whole.
Greymouth:	Yes, for the most part.
MGUG:	Generally yes. Benefits of capacity products are underrated.
Methanex:	No. Insufficient weight to: secrecy of existing agreements; Hourly Overrun Charges and peaking; lack of Metering Requirements; optionality is not positive in relation to allocation; reduced balancing and quality responsibilities; limited term of GTAC; loss of confidentiality around outages, and; loose assignment provisions.
Shell:	No. Energy allocation, balancing and termination are all significantly worse.
Todd:	Approves of methodology.
Vector:	Yes.

Q12: **Do you agree with our overall assessment?**	
Contact:	Yes.
First Gas:	No. But GIC has exercised its judgement in a reasonable and transparent manner.
Fonterra:	Supports MGUG submission.
Genesis:	Yes, on the whole.
Greymouth:	Yes, but underrated: potential for First Gas to divert revenue to unregulated business; importance of completed D+1 and wash-up agreements; removal of liquidated damages regime, and; lack of termination provisions.
MGUG:	GIC's distillation lacks clarity, and should have considered SCOP1/SCOP2 objectives. GIC should progress regulatory solution in parallel.
Methanex:	Yes, but downplays/ignores: consequences of allocation arrangements; changes to line-pack management; absence of balancing objectives; relaxing of TTP obligations; discriminatory aspects of hourly arrangements; availability of unpriced flexibility; gas quality obligations; loss of MPOC s15.2; and, secrecy of existing contracts.
Shell:	No. Disagrees with GIC's positive view of balancing, secrecy of existing (non MPOC) ICAs, and gas trading.
Todd:	Fair, but doesn't agree with all points.
Vector:	Generally agree.

Q13: **Do you agree that with our analysis of ICAs?**	
Contact:	Yes.
First Gas:	If GTAC moves forward, First Gas will engage on common and essential terms of interconnection.
Fonterra:	-
Genesis:	-
Greymouth:	Yes, and next assessment needs to scrutinise: fairness of ICA fees; and, who needs to have TSA and ICA.
MGUG:	Yes.

Methanex:	Yes generally but, IP rights and obligations with each other also need to mesh.
Shell:	Yes.
Todd:	Yes. Producers have rights to a minimum set of terms and conditions.
Vector:	Yes. GTAC shouldn't be implemented until all ICAs are in place.

Q14: **Do you agree with our analysis of SAs?**

Contact:	Yes.
First Gas:	Assessment misses the point that requesting party must demonstrate need for SA. However, agree need for transparency, although dealing with confidential information may be an issue.
Fonterra:	Supports MGUG submission.
Genesis:	May need SA to contract out of Hourly Overruns at Huntly.
Greymouth:	Yes, but existing SAs should be fully reviewed, and new SAs destroy integrity of the GTAC.
MGUG:	Yes. SAs should be marginal product, and First Gas could publish its reasons for agreeing.
Methanex:	SAs should bring tangible benefits to all users.
Shell:	Agree with need for oversight.
Todd:	Yes. Independent ratification of SAs by, say, GIC may be appropriate.
Vector:	Do not agree that there are no benefits from SAs being available for the Maui pipeline.

Q15: **Do you agree with our analysis of nominations?**

Contact:	Yes.
First Gas:	For mass-market shippers non-daily metered estimation and allocation is worth further investigation.
Fonterra:	-
Genesis:	Yes, on the whole.
Greymouth:	No. Impact of increase nominations is underestimated.
MGUG:	Yes.
Methanex:	De-linking receipt and delivery nominations is not an improvement.
Shell:	-
Todd:	Work load is not excessive.
Vector:	Generally ok. But: nomination workload would not increase for Shippers serving ToU customers (90%of load); overall workload would not increase (shippers do the work now, and no longer need to reserve capacity); and, DNC arrangements are not well suited to non-ToU customers.

Q16: **Do you agree with our analysis of daily overrun and underrun charges?**

Contact:	Yes.
First Gas:	Accept that asymmetry needs to be corrected. Without incentives Shippers may systematically under-nominate to avoid DNC fees.
Fonterra:	-
Genesis:	No justification for OR/UR charges.
Greymouth:	Yes, but also they may be a barrier to shippers wanting to ship to a new zone.
MGUG:	Yes.

Methanex:	Insufficient consideration of what incentives should apply.
Shell:	OR/UR fees are arbitrary and inefficient.
Todd:	Problem largely disappears if fees are balanced. Also linked to rebate scheme, so should be considered together. And the level of OR/UR fees are easily amended.
Trustpower:	Fees may inefficiently discourage pipeline use when capacity is not scarce
Vector:	Yes. Because of rebate hard to know if better or worse. Changing formula to F-2 instead of F-1, may address the issue.

Q17: **Do you agree with our analysis of hourly quantities?**

Contact:	Yes.
First Gas:	To be considered along with other interconnection issues.
Fonterra:	-
Genesis:	Yes. Not necessary (Huntly can run at peak for 12 hours before creating problem) and not fair.
Greymouth:	Yes.
MGUG:	Yes, but need for MHQ charge needs to be demonstrated.
Methanex:	Insufficient emphasis on hourly profiles. More design work is required: Proposed use extends beyond operational needs and will increase pressure volatility; no obligations, sanctions or price applies, and; it is not available to OBA parties.
Shell:	Yes.
Todd:	Yes. Also limited means for large users to mitigate penalties (provided under MPOC s15.1 and 15.2).
Vector:	Yes. Removing Hourly Overrun Charges would reduce the complexity of GTAC and remove the requirement for AHPs.

Q18: **Do you agree with our analysis of liabilities? In particular, do you have any particular comments on whether the proposed liability arrangements in relation to the injection of Non-Specification Gas better meet the efficiency, reliability and fairness objectives when compared to the MPOC and the VTC?**

Contact:	Yes. Non-spec responsibility and liability still to be addressed.
First Gas:	Keen to explore with industry which option works best.
Fonterra:	Yes. Suggests MPOC/VTC liability provisions be carried across.
Genesis:	Yes, and liability caps need to be adjusted for inflation.
Greymouth:	Yes.
MGUG:	-
Methanex:	IP/Shipper liability issues are not sufficiently addressed, particularly re non-spec gas.
Shell:	*"Deeming"* a party not to be an RPO is unacceptable.
Todd:	Yes. And, it is wrong to deem a party to not be an RPO if it has acted as an RPO. Further legal review required.
Vector:	Strongly agree.

Q19: **Given that the current, tighter, drafting in the MPOC still results in excursions outside of the 42-48 bar gauge range, what is your view of the revised drafting under the GTAC?**

Contact:	TTP should be tightly monitored if excursions are limiting receipts.
First Gas:	To be considered along with other interconnection issues.
Fonterra:	-
Genesis:	-
Greymouth:	Yes. If TTP is relaxed, RPO obligation becomes more important.
MGUG:	Yes, high pressure is a concern.
Methanex:	Drafting is weak (reasonable endeavours) and TTP being subject to *"aggregate ERM"* is ambiguous.
Shell:	GTAC is weak and unjustified. Strong incentive on First Gas to minimise compressor costs by increasing pressure in Taranaki. ICA negotiation will require TTP terms at least as strong as current.
Todd:	Probably ok. And TTP will be better managed through accurate forecasts.
Vector:	No firm view.

Q20: **Do you agree that comparing the ERM charges with bid/ask spreads is a sound method for testing the appropriateness of the quantum of those ERM charges? If not, what would be a more appropriate comparator?**

Contact:	Perhaps, it is a starting point.
First Gas:	No. An arbitrage decision would require assessment of the potential for cash-out.
Fonterra:	-
Genesis:	Yes.
Greymouth:	No. Spreads involve title transfer whereas ERM charges are just a penalty. ERM charges combine with tightened tolerances to be more unjust.
MGUG:	Yes. Also ERM is Park and Loan by another name and may provide gaming opportunities on the market.
Methanex:	Start low and observe behaviour.
Shell:	No. Analysis ignores multi-day effects. Parties will use linepack to arbitrage expected price increases or reductions in ERM charges. Too open to gaming to make analysis reliable.
Todd:	Seems reasonable.
Vector:	The analysis could have gone further: to compare fixed v variable fee; to consider whether asymmetry of fees is warranted, and; repeated ERM charges for shippers who return mismatch within tolerance.

Q21: **Do you agree with our analysis of the incentive charge rebates?**

Contact:	Yes.
First Gas:	Choice of rebate mechanism is finely balanced.
Fonterra:	Supports MGUG submission. Impact on Fonterra should be minimal.
Genesis:	Rebates favours large retailers. Do SAs get rebate?
Greymouth:	Not entirely: time value of money, work involved in obtaining rebates, and risk of rebates not being passed on make the rebates worse.

MGUG:	No. Assumes incentive charges and retail markets are efficient. Rebates should be assessed from end-user perspective, and should be integral with the transport revenue.
Methanex:	Immediate recycling of incentives is reasonably fair, efficient, and likely to be less costly.
Shell:	Agree that marginal cost signal is higher for shippers with lower market share. But analysis ignores end-of-month effects when shipper could judge OR/UR marginal costs to be negligible.
Todd:	Mathematically correct, but only based on illustrative numbers. Marginal costs are unlikely to be significantly different between shippers. And the analysis ignores problems with current arrangements: changing mix of shipper volumes lead to patchy outcomes, and; some prices are inclusive of penalties which is less transparent.
Vector:	Does not agree that smaller shippers face higher marginal costs.

Q22: **Do you agree with our analysis of First Gas' discretion?**

Contact:	Yes.
First Gas:	Yes, the levels of discretion strike the right balance.
Fonterra:	-
Genesis:	-
Greymouth:	Generally yes. Other matters requiring investigation: how will First Gas top up cushion gas, and; whether First Gas can swap gas.
Methanex:	Flawed, because: not appropriate approval of Metering Requirements, and; Specific HDQ/DDQ rationale in GTAC (First Gas striking a balance) is entirely inappropriate.
Shell:	TTP limits are too open to First Gas' discretion.
Todd:	Ok.
Vector:	Generally agree. But disagree that First Gas discretion on ERM charges is ok – prefer MPOC's market price +/- margin.

Q23: **Do you agree with our analysis of public information disclosure?**

Contact:	Yes.
First Gas:	Publication of ICAs is significantly more transparent than VTC. Publication of running mismatch positions is more transparent than MPOC or VTC.
Fonterra:	-
Genesis:	-
Greymouth:	Yes.
Shell:	Unlike MPOC, GTAC does not commit to publish hourly SQs, metered quantities and imbalance at each RP and DP. Real time information on planned v actual flows is important for balancing.
Todd:	Yes, generally. OATIS replacement will provide more real-time information.
Vector:	Yes

GIC questions and Stakeholder cross-submissions

SQ1: **Are there matters raised in submissions you would like to comment on, that are not addressed in the supplementary questions?**

Contact:	**-**
First Gas:	Commerce Commission has confirmed that park and loan revenue would fall within the regulated business and be treated the same as revenue from balancing charges.
Fonterra:	**-**
Genesis:	Supports further consideration of Todd's recommendation for six nomination cycles. Interested in understanding Trustpower's suggestion of a no notice option for mass-market customers. Agree with Vector that unfairness of hourly overrun fees is an issue.
Greymouth:	Agrees that park and loan revenue should fall within First Gas' regulatory cap, but does not agree with First Gas' proposition in its letter to the Commerce Commission that it should be a recoverable cost. Park and loan is revenue associated with the provision of a transmission service. Concerned with figure 6 in First Gas' submission – there is some variation in shippers' financial exposure net of rebates. This issue is exacerbated by the absence of detail on daily allocations. The next version of the GTAC must include all ancillary arrangements.
MGUG:	Responds to Nova's comments that the rebate arrangements are superior to adjustment 2 years after the costs have been incurred. Scope and size of incentive charges will potentially be greater under the GTAC leading to less transparency for customers regarding transmission charges. Lack of transparency for the customer creates the potential for a wealth transfer to the retailer. Rebates to causers sends a weaker economic signal.
Methanex:	Disagrees that First Gas has reflected the concept that Hourly Overruns should be targeted at those parties who control their impact on the system. A price should be attached to unpredictable and volatile flows where they can be reasonably measured (as under the MPOC). Allocating costs to causer should be paramount unless the costs outweigh the benefits (the 200GJ threshold is arbitrary). Disagrees with First Gas that rebating hourly overruns achieves the same result as the MPOC/VTC. That would only be the case if all parties were potentially liable for peaking charges as under the MPOC. The rebate of Hourly Overrun Charges under the GTAC will be to parties that have *"no skin in the game"*. Disagrees with First Gas that there are adequate incentives in the GTAC to ensure that First Gas acts in the best interests of industry following the acquisition of Ahuroa. Does not consider that GTAC s2 adequately addresses this issue. Agrees with MGUG's comment that the question of whether the GTAC is materially better than the MPOC has not been answered. GIC should assess the GTAC against the true counterfactual of two separate codes not against an artificial amalgam of the codes.
Shell:	Concerned with First Gas' proposed way forward (refinement of the GTAC). Favours evolution of the existing arrangements rather than the GTAC.
Todd:	-
Trustpower:	**-**
Vector:	Tolerances do not apply to Existing Supplementary Agreements and Existing Interruptible Agreements or where gas is delivered from Receipt Points without an OBA, yet delivery from a Receipt Point with an OBA to a Delivery Point with an OBA is subject to tolerance where no mismatch is created. This is inferior to the MPOC and the VTC.

	Vector proposes that the notion of an Interconnected Party *"rejecting"* nominated quantity is added to align with the current drafting of the MPOC where an Interconnected Party approves, rejects or curtails a shipper's nomination. The absence of this right will impact upstream contracts.

SQ2: Methanex Q3, p6: *"We disagree that peaky usage should be discouraged only in connection with congestion… the unpredictability of gas throughput and limited line pack capacity… [are why] peaking limits (which apply universally) are imposed to govern behaviour on the Maui Pipeline under MPOC, even though congestion is not a factor. It is also the reason why Methanex is particularly concerned regarding the approach taken in the GTAC of making line pack freely available to users which is also applied in an inconsistent and discriminatory manner."*

Do you think peaky usage should be discouraged, even when capacity is not scarce, and why?

First Gas:	Notes the distinction between transmission capacity and gas energy. Methanex's concerns relate to gas energy. Agrees that there needs to be more consideration of how line pack flexibility is allocated to users (including AHPs and AIPs). Disagrees with the statement that line pack flexibility is freely available due to the existence of ERM charges. Considers that the PAP is correct that peakiness should only be discouraged in the event of congestion.
Genesis:	No. References First Gas' study regarding the Huntly Power Station's peaking under the GTAC. GIC should review the hourly overrun proposals as more negative. First Gas needs to provide quantitative rational for its pricing, particularly regarding peaking, underrun and overrun fees**.** With six nomination cycles, throughput can be less unpredictable and can be more actively managed by the pipeline owner. This removes the need for AHPs.
Greymouth:	No. The aim should be to encourage the use of gas, whether flat or peaky. The arrangements should prevent parties from breaching the physical limits of the system and make causers pay where peakiness impacts others' use of the system. Fees should be fair and reasonable across all loads.
MGUG:	No. However, this depends on what Methanex considers to be the problem with peaky usage. Encouraging seasonal peaking is good as it creates load diversity and increased demand. In terms of loads with large intra-day fluctuations (eg gas fired generation), the GTAC can deal with these on a case by case basis. For new demand, consider investment. Structure peaking charges so that they are cost reflective.
Methanex:	**-**
Shell:	Yes. Peaky usage should be subject to a liquidated damages mechanism and only payable if peaking has an impact on another party. Development of the MPOC incentive fees mechanism should be considered.
Todd:	Some producers/users would be materially disadvantaged if they cannot access capacity to facilitate peaky usage. If no cost to other users, capacity should be made available for peaky usage. Every additional GJ shipped reduces the average cost to users.
Vector:	No. Notes that peaking charges under the MPOC are subject to a pre-condition that Line Pack falls below the Low Line Pack Threshold on a day. If pipeline is not constrained, peaking charges will create costs with no net benefit. An appropriate capacity product is a better solution for peaky load than an hourly overrun charge.

SQ3: Vector Q3: *"The determination of whether a Delivery Point will be congested is normally made by First Gas by 30 June each year. We would be surprised if a Delivery Point will potentially or actually be congested every day of the year. We therefore question whether applying a 10 times incentive fee on days when there is a very low likelihood of congestion is efficient."*

For what reason(s) would an F factor of 10 (GTAC s11.4) be appropriate at times when a Congested DP is not congested?

First Gas:	Higher overruns should only be charged during periods where congestion is expected. The GTAC is currently drafted to deliver that outcome.
Genesis:	Agrees with Vector.
Greymouth:	Agrees with Vector.
MGUG:	-
Methanex:	-
Shell:	A liquidated damages mechanism (similar to that proposed in SQ2) should apply. Compensation would be contingent on actual congestion rather than First Gas' determination.
Todd:	Agrees with Vector. F should only be increased if there is evidence that congestion might occur on a day.
Vector:	First Gas needs to determine the period over which it reasonably expects a Delivery Point to become congested. The incentive fee should only apply during periods of congestion.

SQ4: Todd Q3: *"Most of the 'Benefits of diversity' can be achieved with fewer than ten consumers of similar size. That is hardly a number that should 'hinder competition'."*

Regarding the proposed product or pricing design, do you consider that the benefits of diversity would mostly be achieved by shippers who have 10 or more customers? If not, what level of customers would be sufficient to yield the benefits of diversity?

First Gas:	-
Genesis:	No. Disagrees from a statistical perspective. Genesis's overall load shape is different from retailers of a similar size.
Greymouth:	No. The test should be whether the shipper can operate on a level playing field. Overruns/underruns create a major barrier to competition for shippers with fewer customers in a delivery zone, because that shipper cannot aggregate to mitigate exposure. Favours larger shippers.
MGUG:	-
Methanex:	-
Shell:	No. Arrangements for large commercial and industrial customers may not be easily arranged without the retailer having a significant and diversified market share.
Todd:	Unlikely that any shipper will have less than 10 non-TOU customers across a zone for any significant period of time.
Vector:	Agrees that having 10 similarly sized customers would achieve some diversity. However, 10 mass-market customers would not have diversity of behaviour but 10 SME customers may exhibit diversity if they operate in different industries.

SQ5: Shell Q5: *"We consider that the removal of the ability to operate Displaced Gas Nominations (as defined in MPOC) has negative implications for gas trading, and this should be factored into the GIC's assessment."*

Given the GTAC does not have point-to-point nominations, do you consider that the absence of displaced gas nominations would bring any disadvantages such as adverse effects on gas trading, and why?

First Gas:	Concept of a displaced gas nomination does not seem possible or valuable in the context of the GTAC as trades are executed in the receipt zone and alter the running mismatch of the shipper/OBA party.
Genesis:	-

Greymouth:	Yes. Absence of displaced gas nominations would not allow receipt points to optimise their position and exposes them to cash-outs and ERM charges.
MGUG:	-
Methanex:	-
Shell:	Displaced gas nominations may be necessary to address issues with the legal concepts underpinning gas trading and lack of detail regarding the mechanics of trading. Displaced gas nominations will be necessary to provide continuity to existing interconnection agreements.
Todd:	Considers that there are benefits for gas trading arising from the trading within the receipt zone. Parties should be able to transfer title at any point through a GTA. Title tracking does not need to be effected through nominations.
Vector:	Does not have a strong view. Query whether the Interconnected Party could purchase gas to counter the mismatch created by nominations being greater than flow.

SQ6: First Gas Q6: *"We also agree that uncertainties raised over tolerances are balanced out by the obligation on First Gas to act impartially."*

Do you think that the GTAC s2.6 obligation on First Gas to deal with Shippers impartially mitigates concerns around how tolerances would be set under s8.5(b)?

First Gas:	Yes. Information, incentives and capability all support First Gas being best placed to determine the amount of line pack available for tolerances.
Genesis:	Considers that First Gas has missed the point – there will always be winners and losers from the tolerance; shippers need to understand the financial implications of the tolerance; acting impartially does not fix these issues.
Greymouth:	No. First Gas could increase overall group profits by setting tolerances to drive use of Ahuroa. Parties should have certainty around tolerances, which we would expect to be at least as large as those under the MPOC. Also refers to response to SQ10.
MGUG:	-
Methanex:	No. GTAC s2.6 contains a carve-out for matters otherwise addressed in the GTAC. As the setting of tolerances is subject to AHP and HDQ/DDQ, the tolerances are effectively excluded from GTACs2.6.
Shell:	No. Those provisions only refer to shippers, not interconnected parties.
Todd:	Agrees that First Gas will act impartially. However, it would prefer that tolerances are clearly defined in advance and any changes subject to an obligation to consult at a minimum, but preferably the GTAC changes process. The relationships are complex and would benefit from wider input that First Gas' analysis.
Vector:	Discussions are required between First Gas and stakeholders. While Vector is confident that First Gas will act impartially, it is concerned with the possibility of inefficient solutions.

SQ7: Methanex Q6: *"In general terms, we don't believe that GIC has sufficiently assessed changes made in the GTAC regarding physical balancing arrangements, particularly in regard to the implications of FGL relaxing its obligations in regard to managing pipeline pressure and line pack (section 8.5/8.6 in particular), and its diminished responsibilities to pro-actively undertake balancing actions when the pipeline approaches the acceptable limits (including through operation of Section 8.6)."*

Do you consider that the GTAC would relax the obligations on First Gas to manage pipeline pressure and, if so, is that detrimental?

First Gas:	No. Considers that the MPOC approach of having First Gas as the buyer and seller of last resort places an additional cost on industry and is inefficient.
Genesis:	-
Greymouth:	Yes. Refers to response to SQ18.

MGUG:	-
Methanex:	-
Shell:	Yes.
Todd:	No. Greater transparency under the GTAC should assist shippers to monitor First Gas' line pack performance. Supports four-hourly nominations cycles to assist the management of imbalances.
Vector:	Supports the GTAC balancing arrangements – ie self-management of mismatch positions with First Gas action only as a last resort.

Q8: Shell Q6: *"The burden of proof should not be on submitters to prove that the ERM mechanism is worse, it should be on the GTAC proposer to demonstrate that it is better than the current system of daily balancing, and in accord with good gas practice that has been proven elsewhere."*

Overall, do you consider that the ERM mechanism, coupled with back-to-back balancing, is likely to improve on, or be worse than, the current balancing arrangements (MBB, coupled with the Balancing and Peaking Pools)?

First Gas:	Agrees with PAP that ERM, coupled with back to back balancing, is an improvement on the current balancing arrangements. The GTAC will mitigate the risk that parties trade against First Gas' cash-out. Instead, parties will need to trade against the ERM charge and the likelihood of a primary balancing trade.
Genesis:	No. First Gas has not justified prices or considered relativity with OR/UR fees.
Greymouth:	Agrees with Shell. Unclear what further accuracy ERM charges are designed to incentivise. Current MBB model is adequate and has title transfer. ERM charges without title transfer is not efficient. GTAC proposal contains uncertainties.
MGUG:	-
Methanex:	-
Shell:	The ERM mechanism will be worse than the current daily balancing mechanism when the interests of the whole industry are considered. The proposed changes have not been subject to the same level of analysis as the establishment of daily balancing.
Todd:	The ERM mechanism is worth developing. MBB cash-out provisions are not necessary under the GTAC as it should be simpler for parties to balance their position. MBB does not appear to increase trading liquidity as parties often rely on cash-outs rather than the market.
Vector:	Supports the GIC's analysis that the GTAC should result in a reduction in the overall balancing costs to parties. Cost reduction is countered by the requirement to efficiently and effectively set tolerances and fees.

SQ9: Trustpower Q6, 8.11.3: "… the proposal will provide sustained upward pressure onto market prices by incentivising market offers to be $0.60/GJ ABOVE the last trade, while bids will only be $0.20/GJ BELOW the last trade."

Do you consider that the ERM fees will distort the market price of gas compared with the status quo?

First Gas:	ERM charges are based on the historic transaction charges associated with cash-outs on the Maui pipeline. Trading occurs for many reasons, so it is simplistic to attribute all upward pressure to imbalance trading.
Greymouth:	Yes. It will be a different distortion to the status quo.
Genesis:	For this to be true, the party making the bid or offer would need to know that the only reason a counterparty would be interested in buying or selling gas would be for the purposes of balancing. This is unlikely most of the time.

MGUG:	Suspects there to be a strong possibility that ERMs have the potential to interact with the gas trading market in an unanticipated or undesirable way. Considers that an independent view would be desirable.
Methanex:	-
Shell:	Trustpower's view is plausible; further analysis and reference to overseas practice is required.
Todd:	No. The ERM charges act as a cap on the acceptable buy/sell spread rather than a floor. If the ERM charge is too low, Shippers will hold their position and will not trade, electing to pay the ERM charges and balance later. Shippers trading to avoid ERM charges are only likely to complete a trade if there is very little liquidity. ERM charges are not likely to play a significant role in gas pricing decisions of parties seeking to trade on the market.
Vector:	The current ERM charges will distort the market price of gas relative to the status quo.

SQ10: First Gas Q7: *"We agree that the single balancing regime across the system will have significant benefits in terms of efficiency. We also agree that uncertainties raised over tolerances are balanced out by the obligation on First Gas to act impartially."*

Do you consider that the requirements for First Gas to be impartial (eg GTAC s2.6 and 2.7) should dispel concerns about the uncertainties of how ERM tolerances will be allocated?

First Gas:	Yes, discretion is integral to First Gas' role as system operator.
Genesis:	No. Refer to the response to Q6.
Greymouth:	No. Impartiality does not affect whether First Gas' discretion is reasonable or efficient. GTAC s2.6 raises queries over whether First Gas will become a shipper and does not apply to interconnected parties. GTAC s2.7 also raises queries over whether First Gas could incentivise parties to use Ahuroa.
MGUG:	-
Methanex:	No. GTAC s2.6 contains a carve-out for matters otherwise addressed in the GTAC. As the setting of tolerances is subject to AHP and HDQ/DDQ, the tolerances are effectively excluded from GTACs2.6.
Shell:	No. Also disagrees for other topics as well. No assurance is provided to interconnected parties.
Todd:	Refers to its response to SQ6.
Vector:	Refers to its response to SQ6.

Q11: Greymouth Q14, item 2: *"We consider that a change in transmission products and access terms should require a reassessment of the basis and terms on which non-standard pricing terms are offered to end-users – policies that may have been appropriate under current codes may no longer be fit for purpose under the new arrangements."*

Do you agree with Greymouth, that the Supplementary Agreements should be reassessed in light of any change from the current access arrangements to new access arrangements?

First Gas:	First Gas currently has 25 SAs. Only 8 will potentially carry-over to the GTAC. First Gas is reassessing how all existing SAs fit with the transmission products under the GTAC. First Gas intends to open a dialogue regarding the transition of SAs. Agrees that there needs to be a policy published on SAs to demonstrate that the obligations in GTAC s7 are being met.
Genesis:	Agrees with the sentiment of the submission. Linked to Genesis's concerns regarding the lack of qualitative or quantitative rationale for the prices of GTAC products.
Greymouth:	The existing SAs and the terms on which new SAs will be offered need to be reviewed.
MGUG:	No. There appear to be relatively few SAs to carry-over. Support the general criteria for new SAs and transparency.

Methanex: -

Shell: -

Todd: Yes. Gives the example of a party that is not exposed to overrun/underrun charges being eligible for rebates in relation to that volume.

Vector: Existing SAs that outlive the VTC must be honoured.

SQ12: Methanex Q14, p3: *"Lack of transparency due to the non-disclosure of those agreements [SAs] has made it impossible to determine the level of impact they have on the rights of MPOC users during the GTAC consultation process. The lack of transparency is then carried forward under GTAC, as those agreements are not subject to any disclosure requirements under GTAC. GIC comments that GTAC is an improvement over existing codes by reducing information asymmetries and in so doing reducing barriers to competition. We contend that in this respect there is a substantial reduction in the level of transparency that is currently enjoyed by MPOC users."*

Do you consider that the confidential nature of non-standard pricing and other terms of existing SAs would raise more concerns under the GTAC regime than under the current access arrangements?

First Gas: Refers to SQ11 regarding the impact of existing SAs. Future SAs will be disclosed under the GTAC.

Genesis: Genesis generally supports the disclosure of information, but does not support overriding confidentiality provisions in existing contracts.

Greymouth: Yes. Existing agreements may not be appropriate in the context of the new GTAC. Lack of transparency means that this cannot be assessed.

MGUG: -

Methanex: Principal concern is the grandfathering aspect of carrying over pre-existing VTC agreements to the GTAC and the prospect that parties to those agreements will gain new rights and privileges to the detriment of MPOC users.

Shell: Yes. Concerned about the impact of existing SAs under the GTAC regime.

Todd: No. Recommends that parties holding non-disclosed supplementary agreements are requested to voluntarily disclose those agreements. If consent is not provided, then GIC (using its powers under the Gas Act if necessary) should review the arrangements.

Vector: Would prefer all SAs to be non-confidential, but some of the agreement have confidentiality clauses that need to be honoured unless the signatories agree otherwise.

SQ13: Shell Q18: *"No party considering entering into gas transmission or interconnection arrangements should be expected sign an agreement which states there are circumstances where the party can be 'deemed not to have acted as a Reasonable and Prudent Operator'. Such a determination should be determined by the facts. Any necessity for such a 'deeming' is indicative of a flawed design in the liability provisions."*

Do you consider that the proposed provisions deeming a party not to be an RPO are significantly worse than provided for in the current codes?

First Gas: Notes that the wording in the GTAC is materially the same as the MPOC. First Gas is keen to understand the impact of these provisions to better understand the issue. Suggest that this issue is addressed in a dedicated workshop on liabilities.

Genesis: Disagrees with Shell. If a party wilfully defaults on a contract then that is often "*deemed*" to impact on that party's liability limit regardless of the defence of the defaulting party.

Greymouth: Yes. The limited application of the deemed RPO provision in the MPOC contrasts to GTAC s7.13.

MGUG: -

Methanex: -

Shell: Yes.

Todd: Agrees with Shell's view.

Vector: Agrees with Shell's view. Any decision as to whether a party has been an RPO should be made on the basis of the actions of that party. However, notes that this is already an issue under the MPOC.

SQ14: There are some strongly contrasting views on whether the nominations workload would significantly increase the administrative burden for stakeholders. For example, Greymouth Q2: *"We consider the potential impact on end-users of punitive fees for incorrect nominations has been underestimated. The workload on those end-users whose shipper agreements delegate nomination obligations to them will increase significantly."* And, in contrast, Genesis Q15: *"We agree that once the upfront capital cost of the systems upgrade is paid for, the ongoing staffing costs associated with nominations should not be material."*

Do you consider that the proposed nomination arrangements would significantly increase or decrease the administrative burden for stakeholders?

First Gas: -

Genesis: Notwithstanding its previous comments, Genesis agrees with Greymouth that for sites where shippers' contracts require that the customer nominates its own gas requirements, the workload will increase. In the absence of any tolerance, the number of customers required to provide their own nominations is likely to increase. Additional work will also arise from rebates and wash-ups.

Greymouth: Important to take a system wide view. Administrative burden is greater for those parties with ultimate exposure to incentive fees. Administration will increase as parties try and avoid exposure.

MGUG: Considers that there is the potential for the administrative burden of nominations to be increased. The burden arises through what the GTAC demands in terms of incentive arrangements. First Gas has not demonstrated why the higher accuracy is required. Incentive charges complicate invoicing.

Methanex: -

Shell: Supports Vector's view.

Todd: Customers who are currently required to provide daily nomination to their gas supplier face no more or less work under the GTAC. However, individual shippers' trading activities need to be considered (those with just a few TOU customers through to mass-market retailers). ORs and URs on a daily basis need to be compared with daily cash-outs under the MPOC and overrun and underruns under the VTC. Expects the rebate process in the GTAC to deliver a net improvement on the current arrangements.

Vector: Does not anticipate any significant increase in workload from daily DNC nominations. Considers that workload is likely to decrease once the new processes are bedded in.

SQ15: There are some strongly contrasting views on whether the proposed balancing arrangements would increase or decrease spot market activity. For example, Shell Q6: *"There is no basis for the GIC's assertion that the GTAC proposal for balancing has the 'potential for increased activity in the spot market'. With the reduced incentive for shippers to balance, the GTAC proposal will likely reduce the activity on the spot market."* And, in contrast, Todd Q6: *"Todd agrees with the discussion of the various aspects of the GTAC balancing arrangements. In terms of the assessment, it agrees that the tolerance terms could be improved, but believes the overall efficiency gain is in fact a very material improvement on current arrangements. The likely incentive for greater trading on the emsTradepoint gas market is one aspect of that improvement."*

	Do you consider that the proposed balancing arrangements would likely increase or decrease the spot market trading your business might engage in?
First Gas:	Increase, along with other aspects of the GTAC. EMR charges will encourage shippers to balance their own positions directly. That will increase volumes on the market.
Genesis:	The changes proposed in GTAC will not impact on the growth of the market.
Greymouth:	No clear answer until tolerances, incentive fees and the park and loan service details are known. Queries whether preference should be given to the EMS market or any other bilateral markets.
MGUG:	As per SQ9, MGUG would value an independent view on trading market risks.
Methanex:	-
Shell:	Considers that activity will decrease. Incentives on shippers to resolve imbalances commercially will be reduced under the GTAC.
Todd:	Does not agree with Shell. The ERM fee can be amended over time to ensure that the right incentives are maintained. Trading imbalance under the GTAC becomes simpler than the MPOC, as there is no shipping or nominations required to balance a position.
Vector:	There is no reason why trading should increase or decrease in the absence of a change in injection or offtake behaviour. A reduction in transactions by First Gas would be offset by increased shipper activity.

SQ16: There are some strongly contrasting views on whether the proposed requirements for parties to demonstrate the need for a Supplementary Agreement (SA) would likely result in more or less SAs. For example, First Gas Q14: *"The assessment seems to miss the importance of requiring parties to demonstrate the need for an SA."* And, in contrast, Genesis Q14: *"We note that supplementary agreements may be more necessary than the GIC realises in its assessment. For example, Genesis may need to 'contract out' of the GTAC's hourly overrun charge regime to maximise gas throughput at Huntly."*

Do you think SAs are likely to become more prevalent under the proposed GTAC arrangements? For what reason(s)?

First Gas:	Expects to see many existing SAs lapse or terminate, since those agreements relate to annual capacity arrangements. New SAs may be required due to measures under the GTAC (such as MHQ charges) and where the conditions in GTAC s7 are met. The focus should be on whether the conditions for SAs are fair and efficient, not the total number of those arrangements.
Genesis:	Refer to response to SQ2.
Greymouth:	A well-constructed set of arrangements should minimise the need for SAs.
MGUG:	No firm view. Accept that there are some circumstances where an SA would be justified in principle. Some comfort from the narrow scope of SAs and transparency. SAs should cumulatively undermine the equitable arrangements for standard users.
Methanex:	Concerned that there are no checks and balances in the GTAC. There is no mention of the interest of other users being taken into account other than GTAC s7.1(a). First Gas is the sole arbiter of whether the applicant satisfies the criteria.
Shell:	Yes. Agrees with Genesis.
Todd:	Agrees with Genesis's concerns, but does not consider that an SA is necessary for Huntly. More intra-day nomination cycles should be introduced. If there is a substantial need for SAs other than for transmission pricing issues, then that would suggest a design issue.
Vector:	Does not consider that an increase or decrease in the number of SAs is important, it is consistent treatment and transparency that matters.

SQ17: There are some strongly contrasting views on whether the proposal would bring more excursions from the Target Taranaki Pressure (TTP). For example, First Gas Q19*: "The GTAC drafting better reflects reality. As system operator, we endeavour to keep TTP within the range, but there are factors outside*

of our control that cause divergence. This therefore appears to be more an issue of contractual wording, rather than requiring any change in behaviour from First Gas as system operator." And, in contrast, Methanex Q19, p20: *"In regard to there being frequent (but brief) excursions, we consider that the obligation to maintain pressure between 42-48 bar in MPOC does not infer strict observance but it does place an obligation on FGL to act in order to return pipeline pressure to the mandated range. This contrasts with the much weaker reasonable endeavours obligation in GTAC, which is further weakened by the TTP also being subject to the level of 'aggregate ERM', which is at best an ambiguous modifier."*

Do you think the proposed arrangements put weaker incentives on First Gas to maintain the TTP, that could lead to more relaxed management and increased costs to interconnected parties?

First Gas: The proposed GTAC terms reflect actual practice. Aggregate ERM is a relevant factor for first Gas' ability to maintain TTP. If First Gas disregarded imbalances, then system vulnerability would increase.

Genesis: The contractual obligation is weaker under the GTAC. There is the potential that, over time, First Gas might change its operational approach to the benefit or detriment of pipeline users.

Greymouth: Yes. For example: the absence of a requirement to keep TTP as low as practicable; the removal of the incentives pool; the amended RPO definition; and the absence of balancing SoPs and a policy on park and loan.

MGUG: -

Methanex: GTAC weakens First Gas' responsibility and incentives. First Gas can also *"move the goalposts"* through GTAC s8.5 to artificially reduce the prospect of excursions. Should not place any reliance on First Gas' intentions as a substitute for codified commitments.

Shell: Yes. Shell will seek to place certain obligations on First Gas under the interconnection agreements to: use reasonable endeavours to ensure that pressure is below 48 barg (including selling of line pack); and to use reasonable endeavours to minimise pressure to 42 barg (as per the MPOC). There will be no exclusion for ERM. The SOP regarding the use of compression are also important.

Todd: GTAC and associated IT system changes should enable First Gas to more proactively manage the transmission system. Mechanisms are more important than contractual obligations. Transparency and improved reporting are likely to enhance incentives for First Gas to manage line pack. Considers that deemed flow, AHPs, MHQ and overruns should be replaced with more nomination cycles.

Vector: -

SQ18: There are some strongly contrasting views in relation to gas quality. For example, Methanex Q9, p11: *"We believe GIC is misrepresenting 'passive' wording in GTAC for what is, a substantive reduction in FGL's obligations to protect its customers from the prospect of receiving non-specification gas. In particular, we dispute that the provisions of [GTAC] Sections 12.8 and 12.11 are passive in absolving FGL of responsibilities and liabilities."* In item 40, p11, of its submission Methanex lists a number of instances where it considers the GTAC gas quality assurances are significantly less than those of the MPOC. This contrasts with the views of other submitters – eg Contact, Greymouth, MGUG and Todd – who agreed with the PAP that there would be *"no noticeable change"* in relation to gas quality.

Do you consider that the Methanex is correct to say that the proposed arrangements would bring a substantive reduction in First Gas' obligations to protect its customers for non-specification gas?

First Gas: Agrees with stakeholders who see no noticeable change to gas quality arrangements under the GTAC.

Genesis: -

Greymouth: No. Although notes that gas quality has not had much attention.

MGUG: -

Methanex: MPOC s17.6 requires First Gas to monitor the composition of gas flows while GTAC s12.8 has a diminished obligation. Under the GTAC, unless First Gas has caused gas to become non-specification gas, it is explicitly excluded from liability under GTACs 12.11. If First Gas fails to comply with GTAC ss12.2, 12.3 and 12.4, and breaches the RPO obligation, it will have no liability for any consequence of that breach under GTAC s12.11.

Shell: -

Todd: Notes that the issue of liabilities is to be addressed.

Vector: There is some overlap between the comments on gas quality and liabilities. Agrees with Methanex that GTAC s12.22 substantially reduces First Gas' obligations.

Considers this an opportunity to progress industry discussions on gas quality.

SQ19: There are some strongly contrasting views on whether, if the Overrun (OR) and Underrun (UR) fees are balanced, the proposed level of OR/UR fees would still be a concern. For example, Todd Q16, p8: *"As noted above, the formula applied in the GTAC is incorrect. Once corrected, and the value of F is no greater than 2, then these charges are much less (and probably one third less) than the levels projected by GIC because there would be no underrun fees applying. Many of the concerns about GTAC pricing would therefore fall away under this correction."* And, in contrast, Genesis Q16: *"We are concerned the daily over and underrun charges will increase costs to serve the mass-market, which will be exasperated by lower incentive pool rebates. This does not reflect the flexibility the transmission system has been designed to afford."*

Do you consider that, if the OR and UR fees are balanced, the proposed level of OR/UR fees would still be a concern and, if so, why?

First Gas: Agrees with Todd's proposed solution (amend the overrun fee to F-2). Keen to investigate options for managing mass-market shipper costs and risks.

Genesis: The proposed balancing of the OR and UR fees would be an improvement on the current GTAC drafting. The fees are disproportionately high when compared to excess running mismatch. Purpose of OR/UR fees is to stop the hoarding of transmission capacity and to incentivise accurate nominations. Overall justification for high OR/UR fees is low as there is little incentive on parties to provide inaccurate nominations and the information provides very little benefit. Magnitude of OR fee is much less than current negative ERM fee. Should be more thought given to relative price of OR, UR and ERM charges. Tolerance should be provided. More detail should be provided on distribution of benefits of the rebate scheme.

Greymouth: Yes. Incentive fees should be less than the VTC/MPOC incentive fees to be more efficient. That is true even when rebates are considered – parties have no certainty over rebates. Charges should consist of tariffs based on demand in uncongested areas without SAs.

MGUG: Concerned about the application of OR/UR fees without a tolerance, and the level of penalty not being cost reflective.

Methanex: -

Shell: Refers to comment in response to SQ3 (suggestion of a liquidated damages mechanism).

Todd: Agrees that the value of F should not be excessive, and a value between 1 and 2 may be appropriate (a value of less than 2 may require a partial rebate). Does not consider that the mass-market is necessarily less predictable than other loads and therefore more exposed to OR/UR charges. If the final GTAC excludes the provision of rebates, then ORs/URs could have a negative impact as shippers would need to pass on those costs to consumers.

Vector: Supports the proposed adjustment.

SQ20: There are some strongly contrasting views in relation to Priority Rights. For example, Trustpower 7.1.14, p7: *"We are pleased GIC and other submitters recognise our concerns that: a) the PR auctions may not result in an efficient allocation of risk because if mass-market shippers are unable to secure PRs in either the primary or secondary markets they have no effective means of reducing their demand. b) it is also not fair that retailers may not be able to buy affordable PRs and so could become*

caught in a squeeze between their customers and the competing priorities of the network owner and/or other access seekers." And, in contrast, First Gas s4.2, p29: *"While we acknowledge that mass-market shippers cannot control their customers' demand, we do not believe that PRs are any more onerous than the existing codes. If a mass-market shipper does not hold sufficient reserved capacity under the VTC then it will face overrun charges and potential liabilities to other parties for loss if gas cannot be delivered to everyone. If a mass-market shipper does not hold PRs under the GTAC then it will face overrun charges and potential liabilities to other parties for loss if gas cannot be delivered to everyone. The key difference under the GTAC is in how the price of scarce capacity is set –with the PR price being set via an auction."*

Do you consider that the Preliminary Assessment gives undue weight to concerns that, if mass-market shippers may be unable to secure PRs, they have no effective means of reducing their demand?

First Gas: PRs are an effective mechanism for allocating capacity based on market value (as opposed to an administered price under the VTC). Concerned with potential issues raised by mass-market shippers and is open to considering solutions.

Genesis: Trustpower's concerns are valid. PR rights are only valuable in the case where scarce capacity can be valued and parties can make rational decisions based on that value.

Greymouth: Yes. Agrees with Trustpower and consider the weighting is correct. Under the current arrangements reserved capacity coupled with grandfathering rights means that shippers have some means to pre-emptively mitigate exposure to overruns. That is not the case under the PR regime.

MGUG: -

Methanex: -

Shell: Agrees with First Gas. Cost of securing PRs should be factored into the charges to mass-market customers. Retailers have a choice regarding their demand exposure ahead of time.

Todd: Does not consider that mass-market retailers will have more difficulty securing PRs than any other retailer. There is no incentive for shippers to secure more PRs than they require. Determining the appropriate value of PRs is more critical for commercial entities that are price sensitive.

Vector: The application of PRs to mass-market customers should be subject to further discussion. Sees merit in a solution that guarantees PRs for the mass-market and critical services with the price set by auction.

SQ21: There are some strongly contrasting views on whether the level of First Gas discretion is always appropriate. For example, Methanex Q22, p21: *"We strongly disagree that FGL discretion is appropriate or fair in regard to providing tailored Specific HDQ/DDQ allowances and we are generally concerned that GIC has not considered this as an area which, on efficiency and fairness grounds, is materially worse than the status quo. Further, we consider the rationale set out in GTAC of 'striking a balance', at FGL's discretion, between the proper operation of the pipeline system against the commercial requirements of particular end-users to be entirely inappropriate."* And, in contrast, First Gas Q22, p45: *"We agree with the analysis of First Gas discretion. We believe that the areas of discretion identified strike the right balance for a transmission system operator."*

How have submitter views on First Gas discretion altered your opinion?

First Gas: Agrees with GIC's view in the PAP. Considers that the system operator requires discretion in setting HQ/DQ ratios to balance the needs of all pipeline users and allocate capacity in the system.

Genesis: Refers to response to Q2.

Greymouth: Does not consider that views are *"strongly contrasting"*. Parties other than First Gas does not agree with the level of discretion.

MGUG: -

Methanex:	-
Shell:	Yes. There is no obligation on First Gas to act impartially between the interests of shippers and the interests of interconnected parties. Agrees with Methanex's perspective.
Todd:	Restricting tolerances available to many parties may increase the capacity of the pipeline to deliver gas. That is likely to have a benefits in terms of reduced transmission charges overall. Allocating discretion to First Gas is about maximising the use of transmission assets without being overly prescriptive on how every decision should be optimised. Setting of operational parameters would benefit from consultation. The code change process is available if there are concerns about the use of First Gas' discretion.
Vector:	The imposition of the Hourly Overrun Charge on only a few end-users (possibly two) is unfair.

SQ22: There are some strongly contrasting views on whether the proposed arrangements will provide more transparency. For example, Shell Q23, p11: *"In terms of the commitment to publish information, we agree that the GTAC is not as open as MPOC, to the extent that we consider that the GTAC is materially worse than MPOC. In contrast to MPOC, GTAC does not commit to publish in real time: the then-prevailing hourly Scheduled Quantity (SQ) established for each receipt or delivery point (or delivery zone in GTAC); the metering quantity for each hour at each receipt point or delivery point (or the aggregate delivery quantity in each delivery zone in GTAC); the imbalance between scheduled and actual flow at each major receipt or delivery point."* And, in contrast, First Gas Q23, p45: *"We believe that the publication of interconnection agreements is significantly more transparent than the current VTC. Publication of running mismatch positions is more transparent than either current Code. Moreover, changes suggested to publish reasons for SAs will further increase transparency."*

In light of the submissions, how do you consider the proposed arrangements compare in relation to transparency to the current arrangements?

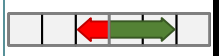
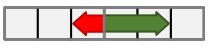
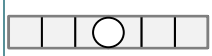
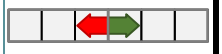
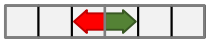
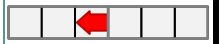
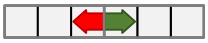
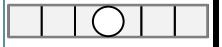
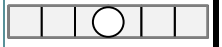
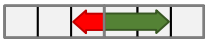
First Gas:	First Gas is happy to consult on the publication of the data that Shell refers to.
Genesis:	Genesis would value the publication of information that Shell refers to over the publication of interconnection agreements.
Greymouth:	Agrees with Shell. GTAC parties should receive information that is at least equivalent to the BGIX/OATIS.
MGUG	-
Methanex:	-
Shell:	Comment stands. Issues with the VTC are causing MPOC parties to be forced into materially worse transparency.
Todd:	Considers that MPOC information should be available under the GTAC. Operational data should be available to shipper in a timely manner.
Vector:	Agrees that the GTAC appears to be less transparent than the MPOC in relation to the publication of hourly SCADA data and Scheduled Quantities. Considers this to be a drafting matter rather than a design issue.

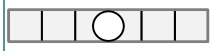
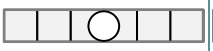
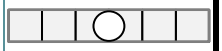
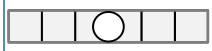
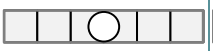
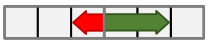
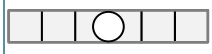
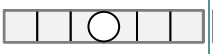
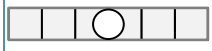
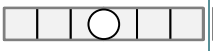
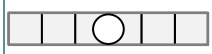
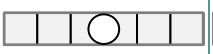
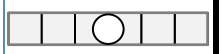
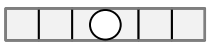
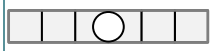
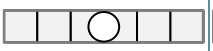
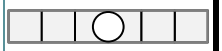
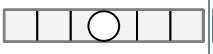
Appendix C FAP v PAP comparison of assessments

Table 23 compares the assessments made in the FAP against those previously made in the PAP to allow the changes to be easily identified. Below the table we provide brief reasons for the changes.

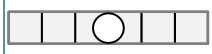
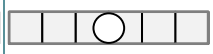
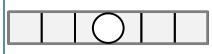
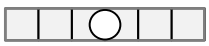
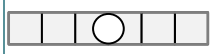
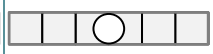
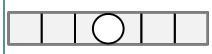
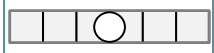
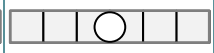
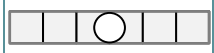
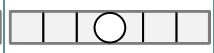
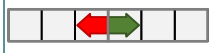
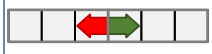
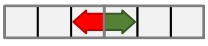
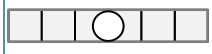
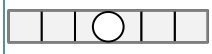
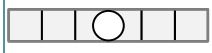
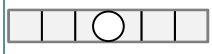
Note that changes to individual components of the assessment do not necessarily result in changes to the "All criteria" ratings in the right hand column or the "Overall" ratings in the last row. For example the reduced fairness rating for energy quantity determination was not considered sufficient to change its "all criteria" rating. On the other hand, the improved reliability and fairness assessments for gas transmission products was sufficient to improve its "all criteria" rating.

Table 23 – Summary of bottom-up and top-down assessment of GTAC

	Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Gas transmission products (considered to be more significant to the overall assessment)						
FAP						
PAP						
Pricing (considered to be more significant to the overall assessment)						
FAP			-			
PAP			-			
Energy quantity determination						
FAP			-	-		
PAP			-	-		
Energy allocation						
FAP			-	-		
PAP			-	-		
Balancing (considered to be more significant to the overall assessment)						
FAP			-			
PAP			-			

	Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Curtailment						
FAP						
PAP						
Congestion management						
FAP						
PAP						
Gas quality and odorisation (considered to be more significant to the overall assessment)						
FAP						
PAP						
Prudential requirements						
FAP						
PAP						
Force majeure						
FAP						
PAP						
Liabilities (considered to be more significant to the overall assessment)						
FAP						
PAP						
Code changes						
FAP						
PAP[210]						

[210] We note that there was a consistency issue in the PAP. Table 20 in the PAP recorded this as a modest green arrow in relation to efficiency. However, based on Table 14 in the PAP, the correct position was a moderate green arrow for efficiency.

	Efficiency	Reliability	Safety	Environment	Fairness	All criteria
Dispute resolution						
FAP						
PAP[211]						
Term and termination						
FAP						
PAP						
Confidentiality						
FAP	-	-	-	-		
PAP	-	-	-	-		
Assignment						
FAP	-	-	-	-		
PAP	-	-	-	-		
Overall						
FAP						
PAP						

C.1 Comment on changes between the PAP and the FAP

Gas transmission products – improved reliability assessment

The negative component of the reliability assessment has reduced. As discussed in section 2.8, while we still believe that mass-market retailers should (except in situations of emergency or force majeure) be confident that firm capacity can be obtained to cover their demand (at a price that reflects the market value of the capacity), we concede that the New Code arrangements would not introduce significantly more risk in this regard than the current arrangements.

Gas transmission products – improved fairness assessment

The negative component of the fairness assessment has reduced from a moderate to a modest rating because, to avoid double-counting, ICAs are now fully accounted for in Chapter 6.

[211] We note that there was a consistency issue in the PAP. Table 14 in the PAP recorded a moderate green arrow in relation to efficiency, Table 15 recorded neutral assessment in relation to efficiency and Table 20 recorded a modest green arrow in relation to efficiency. We have noted a moderate green arrow here.

Gas transmission products – improved "all criteria" assessment

The negative component of the "all criteria" assessment has reduced from a moderate to a modest rating as a result of the improved reliability and fairness assessments

Pricing – fairness assessment changes both ways

The positive and negative components of the fairness assessment have both increased from modest to moderate ratings. We consider that we underrated how much more equitable daily capacity nominations would be compared to annual reservations. We also consider that we did not give enough weight to the unfairness of the high OR/UR fees combined with the rebate mechanism, and the uneven coverage of the hourly overrun charges.

Energy quantity determination – worse fairness assessment

The neutral fairness rating has been reduced to a modestly negative rating, for the reasons discussed in our response to submissions (see section 2.4). In essence, we believe that there is a measure of unfairness if parties to existing (known) arrangements do not know exactly what they will be replaced with, or are not provided with assurance that there is appropriate process for making changes to those arrangements.

Energy Allocation – worse "all criteria" assessment

The negative component of the balancing "all criteria" assessment has increased from a modest to a moderate rating. We believe the assessment in the PAP did not give sufficient weight to the negative efficiency assessment for energy allocation, this is corrected in this FAP.

Balancing – worse efficiency assessment

The negative component of the efficiency assessment has increased from a modest to a moderate rating. As discussed in section 2.6, absent any other information about First Gas' approach to tolerances, we must recognise the potential for them to be set at inefficient levels.

Balancing – worse fairness assessment

A modestly negative component is now allowed for in the balancing fairness assessment. As discussed in section 2.6, we accept it is modestly unfair that parties do not know what balancing tolerance they will be allocated, or what the methodology for determining that tolerance would be.

Balancing – worse "all criteria" assessment

The negative component of the balancing "all criteria" assessment has increased from a modest to a moderate rating as a result of the deterioration of the balancing efficiency and fairness assessments.

Curtailment – worse reliability assessment

A moderately negative component has been introduced to the curtailment reliability assessment. As discussed in section 2.7, we accept that the PAP did not adequately respond to submitter concerns about the time delay the New Code would introduced by the replacement of MPOC s15.2 by an Extra ID Cycle. We consider that this does introduce moderate reliability concerns.

Curtailment – improved fairness assessment

The modestly negative curtailment fairness assessment of the PAP has been removed. As discussed in section 2.7, we agree with First Gas that the GTAC curtailment arrangement cannot be less fair than the current arrangements since both the MPOC and VTC require immediate compliance with an OFO.

Congestion management – improved efficiency assessment

The negative component of our congestion management efficiency assessment has reduced from moderate to modest. As discussed in section 2.8, we accept that, when considering the position of mass-market retailers facing congestion, we did not fully consider the counterfactual. They face similar risks of incurring overrun fees and potential exposure to liabilities under the VTC as they would under the GTAC. However, First Gas discretion to negotiate SAs and IAs remains a modest concern.

Congestion management – improved reliability assessment

The negative component of our congestion management reliability assessment has reduced from moderate to neutral. As discussed in relation to the efficiency assessment, the PAP did not properly consider the counterfactual, and we now accept that similar risks for mass-market shippers would be faced under the GTAC as at present.

Congestion management – improved "all criteria" assessment

The moderately negative component of the "all criteria" assessment under the PAP has been reduced to modestly negative for the reasons discussed above.

Gas quality – worse reliability assessment

A modestly negative reliability assessment has been introduced. As discussed in sections 2.9 and 4.8, we accept Methanex's view that, in relation to non-specification gas, the right for shippers to seek confirmation of compliance in the GTAC is more limited than the right allocated to welded parties in the MPOC or Shippers under the VTC. We assess the deterioration as modest. However, we note that we have additional concerns regarding the liability arrangements and terms of ICAs that have an impact on gas quality, but those concerns are addressed in other sections of our analysis (liabilities and ICAs).

Gas quality – worse "all criteria" assessment

A modestly negative "all criteria" assessment is introduced, reflecting the worse reliability assessment.

Governance (including prudential requirements, force majeure, liabilities, code changes, dispute resolution, term and termination, confidentiality and assignment) – decreased efficiency and decreased reliability

We think the number and significance of our concerns regarding the liability arrangements (as highlighted in section D.8, Appendix D) justifies a more negative assessment in relation to efficiency. We also think that the PAP did not adequately recognise the role that the liability arrangements have to incentivise good behaviour in relation to the injection of non-specification gas and the widespread impact that a non-specification gas event would have on the industry (relevant to reliability).

We have noted a minor reduction of the efficiency assessment of the dispute resolution process to more accurately reflect the level of improvement.

Appendix D Supporting analysis

This Appendix provides supporting analysis of a number of specific issues that have proved contentious during the GTAC development process.

D.1 Interconnection Agreements (ICAs)

Code design

The New Code design would bind each Shipper to the terms of the GTAC through its TSA, but each interconnected party would be subject to an individually negotiated ICA that is only loosely associated with the GTAC. This approach is similar to the VTC arrangements, where only Shippers are subject to the terms of that code, with ICAs being separate, individual agreements.[212] However, the approach is different to the MPOC which is a combined code for both Shippers and interconnected parties.

In our view, there is no inherent problem with the GTAC containing terms that apply principally to Shippers and addressing the terms that apply to interconnected parties in separate ICAs. However, a coherent, non-discriminatory access regime needs to prescribe the rights and obligations of all system users; Shippers and interconnected parties. This need not be done in a single code, but if the GTAC is to remain a shipper code:

1. The terms that apply to interconnected parties through ICAs must *mesh* with the terms that apply to all other interconnected parties, and to Shippers through TSAs (that reference the GTAC). The terms and conditions of access to, and use of, the gas transmission system must be fully described for all system users and be coherent (ie work together).
2. The core terms of interconnection should be standard across all interconnected parties (so that coherent, non-discriminatory access is assured), except to the extent that individually negotiated terms can be demonstrably justified.[213]

Shipper interests

From GTAC s7.13, it is clear that First Gas has endeavoured to capture the matters that are important to Shippers in relation to ICAs, and improve on the MPOC and VTC. For example s7.13(g) aims to address the absence of shipper information on plant outages.[214] However, as drafted, GTAC s7.13 provides Shippers with little confidence that the above principles will be observed. That provision, which prescribes the content of ICAs, is framed in general terms and does not provide Shippers with sufficient certainty regarding the terms of ICAs (ie First Gas and each interconnected party are able to freely negotiate terms while remaining within the bounds of that provision).

In our view, at least some of the rights and obligations of an interconnected party have the potential to affect Shippers, and possibly other interconnected parties. We think that there has

[212] Although we note that there is some limited prescription of the terms of ICAs in the VTC.

[213] In our view this should allow for the continuation of existing ICAs with a term that continues beyond the termination or expiry of the MPOC or the VTC, with some adjustment for the New Code arrangements where necessary.

[214] We assume that First Gas wishes to bring the arrangements into line with overseas practice in regard to transparency of outages. For example, the EU's REMIT regulations on Wholesale Market Integrity and Transparency here (https://www.ofgem.gov.uk/gas/wholesale-market/european-market/remit).

not been adequate consideration of what aspects of ICAs a Shipper may have an interest in enforcing (and therefore should be included in a strengthened GTAC s7.13). As highlighted by the examples below, we think that GTAC s7.13 must prescribe the relevant terms in more detail. The actual wording of the ICAs is critical. For example:

1. The requirement, in GTAC s7.13(b), that an ICA stipulates the requirement for metering (including its location, ownership and monitoring rights). This provision provides a Shipper with no assurance that Interconnected Parties will be operating off a standardised set of requirements in relation to metering or any obligations on an Interconnected Party regarding the accuracy of meters.
2. GTAC s7.13(g) requires the Interconnected Party to provide First Gas with information regarding outages, and permit the publication of that information on OATIS. It does not prescribe, for example, the timing of the provision of this information or require the Interconnected Party to notify when the outage will end. That being the case, each Interconnected Party would be able to negotiate its own terms with First Gas. Shippers clearly have an interest in the timely provision of this information for the purpose of their sales and purchases of gas on the wholesale market.
3. The requirement, in GTAC s7.13(r), that the liability provisions in ICAs are consistent with section 16 of the GTAC. We think that the liability provisions in ICAs may not exactly replicate section 16 of the GTAC as the allocation of risk is different under ICAs. For example, Interconnected Parties with RP ICAs will have a specific obligation to ensure that gas injected into the gas transmission system complies with the Gas Specification. The precise drafting of the liability provisions in ICAs is relevant for Shippers, particularly in the context of the subrogation arrangements in GTAC s16.12.
4. GTAC s12.2 requires a RP ICA to include a requirement that an Interconnected Party ensures that; gas it injects into the transmission system complies with the Gas Specification; and to demonstrate that its processes are adequate. While we agree with that requirement, we question whether (from a Shipper's perspective) it is enough for a RP ICA to only cover off the narrow range of matters mentioned in GTAC s12.2, particularly if First Gas does not offer an indemnity in relation to any loss that Shippers may suffer from the injection of Non-Specification Gas. For example, First Gas' obligation to notify Shippers of the injection of Non-Specification Gas in GTAC s12.4 depends on it being "*aware*" of the injection, so Shippers would need to be confident that there is an obligation on Interconnected Parties to make sure that First Gas is aware of Non-Specification Gas entering the pipeline system.[215]

We think that it is necessary for First Gas and stakeholders to consider the relationship between ICAs and the GTAC in further detail. The above examples highlight the interest that Shippers have in the terms of ICAs beyond those prescribed in GTAC s7.13 and s12.2.

Interconnected Party interests

An interconnected party, who is not a party to the GTAC, would not have any assurance that it could access the transmission system on an equal footing with other interconnected parties, except to the extent that individual terms can be justified. Currently MPOC Welded Parties and any new producer seeking interconnection has that assurance through MPOC s2.1.

The lack of certainty afforded by GTAC s7.13 also creates difficulty for our assessment of the arrangements in respect of interconnected parties. MPOC s 22.16(b) requires Gas Industry Co to assess a *New Code* that provides for Shippers to continue to transport gas and Welded Parties to continue to connect to the Maui Pipeline. We cannot assume that the template RP ICA and DP ICA will be the final terms that will agreed with interconnected parties as GTAC s7.13 does not

[215] Under the MPOC a Shipper would have had the certainty of MPOC s17.5 and 17.6.

provide that assurance. The approval of the GTAC will result in the termination of MPOC interconnected parties' ICAs. We think that there should be greater certainty regarding the replacement terms for existing ICAs.

We note that there is a requirement, in GTAC s7.15, that First Gas publish ICAs on OATIS, consistent with the VTC and MPOC. While retrospective publication may encourage standardisation over time, it does not entirely address our concerns regarding GTAC s7.13, as mentioned above.

Submitter views

Submitters on the PAP essentially agree with our analysis of ICAs. First Gas[216] accepts that the ICA terms specified in GTAC s7.13 provide direction for negotiations rather than certainty. Methanex[217] notes that the ICA needs to "*mesh*" not only shipper and interconnected party rights and obligations, but also those of other interconnected parties. Todd[218] considers it important that a set of minimum conditions underpins the negotiation of ICAs. We agree with these points.

Conclusion on ICAs

In our view, while ICAs that are separate from the GTAC are not inherently worse than the current MPOC arrangements, the core terms of the ICAs need to *mesh* with those contained in the GTAC and other ICAs, and cannot become misaligned over time. We do not think that the New Code arrangements achieve this.

Note that our assessment and our resulting concerns relate to the terms of new ICAs (including any that will need to be re-negotiated because the existing ICA would be terminated when the New Code is introduced). We cannot assess, or require First Gas to terminate, existing ICAs that would not be terminated when the New Code is introduced.

From the above, we think that the treatment of ICAs under the GTAC has the potential to create efficiency issues by allowing for the negotiation of a unique ICA with each interconnected party. Although we believe that some aspects of ICAs may need to be individually negotiated, we think the need for individual negotiation is more limited than the GTAC provides for.

We also have concerns regarding the fairness of GTAC s7.13. We think that Shippers require further assurance regarding the detail of ICAs given that they have reasonable interests in the terms that apply to interconnected parties.

D.2 Supplementary Agreements (SAs)

Scope of SAs

First Gas[219], notes that the MPOC does not allow for SAs, and that most SAs under the VTC are renewed and reconsidered annually. Of the 25 current SAs, only 8, with a contract value of around $10m, would potentially carry over into the New Code.

Table 24 shows that the extent to which SAs may vary the standard terms of transmission products (DNC in the case of the GTAC and annual reserved capacity in the case of the VTC) is very wide, and broadly comparable between the GTAC and the VTC.

Table 24 also lists the items that a SA may be conditional on. The list is longer in the case of the GTAC, but none of the items seem out of place, and probably reflect past experience of what conditions are relevant. The only item required by the VTC and not by the GTAC is that an SA

[216] First Gas, 19 March PAP submission, p43, Q13.

[217] Methanex, 19 March PAP submission, p18, Q13.

[218] Todd, 19 March PAP submission, p7, Q13.

[219] First Gas, 16 April cross-submission, p4-5, SQ11.

may be conditional on the availability of land to site a DP. However, it is not necessary to compare these conditional items in detail since they are not binding; the decision of whether it enters into an SA or not is entirely at First Gas' discretion. Our focus should be on whether the scope to exercise that discretion would be any different under the GTAC.

Table 24 – Comparison of GTAC and VTC arrangements for Supplementary Agreements (SAs)

GTAC s7.4	VTC s2.7(e)
An SA may vary standard transmission products in relation to:	
RP and/or DP (GTAC s7.4(a)(i))	RP and/or DP (VTC s2.7(e)(iii))
End-user (GTAC s7.4(a)(ii))	-
Capacity, including whether it is constant or variable, and determining the priority of Supplementary Capacity over DNC with Priority Rights Term (GTAC s7.4(a)(iii),(b)&(g))	Capacity (VTC s2.7(e)(ii) & (ix)), but no capacity trading rights (VTC s2.7(e)(iv))
Fees (GTAC s7.4(a)(iv)), including providing for an early termination fee (GTAC s7.4(d))	Fees (VTC s2.7(e)(v),(vi)&(vii))
Term (GTAC s7.4(a)(v))	Term (VTC s2.7(e)(i))
Termination in the event of FM (GTAC s7.4(c))	-
The Shipper making nominations (GTAC s7.4(f))	-
The end-user being required to have a TOU Meter (GTAC s7.4(h))	-
An SA may be conditional on:	
The Interconnected Party entering into an ICA (GTAC s7.4(e)(i))	-
The end-user entering into a transmission pricing agreement (GTAC s7.4(e)(ii))	The end-user entering into a transmission pricing agreement (VTC s2.7(e)(xiv))
Statutory or regulatory approvals (GTAC s7.4(e)(iii))	Corporate/statutory approvals (VTC s2.7(e)(xv))
The Shipper complying with its obligations under the DRR, Allocation Agreement or OBA (GTAC s7.4(e)(iv))	-
The Allocation Agent providing First Gas with Daily Delivery Quantities and the Shipper agreeing First Gas can use them (GTAC s7.4(e)(v))	-
-	Availability of land to site DP (VTC s2.7(e)(xiii))

Evaluation of requests for SAs

The GTAC lists a number of criteria against which First Gas will evaluate any request for an SA. In its submission, First Gas suggests these criteria would limit the use of SAs to circumstances where they are genuinely warranted. The criteria (GTAC s7.1) are:

1. The amount of capacity requested, and whether providing it would affect Available Operational Capacity to the extent of impeding or forestalling opportunities more beneficial to First Gas and other users of the Transmission System;
2. whether the Shipper (or End-user) can demonstrate that it has a practical opportunity to bypass the Transmission System or use an alternative fuel that is cheaper than Gas;
3. whether the Shipper (or End-user) can demonstrate that paying First Gas' standard transmission fees would be uneconomic; and
4. whether the Shipper (or End-user) is the sole user of the relevant Delivery Point or other transmission assets and those assets would cease to be useful were the End-user to cease using Gas.

These are all relevant considerations, but GTAC s7.1 only requires First Gas to evaluate a request against these criteria, it does not require First Gas to publish its analysis or justify its decision to enter into an SA. So, although these criteria may be helpful indicators to a shipper seeking an SA, they do not constrain the very wide discretion First Gas has in respect of SAs. However, we note that this discretion is equally unconstrained under the VTC.

Submitter views

Submitters on the PAP mostly agree with our analysis of SAs. However, First Gas[220] considers that the important difference is that the GTAC would require a party requesting an SA to demonstrate the need for it. However, we assume that a shipper requesting an SA under the VTC would also have to explain why it is needed, so we are not convinced that this is a distinguishing feature. Nor is it explicit in the GTAC that such evidence would be published (which would be a positive distinguishing feature).

Greymouth[221] notes that: "*We consider that a change in transmission products and access terms should require a reassessment of the basis and terms on which non-standard pricing terms are offered to end-users – policies that may have been appropriate under current codes may no longer be fit for purpose under the new arrangements.*" We sought other stakeholder views on this in SQ11 of our cross-submission template. Genesis[222] and Todd[223] agree with Greymouth, but Vector[224] believes existing SAs must be honoured.

Conclusion on SAs

From the above, it may seem that there would be very little difference between the proposed arrangements and those in the VTC, but one significant difference is that the GTAC would allow an SA to apply on the Maui pipelines. SAs are not a feature of the MPOC, so we need to consider whether this added contractual option is efficiency enhancing or not.

We generally agree with MGUG[225] that: "*The new arrangements also allow for non-standard products that may be substantially different from the DNC product. Provided DNC is the*

[220] First Gas, 19 March PAP submission, p43, Q14.

[221] Greymouth, 19 March PAP submission, item 2.

[222] Genesis, 16 April cross-submission, p5, SQ11.

[223] Todd, 16 April cross-submission, SQ11.

[224] Vector, 16 April cross-submission, p6, SQ11.

[225] MGUG, 22 January New Code submission, p4, para 10.

dominant product on the system, we believe that this can offer a materially better outcome under the new arrangements."

Certainly the SAs should be a marginal product. Our concern is whether First Gas should have sole discretion on how "*different from the DNC product*" they should be. SAs can be efficiency enhancing; for example an SA may be necessary to prevent uneconomic bypass, or provide sufficient supply certainty to allow a major gas fired power station development to proceed. SAs can also be destructive to competition, for example where they give a shipper preferential rights to capacity and/or discounted prices without good reason. Without checks and balances on outcome of the SA negotiation process, we cannot agree with the First Gas submission, that allowing SAs on the Maui pipeline would necessarily be an improvement.

D.3 Nominations

The GTAC allows for two different types of nominations for each day: nominations for gas receipts into the pipeline, and nominations for capacity, so-called DNC. The de-linking of receipt and delivery nominations under the GTAC would make it possible for a Shipper to make adjustments to its running mismatch position independently of providing the correct downstream capacity nominations.

DNC identifies a Shipper's intended use of the transmission system capacity at any of 15 zones and 17 Individual DPs (see Figure 4). Each daily capacity nomination will represent a Shipper's best estimate of its aggregate customer demand at each of those locations. Under the GTAC each DNC nomination (for an Individual DP or delivery zone) a shipper makes is compared with its allocated quantity at that point (as determined by GTAC s6, Energy Allocations) and any difference would accrue either an overrun fee or an underrun fee.

Table 25 compares the nomination regime under the proposed GTAC with the nomination regimes for the MPOC and VTC.

Table 25 Comparison of GTAC nominations with MPOC/VTC arrangements

Description	GTAC	MPOC/VTC
Type of nomination	Receipt nominations would be required at any receipt point with an OBA or other GTA arrangement requiring nominations. Delivery Zone nominations/individual DP nominations are required to obtain DNC.	MPOC nominations are point-to-point, ie from a receipt point to one or more DPs on the Maui pipeline. Nominations must be balanced (ie it is not possible to receive more or less than the aggregate DP nominations), but any mismatches can be corrected by nominating to the 'payback point'. Other than for non-standard agreements, daily nominations are not commonly required under the VTC.
Numbers of delivery zones/points	There would be 15 delivery zones and 17 Individual DPs.	There are 15 DPs on the Maui pipeline, some of which are TP Welded Points that deliver gas to the ex-Vector transmission system.
Nomination cycles	Provisional (week-ahead) Changed provisional (day ahead) Four intra-day cycles Emergency intra-day cycle(s)	Provisional (week-ahead) Changed provisional (day ahead) Four intra-day cycles

Description	GTAC	MPOC/VTC
Deemed flow	Flow for period prior to intra-day cycle is deemed to be 1/24th of previous scheduled quantity times elapsed hours to the ID cycle.	Flow for period prior to intra-day cycle is deemed to be 1/24th of previous scheduled quantity times elapsed hours to the ID cycle.

Shipper nomination workload

Nominations under the MPOC are generally balanced RP-DP nominations (although OATIS also provides functionality that allows for nominations to and from a pooling point). The VTC's standard product is a "*no-notice*" service, ie no nominations are generally required once the annual reserved capacity has been booked. As a result, with a relatively small number of nominations, gas can currently be transported from Taranaki to anywhere in the North Island served by the high-pressure gas transmission network. For example, a shipper wishing to transport gas from Oaonui to all DPs north of Rotowaro need only make balanced bookings on the Maui pipeline at Oaonui and Rotowaro (assuming it holds sufficient reserved capacity for delivery to each DP). Under the GTAC, that shipper would need to make nominations at Oaonui and at each Dedicated DP and delivery Zone north of Rotowaro.

Submitter views

Looking at the aggregate position, shippers currently nominate to 15 Maui pipeline DPs, in future they would have to make nominations to 15 delivery zones and 17 Individual DPs. Whilst this might appear to be an increased workload overall, with associated increased costs, most submissions on the PAP did not consider that was the case. Please refer to section 2.2 for a full discussion on submitter views.

The PAP highlighted a concern that there might be significantly more work under the New Code than the existing arrangements because of the need to provide daily nominations at a finer level of granularity rather than a relatively small number of TP welded points under the MPOC.

Some submissions on the PAP indicated that Gas Industry Co had overstated concerns about the workload involved in making daily nominations. They point out that shippers already need to make estimates for their customers' usage in order to manage their energy balances. So not much additional work would be involved. Some also note that annual capacity nominations would not be required under the GTAC, neither would the associated work involved in further optimising those nominations intra-year to make capacity transfers. However, there was also an appreciation that providing accurate nominations would be more difficult for mass-market retailers compared with retailers serving TOU-metered customers.

Submitters' concerns seemed less about the work inherent in providing nominations and more about the un-necessarily high level of accuracy being incentivised by high OR/UR charges. On the other hand, First Gas notes that the more granular nominations will allow it to optimise pipeline operations, particularly compressor usage.

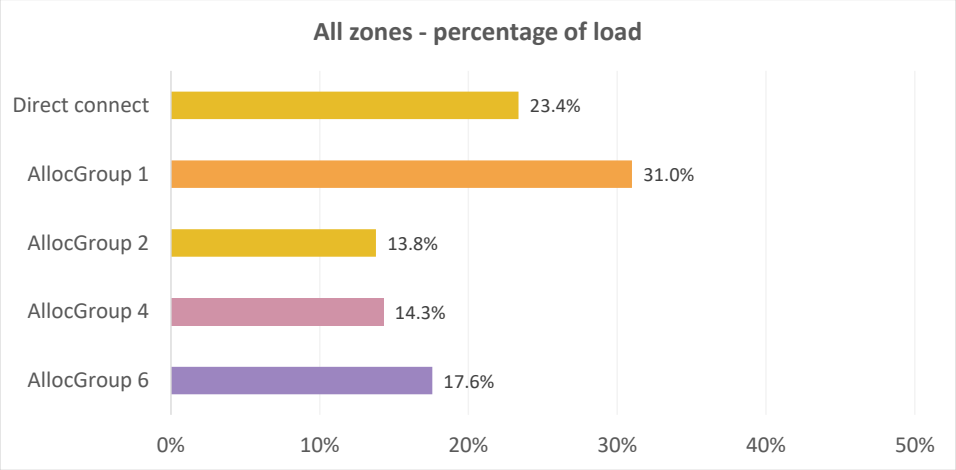
Conclusion on nominations

While we have no doubt that shipper nominations are necessary and valuable when capacity is congested, the value of those nominations in situations where there is ample transmission capacity is less certain.

Shippers with mass-market customers submit that they can only estimate customer demand with limited accuracy. This accords with the low accuracy of such retailers' submissions for the initial allocations under the DRR. These shippers argue that it would be easier and more accurate for First Gas to forecast the aggregate system demand, of which the mass-market (Allocation

Groups 4 and 6) is currently only about one-third of the total demand. Figure 5 shows that, of the approximately 40PJ/annum "*reticulated market*", about a third do not have time-of-use metering (Allocation groups 4 and 6).

Figure 5 – Allocation group breakdown for the "*reticulated market*"



It is interesting to note that the approach taken in the UK is that shippers only forecast daily flows to their largest end-users, ie those who have daily metering (DM) or time-of-use metering. The expected flows to mass-market or non-daily metered (NDM) end-users are made through a top-down estimation and allocation process run by the TSP. The NDM nominations for each shipper are made by the TSP based on the number and class of registered end-users for that shipper. That system appears to recognise the difficulties inherent in multiple parties attempting to solve the same estimation problem and instead makes one party responsible for forecasting.

Our conclusion is that the nomination regime is inherent to the GTAC transmission products. Some submitters consider that although there would be some upfront cost associated with new IT systems, there would be little or no additional work on an ongoing basis. Others consider that the nomination workload would increase, but this does not seem to be a significant concern per-se. Rather, it is the strength of the economic incentives to make those nominations accurate (the OR/UR charges) that raises serious concerns. We discuss these in the next section.

D.4 Daily overrun (OR) and underrun (UR) charges

As noted in section 4.2, the New Code includes daily incentive charges to encourage shippers to provide accurate nominations (and to operate in accordance with their approved DNC quantities). In situations where capacity is not expected to be scarce[226], such charges could encourage shippers to:

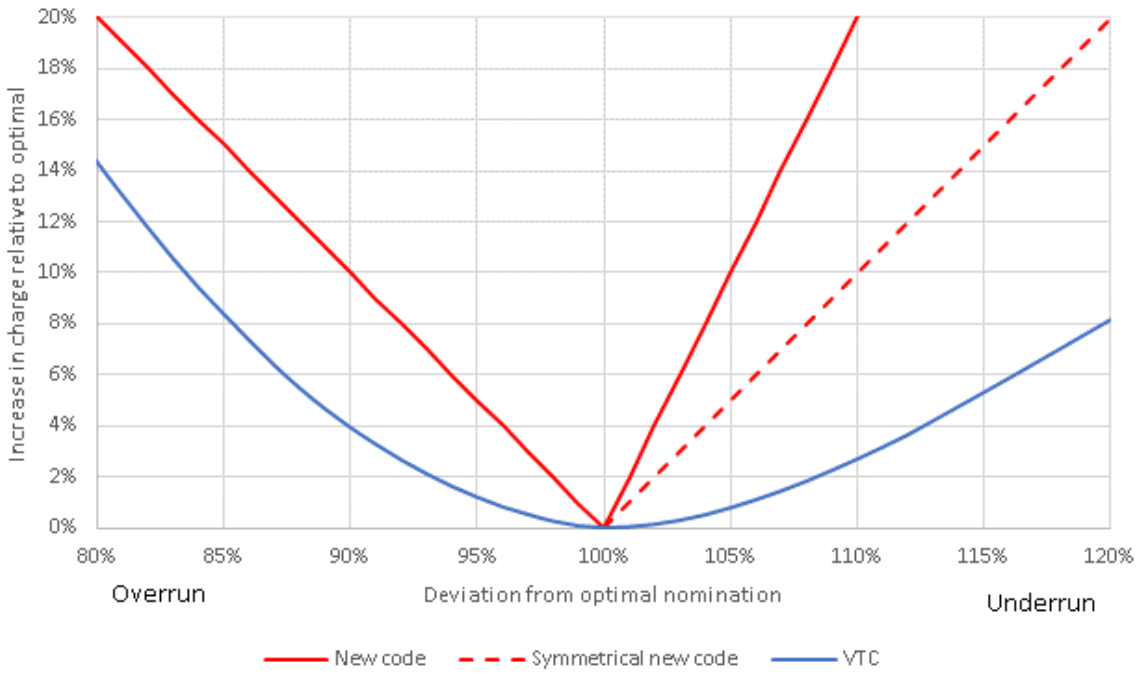
1. expend undue effort on forecasting their usage, even though the more accurate nomination information does not yield an offsetting system wide benefit; and/or
2. alter their gas usage to conform to their previous nomination/reservation, even though a deviation causes little or no cost from a system perspective.

While these inefficiencies are a potential concern, the same broad issue arises with the charging structure in the VTC, because it also financially discourages overruns and underruns where no capacity scarcity is expected. In the PAP, we compared the relative strength of incentives in the

[226] Unless stated otherwise, the remaining discussion in this section is focused on incentives charges when congestion does not apply.

VTC and New Code using a common measurement framework as far as possible. The results are summarised in Figure 6.

Figure 6 – Comparison of incentive charge strength – VTC and New Code



The horizontal axis shows deviations between a shipper's capacity 'nomination'[227] and its actual gas flow, expressed in percentage terms. The left-hand portion of the axis (<100%) indicates that a capacity nomination is less than the flow, and vice versa.

The vertical axis shows the size of the financial incentive associated with differing deviations. To ensure comparability, these incentives are expressed as the percentage increase in transmission charges faced by a user for each level of deviation.[228]

The chart shows that the incentive to minimise deviations is appreciably stronger under the New Code than the VTC.[229] For example, under the New Code, a shipper who nominates 90% of its actual flow will face a transmission cost uplift equivalent to 10% of DNC, whereas under VTC the effective increase is around 4%. The differences are larger for underrun situations, where the capacity nomination exceeds the actual flow.[230] This arises because a shipper who does not utilise a unit of DNC will pay the normal cost of the DNC charge itself, plus the underrun charge (100% of DNC if there is no congestion), and not receive any economic benefit from shipping a unit of gas. Hence, the net penalty for the nomination error is 200% of the DNC charge. Conversely, a shipper with overrun will not pay a "*normal*" DNC charge, and instead pays overrun charges equivalent to 200% of the DNC fee (absent congestion). That shipper will have the economic benefit associated with shipping the gas. The benefit will vary with circumstances,

[227] Noting that it is a daily nomination for GTAC, and a yearly 'nomination' (capacity booking) for VTC.

[228] Under New Code, the existence of overrun and underrun charges means that shippers will minimise their costs by nominating their expected usage (assuming no forecast uncertainty and symmetric incentives). Under VTC, most shippers will minimise their costs by reserving less than (but relatively close to) their highest expected daily flow for the coming year, and incuring some overrun charges. The comparison adjusts for this difference by considering deviations from the optimal 'nomination/reservation' level. Note also that the chart shows the increase in the daily cost from under- or over-nominating usage for the New Code, and the change in annual cost for VTC.

[229] The shape of VTC curve is affected by the profile of a user's daily gas flows over a year, and data for a mass-market gate has been used for the analysis.

[230] This asymmetry could encourage users to bias their nominations, but that concern is secondary to the overall size of the incentives

but assuming it approximates the value of the standard DNC charge on average, the net penalty for the nomination error is 100% of DNC.

While the incentives to minimise deviations are clearly greater under the New Code than the VTC, this may not necessarily lead to increased efficiency losses. That would depend on the degree of difficulty that shippers face in minimising their deviations under the New Code. These may differ because:

1. The VTC requires shippers to forecast their maximum daily demand each year by DP. These forecasts need to be made on a year-ahead basis, although shippers can adjust their forecasts nearer the time by purchasing additional capacity (for the full annual capacity reservation fee) or transferring capacity between points that are in the same area; and
2. The New Code requires shippers to forecast their demand for the current day, and shippers can adjust these forecasts during the course of the day to reflect new information if they wish. Forecasts must be made for each Delivery Zone and each Individual DP.

To explore this issue, we undertook modelling to estimate the total incentive charges that would be payable under the New Code, so these could be compared with the VTC. If the estimated level of charges is higher than under the VTC, that would suggest stronger incentives to minimise nomination errors relative to the status quo, and vice versa.

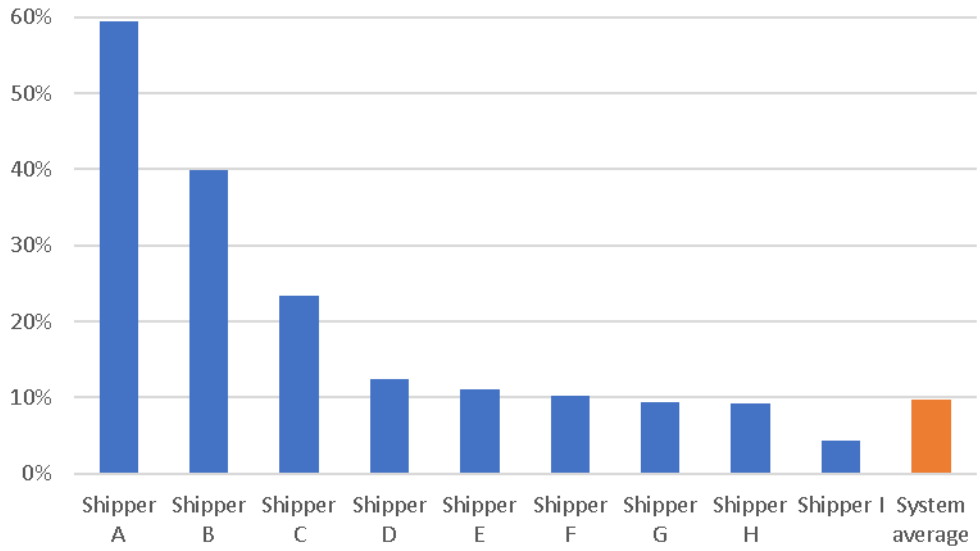
No zonal nominations exist currently to enable a direct comparison. However, D+1 allocations provide a potential proxy to simulate nominations from shippers, ie the nomination for Tuesday 16 January is assumed to be the D+1 allocation quantity for that gas day. Although strictly speaking D+1 allocations look back in time, they are still a "*forecast*" because data from most meters is not available and is modelled. In this respect, the D+1 allocations are similar to shipper demand forecasts that inform their nominations. D+1 allocations are also at the DP level, and are specific to each shipper, which means they can be easily converted to zonal nominations.

We also have access to one shipper's daily pool forecasts on a confidential basis. This allowed us to compare the relative accuracy of that shipper's genuine forecasts with 'D+1 forecasts'. The two data series resulted in very similar payments for incentive fees, suggesting that D+1 forecasts are a reasonable proxy for this shipper.

However, there will be significant variability among shippers regarding the accuracy of their forecasts. Shippers mainly serving mass-market demand will not have access to significant volumes of telemetry data. Other shippers serving larger customers may have access to telemetry data on the morning after real-time which means that their D+1 data is more accurate, and less in the nature of a genuine forecast. For these shippers, using D+1 as a proxy may understate the actual errors that would arise with real-time nominations.

Figure 7 shows the modelled incentive charges as a percentage of each shipper's total transmission charges under the New Code, based on D+1 data for the period August 2015 to July 2016. Note that the chart shows results for flows on the non-Maui system that are subject to D+1 allocations – ie it does not include flows to Dedicated DPs.

Figure 7 – Modelled New Code incentive charges using D+1 allocations as nominations



The system average is about 9.5%, but there is significant variation between shippers. The main reason for this is the size of different shippers. D+1 generally performs worse for smaller shippers, because their customer base changes more quickly, and because they have lower diversity benefits and less telemetry data. It is likely that smaller shippers would be able to predict their demand better than the D+1 model does by modelling their changing customer base in more detail. This would require additional effort, but we expect that shippers already produce their own demand forecasts. However, as noted above, the errors for the other shippers may be larger because telemetry data available on the morning after real-time will not assist their nomination accuracy.

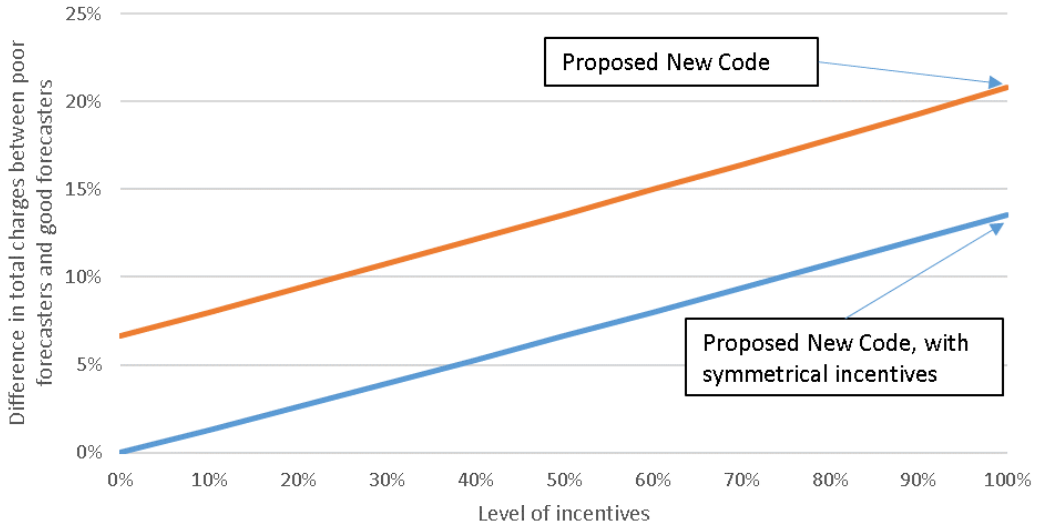
First Gas[231] in its PAP submission correctly notes that Shipper A and Shipper B are not shippers in their own right but use a "*white label*" service provided by another shipper (while still receiving a D+1 volume). First Gas considers that this resolves the concern about differential impacts, since these parties will be protected from the level of charges indicated in the graph by their arrangements with their shipper. We do not entirely share this view. It assumes the white label provider will share the diversity benefits of its wider portfolio with Shipper A and B at no charge. This seems improbable given the relatively thin market for white label services.

Figure 10 shows the difference in total shipping charges that two shippers might face due to different forecasting accuracy. This stylised example assumes that a shipper with poor forecasting makes an error that is +/-15% each day, and a good forecaster makes errors of +/-2%. While these are stylised, they broadly approximate the observed errors in D+1 nominations for shippers with industrial load on telemetry (Allocation Group 1) and for shippers with a small amount of mass-market load in Allocation Group 6. In the example, the poor forecaster would pay more than 20% more than the shipper with good forecasting. As discussed, this difference does not appear to be justified by any real system benefits from more accurate forecasts, when congestion does not apply.

Making the incentive charge symmetrical (as proposed by First Gas) would reduce this difference to ~14%. However, it is still sizeable. Further reducing the incentive charge reduces this difference accordingly.

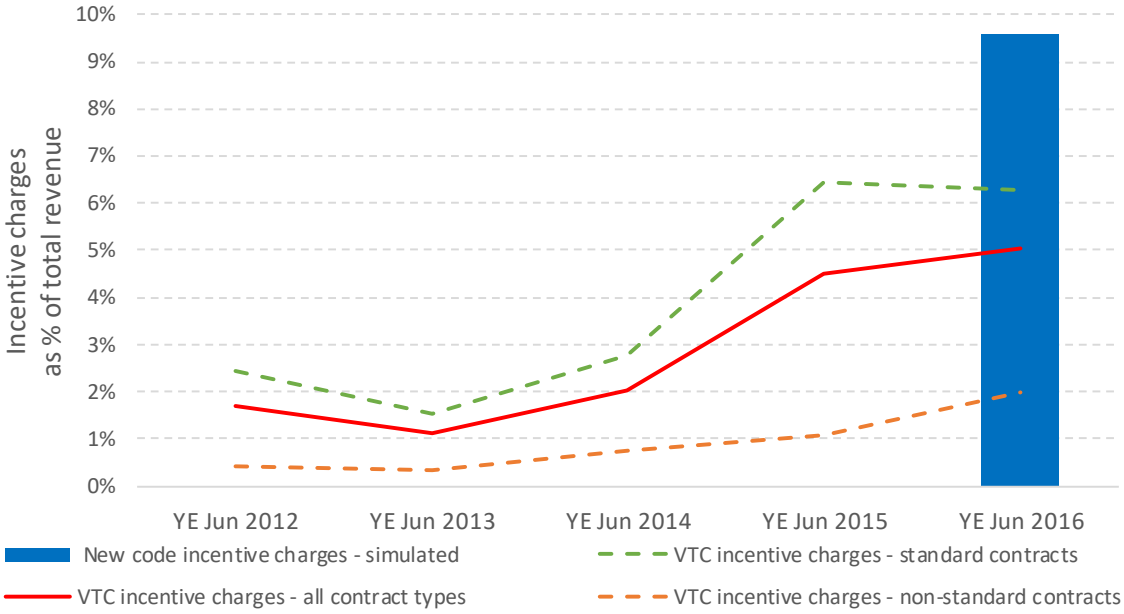
[231] First Gas, 19 March PAP submission, pp 19-20.

Figure 8 - Difference in incentive charges for different types of customer (after rebates)



We also compared the modelled incentive charges under the New Code to existing overrun charges under the VTC, as shown in Figure 9.

Figure 9 – Overrun charges as share of total revenue



The modelled New Code ratio represents a sizeable increase in incentive charges compared to historic data for all VTC contract types – roughly doubling in total size. Arguably, the historic data for VTC standard contracts is a more appropriate comparator (because the modelled New Code charges only apply for allocated gates, at which standard terms are more likely to apply). However, there is still an appreciable increase in charges even for this subset.

More importantly, comparing the ratio of incentive fees to total charges does not necessarily show the extent to which forecasting incentives would change because it is an "*apples with oranges*" comparison. Under the current VTC pricing regime, the optimal booking strategy for most shippers is to book slightly less than their peak capacity and then pay the overrun charge on a small number of days. The amount the shipper saves by paying less on every day of the year outweighs the overrun penalty. The exact incentive charge which minimizes a shipper's total

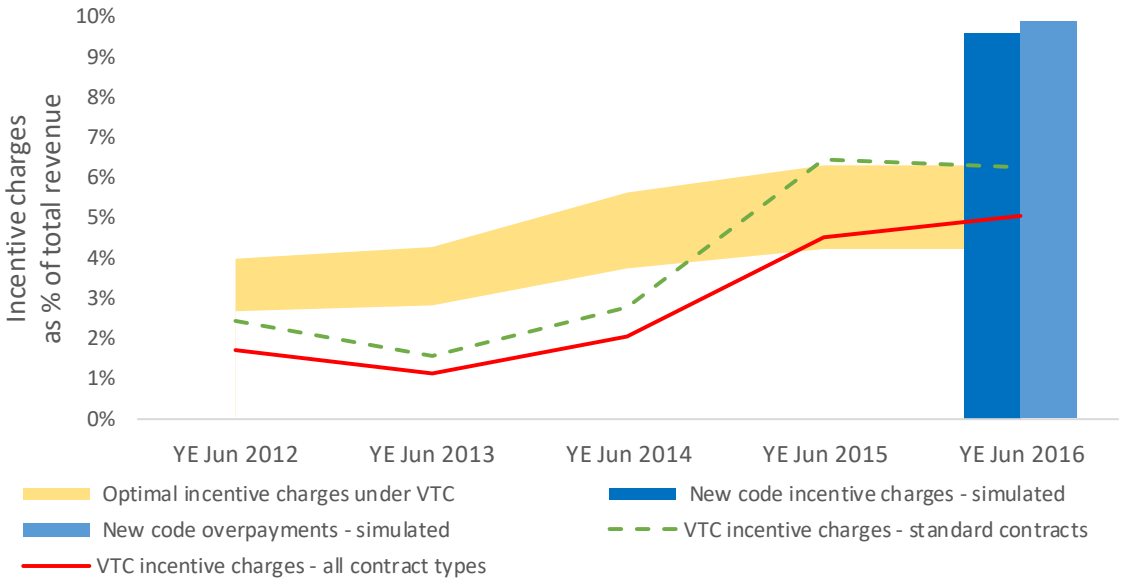
transmission charge is dependent on the shape of a shipper's demand[232]. For shippers at allocated gates, the average optimal incentive charge is about 5% (close to the observed ratio of fees). The key point here is that under VTC a shipper pays less overall if they book less than their peak capacity and pay some overrun fees. This is not the case under the New Code.

Instead, the optimal nomination strategy is to nominate accurately.[233] A shipper that is able to perfectly forecast their load minimizes their total transmission charge and pays no incentive charges.

This illustrates the difference between "*incentive charges*" and "*overpayments*." Overpayments are any payments that the shipper pays in excess of their minimum payment from nominating or booking capacity optimally. For example, paying for DNC and not utilising it represents an overpayment, but is not an incentive charge *per se*.

Figure 10 shows modelled overpayments under New Code, as well as the modelled incentive charges.

Figure 10 – Incentive charges and overpayments



Overpayments are slightly higher than incentive charges for the simulated New Code. Unfortunately, we are not able to calculate equivalent overpayments under the VTC from publicly disclosed data. However, we believe they are significantly lower than the observed incentive charges.

We draw this inference because of the observation that with optimal booking behaviour we would expect to see incentive charges account for around 5% of charges paid, and the historical level is very close to this[234].*Conclusion on daily overrun and underrun charges*

In summary, while the simple comparison suggests that incentive payments for mass-market shippers would increase by around 50%,[235] this is likely to understate the actual step-up in incentives to minimise nomination errors. This is because under the New Code, the full incentive

[232] For example, if a shipper only required gas for one month in a year, the optimal strategy would be to book no capacity, and only pay overrun charges. On the other hand, a shipper with perfectly flat load should optimally pay no overrun charges.

[233] Assuming there is no appreciable asymmetry in underrun/overrun penalty.

[234] For YE Jun 2016. Earlier years have lower optimal percentages because more of the VTC revenue was recovered under throughput charges.

[235] Based on comparing the modelled increase for allocated flows on the non-Maui system with the observed payment ratio for standard contracts.

charge pool is in play, whereas under VTC it is the difference between amount payable and the optimal level.

Another factor to consider is the extent to which daily nominations provide some system operational benefits where congestion does not apply. First Gas has stated that this is the case.[236] However, we are not aware of any analysis that quantifies this benefit. We assume such benefits would need to be in the millions of dollars per annum, if they were to reflect the estimated level of incentive payments.

As a further point of comparison, we considered the approach taken in Great Britain, which was among the first gas markets to introduce open access arrangements. In that system, shippers supplying non-daily metered (NDM) customers at the distribution-level are not required to provide daily delivery nominations. Instead, these nominations are made through a top-down estimation and allocation process run by the transmission system provider. The cut-off for requiring a customer to have daily metering is currently around 210 TJ/year, although customers below this threshold may be able to opt-in to daily metering. We understand a top-down approach for NDM users was taken because it was considered to be less costly (less replication of forecasting systems/effort across shippers), and more accurate (less difficulty in accounting for diversity effects in a consistent manner within, and across, shipper portfolios).

Submitter views

PAP submissions and cross-submissions are discussed in section 2.3

Conclusion on OR/UR charges

Overall, we conclude that the New Code is likely to appreciably increase the incentive to minimise nomination deviations compared to the status quo, and that it appears unlikely that this will yield commensurate efficiency gains where congestion does not apply.

D.5 ERM charges

We expect that the GTAC arrangements would reduce the instances where users inefficiently incur costs to balance their positions, when there is no system wide need for balancing actions. Our reasoning is illustrated with the following stylised example which was included in the PAP.

Imagine a pipeline user on the Maui system with a negative excess running mismatch position that will be cashed out at the close of the day. Let's also assume that the pipeline as a whole is in balance, because of an offsetting mismatch position held by another user.

Notwithstanding the system being in balance, the pipeline user with negative excess running mismatch will be incentivised to act to reduce this because of the automatic cash-out rule in the MPOC. One of the alternatives available to the user is to buy more gas in the spot market. Let's assume in this example that the market offers (ie sell) price is $8/GJ, and that our party is unwilling to pay that price. Let's also assume that the market bid (ie buy) price is $4/GJ. Our party presumably thinks the true value of gas to it is somewhere around the bid price, ie $4/GJ. (If it thought gas was worth more, it would bid at a higher price.).

If the party does nothing, it will be cashed out at the end of the day. For simplicity we will assume the cash-out price equates to the mid-point of the bid-offer price range (this ignores transaction costs etc.) – ie $6/GJ in this example.

[236] See slides entitled "*Value of nominations*" presented at workshop on 25 August 2017. The main value claimed is that nominations would provide an advance indication of intended use of the gas transmission system (week ahead, day ahead). This would provide the First Gas operators with an early indication of any deliverability concerns and allow them to better interpret real-time information on system use and take action where necessary. For example, First Gas could adjust its line pack and configure system operations if nominations indicated that offtake would not be matched by receipts.

The cost to the user of the cash-out will therefore be around $2/GJ, ie the difference between the cash-out price and its valuation of gas. If the user has other alternatives to clear the mismatch that are cheaper, it would be driven to use them to avoid a cash-out. For example, it might reduce its gas withdrawals by cutting demand, or increase gas injections by paying a supplier. As long as the net cost of those actions is less than $2/GJ that would be commercially rational for the user. However, it would be inefficient for the system as a whole because there is no pipeline running mismatch position that needs to be addressed.

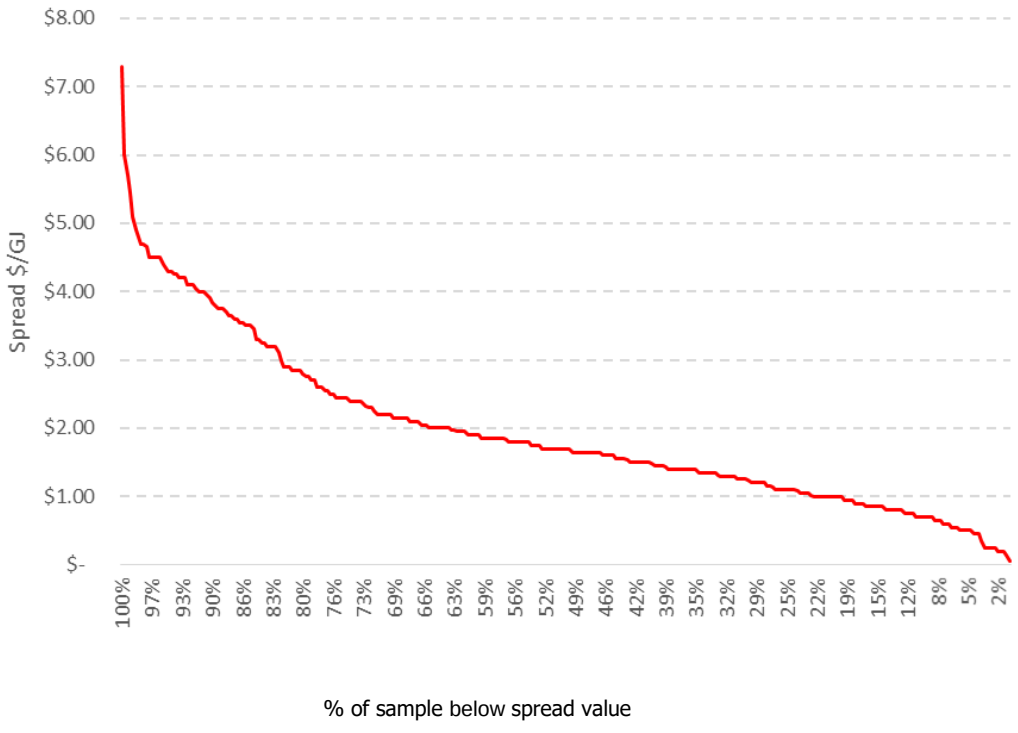
Likewise, the party with the offsetting positive mismatch position will be cashed out irrespective of the fact that the system is in balance. That party would also be driven to incur some costs to avoid cash-outs, and the upper limit is set by the difference between the cash-out price and its gas value (ie the $8/GJ offer price).

Now consider what the position would be under the New Code. No automatic cashout would occur because the system is in balance and no physical action is needed. Instead, the two parties would pay Excess Running Mismatch charges of $0.20/GJ for positive running mismatch and $0.60/GJ for negative running mismatch.

In our stylised example, the party with the negative excess running mismatch would incur a net cost of $0.60/GJ instead of $2/GJ (assuming no balancing action is needed by First Gas), and likewise the party with the positive excess running mismatch would pay only $0.20/GJ. In both cases, the incentive to undertake actions to balance their individual positions (and which have no effect on the system position) would be much reduced.

Of course, the preceding section discussed a stylised example with a sizeable spread between market bid and offer prices that could drive parties to undertake inefficient actions. To assess whether the New Code is likely to reduce inefficient incentives in practice, we have analysed historic spot price data between July 2016 and December 2017. Earlier data was excluded because there has been a noticeable tightening of spreads since mid-2016. Figure 11 shows the daily spreads at the close of trading, ranked from highest the lowest value.

Figure 11 – Closing spread between bid and offer prices (Jul 2016-Dec 2017)



Observations on ERM charges

Key observations from the data are:

1. The observed bid-offer spreads are relatively large (>$1.50/GJ) for much of the period;
   (a) On more than 95% of the observed days, the spread divided by two[237] exceeded $0.20/GJ (the positive ERM charge in the New Code). This suggests that the New Code would substantially reduce the incentive on parties with positive excess running mismatch to inefficiently incur balancing costs; and
   (b) On around 70% of the observed days, the spread divided by two exceeded $0.60/GJ (the positive ERM charge in the New Code). This suggests that the New Code would reduce the incentive on parties with negative excess running mismatch to inefficiently incur balancing costs.

However, there are some caveats to bear in mind:

1. The data in Figure 11 does not distinguish days when a physical balancing action was required. On those days, the observed spread would continue to be the relevant incentive under the New Code. This reduces the extent of improvement that can be expected under the New Code, although we are unable to quantify the size of this effect;
2. The data in Figure 11 does not include transaction costs which are incurred for spot market trades. These costs are likely to increase the incentive on parties to avoid cash-outs, and mean the extent of improvement under the New Code may be greater than implied by Figure 11; and
3. The analysis assumes that historic spreads provide a reasonable indication of future conditions. While we have no specific reason to expect any change, spot market spreads are influenced by a wide range of factors, including the strength of balancing incentives in the transmission codes.

Submitter views

PAP submissions and cross-submissions are discussed in section 2.3.

Some submitters[238] on the PAP considered that the example and analysis did not account for potential "*gaming*" opportunities associated with ERM charges. We sought cross-submissions on this specific point. As discussed in section 2.6, we consider that such gaming incentives are constrained by the requirement for mandatory cash-outs if a physical balancing action is triggered. A number of cross-submitters appear to share this view.[239]

Conclusion on ERM charges

We continue to believe that the GTAC arrangements would reduce the instances where users inefficiently incur costs to balance their positions, when there is no system wide need for balancing actions.

[237] The spread divided by two gives a measure of the cost incurred by the party facing cash-out – ie the difference between the cash-out price and the value of gas to the party with mismatch.

[238] For example MGUG, Shell, Trustpower at Q20 of their submissions on the PAP.

[239] For example First Gas, Genesis, Todd at SQ9 of their cross-submissions on the PAP.

D.6 Incentive Charge Rebates

Proposed change to the rebate arrangements

The New Code approach to recycling incentive charges is different to the current arrangement. The difference and the rationale for the change were explained in a First Gas memo to pipeline users dated 1 December 2017 (Rebate Memo).

Under the current MPOC/VTC rebate arrangements, for any year (year 1, say), First Gas' regulated revenue will include its estimated incentive charge revenue. In the following year (year 2), the actual incentive charge revenue is known and the difference from the estimate is carried forward in an adjustment account. In the subsequent year (year 3), the balance of the adjustment account is applied as a credit or debit to the standard transmission fees (capacity charges) in that year.

Under the New Code, incentive charges would be rebated in the same month the incentive charges are invoiced. GTAC s11.13 provides for total Daily OR Charges, UR Charges, Hourly OR Charges and Over-Flow Charges (what we collectively call the incentive charges) to be credited to shippers each month *pro rata* to each shipper's DNC charges.

First Gas considers that the benefits would be that the new arrangement would:

1. immediately recycle incentive charge revenue;
2. avoid the need for First Gas to forecast incentive charges; and
3. use the same approach as First Gas had earlier proposed for recycling PR revenue.

Example of how total charges compare

Table 26, copied from the Rebate Memo, traces through how the additional revenue earned from incentive charges finds its way back to shippers under current arrangements. It assumes that in year 1 $10m of incentive charges are estimated but $15m are received (marked in red). The additional $5m results in an over-recovery in year 1 which is returned through lower capacity charges in year 3 of the regulatory period (also marked in red). For simplicity the example ignores the time value of money.

Table 26 – Table from Rebate Memo illustrating current approach to rebates

	Regulatory Year				
	1	**2**	**3**	**4**	**5**
Supplementary capacity charges	20	20	20	20	20
Standard capacity charges (DNC)	90	90	~~90~~ 85	90	90
Incentive charges	~~10~~ 15	10	10	10	10
Total revenue	**~~120~~ 125**	**120**	**~~120~~ 115**	**120**	**120**

Table 27 is also copied from the Rebate Memo. It shows how this situation would play out under the New Code. The $15m of incentive charges invoiced in year 1 of the regulatory period would be credited throughout the year, so the net incentive charges (circled in red) are zero. The

second part of the table shows monthly incentives and rebates. For example in the peak charge month of August, the incentive charges of $4m are rebated.

Table 27 – Table from Rebate Memo illustrating GTAC ss11.12-11.13 approach to rebates

	Regulatory Year				
	1	**2**	**3**	**4**	**5**
Supplementary capacity charges	20	20	20	20	20
Standard capacity charges (DNC)	100	100	100	100	100
Incentive charges	-	-	-	-	-
Total revenue	**120**	**120**	**120**	**120**	**120**

Incentive charges	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Charged	0.5	0.5	0.5	0.5	1	1	1	4	2	2	1	1
Rebated	-0.5	-0.5	-0.5	-0.5	-1	-1	-1	-4	-2	-2	-1	-1

The rebates would be *pro rata* on DNC charges. The Rebate Memo did not state how much the DNC charges would be in each month but, given that the annual DNC charges were assumed to be $90m, we can assume it would be around $10m in the peak month of August. In that case all shippers would receive a discount of 40% on their DNC charges in August, funded by the set of shippers who paid the incentive charges of $4m that month (this assumes all gas is shipped on standard TSAs for simplicity).

To see how this might affect individual shippers in different circumstances, we develop the example by assuming that the charges fall across two shippers. We initially (in Table 28 and Table 29) assume that each of those shippers face the same demand uncertainty, and therefore incur the same proportionate levels of incentive charge. We then (in Table 30 and Table 31) assume that the larger shipper is better able to estimate its demand, and therefore incurs proportionately less incentive changes.

Table 28 – Example of current approach to rebates with two shippers who are equally able to forecast demand

	Regulatory Year				
	1			**Future year**	
	Capacity charges	Incentive charges	Total charges	Carry forward	Net position
Shipper A	90	12.3	102.3	-4.1	98.2
Shipper B	20	2.7	22.7	-0.9	21.8
Total Revenue	**110**	**15**	**125**	**-5**	**120**

Table 29 – Example of New Code approach to rebates with two shippers who are equally able to forecast demand

	Regulatory Year			
	1			
	Capacity charges	Incentive charges	Incentive rebates	Net position
Shipper A	98.2	12.3	-12.3	98.2
Shipper B	21.8	2.7	-2.7	21.8
Total Revenue	**120**	**15**	**-15**	**120**

Table 30 – Example of current approach to rebates with the larger shipper better able to forecast demand

	Regulatory Year				
	1			**Future year**	
	Capacity charges	Incentive charges	Total charges	Carry forward	Net position
Shipper A	90	11	101	-4.1	96.9
Shipper B	20	4	24	-0.9	23.1
Total Revenue	**110**	**15**	**125**	**-5**	**120**

Table 31 – Example of New Code approach to rebates with the larger shipper better able to forecast demand

	Regulatory Year			
	1			
	Capacity charges	Incentive charges	Incentive rebates	Net position
Shipper A	98.2	11	-12.3	96.9
Shipper B	21.8	4	-2.7	23.1
Total Revenue	**120**	**15**	**-15**	**120**

Example of how marginal charges compare

The above example shows how aggregate shipper positions compare, but not how a shipper would view its marginal position. To illustrate the marginal viewpoint, consider a two shipper example where Shipper A has a 90% market share, Shipper B a 10% market share, and there is a posted incentive fee of $1/GJ.

Both shippers face the same incentive fee of $1/GJ, but Shipper A would estimate its marginal charge to be $1 less $0.90, since it expects on average to receive 90% of any payment it makes as a rebate. Shipper B would estimate the marginal charge to be $1 less $0.10, since it expects 10% on average of any payment to be rebated to it.

This situation would apply under both the current rebate arrangements and the New Code rebate arrangements. However, the effect might be more influential under the New Code arrangements since the rebate is more immediate (in fact simultaneous to the payment) and the incentive charges appear to comprise a higher proportion of revenue.

Conclusion on incentive charge rebates

From the example, we conclude that, under the New Code rebate arrangement there would be no need for First Gas to forecast incentive charges. As shown in Table 27, the quantum of incentive charges would not affect the annual revenue.[240]

In contrast, under the current rebate arrangement, the incentive charge revenue significantly affects the overall outcome against the approved regulated revenue. In the Table 26 example, incentive charge revenue is $5m higher than estimated in year 1 and, to correct for this, $5m is carried forward and credited against capacity charges in year 3.

The capacity fees would be higher, because those fees need to generate the full regulated revenue ($120m in Table 27).

Under the current arrangement, the capacity fee calculation includes an allowance for incentive charges, so the capacity fees can be lower ($110m in Table 4).

The capacity fees would be independent of the level of incentive fees. In other words, it doesn't matter how high the incentive fees are set, the capacity fees would be the same (because the incentive charges are fully recycled, regardless of how high or low they are). For example, in Table 27, the capacity charges are $120m, regardless of the level of incentive charges.

Under the current rebate arrangement the capacity fees will be lower if the incentive fees are set higher (because the estimated revenue from incentive charges would be higher). For example, in Table 26, the capacity charges are $110m, because $10m of estimated incentive charges also contributes to the approved regulated revenue of $120m.

The rebates could be a significant proportion of DNC charges. The example shows a peak month (August) rebate of 40% of the DNC charges.

Under the current rebate arrangement only the difference between the actual and estimated incentive charges is carried forward to adjust future DNC charges, not the full amount of the incentive charges.

If all shippers are equally good/bad at estimating demand, the average total charges would be the same as under the current rebate arrangements. The relative size of the shipper would not matter (compare final columns in Table 30 and Table 31).

The strength of the marginal cost signal will be in inverse proportion to a shipper's market share. In the example given, the shipper with a 90% market share faces a marginal cost signal of $0.10/GJ while the shipper with a 10% market share faces a marginal cost signal of $0.90/GJ. While this is true for both the current and proposed rebate arrangements, the New Code arrangements make it more visible, immediate and, we would expect, influential.

[240] The examples assume that there will be no uncertainty about the quantum of each year's capacity charges. However, in practice, First Gas needs to forecast each year's demand in order to set the capacity fees, and there will be capacity charge overs and unders to carry forward regardless of which incentive charge rebate arrangement applies. It is just that the capacity charges are much easier to estimate than the incentive charges, so a significant source of uncertainty would be removed.

Although, as discussed in item 6 above, the immediate marginal cost signal is likely to be more influential under the New Code proposal, the longer-term incentive to perform better than average (ie predict demand better than other shippers in order to reduce incentive charges) is actually the same as under the current rebate arrangement. This can be seen by comparing the net positions (the final columns) of Table 30 and Table 31. The reason for this is that both the proposed and current rebate arrangements would fully recycle the incentive charges in proportion to capacity charges. With the current rebate mechanism (Table 30) the amount is recycled via the initial estimate of the fees and the subsequent carry forward of the difference between the actual and the estimate. With the proposed rebate mechanism (Table 31) the amount is recycled via a rebate in the same month the charge is incurred. In both cases the recycling is in proportion to the capacity charges, so the outcome is the same on average.[241]

Stakeholder concerns

In addition to a general concern that the proposed change to the rebate method had not been sufficiently discussed, submissions[242] raise concerns that rebates might:

1. favour larger shippers;
2. distort the incentives under the New Code, including to ensure accurate daily nominations and the need to procure Priority Rights; and
3. allow rebates to be captured by retailers (shippers) and not passed through to end-users of gas.

Also, The Lantau Group (see section 2.11, item 10) note that rebate mechanism makes the marginal cost of capacity different for each shipper, frustrating competition. It proposes that revenue should be rebated in a manner consistent with the objective of the incentive charge, thereby sharpening the incentive.

Todd[243] considers the PAP analysis exaggerates the marginal cost issue. It believe that incentive fees would be no more than 30% of total transmission charges for any shipper, probably substantially less. Also the analysis ignores that under the proposed rebate mechanism, the rebate would not be affected by changes in the shipper's demand over time (unlike the current rebate that is affected by changes between year 1 and year 3), nor would it be smeared across a full year. It would therefore be easier to pass on accurately to end-users, and easier for end-users to verify.

MGUG[244] believe the proposed rebate would be detrimental to end-users. It notes that, except for large end-users, a bundled tariff for delivered gas usually applies. Given the imperfect competition, it considers that such a tariff would be less likely to include rebates under the proposal (ie the retailer would take the rebate as profit). It also thinks the proposal would lessen incentives on First Gas to keep its incentive charges low.

Conclusion on incentive charge rebates

In relation to the stakeholder concerns, we agree with stakeholders who say that this proposed change to the rebate mechanism would be significant, and has not been intensively discussed. We also agree with Todd's comments on the possibly positive effects from some aspects of the proposal that, for simplicity, we have not included in our analysis. We therefore consider that, if

[241] This does assume that the year 3 capacity charges will be in the same proportion to the year 1 capacity charges.

[242] For example Genesis, MGUG, Shell at Q21 of their submissions on the PAP.

[243] Todd, 19 March PAP submission, p 12-13, Q21.

[244] MGUG, 19 March PAP submission, p15-17, Q21

First Gas does adopt the proposed rebate mechanism, there should be a post-implementation review to evaluate its impact.

We do not believe that the proposed rebate mechanism favours larger shippers in the long term. As stated in conclusion 5 above, if shippers are equally good at estimating their demand, their total charges will be the same, regardless of the whether the rebate mechanism is as at present, or as proposed (compare final columns in Table 30 and Table 31). However, we accept that in the short term, the marginal incentive on a smaller shipper will be stronger.

Similarly, we agree with the view expressed in some submissions that the rebate mechanism weakens the incentive signal at the margin, relative to a no-rebate model. However, this issue also applies under the status quo. It also remains the case that a shipper who can do better than average at forecasting its demand will have lower incentive charges (this, after all, is the purpose of the incentive charges).

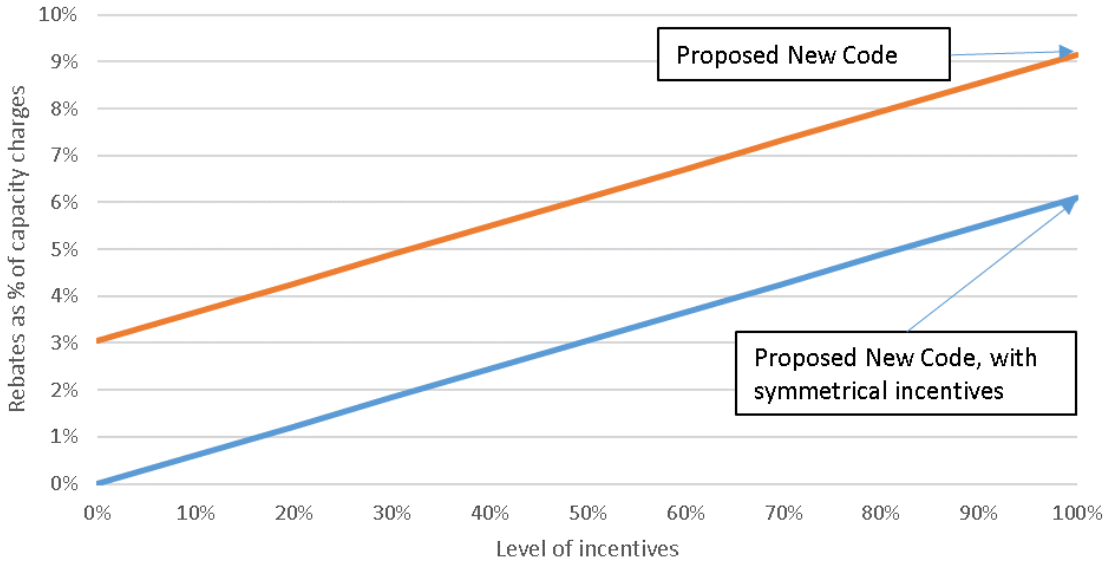
When a shipper is better at forecasting its demand (and so minimising its incentive charges) than the average it will benefit at the expense of shippers who are worse than average. For example, from Table 31 it is clear that Shipper A, benefits $1.3m at the expense of Shipper B. The higher the incentive charges are, the higher this wealth transfer will be. It is very important that, regardless of which rebate mechanism is adopted, the incentive charges are set at an efficient level (ie that they reflect real economic costs).

Regarding the concern that rebates may be captured by retailers (shippers) and not passed through to end-users of gas, we think that situation should only arise if the retail market is inefficient. However, we do accept that, since incentive fees (and hence rebates) would be higher than under the New Code, there is more scope for end-users to experience some value leakage from this source. In this respect, we note our wider concerns about the level of incentive charges. If these issues were addressed, we believe the concerns about the rebate mechanism would be much reduced – because there would be substantially smaller cashflows that are subject to rebating.

This is illustrated in Figure 12 which shows how reducing incentive charges would affect rebates. We estimate that the New Code produces rebates of about 9% of capacity charges. Changing the incentive fees (as proposed by First Gas) to produce symmetrical incentives reduces this to about 6%. Further reducing incentive charges correspondingly reduces the magnitude of rebates relative to capacity charges.[245]

[245] The assumptions used to produce this chart are the same as those used to generate Figure 8

Figure 12 - Magnitude of rebates under New Code



In short, we conclude that if the incentive fees are set at an efficient level, the proposed rebate arrangements should not have the detrimental effects claimed by some stakeholders. But we do have concerns about whether the incentive fees applying in non-congested situations are disproportionately high.

D.7 Agreed Hourly Profiles (AHPs)

Under the GTAC, a shipper's MHQ would generally be 1/16th of its MDQ. However, a shipper may apply for an AHP at a Dedicated DP at any nomination cycle, for the rest of the current day and subsequent days up to a maximum of 7 days (GTAC ss3.26-3.28). First Gas will approve an AHP request unless it affects any shipper's DNC, exceeds the physical deliverability of the DP, or unduly increases the risk of breaching an Acceptable Line Pack Limit (GTAC s3.31).

Hourly overrun charges apply only at Dedicated DPs, and only where the metered quantity is 200 GJ or more.

There is no equivalent to AHP in the MPOC or VTC.

Submitter views

Todd note that the arrangements under the MPOC and VTC do not seem to have been a problem, so it questions why AHP is needed. It is concerned how it would impact on the operation of large industrial sites and gas fired power stations.

Vector notes that AHP effectively amends DNC, and through what appears to be drafting errors could provide more DNC than a shipper had requested.

Several Shippers and Interconnected Parties have questioned why hourly overrun charges should apply at Dedicated DPs but not to shared DPs. Our view is that this simply reflects the practical difficulties of identifying the causer(s) of overruns at a shared DP when many of the downstream sites will not have meters capable of logging hourly consumption.

There also seems to be something of an anomaly that where an OBA exists at a Dedicated DP the OBA Party becomes liable for any hourly overrun charges but is not able to apply for an AHP, ie the OBA Party has to rely on its supplier Shipper to obtain an AHP. However, that Shipper arguably has weak incentives to acquire the AHP as the OBA Party has the liability for hourly overrun charges (GTAC s11.12).

In its submission, Methanex considered that there were a number of shortcomings in the AHP design, including:

1. OBA Parties are excluded from being able to acquire an AHP;
2. AHPs being available for up to a seven day period means that the GTAC arrangements are somewhat more permissive than the equivalent in the MPOC;
3. MPOC places obligations for peaking limits on interconnected parties rather than shippers, reflecting that they are best placed to manage those obligations; and
4. there is a level of consistency in the MPOC in that peaking limits are consistently 125% for DPs and 150% for receipt points. The arrangements in the GTAC do not seem to require consistent application.

One of Methanex's key points was that it would expect AHPs to be available for extraordinary operational circumstances and was concerned that AHPs may be available for a variety of commercial reasons. Alongside that, Methanex was also concerned GTAC s3.31 is drafted in a fashion that means First Gas is obliged to provide AHPs except where granting the AHP would:

(a) require it to curtail any Shipper's request:

(i) in the same nominations cycle, for DNC; and/or

(ii) previously approved DNC or Supplementary Capacity;

(b) exceed the Physical MHQ of the relevant DP; or

(c) unduly increase the risk of breaching an Acceptable Line Pack Limit.

Conclusion on AHPs

Gas Industry Co considers that it is important to provide for flexibility in the arrangements where that is needed. But we are concerned that a common good, such as operational flexibility, ought to be provided without undue discrimination. We think that submitters have raised a number of legitimate concerns about AHP that suggest that further design work is required before the product can be judged fair and reasonable.

D.8 Liabilities

The following table provide our comments on the liability framework in the GTAC. The liability provisions are largely the same as the current MPOC and VTC in a number of respects, but there are important differences.

Issue	Comment
Interaction between the GTAC (TSAs) and ICAs	GTAC s7 requires the liability arrangements in GTAC s16 to be reflected in ICAs. We think that approach does not take into account differences in the obligations that apply to Shippers and Interconnected Parties. Some of the obligations that apply to Interconnected Parties will require exclusions and limits on liability that are different to s16 of the GTAC.
GTAC s1.1. definition of "*Reasonable and Prudent Operator*"	We think that, notwithstanding the changes to the drafting of the definition of "*Reasonable and Prudent Operator*", reference may still be made to international practice when assessing conduct, but

Issue	Comment
	local practice may also be relevant. We think that change to the drafting is neutral. We are concerned that inclusion of the reference to "*having due consideration to other users of the Transmission System*" may increase the scope for dispute give the vagueness of that concept.
GTAC s12.11	Unless it can be shown that First Gas caused gas to become Non-Specification Gas, we think that GTAC s12.11 effectively excludes any liability that First Gas may have for loss that a Shipper suffers in relation to the taking of Non-Specification Gas (whether the RPO standard has been breached or not). This seems to be inconsistent with GTAC s 12.3 and deterioration on the MPOC and VTC.
GTAC ss16.4 and 16.5 "*Capped Liability*"	The liability caps under the GTAC appear to be adopted from the MPOC and the VTC. However, that does not take into account the fact that the caps in the MPOC and VTC have been adjusted for inflation on an annual basis since the commencement of those codes. It is also unclear whether the various incentive and other charges are included within the liability cap.
GTAC s16.2 "*Limitation of a Party's Liability*"	This does not carve out liability for the injection of Non-Specification Gas (or other relevant liabilities) from the general exclusion of liability to third parties. That means that a Shipper or Interconnected Party would be unable to recover any amounts claimed by third parties. The MPOC and the VTC both include the ability for a Welded Party or Shipper to claim for damages awarded against a Welded Party or Shipper in favour of a third party.
GTAC s16.12 "*Subrogated Claims*"	The subrogation process in GTAC s16.12 is intended to provide Shippers with a right to claim against other Shippers or Interconnected Parties in relation to breaches that cause a Shipper Loss. In relation to liability for the injection of Non-Specification Gas, we have concerns regarding the following: 1. The effectiveness of the subrogation provisions (ie whether the subrogation provisions enable shippers to recover their loss), particularly when compared to the back-to-back indemnities in the MPOC and VTC that apply to the injection of Non-Specification Gas.

Issue	Comment
	2. Even if the subrogation process is effective, whether this new process (and the reallocation of risk) is an improvement on the MPOC and VTC.
MPOC s14 and s12.4 "*Incentives Pool*" and VTC s8 "*Balancing and Peaking Pool*".	There is no equivalent to the liquidated damages mechanism in the MPOC and the VTC if a Shipper or Welded Party is unable to offtake gas due to the actions of another Shipper or Welded Party. This risk remains under the GTAC, but the equivalent mechanism for a Shipper or Interconnected Party to recover loss under the GTAC is unclear.
GTAC s16.1 and various references	There are various references to "*reasonable endeavours*" and "*to the fullest extent practicable*" in the context of the obligation to mitigate loss. This looks to be a consistency issue arising from the adoption of the VTC drafting for some provisions, while new drafting has been inserted for others.
GTAC ss16.1, 9.12(b), 11.9(b), 12.2, 12.10 and ICAs	The use of the RPO standard has been modified in the GTAC when compared to the MPOC and the VTC. Under the MPOC and the VTC the need to establish a breach to the standard of an RPO was only avoided in the case of the provisions regarding Non-Specification Gas (which is not the case under the GTAC), not other provisions. We think that exclusions from the need to establish a breach of the RPO standard should be reconsidered.[246]

Conclusion on liabilities

We note that some submitters shared some of our concerns regarding the liability arrangements in the GTAC. Those submitters who had strong views are Fonterra, Methanex, Trustpower and Vector.

As we have mentioned in our assessment of the governance terms, an efficient set of liability arrangement are legally robust, reduce the risk of disputes and incentivise appropriate behaviour. In light of the above issues, we consider that the liability arrangements in the GTAC are less efficient than the MPOC and the VTC. We also think that the lack of certainty regarding liability for Non-Specification Gas has a potentially negative impact on reliability given the impact that injection of Non-Specification Gas may have on security of supply. In our view, the overall balance of the liability arrangements is not as fair or reasonable as the MPOC and the VTC.

[246] For example, we have previously discussed the reasonableness of exclusions from the need to establish a breach of the RPO standard in the context of Operational Flow Orders (OFOs).

D.9 Target Taranaki Pressure (TTP)

Why TTP matters

The exit pressure from a producer's plant must exceed the pressure in the transmission system for gas to flow. If the pipeline pressure rises to a level above that which the injecting party is able to achieve then that producer will be "*shut-in*", ie unable to inject its gas into the pipeline and, therefore, unable to meet its commercial obligations. The TTP range is therefore set so that:

1. the lower limit is sufficient to allow the transmission owner to maintain sufficient line pack in the system to meet its delivery obligations and to provide a cushion against contingencies; and
2. the upper limit is below the pressure that would shut-in producers.

The latter point is important because a producer that is shut-in is likely to experience a shutdown of its production facilities that may take significant time to restart. Depending on the size of such a producer, the transmission system could potentially trip into a critical contingency situation. This highlights the importance of maintaining pipeline pressure within the TTP range.

Also, the lower the pipeline pressure is within the TTP range, the lower will be the producer's compression cost to inject its gas (and the higher will be First Gas' compression cost to transport that gas).

A producer has provided Gas Industry Co with some information concerning the interplay between the economics of production and the pressure against which the producer is required to inject. That information was provided in confidence but shows that there are two costs associated with high backpressures that are experienced by producers are:

1. higher backpressures increase production costs and reduce flexibility. Mitigating these effects can be a significant cost
2. the ultimate recovery of hydrocarbon resources can be adversely affected by higher backpressures.

The proposed change

Under the MPOC, TTP is defined as:

> …the pressure calculated by TSP at or near the Bertrand Road Welded Point to be sufficient to:(a) deliver Shippers' Approved Nominations; and(b) provide, using reasonable endeavours, a reasonable quantity of Gas for use in a Contingency Event; and(c) provide, using reasonable endeavours, a reasonable quantity of Gas to allow for delivery within the relevant Peaking Limit and Daily Operational Imbalance Limit.

Then, in MPOC s2.5, First Gas, acting as RPO, is required to:

> …use reasonable endeavours to manage the Target Taranaki Pressure to be as low as practicable while maintaining sufficient Line Pack to meet its obligations under this Operating Code

MPOC s2.19 specifies that the TTP shall be:

> …between 42 and 48 bar gauge, except as may be required as a result of a Contingency Event, Force Majeure Event or Maintenance.

The GTAC treats TTP somewhat differently. It notes that TTP is for the benefit of injecting parties located between Oaonui and the Turangi Mixing Station, and GTAC s7.13(e) requires that:

> …First Gas will use reasonable endeavours to maintain the pressure in that line at or near the Bertrand Road Offtake between 42 and 48 bar gauge (Target Taranaki Pressure), subject to a Critical Contingency, Force Majeure Event, Emergency, Maintenance or the aggregate ERM of Shippers and/or OBA Parties

The RP ICA is silent on the TTP, except to note in RP ICA s3.1(b) that the Interconnected Party acknowledges and agrees that:

> …apart from the provisions of the Code relating to the Target Taranaki Pressure, First Gas shall not be obliged to operate its Pipeline within any particular pressure range to facilitate the injection of Gas at any Receipt Point

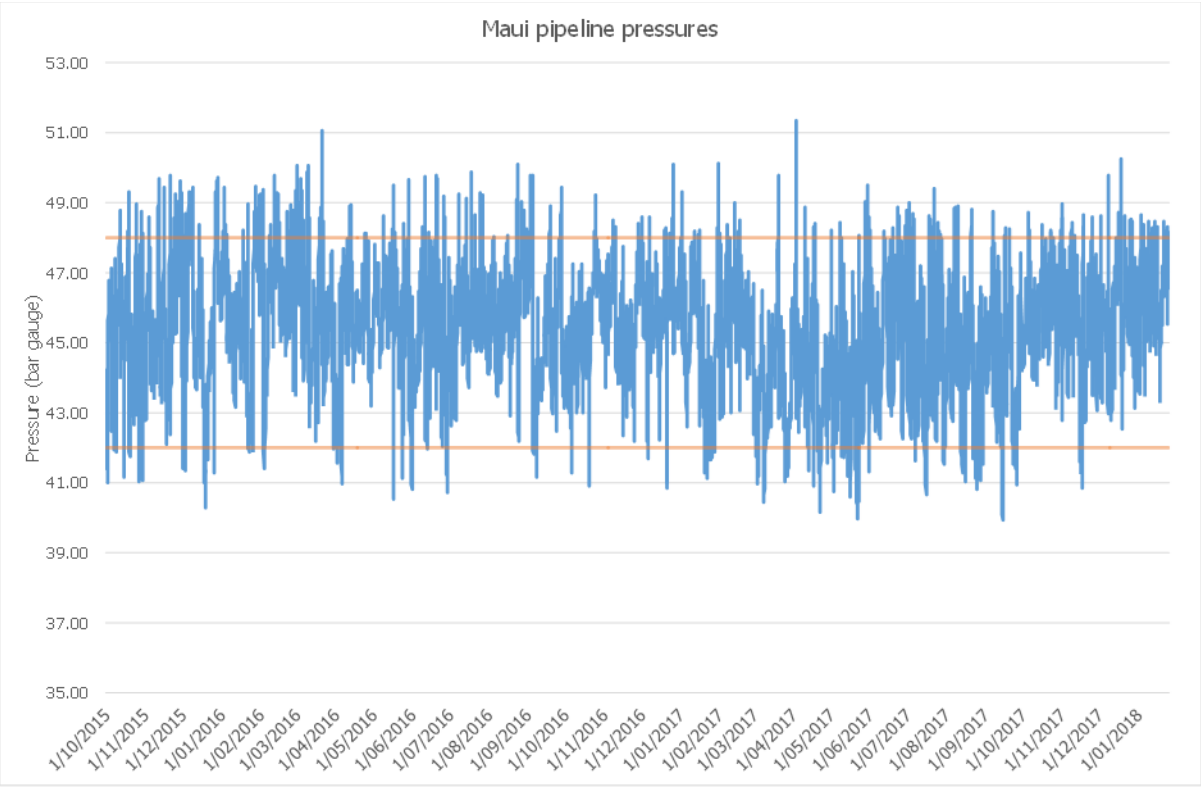
From the above extracts the MPOC places an obligation on First Gas to manage the TTP to be "…*as low as practicable…*" consistent with maintaining line pack sufficient to meet its obligations, but there is no equivalent in the New Code.

Operating practice

The proposed TTP obligations under the New Code appear to reflect the established practice for managing pressure in that segment of the Maui pipeline.

Figure 13 shows the variation in Maui pipeline pressures in the Taranaki region since October 2015 (the period since the introduction of MBB). As can be seen from the chart there are numerous excursions both above and below the TTP range. The pipeline pressure is below 42 bar for 2.5% of observations and is above 48 bar for 6.5% of observations (ie the pressure is outside of the range almost 10% of the time). Additionally, the shape of the chart does not suggest that there is any consistent bias towards the lower end of the range as might be expected from the wording in the MPOC. That appearance is consistent with the 50th percentile of the data being at 45.63 bar, a margin above the mid-point of the 42 to 48 bar range.

Figure 13- Maui pipeline pressures since introduction of MBB



Submitter views

In section 4.5 (Balancing) of the PAP we noted that concern had been expressed by stakeholders over the different treatment afforded the maintenance of TTP as between the MPOC and the New Code. This was further examined in Appendix C of the PAP and submitters asked for their views.

There was no clear consensus in submissions on the PAP regarding this issue. While some parties (such as MGUG) express concern regarding the security of supply risks associated with excursions above the upper TTP limit, there were several submitters who either say they had no concerns or are silent. Shell[247] and Methanex[248] both express misgivings regarding the New Code balancing arrangements that, together with more relaxed drafting in respect of TTP management, might lead to more frequent and/or sustained excursions.

First Gas[249] points out that, based on the chart reproduced in Figure 13 below, the MPOC "…*makes a promise it can't keep*", basing that view on the fact that movements in TTP are driven by the combination of IP injections and shippers' management of their offtakes. On the strength of that, First Gas considers that the wording in the New Code "*…better recognises the [present] reality*." Its submission goes on to say that First Gas "*…does not intend to operate the system under the [New Code] in a way that would prevent us from maintaining the TTP as at present*."

Conclusion on TTP

We conclude that there are potential efficiency gains that arise from managing pressure within the TTP range (and if producer economics are considered, potentially more gain from managing closer to the bottom of that range). First Gas comments that the GTAC TTP provisions reflect current practice. This may be so, but they still relax the current MPOC provisions. The risk of any relaxation in pressure management within the Taranaki region is that the reliability of gas receipts into the pipeline could be compromised, which goes directly to the reliability Criterion.

The TTP has been in existence for many years and, despite excursions outside of the range, the pressure falls within that range over 90% of the time. We have seen no evidence supporting a change to the TTP or justifying a relaxation of the management standards. Accordingly, it would appear efficient and prudent to maintain at least the level of scrutiny and control that is currently required by the MPOC. While not a significant issue for most submitters, there is still a small number that voice concern over TTP management under the New Code, linking that to their concerns over balancing.

[247] Shell, 19 March PAP submission, p6, Q6, and p9, Q19.

[248] Methanex, 19 March PAP submission, p8, Q6, and p20, Q19.

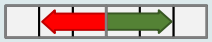
[249] First Gas, 19 March PAP submission, p33, section 4.6.

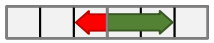
Appendix E The Red Arrows – aspects of the New Code that are assessed negatively

This Appendix collates each assessment in the Chapter 4 bottom-up analysis that contained a red arrow, and provides a brief explanation of why we assessed that feature as negative. The intention is to coral together all of the features that could be improved.

Table 32 – Reasons for assessing some aspects of the GTAC arrangements negatively

Aspect Criteria under consideration		Assessment	Reason for red arrow
Gas transmission products			
	Efficiency: Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements)		Transition to the GTAC regime would involve costs for all participants including one-off set-up costs (renegotiating contracts, introducing new procedure and systems etc), and on-going increased transaction costs, primarily related to increased nominations.
	Efficiency: Criterion 5 (sustained downward pressure on costs and prices)		Increased nomination workload costs, particularly on shippers.
	Fairness: Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions)		Fairness would deteriorate due to uncertainty regarding AHP arrangements.

Aspect Criteria under consideration		Assessment	Reason for red arrow
Pricing			
	Efficiency: Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements)		Concerns that incentive fees (daily and hourly overrun, and daily underrun fees) may be disproportionately high (particularly in non-congested situations), and that ERM charges are asymmetric.
	Efficiency: Criterion 3 (reducing barriers to competition)		Concerns regarding the quantum of incentive charges and, because of the rebate mechanism, smaller shippers will effectively face higher marginal incentive charges, and less informed end-users may not get the benefit of any rebates.
	Efficiency: Criterion 5 (sustained downward pressure on costs and prices)		As above, in relation to Criterion 3.
	Efficiency: Criterion 9 (facilitating competition in upstream and downstream markets)		Concern that un-necessarily high incentive charges distort prices and modestly reduce competition (at least until the fees are changed).
	Efficiency: Criterion 10 (full cost of producing and transporting are signalled to consumers)		As above, in relation to Criterion 3.
	Fairness: Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions)		High OR/UR charges combined with the rebate mechanism, and the scope of hourly overrun fees.
Energy quantity determination			
	Reliability: Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently)		The 9 month interval before special tests is worse than under the MPOC (60 days) or VTC (90 days), and the absence of a completed Metering Requirements document, or an appropriate process for development of that document.

Aspect Criteria under consideration		Assessment	Reason for red arrow
	Fairness: Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions)		Meter owners may be affected by the Metering Requirements document, as yet unavailable.
Energy allocation			
	Efficiency: Criteria 1, 2 and 14 and 17 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements, and accurate, efficient and timely arrangements for … reconciliation of upstream gas quantities)		Interconnected parties may be discouraged from using OBAs because they would have no entitlement to AHPs, and would not be primarily responsible for choosing the allocation method, even when the RP of DP is owned and controlled by them.
	Reliability: Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently)		Absence of the Wash-up Agreement.
Balancing			
	Efficiency: Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements)		Uncertainties regarding initial tolerance levels, and how they are set.
	Fairness: Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions)		Initial balancing tolerances are unknown.

Aspect Criteria under consideration		Assessment	Reason for red arrow
Curtailment			
	Reliability: Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently)		OFOs may not be directed at the party best able to respond.
Congestion Management			
	Efficiency: Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements)		The First Gas discretion to negotiate SAs and IAs could lead to outcomes that undermine the benefits of PRs.
	Efficiency: Criterion 3 (reducing barriers to competition)		The First Gas discretion to negotiate SAs and IAs has the potential to increase barriers to competition.
	Efficiency: Criterion 5 (sustained downward pressure on costs and prices)		Prices would increase to reflect added cost of PR auctions.
Gas quality and odorisation			
	Reliability: Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently)		In some instances, the obligations designed to protect customers from non-specification gas have been reduced.
Governance			
	Efficiency: Criteria 1, 2 and 14 (delivering gas efficiently and facilitating ongoing supply by providing access and competitive market arrangements)		The liability arrangements under the GTAC may increase the risk of disputes and incentivise inappropriate behaviour. The short term of the GTAC has a modest negative impact on efficiency.

Aspect Criteria under consideration		Assessment	Reason for red arrow
	Reliability: Criteria 1, 2 and 6 (providing reliable and competitive arrangements and allocating risks properly and efficiently)		Material changes have been made to the liability arrangements in relation to the injection of Non-Specification Gas. We have concern regarding the enforceability of those arrangements when compared to the current regime under the MPOC and VTC. Accordingly there is a moderate negative impact on the proper and efficient management of risks relating to security of supply.
	Fairness: Criteria 13 and 18 (gas is delivered to existing and new customers in a fair manner, and transmission pipelines can be accessed on reasonable terms and conditions)		We have concerns regarding the process for enforcing key aspects of the liability framework as well as a range of other concerns regarding the liability framework noted in section D.8, Appendix D. We think that aspects of the code change, termination and confidentiality arrangements have a negative impact on Shippers when compared to the MPOC and VTC and are not a reasonable change.

Glossary

Term	Description
AHP	Agreed Hourly Profile. A GTAC term for a demand profile requested by a shipper and agreed by First Gas. AHPs apply only at Dedicated DPs.
Allocation Agreement	For receipt and/or DPs where gas quantities must be allocated between parties (other than in accordance with the Downstream Reconciliation Rules), an agreement between those parties and an Allocation Agent about how those quantities will be calculated and notified.
Available Operation Capacity	A term used in the GTAC to mean the amount of capacity that First Gas determines it can make available as DNC at a DP without exceeding the capacity of that DP or any Security Standard Criteria.
Beneficiary DP	A term used in the GTAC to mean a DP where First Gas has entered into an IA for the purposes of Congestion Management. The other users of the DP are the beneficiaries since they benefit from the capacity freed up when such an IA is interrupted.
BPP	The Balancing and Peaking Pool, a mechanism in the VTC to ring-fence and allocate MPOC cash-outs among VTC shippers via a trust account.
Cash-Out	A forced sale or purchase of a user's gas by First Gas to resolve an outstanding mismatch/imbalance position.
Congestion Management	A term used in the GTAC to mean the measures First Gas may take to alleviate congestion. These may include (to the extent necessary) curtailing requests for interruptible, supplementary capacity, NQ not covered by PRs and, as a final resort, NQ covered by PRs.
D+1	D+1 commonly refers to a system for allocating quantities of gas at a shared point among the parties flowing gas through that point, on the day after gas flow.
DDR	Daily Delivery Report.
DNC	Daily Nominated Capacity, the core product offered under the GTAC.
DP	Delivery Point
Dedicated DP	A GTAC term for a DP that supplies gas to a single end-user.
DRRs	Gas (Downstream Reconciliation) Rules 2008.

ERM	Excess Running Mismatch. A GTAC term meaning a party's Running Mismatch in excess of its tolerance.
GPS	Government Policy Statement on Gas Governance, April 2008
GTA	A Gas Transfer Agreement is an agreement specifying how the quantities of gas transferred between parties at a point will be calculated. The agreement is between those parties and a Gas Transfer Agent, who is responsible for doing the calculations and notifying the results.
GTAC	Gas Transmission Access Code the current version is dated 8 December 2017.
GTPM	Gas Transmission Pricing Methodology.
HDR	Hourly Delivery Report.
IA	A term used in the GTAC and VTC to refer to agreements that provide for deliveries to be interrupted at First Gas' discretion.
ICA	An Interconnection Agreement is an agreement between First Gas and an interconnected party.
Imbalance	Generally this term is used to mean a situation where flows do not match scheduled quantities or receipts do not match deliveries. More specifically, the difference in scheduled flows and actual flows at an interconnection point is referred to as *"operational imbalance"* in the MPOC, but is known as mismatch in the GTAC.
IP	Interconnected Party is a term used in the VTC and GTAC to mean a party whose assets are directly connected to the transmission system, known as a Welded Party in the MPOC.
Incentives Pool	Defined by the MPOC as *"the pool of money held on trust and administered by the Incentives Pool Trustee, into which all Incentives Pool Debits are to be paid and out of which Incentives Pool Claims are to be paid."* The Incentives Pool is essentially a liquidated damages arrangement that permits a Welded Party, who suffers damage as a result of another Welded Party being out of balance, to claim liquidated damages.
Individual DPs	Defined in the GTAC as a Dedicated DP that is not part of a Delivery Zone, including any DP at which an OBA applies or a Congested DP.
Line Pack	The total quantity of Gas in the Maui Pipeline at any time.
MDQ	Maximum Daily Quantity
MHQ	Maximum Hourly Quantity
MPOC	Maui Pipeline Operating Code, the current version is dated 8 December 2017, and incorporates the TCR amendments.

Mismatch	In the MPOC and VTC the term refers to the difference between a shipper's receipts and deliveries. In the GTAC it is also the difference between an OBA Party's scheduled and metered quantities (all adjusted for any traded quantities).
New Code	Defined in the MPOC, and used in this Final Assessment, to mean the set of terms and conditions that provide for: (i) All Shippers using the Maui Pipeline, and VTC Shippers using the Transmission Pipelines governed by the VTC, may continue to transport gas through those pipelines; and (ii) All Welded Parties may continue to connect their respective Pipelines to the Maui Pipeline
Objectives and Outcomes	The Gas Act and GPS objectives and outcomes.
OI	Operational Imbalance is an MPOC term meaning the difference between the actual quantity of gas that flowed through a welded point on a day and the scheduled quantity for that day.
OBA	An Operational Balancing Agreement is a way of allocating responsibility for imbalances or mis-matches at specific points between the interconnected party and the shippers using its interconnection point. In the MPOC, OBA is the only method of allocation and it applies at all RPs and DPs. OBA is not a feature of the VTC. In the GTAC, OBA is an optional method of allocation. The OBA principles are that shippers are deemed to have received their approved nominations at the point, while the interconnected party is responsible for the difference between the metered quantity and the aggregate of the approved nominations.
OBA Party	A term used in the GTAC to mean an interconnected party at a receipt or DP who has agreed to an OBA, and who is responsible for managing running mismatch at that point. (The equivalent of a Welded Party under the MPOC.)
OFO	Operational Flow Order. A term used in the GTAC, MPOC and VTC to mean a notice issued by First Gas instructing a user to reduce or suspend a flow of gas.
Park or Loan service	An option service that First Gas may offer under the GTAC, allowing a shipper to store gas as pipeline inventory or borrow gas from that inventory. This is not a service that is currently available in the MPOC/VTC access regime.
PAP	Gas Industry Co's Preliminary Assessment Paper dated 13 February 2018.
PR	Priority Right is a term used in the GTAC to mean a right giving priority to have its NQ approved ahead of shippers without a PR. PRs may be used in any nominations cycle.

Published	In this document, we use the term *"published"* to mean that the relevant information is publically available for any party to view, at no cost.
RP	Receipt Point
RPO	Reasonable and Prudent Operator is a term, defined somewhat differently in the GTAC, MPOC and VTC, but generally referring to a standard for performance equal to or better than good industry operating practice.
Running Mismatch	In the MPOC and VTC the term refers to the cumulative difference between a shipper's receipts and deliveries. In the GTAC it is also the cumulative difference between an OBA Party's scheduled and metered quantities. All adjusted for any traded quantities.
ROI	Running Operational Imbalance. An MPOC term for the cumulative difference between a welded party's scheduled quantities and its metered quantities (and therefore represents the total gas parked or loaned from the pipeline at that point). In the GTAC world the welded party is known as an OBA party, and ROI is known as Running Mismatch.
SA	A Supplementary Agreement is an agreement that varies some terms of a standard transmission contract. SAs are not available under the MPOC, but under the VTC or GTAC SAs are available, at the TSAs discretion, that would incorporate the terms of the relevant code but also contain one or more unique terms.
Security Standard Criteria	A term used in the GTAC to mean the physical parameters set out in First Gas' Security Standard (as published on OATIS) indicating, for example, that minimum pressures could be breached.
Shipper	A party, commonly a gas wholesaler or retailer, who contracts First Gas to transport its gas across the transmission system.
SOP	Standard Operating Procedure. A procedure used internally by First Gas to manage some aspect of its operation such as pipeline balancing.
TCR	The MPOC Transition Change Request proposed by First Gas on 14 July 2017 and supported by Gas Industry Co's Final Recommendation dated 31 October 2017. In essence the TCR enables contracts which incorporate the MPOC to be terminated when certain conditions are met.
TPA	Transmission Pricing Agreement. A GTAC term for an agreement between First Gas and an end-user.
TTP	The Target Taranaki Pressure, a term used in the MPOC and GTAC to refer to the pressure between 42 and 48 bar gauge at or near the Bertrand Road Offtake on the Maui pipeline.
First Gas	The Transmission Service Provider is the party responsible for providing transmission services, now First Gas Limited.

TPWP	Transmission Pipeline Welded Point. An MPOC term for the interconnection point between the Maui pipeline and a non-Maui transmission pipeline.
TSA	A Transmission Service Agreement is a contract between a shipper and First Gas, incorporating the terms of the relevant code.
VTC	Vector Transmission Code, the current version is dated 1 October 2017.
VRI	Vector Running Imbalance. A VTC term for the running differences between the receipts and deliveries of gas used for operations on the pipeline (including fuel/vented gas, balancing gas and UFG).
WP	Welded Party is defined by the MPOC as "*…the person named as a welded party in a valid and subsisting ICA"* It is equivalent to the *"Interconnected Party"* term used in the VTC and GTAC.

ABOUT GAS INDUSTRY CO

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

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

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

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