Analysis of Submissions on:

Emerging Views on Detailed Design of Access Products, Pricing, Balancing and Allocation; First Gas, May 2017 (EV Paper)

GAS INDUSTRY COMPANY LIMITED

Executive Summary

First Gas has asked for stakeholder feedback on various proposals on its *Gas Transmission Access Code (GTAC)* design. These proposals are set out in its May 2017 paper: *Emerging Views on Detailed Design of Access Products, Pricing, Balancing and Allocation; (EV Paper).* Gas Industry Co has analysed the stakeholder submissions on the *EV Paper* and in this report we summarise that feedback and offer some comments.

We commend First Gas and submitters for the attention they have given to developing and considering the First Gas proposals, and their ongoing support of the process to develop the *GTAC*.

From the stakeholder submissions we observe that:

1. In relation to the access products proposed by First Gas there is no clear consensus. While a few submissions support the proposals as presented, most are cautious and a few suggest either significant modifications or new models.
2. Because prices are closely bound to the access products, the feedback on the proposed prices was also mixed. Many comments seem to reflect an uncertainty about what each access product and the associated prices are aiming to achieve.
3. The balancing proposals generally received strong support.
4. There are mixed views on the merits of developing a park and loan service.
5. In relation to allocation (ie how each shipper's receipts and deliveries are initially determined), submitters are open to investigating alternatives to the current 'D+1' allocations.

We encourage First Gas to carefully consider the feedback – particularly where submitters say that the proposal has features that appear to add cost/complexity for users but may not provide significant offsetting benefits.

We also encourage participants to continue to engage positively – and to be mindful that the development of any *GTAC* will have regard to input from a number of interested parties.

Contents

1. Introduction and purpose

1.1 A single transmission code

In 2016, both of New Zealand's open access transmission systems – the Maui and Vector pipelines – came under the ownership of First Gas Limited (First Gas). For several years prior, Gas Industry Co and stakeholders were reviewing the access arrangements to these pipelines, as set out in the Maui Pipeline Operating Code (MPOC) and the Vector Transmission Code (VTC). Various proposals to 'converge' these codes were under consideration before First Gas became owner.

On becoming the new transmission system owner, First Gas confirmed that it wished to develop a new access regime, and a single new transmission code that provides an end-to-end service. As 'industry body' under the Gas Act, Gas Industry Co wishes to ensure that any such arrangements meet the objectives of the Gas Act and the Government Policy Statement (GPS), and may recommend regulation to the Minister if necessary. Considering these matters, First Gas and Gas Industry Co agreed to co-lead the new code development work, each with its complementary responsibilities.

1.2 SCOP1

In preparation for developing a single code, a foundation document was consulted on by Gas Industry Co: *Gas Transmission Access - Single Code Options Paper - Part 1 (SCOP1). SCOP1* summarised previous work, and discussed how Gas Industry Co and First Gas should co-lead the new code development process. In particular that:

> 'First Gas and Gas Industry Co will have complementary responsibilities for:
>
> (a) Initial description and analysis of design options (First Gas)
>
> (b) Identification and assessment of IT options (First Gas)
>
> (c) Procurement and deployment of IT (First Gas)
>
> (d) Drafting legal documents (First Gas)
>
> (e) Training (First Gas)
>
> (f) Testing proposals against Gas Act and GPS objectives (Gas Industry Co)
>
> (g) Ensuring that all reasonably practicable options have been considered (Gas Industry Co)
>
> (h) Drafting and recommending regulations regarding access and use, if required (Gas Industry Co).'
>
> SCOP1 s5.1

Gas Industry Co's role will ensure that it is well-positioned to advance a regulated solution should industry efforts to reform the access arrangements fail.

SCOP1 was issued on 13 September 2016 and on 23 November 2016 an Analysis of Submissions on *SCOP1* was published, noting that submitters generally agreed with its proposals, including unanimous support for First Gas and Gas Industry Co co-leading the process.

1.3 SCOP2

Building on SCOP1 and one-on-one discussions with its key stakeholders, on 28 November 2016 First Gas issued a consultation paper entitled *Gas Transmission Access: Single Code Options Paper (SCOP2)*, and called for submissions. *SCOP2* was presented at a workshop on 5 December 2016.

SCOP2 explored the possible forms that a new code could take, focusing on decisions that are important to establishing the new code and the IT system that would implement it. It also set out the objectives against which First Gas would evaluate the proposed designs.

On 27 January 2017, Gas Industry Co published an *Analysis of Submissions on SCOP2*. It found that submitters strongly supported the main First Gas objective; to enable the use of gas. Most submitters also highly valued simple arrangements, particularly where no system capacity constraints were likely.

After consulting on the general direction of the new code, First Gas embarked on developing detailed design proposals.

1.4 The EV Paper

The First Gas May 2017 paper: *Emerging Views on Detailed Design of Access Products, Pricing, Balancing and Allocation; (EV Paper)* is a key document in the *GTAC* development process. The schedule presented in Appendix B of this analysis shows where the *EV Paper* lies in relation to other significant documents and workshops involved in the *GTAC* development.

The *EV Paper* was published on 12 May 2017. It outlines the proposed design of:

1. Access products;
2. Pricing;
3. Balancing; and
4. Allocation.

Six weeks were allowed for stakeholders to provide submissions on the *EV Paper*. During that time First Gas met with stakeholders to discuss questions they had on the paper and any initial feedback that wished to provide, and a workshop has held on 17 May to discuss the *EV Paper*. Among other matters raised by stakeholders was a request for First Gas to provide further information on the risks it has identified in relation to the procurement of an IT system required to support the *GTAC*. In response, First Gas developed an *Information Paper - Initial Summary of GTAC IT Risks (IT Risks Paper)*. The IT Risks Paper was published on 7 June 2017.

1.5 Purpose of this paper

The purpose of this paper is to summarise and assess feedback with the view of informing the next steps in the *GTAC* development process.

Appendix A of this paper provides a comprehensive summary of each submitter's views.

Chapter 2 considers the submitter views under the broad topic heading, providing some Gas Industry Co comment.

We hope this analysis will be a useful input to further stakeholder discussions.

2. Analysis of submitter views

2.1 Submissions received

Submissions on the *EV Paper* were received from:

- Contact Energy Limited (Contact)
- Genesis Energy Limited (Genesis)
- Greymouth Gas New Zealand Limited (Greymouth)
- Major Gas Users Group (MGUG)
- Methanex New Zealand Limited (Methanex)
- Nova Energy Limited (Nova)
- Shell New Zealand (2011) Limited (Shell)
- Shell Todd Oil Services Limited (STOS)
- Trellis Energy Inc. (Trellis)
- Trustpower Limited (Trustpower)
- Vector Limited (Vector)

These submissions are summarised in Appendix A.

The submissions are quite varied: some brief, others extensive; some focussed on a few aspects of the proposed design, others giving a comprehensive critique; some commenting on detail, others testing the principles. In this chapter we draw out some of the main themes that emerged and offer some comment.

2.2 Access products

What the *EV Paper* proposes

The *EV Paper* proposes that the principal access product will be Daily Nominated Capacity (DNC). A shipper obtains DNC when it nominates its anticipated demand at a delivery point, and that nomination is confirmed by First Gas. First Gas may approve requested nominations in full or provide as much of the nominated quantity as it can.

DNC is available at posted prices, the DNC fees. A DNC fee will be set for each of a number of delivery zones. First Gas intends that its allowable revenue will be recovered through aggregate DNC charges.

First Gas proposed to incentivise accurate DNC nominations by means of an overrun fee that will apply to the amount by which a shipper's actual daily deliveries exceed its DNC.

DNC is an interruptible product that can be reduced ('curtailed') by First Gas when necessary. Curtailment may be necessary for reasons of emergency, a force majeure (FM) event, or congestion.

Shippers who are concerned that DNCs at a delivery point may be curtailed can obtain Priority Rights (PRs) at auction. Auctions will be held every 6 months. In the event of congestion, DNC nominations up to the level of a shipper's PR will be the last DNC to be curtailed, so those DNC nominations are made 'firm' when covered by a PR.

What submitters say

Some submitters conditionally support the DNC/PR concept (MGUG, Nova), others are non-committal (Contact, Methanex, Shell, STOS, Vector), while others propose different alternatives (Genesis, Greymouth, Trellis, Trustpower).

The DNC/PR concept

Many of the suggestions for change arise from what submitters see as the unnecessary administrative complexity of the proposed arrangements. There is particular opposition to:

1. Shippers having to nominate (and re-nominate) at every delivery point, every day, in a pipeline system that is normally unconstrained;
2. Shippers having to assess the need for and value of PRs at every delivery point every six months; and
3. The concept that the primary product is interruptible, with firmness being available at a premium, rather than the alternative (proposed by some submitters) where the primary product is firm, with interruptibility being available at a discount[1]. Trustpower, in particular, provided an extensive description of this alternative, along with an evaluation of its relative merits.

DNC

Some submitters state that:

1. It appears that a shipper will need to maintain two sets of nominations; one for its gas supply and a different one for transport; and
2. Because of the incentive to avoid daily and hourly overrun fees (and possibly on occasion to minimise the consequences of a curtailment), a shipper's DNC nominations may not be an accurate view of its anticipated demand.

PR

The PR proposal draws a substantial amount of comment. In regard to mass market shippers, there are different views on whether they would need to buy PRs or not. But, regardless of this, many submitters believe PRs:

1. Are unnecessarily administratively burdensome, particularly since it is proposed that auctions would be run at every delivery point, regardless of whether congestion is anticipated or not;
2. Would transfer the risks of congestion from First Gas, the party best placed to anticipate and manage those risks, to shippers and eventually consumers, who do not have the tools and system-wide information to manage those risks; and
3. Would be difficult to value, even where information is available on available capacity and anticipated demand.

Some submitters also consider PRs may be

4. Prone to 'gaming', particularly where private information is held by one party;
5. Irrelevant at dedicated delivery points; and
6. Ineffective, or at least inefficient, as a tool to manage physical congestion.

[1] Some submitters describe such an interruptible product as a demand management product.

Some submitters ask:

7. Would PRs apply during an FM event[2]? For example, would they provide priority during any unexpected shortfall in gas injections, as well as transmission congestion?

Suggestions for improving DNC/PR arrangements

Many possible improvements to the DNC/PR arrangements are suggested by submitters, including:

1. Making PRs available for one year or longer to provide greater assurance on access to transmission capacity (which may be needed to support investments in new facilities that use gas);
2. Improving transparency of the amount of PRs available at each delivery point;
3. Improving transparency of historic congestion and the prospect of future congestion in areas of the system;
4. PRs should only be offered when First Gas assesses that congestion is likely at one or more delivery points; and
5. Nominations should only be required at delivery points where PRs apply.

Suggested alternatives to the DNC/PR model

Some alternatives submitters suggest to the DNC/PR approach are:

1. Genesis puts forward two alternative 'hybrid' models and a suggestion for congestion management;
2. Greymouth puts forward a 'flow on demand' model; and
3. Trustpower puts forward an 'interruption call auction' model.

Gas Industry Co comment

We believe the DNC/PR concept is workable, but like submitters, we need more information before we can assess how suitable or effective it would be.

DNC is an interruptible product, so it is important to understand:

1. How DNC nominations will be made and approved (*GTAC* section 4); and
2. How DNC nominations might be curtailed (*GTAC* section 12).

We understand that these sections will be available when First Gas releases the full draft of the *GTAC* (scheduled for August 2017).

PR is the means of firming up the DNC, so it is important to understand:

3. Whether PR only has value during congestion (ie when planned flows exceed physical capacity), or would also have value during emergency, and FM events.

We suggest that First Gas may best work through stakeholder concerns, and improve stakeholder understanding of its proposals, by working though different scenarios at workshop sessions.

For example, consider the scenario where a shipper nominates 100 units at a delivery point and First Gas only approves 80, because it anticipates congestion. This would not be a curtailment of DNC, because the DNC is the approved quantity, 80 units, and not the nominated quantity.

[2] We note that FM events could possibly cover a wide spectrum of situations such as a Rotowaro transmission compressor fire or a production plant incident. The first is a transmission issue, while the second is not. So this matter would require careful consideration.

However, the DNC of 80 units could subsequently (between nomination cycles) be curtailed to, say, 70 units.

In this scenario, if this shipper held PR for 90 units then presumably it could nominate 100 units and be confident that First Gas would approve at least 90 units. Depending on how First Gas went about rationing capacity it may even approve a little more for this shipper, say 95 units. The shipper would then have a DNC of 95 units. If all uncovered DNC was subsequently curtailed, or if First Gas did not accept any uncovered nominations, then the shipper may be left with a curtailed DNC of 90 units.

In this scenario, shippers without sufficient DNC are exposed to overrun fees and may seek to reduce their demand, but there is no guarantee that there would be a physical reduction[3], in which case delivery point pressures may fall to the point where a critical contingency is invoked.

Working through scenarios such as this would help to ensure that stakeholders are not mis-interpreting First Gas proposals, have an opportunity to share their concerns, and can contribute to improving the proposals.

Several submitters point to the importance of the IT system, particularly the need to facilitate routine tasks (such as making nominations), and to minimise customisation of the system. We agree. The comments of Trellis are therefore particularly interesting. They suggest that its standard IT system, operating in other jurisdictions, is geared towards:

1. Point to point transportation;
2. Fixed term, firm transportation contracts being the primary product; and
3. Interruptible transport contracts being the secondary product.

This prompts us to ask:

1. Are the systems offered by other IT vendors similar?
2. What are the likely costs of customising such systems to accommodate the design proposed by First Gas?
3. Is the cost of customisation worth the benefits of the proposed design?

However, we note that the Panel of Expert Advisers' (PEA) conclusion was that firm rights should be traded and allocated on a willingness to pay basis (ie they would not be a posted price product). First Gas has designed its PR product with that recommendation in mind.

Regarding the alternative models suggested by Genesis, Greymouth and Trustpower, we consider that all have merit and should warrant consideration by First Gas and stakeholders. Perhaps these submitters should be given an opportunity to explain their proposals at the next workshop (unless First Gas has already considered the proposals and does not consider that the proposals should be explored further).

2.3 Pricing

What the *EV Paper* proposes

The DNC fee for transport from a receipt zone (initially there will only be one receipt zone) to a delivery point in a delivery zone will be the same for all delivery points in that delivery zone. These delivery zone prices will be set at a level that aims to recover First Gas' regulated revenue set by the Commerce Commission. Delivery zones more distant from the receipt zone will have higher DNC fees.

[3] Indeed it is worth noting that, short of giving First Gas direct control of an end user's demand, the shipping contract can only provide incentives for the shipper to control its demand in the event of congestion.

A throughput fee will be allowed for in the *GTAC*, but initially set to zero.

To encourage accurate nominations requests and adherence to approved nominations, overrun fees will apply to deliveries in excess of approved nominations. First Gas proposes a 3-step overrun fee. The fee would be zero for the 1st step, 5 times the DNC fee for the 2nd step, and 10 times the DNC fee for the 3rd step.

The price of PRs will be established by auction on a 'pay as bid' basis.

The revenue earned from these auctions will be credited against all DNC Charges.

Primary balance will be encouraged through two charges applying to excess running mismatch:

1. A tiered balancing incentive charge; and
2. A cash-out, when First Gas takes a balancing action.

What submitters say

General

A few submitters have asked for an indication of what the prices would be and/or worked examples of how they would apply.

Throughput fee

There are mixed views whether a throughput fee should be allowed for in the *GTAC*, even if it is initially set to zero. Trustpower notes that introducing new fees can have a significant effect on users and should require a code change.

DNC Overrun fees

Many submitters point out that:

1. The overrun fee will incline shippers to over-nominate DNC, so DNC is not a measure of anticipated demand; and
2. Because of the uncertainty inherent in delivery point nominations (rather than by aggregated zone nominations), overrun charges will be an uncertain and disproportionate part of a shipper's transport charges.

One or more submitters consider that:

3. The proposed stepped overrun fee structure is too complex and proposed fees are excessive;
4. Overrun fees should be cost reflective and not punitive. If they are amended, shippers will push for more intraday nominations cycles, reassess their nominations more frequently, and seek more flexibility in their supply contracts, all unnecessarily adding to industry costs;
5. A 3% buffer is meaningless when demand is much more volatile than that;
6. Using overrun revenue to reduce DNC fees may not be efficient; and
7. It is inconsistent that DNC charges will be determined by zone and overrun charges determined by delivery point.

MHQ Overrun fees

A few submitters consider that:

1. Peaking is generally not a problem, and introducing MHQ fees has not been justified;
2. The case for limiting the MHQ fees to dedicated delivery points has not been made;

3. The fees may cause DNC to be higher than it otherwise would be, making DNC even less of a measure of anticipated demand; and
4. The charge will drive shippers to seek more flexibility in gas supply contracts, increasing the cost to producers and (ultimately) consumers.

Balancing incentives

One or more submitters consider that:

1. Using a clearing price auction is preferable to the pay-as-bid proposed; and
2. Producers with OBAs pay balancing incentives like shippers, so the recycled revenue should be returned to producers as well as shippers.

Gas Industry Co comment

The approach to pricing of the access products is integral to the purpose and definition of those products. We consider that many of the submitter comments on pricing are really critiques of the products themselves.

In particular, many comments seem to reflect an uncertainty about what each access product and the associated prices are aiming to achieve.

For example, if DNC is intended to give First Gas an accurate view of what shippers believe demand will be at each delivery point, then the incentives to nominate correctly should be reasonably balanced (ie similar underrun and overrun charges). On the other hand, if First Gas is more concerned about shipper flows exceeding (rather than undershooting) DNC, then a degree of asymmetry may be reasonable.

We consider that pricing should be considered in tandem with the product definitions.

2.4 Balancing

What the *EV Paper* proposes

At each receipt point or delivery point where an Operational Balancing Agreement (OBA) applies, the interconnected party is responsible for balancing measured flows to scheduled quantities (ie the aggregate of all shipper nominations at that location). Each shipper is required to balance its aggregate receipts with aggregate deliveries across the whole transmission system. An incentive charge will apply to all running mismatches (those of both shippers and parties to OBAs) beyond a defined tolerance.

Where First Gas finds it necessary to buy or sell balancing gas to maintain pipeline line pack, it will make back-to-back cash-outs of opposing running imbalance positions. It will also have discretion to cash out running imbalances in other circumstances. However there will be no automatic daily cash outs as there is under the current Market Based Balancing (MBB) regime.

A park and loan service may also be offered to interconnected parties and shippers.

What submitters say

There is strong support for the balancing proposals, particularly for balancing the pipeline as a whole, and for moving away from automatic daily cash-out of excess running mismatch.

We will focus of areas where submitter have different views or suggest further improvements.

Balancing incentive charge

Greymouth thinks that, because there would be back-to-back cash-out of running imbalance, the balancing incentive charge (applying to excess running mismatch) is unnecessary. However Nova considers that the incentive charge would appropriately motivate shippers to rectify their

imbalance through revised receipts or deliveries, trading gas, or using the park and loan facility, if available.

Nova and Shell would like to know how First Gas will set the incentive price. Nova notes that it is essentially a charge for an unauthorised park or loan.

Tolerances

Greymouth suggests current (cumulative) tolerances should be retained.

Methanex suggests that principles similar to s3 of the MPOC – such as transparency, seeking the lowest cost and making use of the market where possible – should also be in the *GTAC*.

Not all submitters agree that making shipper running mismatch positions public is a good idea.

Interconnected parties (Methanex, Shell and STOS) seem unclear about the extent to which the MPOC OBA arrangements would be preserved. STOS also stresses the importance of maintaining the Taranaki Target Pressure concept, particularly the 48 barg maximum pressure.

Park and loan

There were mixed views about the practicality of the park and loan proposal. For example, Genesis supports the proposal while Greymouth thinks it is unclear and unnecessary, given the emsTradepoint market, and MGUG does not support it, believing it would negatively affect the capacity of the pipeline, PR availability, overrun and running mismatch tolerances, and undermine the emsTradepoint market.

ROIL multipliers

STOS thinks a park and loan service may be useful in managing planned outages, but its strong preference is to have something similar to ROIL multiplier arrangement that has been effective in managing both planned and unplanned outages.

Gas Industry Co comment

We are encouraged that there appears to be a degree of industry consensus on the core aspects of the balancing proposals.

We encourage First Gas to work through the more detailed issues raised by stakeholders as it further develops the *GTAC* proposals.

2.5 Allocation

What the *EV Paper* proposes

The current method of calculating initial allocations (using the D+1 Pilot Agreement results) will be replaced by pro-rating the metered quantities by nominations. As at present, the interim and final allocations under the Downstream Reconciliation Rules (DRR) will be used for wash-ups.

What submitters say

Generally submitters support:

1. A pro-rata on DNC approach to initial allocation if it is shown to be more accurate, timelier and cheaper than D+1. But most submitters doubt that it will be as accurate as D+1. A few submitters note that this matter is being considered by the Downstream Allocation Working Group (DAWG); and
2. Retaining OBA arrangements.

One or more submitters suggest:

3. Giving further consideration to whether there should be wash-ups of running mismatch and overruns, with particular view to minimising gaming opportunities; and
4. That there should be a default rule if parties cannot agree on an allocation method. (Trellis notes that in its experience the default is to prorate by scheduled quantities.)

Shell and STOS suggest that the definition of a Gas Day be revisited, and recommend that it start at 9am NZ Standard time.

Gas Industry Co comment

This does not seem to be a contentious area. Stakeholders appear to be looking for the most efficient approach to allocation.

We agree that the DAWG is the best forum for discussing downstream allocation issues.

We also agree that it is a convenient time to review the Gas Day definition, and it appears to be a matter that can be considered independently of other design features. We suggest that an independent consultant report could usefully inform the industry on the pros and cons of a change. If First Gas and stakeholders agree, Gas Industry Co is willing to commission that work.

2.6 Other matters

There were a range of other matters related to the development of the *GTAC* but not directly addressed by the *EV Paper* that we note here for completeness. We appreciate the importance of each of these matters to the submitters. Although we think they will be addressed through the on-going transition process discussions, or in the detailed design negotiations, we note the issues in summary here so that we do not lose sight of them.

Commerce Act considerations

Trustpower notes the potential that the *GTAC* might breach the Commerce Act, and suggests that the Commerce Commission's view on the matter should be sought.

Transparency

Trustpower notes that information transparency is necessary for efficient decision making, reducing information asymmetries, facilitating the monitoring of the level of competition, and identifying incidents of potential market power abuse.

Trustpower advocates transparency of a wide range of information that may be relevant to congestion or pricing, and suggests that First Gas should consider implementing Gas Bulletin Boards like those available in Australia to disseminate the information.

IT and timeframe

Contact proposes that the new IT system should provide portals to facilitate shipper interactions (such as making nominations). This would reduce the need for each shipper to customise its own IT, thereby reducing overall cost. On a similar theme, Nova notes that the better the information provided by the pipeline operator, the less investment individual shippers will need to make in their own information systems to manage their exposure to charges. Shell also suggests that minimising the customisation of IT should be a guiding principle in designing the *GTAC*.

Contact is concerned that the timeframe for IT procurement is very tight. Genesis has similar concerns and points out that a statement of requirements to vendors is expected to occur in August 2017, so would not allow consideration of feedback that received during the full code review phase.

Cost benefit analysis

Trustpower recommends that First Gas ensures best-practice decision making by undertaking a cost-benefit assessment of the arrangements, along with any alternatives that have been identified including Trustpower's alternative Interruption Call arrangement.

Genesis also asks for a cost-benefit analysis of the *GTAC* against the status quo.

Process

Nova suggests that the process for moving to the new arrangements should allow for running simulations to determine if the processes proposed by First Gas are workable and would be an improvement on the status quo.

Nova also suggests that an implementation plan should include some post-implementation phasing-in of particular code elements, such as park and loan service, priority rights auctions etc.

Evaluation of the proposed arrangements

Trustpower has set out its preliminary views on where the *GTAC* design proposals could be inconsistent with the objectives of the Gas Act and GPS. Specifically, it considers that, compared to current arrangement, the proposals would:

1. Introduce operational inefficiencies;
2. Create barriers that would reduce competition in downstream markets;
3. Increase the cost of transporting gas; and
4. Fail to assign risks to those best able to manage them.

Gas quality

MGUG would like to understand how gas quality assurance will be dealt with in the proposed arrangements.

STOS notes that there are some areas where its gas quality monitoring could be improved, and that it would welcome any opportunity to discuss these.

First Gas discretion

Methanex believes First Gas may have too much discretion in some areas (such as being able to change the number and make-up of delivery zones) and that an overriding Reasonable and Prudent Operator (RPO) principle should apply, and clear boundaries set.

Onerous provisions

Methanex is concerned that a number of provisions of the proposed *GTAC* may be onerous. For example, only permitting invoices to be disputed for manifest error, and only within 10 days, and only permitting allocation results and delivery quantities to be disputed on manifest error.

Start-up and shut-down profiles

Shell and STOS both propose a continuation of the arrangements that let producers and the pipeline operators agree a profile for start-up and shut-down.

Target Taranaki pressure

Shell and STOS both stress the importance of maintaining the concept of operating pressure targets on the Maui pipeline since facilities have been designed, and gas reserves assessed, on the basis of defined pressure assumptions.

Pipeline maintenance

STOS notes that it is willing to continue supporting pipeline maintenance activity by profiling its production where it can. It suggests the *GTAC* should allow for this to happen, as it benefits the whole industry.

Definition of Gas Day

As previously mentioned, Shell and STOS suggest that the definition of a Gas Day should be revisited. STOS argues that there are safety and operation reasons for the Gas Day having a 09:00 start (NZ Standard Time).

3. Conclusion

Gas Industry Co commends First Gas and submitters for the attention they have given to developing and considering the First Gas *EV Paper*, and their ongoing support of the process to develop a *GTAC*. The *EV Paper* has helped to put flesh on the bones of the First Gas proposals, and provided a very useful platform for engagement with stakeholders.

From the stakeholder submissions we observe that:

1. In relation to the access products proposed by First Gas there is no clear consensus. While a few submissions support the proposals, most are cautious and a few suggest either significant modifications or new models.
2. Because prices are closely bound to the access products, the feedback on the proposed prices was also mixed. Many comments seem to reflect an uncertainty about what each access product and the associated prices are aiming to achieve.
3. The balancing proposals generally received strong support.
4. There are mixed views on the merits of developing a park and loan service.
5. In relation to allocation (ie how each shipper's receipts and deliveries are initially determined), submitters are open to investigating alternatives to the current 'D+1' allocations.

We encourage First Gas to carefully consider the feedback – particularly where submitters say that the proposal has features that appear to add cost/complexity for users but may not provide significant offsetting benefits.

We also encourage participants to continue to engage positively – and to be mindful that the development of any *GTAC* will have regard to input from a number of interested parties.

Appendix A Summary of submissions

While we have tried to capture the essential points made in each submission, we have summarised them and reordered them for easy comparison. Readers should refer back to the original submissions for a full understanding of the submitters' views.

General	
Contact	Contact proposes a number of design refinements and is concerned about the tight timeframe for IT procurement.
Genesis	Genesis generally supports the direction the *GTAC* is heading, but is not convinced that the proposed access products will meet the objectives, and suggests several alternative models. It believes that getting all stakeholders to 'come to the table' for further conversations about finalising the detailed design, code transition and governance frameworks, and IT procurement, is crucial to the eventual signing of an enduring and robust code.
Greymouth	Greymouth favours a single code that delivers fair, efficient and effective transmission access on the simplest terms possible. It suggests First Gas needs to rework and refine its proposals to achieve this.
MGUG	MGUG supports PRs as a signal for capacity investment, but considers that end users should be able to own PRs, and is concerned that non-standard capacity product terms might undermine the PR market.
Methanex	Absent details on nominations, balancing, and access to OBAs, Methanex cannot make a meaningful submission. However, it notes a number of concerns, including a number of areas where it believes First Gas appears to have too much discretion.
Nova	Nova generally supports the proposals and makes a number of suggestions to improve them.
Shell	Shell favours a design that is in accord with good international gas transmission practice.
STOS	STOS believes that operationally the code should align with 'good industry practice', ie with codes used in other (international) jurisdictions, and the IT platforms that support them. It explains why several features of the design are welcome while some others may be of concern.
Trellis	Based on its experience implementing similar pipeline solutions in North American and abroad, Trellis supports the decision and rationale for DNC/PRs by delivery point rather than zone. Point-based delivery models are more common, and create a simpler process for both shippers and the pipeline operator long term. However, Trellis suggest the combining DNC and PRs into a single firm capacity product would be simpler and more predictable.

Trustpower	Trustpower is not convinced that the proposed arrangements would be an improvement on the current arrangements. While having a single transmission Code would be valuable, the proposed new arrangements would be inconsistent with the objectives outlined in the Gas Act since they would: • Introduce operational inefficiencies; • Create a potential barrier to accessing gas transport which could act to reduce overall competition in the downstream gas market; • Assign risks associated with pipeline congestion to parties who are not best able to manage them; and • Increase the costs of transporting gas, which will ultimately be passed through to end users.
Vector	Vector generally supports the pricing and balancing proposals, but has serious concerns about the proposed access products. It believes they are likely to create unnecessary complexity. It suggests alternatives it believes are more likely to meet the *GTAC* objectives of 'keeping things simple' and 'enabling the use of gas'.
Access Products	
Contact	**DNC** Contact is concerned that: • It appears that nominations for transport will be different to nominations for gas transfer. If so, transactions will not be minimised; • At present Contact only evaluates demand at a delivery point level once a year, when it decides what level of capacity to reserve. It considers there is little value in daily delivery point nominations unless there is a potential capacity constraint; and • Contact can estimate demand by zone much more accurately than by delivery point. It believes Delivery Point DNC would be more uncertain that zone DNC, leading to more overruns and causing shippers to over-nominate. **PRs** In Contact's view: • First Gas is best placed to anticipate where congestion may occur, and should only offer PRs for those locations. This provides transparency, more efficient processes and minimal transactions; • PRs should only be offered by delivery point where congestion is anticipated. Elsewhere DNC by zone is all that is required; • First Gas should also make demand response products (interruptible contracts) available on pipelines where congestion is anticipated; and • Contact asks why only up to 5 tranches of PRs can be traded between shippers.
Genesis	**DNC and PRs** Genesis is not convinced that the proposed access products will meet the objectives of enabling the use of gas, promoting competition, increasing transparency and promoting efficient investment. It recommends

	stakeholders are given more time to engage on the design of the access products. **DNC** • Nominating to every gas gate, every day is 'overkill' since: ○ It would be extremely resource intensive for shippers; ○ It gives more granularity than is needed to provide transmission services and takes away flexibility that pipeline users should reasonably have; ○ If it is only needed to facilitate offering PRs, then the costs likely outweigh the benefit; ○ It would greatly increase overrun charges, which would be disproportionate to the true costs of service, would be irrespective of the size of the delivery point or the degree of congestion, and would penalise minor inaccuracies; and ○ In addition, shippers would over-nominate to avoid overrun charges. **PRs** • In respect of PR design: ○ High congestion levels may trigger a critical contingency, at which point the Critical Contingency Regulations apply, overriding PRs and making PRs ineffectual. At that point, the only benefit to having PR would be less accountability for overrun charges; ○ If PRs are only to be sold up to a percentage of a delivery point's demand, it will not be possible to make all that demand firm. This may lead to an overvaluation of PR rights; ○ It is not clear if DNC charges in a constrained area would be increased due to the constraint, or if only the value of PRs would increase to compensate; ○ It is doubtful if the cost of designing PRs and rolling them out across all delivery points is justified. Particularly given the lack of congestion. (While recognising that forward planning is important, there are other tools to provide forward signals of congestion. And a degree of responsibility should lie with First Gas and interconnected parties to plan for growth.); and ○ Also, further consideration should be given to: ▪ using a clearing price auction, rather than the pay as bid proposed; ▪ making PRs available for one year or longer; ▪ transparency of the amount of PRs available at each delivery point; ▪ transparency of historic congestion in areas of the system. **Alternative models** Genesis puts forward two alternative 'hybrid models' and a suggestion for congestion management: • The first hybrid involves: ○ Zoned DNC applying in areas with no congestion, and delivery point specific DNC in areas where there is congestion;

	○ The zone configurations would be dynamic with change triggers codified to adjust them when congestion arises or drops away; ○ PRs would only be offered at delivery points where congestion is identified; and ○ This design is considered to better provide First Gas with what it needs to manage physical flows on the transmission pipeline, without imposing unnecessary cost burdens on shippers. • The second proposal involves: ○ A GJ threshold at each delivery point, say 10GJ/day, under which no overrun charge would apply. This would allow shippers to focus on nominations at the delivery point that matter; and ○ Also, overrun charges would only apply if the delivery point in total overran. Overruns would then be prorated between shippers at either a delivery point level or a zone level. • The congestion management suggestion is that: ○ Congestion is managed using demand management contacts at time-of-use sites; and ○ This would provide First Gas with another way to manage capacity, and offer flexibility to shippers' customers who are ready and willing to reduce demand when called on. Genesis considers that each of these measures would increase the transparency around constraints, which would benefit all stakeholders. However, if the current design proposals persist, Genesis notes a number of issues requiring attention.
Greymouth	Greymouth anticipates a number of problems with the PR proposal and suggests alternative models to avoid them. **Alternative models** Greymouth prefers a 'Flow to Demand' model comprising congestion management products (CMPs) rather than PRs because: • CMPs avoid competition issues: ○ With PRs, for an end-user to switch away from its incumbent supplier it would likely not be covered by PR for up to six months, and risk shut down/curtailment. This could be improved by: ▪ mandatory transfer or PRs between shippers when end-users switch (however, in the past this has proven difficult because of the effect on a shipper's capacity portfolio); ▪ more frequent auctions… but this would either be inefficient or wouldn't give end-users enough certainty; and ▪ having the end-users hold, and bid for, the PRs. • CMPs would better encourage the use of gas: ○ Those without PRs risk needing to turn down production where there is a possibility of congestion, or incur overruns and associated risks. This is an inefficient way to reduce demand, and does not encourage the use of gas; and ○ While DNC (without PRs) will be interruptible (contractually), it may be difficult to enforce (operationally).

	• CMPs are more likely to prevent Critical Contingencies: ○ For any PR or congestion management regime to be workable, it should bypass shippers and involve end-users directly. Otherwise, both regimes risk changing money/risk, without guaranteeing improved efficiency and effectiveness of the pipeline operation; but ○ In contrast, CMPs allow pre-contracted end-users to turn off (or down) in times of operational congestion for a pre-arranged price. This would still give First Gas investment signals and it would not socialise demand reductions. This approach would thus be fairer on industry. For example, the May 2017 critical contingency could have been avoided, as pre-contracted parties would have been called upon by First Gas to reduce demand to prevent the pressure thresholds from tripping. It is unclear how DNC with PRs could achieve the same outcome. • CMPs require less information: ○ Appropriate and transparent information is required if stringent flow-to-nominations requirements are to apply.
MGUG	**Delivery Points v Zones** MGUG is not convinced that the proposed receipt zone to delivery point model would be better for transmission system users or First Gas than the original receipt zone to delivery zone proposal. First Gas should be able to manage the system on a zonal basis, redefining the zones if certain delivery points are approaching capacity. Problems with the zone to point model First Gas proposes include: • Users may not be able to secure as much capacity as they need; • Until PRs are sold, there is no price signal for investment; and • At dedicated delivery points there is no market for PRs. **PRs** MGUG also has concerns about the purpose, availability and ownership of PRs, and offers these comments: • MGUG members prefer PRs to be a mechanism for congestion management, only triggered when congestion is anticipated, rather than being available at all DPs. This would avoid members spending resources to assessing the risks of curtailment where none seems likely; • PR hoarding and speculation is a concern, particularly in the absence of full information (eg First Gas may not be free to advise about contingent demand from parties they are in negotiation with); • More information on how PR availability will be varied across auction cycles and how these might also be influenced by other factors, including those made available under non-standard arrangements, is required; • End users should be able to purchase PRs because: ○ PRs benefit end users who value certainty of supply; ○ If PRs are limited to shippers, most of whom are also retailers, this has the potential to limit downstream competition for gas, or alternatively raise the price of PRs to profit incumbent retailers. (Similar to the situation on the Northern pipeline in 2011.); and

	○ Ownership of a PR creates greater transparency to the end user of the actual price of the product. This is because invoicing from a supplier does not always make it clear whether a particular transmission product or levy is being passed through at cost or with mark-up. • MGUG agrees that PRs should not apply in a FM event. If PRs were to apply during FM events, the price signal would relate to both normal capacity constraints and FM constraints, which would mute the investment signal. MGUG would also like to understand: • What information might be made available to assess system capacity vs demand forecast in order to inform views on the value of PRs; • PR auctioning, arrangements, and rules, including worked examples; and • How PR trading arrangements on secondary market is expected to work. **Non-standard agreements** • MGUG is concerned about the potential for non-standard agreements to transfer risks to standard agreement holders including: ○ increased volatility of price swings under a revenue cap; and ○ crowding out limited availability of PRs. • Non-standard agreements could include terms that include PRs/PR equivalents. Also, PRs may be guaranteed for the term of the agreement, and the term may be much longer than the six months under a standard agreement. This reduces the availability of PRs for auction and also values PRs under non-standard agreements at a price other than the market price; • While non-standard agreements may be needed, PRs should not be part of such arrangements; and • The principles and criteria to be applied to re/negotiation of supplementary agreements are not clear.
Methanex	**PRs** Methanex seeks confirmation that PRs will not be used where gas supply is curtailed but where there is no pipeline congestion. It considers 10 business day notification of PR auctions is insufficient.
Nova	**Delivery Points v Zones** • Accurate demand forecasting on a daily basis for a large number of small gates will likely be impractical, costly and will have limited benefit to First Gas in most circumstances; • Currently shippers nominate on a daily basis for gas transmission on the Maui pipeline to effectively three zones: ○ The Northern zone is represented by Rotowaro which represents no fewer than 32 delivery points; ○ The Bay of Plenty zone represented by Pokuru which has 29 delivery points; and ○ The Southern zone represented by Frankley Road with over 50 delivery points plus around 10 or so other minor or dedicated delivery points.

	The benefit of nominating at a zonal level is that the diversity of consumers across zones makes demand forecasting much easier compared to those DPs dominated by a small number of larger users, which can have a volatile demand; • DP specific DNC will lead to higher transmission costs due to overruns and unutilised DNC nominations; and • Before First Gas makes its final decisions on daily delivery point nominations, we suggest that First Gas review historical delivery point data and the allocations among retailers to investigate the practicalities of retailers with limited information having to forecast daily demand to a level of accuracy that maintains overrun and imbalance charges at a level that is not excessive or ruinous. **DNC and PRs** Nova supports the DNC/PR proposal to allocate transmission capacity in an efficient manner, but highlights some details that require attention: **DNC** • Shippers should be able to change nominations throughout the day as new information becomes available. Shippers should be fully informed by updating the gas position throughout each day to reflect changes to supply and demand. Ideally the systems would update the position in response to each change in nominations, but at a minimum should be more frequent than six times per day; • If the OATIS replacement only provides a small number of nomination cycles, then the new code provisions should provide sufficient tools for parties to manage their daily capacity nominations and imbalance, including: ○ timely daily allocation data (Day +1 data) at the lowest common denominator (by delivery point if necessary); ○ the ability to amend nominations after the intra-day cycle in FM circumstances; and ○ tolerances to account for both forecast error and the inability to amend nominations beyond a certain point during the day. Such tolerances would provide some relief from overrun or imbalance charges. • Nova proposes the use of broad tolerances at delivery points where there are no direct supply constraints, together with lower tolerance thresholds at an aggregated level. A tighter zonal tolerance threshold could apply to the aggregate of total daily nominations vs allocations before overruns/imbalance charges are determined. Where congestion is anticipated at a set of delivery points, the 'zonal tolerance threshold' could be applied to that limited set of DPs, thereby signalling potential congestion; • Nova notes that shippers must return to balance as allocation data is received through the D+1 process. In effect, the balancing requirement is the equivalent of balancing the aggregate of DNC and throughput across the entire pipeline; and

	• D+1 data is an important tool for shippers to manage imbalance and potentially (but not necessarily) capacity nominations. **PRs** • Nova agrees that: ○ PRs should extend for 6 months – essentially summer and winter tranches; ○ A nominal reserve price is appropriate; ○ PRs should be tradable; ○ PRs should be obtainable between auctions; ○ Shippers should be able to nominate a number of PR tranches; ○ First Gas should publish each Shipper's holdings of PRs following each auction, together with any changes of ownership resulting from trading; ○ First Gas should publish the prices paid for PRs after the auction is complete (but not the price of any subsequent PR trades between Shippers); ○ Shippers cannot cancel PRs they no longer need; ○ Supplementary Capacity should rank equal to DNC covered by PRs in the event congestion occurs; ○ All receipt point should be in a single receipt zone initially; ○ First Gas can define additional receipt zones should the need arise; and ○ First Gas may review the make-up of delivery zones. • Nova disagrees with the PR allocation methodology because: ○ The quantity of PRs sold for each DP should be optimised to achieve the maximum revenue from each auction, subject to the capacity of the pipeline to deliver; ○ There should be a phased approach of releasing a proportion of PRs at each auction. PRs can be allocated to DPs across the transmission network, subject to applying a set of constraints around DP capacity, allocation limits and aggregate capacity at various choke points across the network, e.g. capping total PRs within a zone downstream of a potential congestion point in the pipeline; ○ Under this methodology, offers for PRs at different DPs within certain zones are effectively competing bids, i.e. the allocation can be optimised using a model of the gas network in the same way that a large scale linear programming model is used to dispatch electricity generation within a set range of constraints. This also means that shippers at a DP where there is a single consumer only, will pay much the same price for PRs as shippers do for nearby DPs that are likely to be affected by the same congestion issues. We believe this would provide the most efficient allocation and pricing; and ○ Limiting the availability of PRs to less than the actual maximum capacity will potentially result in an artificially elevated auction price for PRs. Further, making all PRs available for auction does not prevent parties that do not hold PRs from accessing capacity on an interruptible basis, i.e. there should be no concern re 'hoarding'.

	• PRs should be made available for up to 3 years ahead, including in strips of 6-monthly blocks, i.e. a proportion of the available PRs for each period being progressively auctioned in tranches 2x p.a. Because only a proportion is made available at each auction, any risk of a single party monopolising all PRs for a delivery point is reduced. These details do not necessarily need to be codified, but the principle of spreading the release over time should be; • The PRs should be allocated at the marginal clearing price, rather than pay as bid. The PRs will be difficult for parties to price given the level of information needed to price each and every delivery point as well as ascertaining the expected demand in any auction. Any uncertainty over the total number of PRs that are likely to be available also makes it difficult to accurately price all PRs. While 'pay as bid' may be appropriate in economic theory, the complexity involved in assessing the true values of PRs means it is very difficult to assess the true economic worth of PRs to end consumers; • Priority customers under critical contingency conditions should be required to hold PRs. For those parties the PRs nominally have a very high value, but it is appropriate for them to pay the clearing price by default. Alternatively, a multi round process at each auction will facilitate efficient price discovery but due to the number of delivery points this will likely be a complex and costly process; Nova also considers that there is the potential for a 'free rider problem' since some classes of user have priority supply under FM or critical contingency, shippers to those end-users may have an incentive not to buy PRs.
Shell	**DNC** Shell considers that protocols for approving nominations and scheduled quantities need to be added, including: • The ability for a producer to selectively approve or reject provisional shipper nominations (per MPOC); • A 'lessor of' rule when establishing final Scheduled Quantity from provisional scheduled quantities; • Allowing for confirmation by both operators before receipt point nominations become final; • Allowing for curtailment of injections or deliveries in event of unforeseen operational problem; and • Specifying a nomination schedule (four ID cycles should be sufficient).
STOS	**DNC and PRs** STOS would like to know how PRs may impact at its interconnection points (Oaonui and Ngatimaru Rd). It expects its buyers/shippers to nominate in accordance with their DNC rights, so does not expect any significant effect on day-to-day operations. It sees a possible inter-relationship between PRs for pipeline capacity, and priority provisions in gas contracts. In the event of an FM event that requires it to curtail its nominations, it considers that a priority mechanism could be a useful tool. Under the MPOC, a curtailment at a welded point is pro-rated across all contracts. If the DNC/PR arrangements (and supporting IT) allow

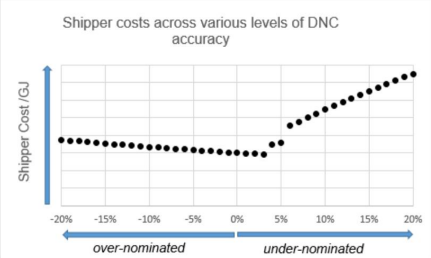
	targeted curtailments at the individual contract level, that would be a significant improvement. In some cases, buyers can have higher-priority contracts. Allowing the welded point operator to choose which contracts get curtailed in preference to others would preserve the value of those higher priority contracts. This mechanism would also be very useful at welded points where there is more than a single seller (Ngatimaru Rd (Receipt)). In the event of an outage, one seller may have sufficient capacity to cover its nominations, and the other(s) may not. Under the current pro-rating of curtailments, it is not possible to just curtail nominations of one seller and not the other. Implementing this ability would have significant benefit where an Operator operates a welded point on behalf of multiple parties. While this is a gas contract issue and not a transmission issue, providing the functionality in the software platform and operating procedures should be considered. STOS also asks for clarification on whether nominations for delivery will be linked to receipt. Ie, will a curtailment at a given receipt point result in a curtailment at the corresponding delivery point(s)?
Trellis	**Delivery Points v Zones** • Trellis supports the rationale for DNC/Priority Rights being assigned to delivery points rather than delivery zones; and • Its experience is that point-based delivery models are more common, and it believes this creates a simpler process for both shippers and the pipeline operator long term. **DNC and PRs** • Combining the concepts of DNC and PRs could let shippers contract for a set capacity for a long-term providing more predictable gas flow and revenue stream; • DNC is consistent with an 'interruptible' contract in a US-based, FERC regulated pipeline. Interruptible contracts generally mean that a shipper has the right to flow, but they don't have any specific volume commitments; • A PR is consistent with the concept of a 'firm' contract in a US-based, FERC regulated pipeline. With a firm contract, a shipper is making a commitment to flow a minimum volume on a daily basis over a specified period of time (in the *GTAC* the current duration looks to be 6 months at a time). And given the concept of a shipper wanting to buy PRs for a specific volume level, shippers could baseline their desired minimum firm volume on the PRs they planned to buy, thus giving them both the flow commitment and priority they seek rolled into one contractual vehicle (one firm contract) vs. two (DNC plus PRs); • The benefits of combining DNC and PRs would be: ○ More predictability. A long term firm contract vehicle that locks in a specific price point and capacity. This allows for better budgeting and planning for the future. If shippers are allowed to purchase PRs that are tied to capacity this could provide them the opportunity to better forecast their business needs and costs. At the same time First Gas would also have a better picture of its pipeline needs, constraints and revenue to better manage the pipeline;

	○ Less overhead and surprises; ○ No need to pay back the revenue of PRs, alleviating a potential administrative burden; ○ Reduce unforeseen exposure to production shortfalls (e.g., a well goes off production) as demand is better forecasted; and ○ Ease of auctioning. Shippers not using their firm capacity could auction this capacity off, similar to the concept of auctioning PRs. The concept is often referred to as 'Capacity Release' in markets Trellis currently serves, and is a common vehicle for shippers to buy and sell pipeline capacity to one another.
Trustpower	**DNC and PRs** Trustpower believes the proposal would introduce significant complexity because shippers will be required to: • provide two sets of nominations (one for energy and one for capacity) at every delivery point - both would affect overrun charges; and • procure PRs at every delivery point. **DNC** Requiring Shippers with mass market customers to forecast to the gate level will increase the uncertainty of pipeline demand, as was discovered in the NZ electricity market when all parties, including retailers, had to submit bids each day to assist the System Operator in determining forecast prices. The resulting uncertainty led to the System Operator only requiring non-conforming load to provide estimated offtake forecasts, whilst conforming, mass market load forecasts were determined by the System Operator in aggregate. The resulting aggregate forecasting greatly improved the accuracy of load forecasts. Accurate forecasting is a particular problem for a new entrant with only a few customers at a delivery point. The smaller the number of customers, the higher the forecast demand inaccuracy, and the less meaningful the forecast information which will be provided to First Gas. **PRs** • Given the size of the New Zealand gas market and the limited congestion, PR auctions at approximately 70 delivery points, run every six months, is overly complex and administratively burdensome; • Shippers who retail to mass market will be compelled to purchase Priority Rights as a matter of prudent risk management practice, regardless of whether congestion is anticipated, as there is always the risk of unexpected events causing congestion; and • The risk of congestion is not carried by parties who can physically respond, but by shippers who do not manage to secure any PRs (or through any off-market arrangements following the auction). A shipper who doesn't secure any PRs is not able to easily manage the risk of significant overruns arising (if their nominations are curtailed) or potentially having their customers turned off. Yet there could be gas users who would be able to turn off during an actual congestion event in response to an appropriate price signal. The *GTAC* should incorporate arrangements that enable these users

	to come forward and offer to physically manage the risk of congestion for the market. Trustpower believes PRs are fundamentally flawed because they do not assign risk to parties best able to manage it, or ensure a physical response to congestion. However, if First Gas is to pursue PR auctions further work is needed to: • Determine the timelines for various steps in the auction, i.e. when bids must be provided, the time that the auction will be run on auction day (second Monday of defined month); • Develop appropriate market power mitigation arrangements to ensure a level playing field; • Define the parameters of the auction; and • Develop appropriate pricing arrangements for ensuring least cost auctions. Also, Trustpower suggests the following design improvements: • Below a set threshold (per customer/GJ) DNC should be required at an aggregated zone level for Shippers (the threshold level should capture mass market customers) and overrun charges should not apply; • Above the set threshold then DNC should be provided at a delivery point level for transparency purposes and to assist First Gas in scheduling; and • First Gas is responsible for ensuring gas is transported around the system, and it should develop products that will physically manage congestion on the system and reduce complexity to existing participants and potential new entrants. Trustpower is also concerned that the PRs raise concerns about market power. It notes that, where there is only one Shipper bidding for PRs at a delivery point PRs would be priced very low, even if congestion is an issue at that delivery point. Larger shippers, who procure PRs at lower cost in these circumstances, would be able to smear costs of acquisition across their entire portfolio and keep overall transport costs down to all customers even if congestion is occurring. As a result larger shippers will have a significant advantage over smaller shippers and new entrants. At delivery points with only be a few shippers, it is also conceivable that larger shippers would be able to price smaller shippers out of the market for PRs, essentially enabling them to hoard capacity. A smaller shipper who is not able to obtain PRs could face significant overrun costs or its customers may be curtailed, making it very difficult for the business to recover. Trustpower, suggests consideration be given to: • Whether ex-ante vs ex-post mitigation arrangements should be adopted, or a mixture of both; • What tools should be used for mitigation, i.e. independent review of bids? Inclusion of a price cap?; and • Who should be tasked with monitoring behaviour? Note that they will need to be independent. It suggests one option would be for the GIC to monitor and report to the Commerce Commission.

	Alternative model Trustpower proposes an Interruption Call auction model to provide greater flexibility for both First Gas and other parties to manage congestion, while ensuring those parties who can best manage congestion risk are assigned that risk. It would be simpler than DNC/PR, remove the barriers to entry and provide a physical response to system constraints. • At a high level, the Interruption Call auction would require First Gas to undertake a Dutch style auction where Shippers and other users of gas can offer to be interrupted at any time during a three month period. In return for providing greater flexibility to First Gas, providers of congestion management services would receive a discount on their transport costs. This could be likened to receiving an 'availability' payment for the three month period; • Other key aspects of the Interruption Call auction option include: ○ an ongoing monitoring role for First Gas to determine when an auction would be called, but generally they would only being run if congestion is anticipated during a three month period; ○ First Gas (or other parties) would bid to get additional flexibility, while Shippers (or other parties) would offer to sell their flexibility - agreeing to a potentially more variable capacity service for a three month period; ○ Those parties who sell their flexibility would have their gas supply interrupted at any time during the three month period should an 'Interruption Call' be issued; ○ A maximum buy price (or auction cap) for First Gas should be set to limit the financial exposure of the market with respect to the purchase of congestion management services; ○ Parties other than First Gas can also seek to purchase congestion management services, essentially displacing the other party's gas at a delivery point in order to ensure they can receive delivery of gas during the three month period. This would enable gas market participants to take steps to avoid contingency events themselves, not just First Gas; ○ The Interruption Call auction would provide strong incentives for all players (if they are capable) to offer to provide congestion management services as they would receive compensation for potentially being interrupted as opposed to receiving nothing if a critical contingency occurs and they their gas consumption is curtailed; and ○ The proposal would allow for zonal based transmission system arrangements. Appendix 1 of the Trustpower submission provides details of its proposed Interruption Call auction, and Appendix 2 give an assessment of PR auctions and Interruption Call auctions against the relevant design objectives for the Code.
Vector	**DNC** • Vector believes the proposal would require two nominations. One would be for a shipper's anticipated customer demand adjusted to address its running imbalance position, and the other would be the DNC. This fails to meet the *GTAC* objective of minimising complexity and transaction costs;

- A consequence of imposing daily and hourly overruns on the DNC is that shippers will be incentivised to focus on avoiding the overrun costs rather than providing First Gas with robust information on the demand;
- It provides a chart to show the impact of the proposed DNC framework, in its current form, on the accuracy of shippers' DNCs;



- The chart shows that:
  - the lowest cost is where a shipper under-nominates by 3%;
  - The extent to which a shipper elects to overnominate will be influenced by its appetite for risk; and with nominations at a delivery point, rather than a zone, over-nomination by shippers is amplified across all delivery points, potentially creating a significant difference between anticipated flows and booked capacity. If overruns were at a zonal level, potential 'unders and overs' that occur on delivery points within the same zone would be factored in by shippers and potentially reduce the extent to which a shipper over-nominates;
- To minimise complexity and transaction/overhead costs, Vector proposes various options First Gas could implement:
  - ensure that the incentives for accurate DNCs are double sided, allowing the determination of anticipated customers' demand and DNC to be made the same amount;
  - remove both daily and hourly overruns and introduce a daily mismatch charge alongside the running mismatch charge – a framework closer to MPOC arrangements; and
  - create capacity zones for non-direct connect delivery points with the ability to remove a delivery point and require DNCs for those delivery points when First Gas believes there is or is likely to be capacity constraint.

PRs

Vector is concerned about the greater complexity and uncertainty that PRs will generate, and the increased risks we face around:

- Information asymmetry
  - It would be highly challenging for shippers and customers to put a value on PRs, given they do not have up-to-date information on current and emerging congestion that First Gas possesses;
  - Around 83% of the volume of gas transported in New Zealand goes to direct connect customers. It is therefore First Gas that will have the most accurate information about likely increases in capacity requirements, not shippers and other customers;

	○ Furthermore, it means 83% of gas transported will not be subject to a competitive bidding process as there is only one end user; ○ The six-month validity of PRs means those who hold them, or intend to bid for them at future auctions, can assess their value only for a very limited timeframe; and ○ In addition, Vector does not agree that the traded price for PRs should be confidential as this goes against the desired outcome of greater pricing transparency. We suggest that traded prices for PRs between shippers be published. • Risk transfer ○ Customers who economically do not (or cannot) value PRs with sufficient confidence to protect themselves in times of congestion may view gas as a less attractive fuel source. We agree that PRs provide strong price signals to First Gas to invest in additional capacity but during that process of creating additional capacity, the industry would lose customers. This will not promote the use of gas; and ○ The risks associated with the lumpy nature of congestion are effectively being placed on shippers and customers, including direct connect customers, who have no tools to deal with those constraints while carrying unlimited liability for continuing to use gas. This effectively transfers risks from First Gas, who is the party best placed to determine and manage congestion, to customers via their shippers. • Security of supply ○ We believe the highest marginal value from the creation of PRs would accrue to mass market customers, whose access to capacity cannot be constrained (unless there is no gas at all), for example, under the curtailment arrangements of the Gas (Critical Contingency Management) Regulations 2008 (CCM Regulations). We suggest that First Gas consider the implications of the CCM Regulations on the value of PRs • To address complexity of above issues, Vector recommends that First Gas: ○ only auction PRs on zones or delivery points where First Gas believes there is congestion, or where congestion is anticipated (or reasonably anticipated); ○ allow direct connect customers to purchase PRs and then assign those PRs to shippers. This could be achieved via an interconnection agreement (ICA) between First Gas and the direct connect customer; ○ develop and implement a demand management response scheme that provides price signals for scarcity and a physical solution in times of actual congestion, rather than relying solely on the CCM Regulations; ○ place a cap on the unlimited loss currently associated with overruns; and ○ adopt the marginal price of the last block of PR at an auction as the price for all PRs of that auction (Figure 1 in the consultation paper) – for simplicity, especially as this revenue is returned to shippers and eventually customers. Price signals would still be available to First Gas and shippers will be paying the same price for the same priority. • First Gas has stated that PRs are designed so that customers and/or shippers who place a higher value on capacity rights can acquire firm capacity by paying a premium. While this approach is appropriate for a competitive market, we do not consider it to be the case for the monopoly

	gas transmission services market. We expect First Gas to apply a neutral and non-discriminatory policy regarding the allocation of firm capacity rights. It is likely that customers or shippers with considerably more resources will acquire most of the PRs, potentially displacing smaller customers or shippers from the market. This will not promote the use of gas; and • Following advice from First Gas that PRs are not "financial products" under the Financial Markets Conduct Act 2013, emailed to Shippers on 20 June 2017, we suggest that the *GTAC* include a provision confirming this to be the case, to avoid any doubt in the future. We also suggest that First Gas seek advice on whether PRs are financial arrangements under other legislation such as the Financial Reporting Act 2013 and Income Tax Act 2007, and if so, what this implies for the relevant parties.
Pricing	
Contact	**Overrun charges** • The balancing incentive charge is a better means of encouraging accurate DNC nominations than an overrun charge. This would have the added benefit of not having an uncertain revenue element (the overruns) included in the make-up of the allowable revenue. Another benefit is that overruns that arise out of a shipper correcting a mismatch would not arise; and • It seems inconsistent that DNC charges will be determined by zone yet overrun charges are determined by delivery point.
Genesis	**Overrun charges** • Genesis is not convinced that the proposed pricing structures specific to overrun charges will meet the objectives of recovering regulated revenue consistently, avoiding price shocks and setting efficient prices; • As noted in relation to Access Products, Genesis is concerned about the difficulty of accurately nominating at every delivery point, and the consequent level or overrun charges being disproportionate to the true costs of service; and • Genesis is also concerned that hourly overrun charges would impact the operational flexibility of the Huntly Power Station. On 10% of days over the last two years the peaking limit would have been exceeded at Huntly. This would encourage more coal fired generation at the expense of gas. **Non-standard agreements** • Genesis sees a potential 'win-win' in tailoring non-standard agreements to unique loads: ○ Genesis would have more flexibility in operating the Huntly Power Station; and ○ First Gas would have increased interaction and information flow to better manage transmission system flows. • Also, such an agreement could allow for the misalignment between the throughput allowed at the Huntly gas gate and the maximum hourly quantity that can be delivered. Following the retirement of large users such as the Southdown and Otahuhu power stations it believes the throughput should be reassessed to reflect the new operating and commercial reality

	of this area of the system. **DNC charges** • Knowing the actual "postage stamp" DNC prices for each zone would allow Genesis to decide if it fully supports the proposal.
Greymouth	**Overrun Charges** • DNC overrun charges are problematic because: ○ Few customers can nominate within +3% of demand, so overruns will be very common and extra work is required for shippers and end-users to nominate and re-nominate; and ○ In the absence of an underrun charge, and especially when the risk of curtailment is high, DNC overrun charge create an incentive to over-nominate. This will mean that transmission nominations will be different to gas nominations. Greymouth suggests adding underrun charges, relaxing the no charge tolerances or, preferably, removing overrun charges. • MHQ overrun charges are problematic because: ○ MHQ overruns can occur for good reasons, and the rationale for penalising them is not clear. Greymouth suggests MHQ overrun charges should be replaced by a demand load-factor element in the DNC price. • The pricing methodology should allow for: ○ a 10% price shock cap; ○ shippers to dispute the GTPM and transmission fees; and/or ○ more detail about how prices will be set. • Decisions with a commercial element should be subject to the code and not left to First Gas discretion; and • Worked examples are required, and may prompt further comment.
MGUG	**MHQ charges** • The case for introducing an MHQ charge at dedicated delivery points has not been justified; • It appears that the rationale for the charge depends on transmission assets (delivery points, receipt points, compressors, and other assets) being sized according to MHQ parameter. Only then could excess MHQ have '… significant impact on the transmission system', although the impact presumably depends on demand diversity and line pack; • It is not clear why MHQ charges only apply to dedicated delivery points. Exempted receipt points and allocated delivery points, which are equally sized for MHQ parameters, can presumably also impact significantly on the transmission system; • MGUG does not agree that '… there is no reason for exceeding MHQ' at dedicated delivery points, because a dedicated delivery point: ○ may inherently have a peaky daily demand profile; and ○ may have a peak created from operational requirements, such as start-up after a plant trip or after a shutdown.

	• For users, the main impact will be to increase the administrative burden in making nominations. Alternatively, users may end up consistently paying for DNC quantities, depending on which part of the day the peak occurs relative to the intra-day nomination cycles. (MGUG details various scenarios.); and • MGUG concludes that there is no clear rationale for MHQ being a function of DNC rather than a function of the physical constraints of the pipeline, or why allocated delivery points and receipt points should be exempt. The benefits of the charge do not appear to justify the cost. **Overrun charges** While MGUG supports the concept of a tiered approach to overrun and excess running mismatch charges, it can't comment on the reasonableness of the proposal without knowing what opportunities end users have to manage overrun and mismatch risk through nomination cycle times.
Methanex	**MHQ charges** • Restricting MHQ charges to dedicated delivery points could allow certain end-users to freeride on peaking. Significant peaky loads should in all cases be measurable.
Nova	**PRs** The revenue from auctioning PRs should be recognised in the year for which the PRs apply, i.e. the income recognised in the period the PRs are utilised. That should help reduce pricing volatility and First Gas will have good information on PR revenues for the next year when setting its DNC charges. • To avoid shippers to end-users with priority supply under critical contingency free-riding by not buying PRs, shippers to residential and critical care end-users could be required to hold PRs by default. These shippers could be required to pay the PR clearing price for the proportion of their market that is in these categories; and • PR revenues should be recognised in the period in which they apply and offset DNC charges for that period. **Overrun charges** • Overrun charges should be cost reflective and not punitive; • If overrun charges are excessive, shippers will collectively be forced into over-investing in forecasting systems that ultimately may add little economic value; • The relationship between charges for nominated capacity and penalties for incurring overrun charges must be proportional so that there is an incentive to nominate DNC to the expected demand at each delivery point each day. Otherwise First Gas will not be able to rely on DNC to predict capacity requirements, and Shippers will face excessive complexity in optimising between expected demand and optimal DNC for all DPs. In addition to setting appropriate over-run charges, it may also be appropriate to provide a margin for error each DP in relationship to that DPs demand characteristics. The specific mechanism may not need to be codified, but the intent of the pricing arrangements should be;

	• Using any over recovery of revenues from imbalance or overrun charges to reduce transmission charges will not in itself prevent distortionary and economically inefficient outcomes. This is because the parties benefiting from reduced transmission charges arising as a result of overrun charges are not necessarily the same shippers or connected parties incurring those costs. Furthermore, there may be some classes of customers that systematically incur charges that are in excess of the costs that they create on the pipeline system; • The proposed basis for overrun fees (zero for the 1st step, 5 times the DNC Fee for the 2nd step and 10 times the DNC Fee for the 3rd step) is excessively punitive. Under an uncertain demand with equal probability of an under or over run, then the appropriate overrun charge to apply to incentivise an accurate DNC would be double the DNC cost (assuming no tolerance). If a tolerance is provided allowing for a 25% probability of an overrun (i.e. 75th percentile of a normally distributed uncertainty of demand), then the neutral overrun fee would be 4x the DNC charge. However, because all variability in demand is not uncertain, and distribution of demand is not normally distributed, setting appropriate tolerances for DPs is not straightforward. The simplest and most reasonable basis would therefore to apply an overrun fee of 2x the DNC fee; • The concept of differential steps for overrun charges also overcomplicates the issue. Shippers will be aiming to match DNC with throughput in any case. A buffer of 3% is almost meaningless in circumstances where demand is much more volatile than that; • An underrun charge will be very difficult to reconcile with industrial and commercial customers, i.e. paying for something that they do not use. If transmission is paid on the basis of DNC rather than throughput, then there is an incentive to not over nominate as underuse of DNC increases the effective cost per GJ being shipped in any case; and • There is no reason for breaching MHQ at delivery points. Given that breaching MHQ can have a direct impact on the transmission system it is appropriate to have an overrun charge relating to that, and for that charge to be punitive in design. **DNC charges** Nova generally agrees with the proposed pricing approach and notes that: • DNC charges being independent of the location of a Shipper's receipt point(s) is an important aspect of design giving producers greater flexibility and saving shippers the need to swap gas between receipt points; • If a throughput fee is introduced, overrun charges would also need to be re-assessed to ensure that optimal DNC is equal to expected throughput; and • PR revenues should be recognised in the period in which they apply and offset DNC charges for that period. **General** • Transmission fees should be finalised well before 1 September each year to allow affected parties to make adjustments to their own charges and notify

	them. A 60 day notice period before any price change takes effect would be workable; and • Nova suspect that without a reasonable degree of tolerance or aggregation for demand forecasting, the process outlined in the paper will not be workable in the long run and will result in significant overruns and imbalance charges. Nova strongly recommends that First Gas undertake simulation of how retailers will manage their capacity nominations and daily imbalance.
Shell	Shell requests initial estimates of zone tariffs
STOS	**Balancing charges** • It is important for producers that revenue from shipping charges and balancing charges are considered independently, because operators/injectors generally pay balancing charges, rather than shipping charges; • In the event of an over-recovery of balancing charges from Producers, having these returned to the industry as a reduction in shipping charges fails to compensate the Producers who have been overcharged; • It is also important that the revenue for each pool is appropriate to the overall "cost" of managing that pool; and • First Gas has indicated that it is seeking to avoid "price shock" to users. STOS expects that this philosophy will apply to interconnected parties as well. **MHQ charges** • The ideal operating scenario for a gas field is for steady operations, all day, every day; • If overrun charges are excessive and punitive, then shippers will naturally seek to have more control over the scheduling of their nominations, likely pushing for more intraday nominations and more flexibility in their contracts with respect to the ability to nominate upwards and downwards frequently on an intra-day basis. This may not lead to the stable operation of the industry; • It is not 'good industry practise' to frequently ramp/cycle facilities and wells up and down. Also, to completely shut-down or start-up wells and facilities requires additional Field Operator resources, and starting-up and shutting-down of facilities (or parts of facilities) is a hazardous operation scenario, particularly during hours-of-darkness; and • Gas Producers have a finite maximum production capacity, and if intraday swing is to be managed in the contracts rather than absorbed by the pipeline buffer, then fields can only contract for a proportion of their maximum capacity.
Trellis	-
Trustpower	**Overrun charges** The proposal is too complex: • The two-tiered overrun charge assumes that shippers will intentionally nominate below their actual off-take. It will lead shippers to over-nominate to avoid overrun charges, thereby distorting the information value, and

	potentially leading to inefficient market signals of congestion. It is also unclear what the two-tiered overrun charge is attempting to achieve; • Accurate delivery point consumption data for each Shipper will be required to inform shippers how their nominations compare to offtake; and • Trustpower suggests a de minimis threshold where shippers below the threshold do not have to make nominations at a delivery point or pay overrun charges. **Throughput Fee** Trustpower does not support the inclusion of a throughput fee, set initially at zero: • The rationale stated by First Gas, ie to avoid the necessity of a change request, suggests the change process may be inadequate. If a throughput fee is required at a later date, then a change request should be developed and assessed on its own merits; and • Putting in place additional fees in the future can potentially have a significant impact on participants. An appropriate level of scrutiny should be applied to any decisions to include a new fee, or significantly vary a fee. **PRs** • PRs could give distortionary signals: ○ Shippers who retail to mass market will need to over-purchase PRs, or at least cover variability of their load; ○ The pay-as-bid auction structure will not send an efficient signal of the true value of congestion. There is a large distinction between the market value of congestion, and the value that an individual party may assign to congestion, particularly given it will form part of a mass market retailer's risk management approach and pricing outcomes may be the result of competitive restrictions in the auction; ○ Auctions will be run regardless of whether there is anticipated congestion; ○ If PRs do not apply in a contingency event then retailers who have not acquired any PRs, or a limited amount, will be potentially encouraged to exacerbate any issues to encourage declaration of a critical contingency; and ○ A single-shot auction arrangement will encourage more aggressive bidding to ensure that their firm capacity is purchased. • 'pay-as-bid' pricing will result in higher costs overall. Marginal pricing arrangements would be more appropriate; and • Shippers will tend to over-procure PRs to cover the variability of their loads, so prices would be higher than necessary and would not reflect the true value of firm capacity.
Vector	• Vector generally supports the First Gas pricing proposals; • Direct connect customers face the risk of hourly overrun charges, with unlimited risk for those who do not hold PRs. First Gas should develop tools for direct connect customers to manage such risks. First Gas could consider:

	○ increasing the number of nomination cycles. For example, a direct connect customer may only operate for a certain number of hours a day and does not need to make nominations for an entire day; and/or ○ allowing hourly profiled nominations. • The proposed monthly credits to shippers from PR fees will significantly increase transaction costs and complexity for shippers. Vector suggests that First Gas amend its proposal so these credits are paid annually, rather than monthly.
Balancing	
Contact	Contact agrees that: • It is practical and efficient to balance the pipeline as a whole rather than by balancing pools; and • A 'park and loan' service is worth investigating.
Genesis	Genesis considers the proposal would achieve the design objectives in maintaining line pack, being cost-effective, incentivising primary balancing and allocating the costs of secondary balancing to causers. It also supports its preference for flexibility in the management of day-to-day gas volumes and the value that this offers its business and its customers. **Primary balancing** Genesis supports: • balancing mismatches being assessed across the system as a whole for shippers and at connection points for Operational Balancing Agreement (OBA) holders; • tolerances being +/- the percentage of nominations each day for OBA holders and +/- the percentage of deliveries at non-OBA points, and nominations to OBA delivery points for shippers; and • exploring different balancing tolerances for normal operating days compared with days the system is under stress. **Park and Loan** Genesis supports: • developing a Park and Loan service to account for temporary shortfalls or surpluses of gas for interconnected parties and shippers.
Greymouth	Greymouth broadly supports the proposals subject to workshopping, seeing worked examples and understanding what discretion First Gas will have. It considers: • Cash-outs are acceptable only if First Gas buys or sells balancing gas; • The park-and-loan proposal is unclear and would seem to compete unnecessarily with the emsTradepoint market; • MBB is retained for some parties/points, but should not be; • The proposed Excess Running Mismatch charge, is not necessary given the B2B cash-out regime; • First Gas' discretion should be limited so that transparency and certainty is advanced; • Current (cumulative) tolerances should be retained;

	• The assumption that shippers currently have an '… obligation to match gas receipts to deliveries' is misleading; • Making shipper running mismatch positions public requires further discussion; • The RPO definition needs further scrutiny; and • Balancing may still be more difficult than necessary.
MGUG	MGUG supports minimising costs by having a single balancing pool for the pipeline system, and providing a mechanism in the code to change the number of balancing pools if circumstances dictate. **Park and loan** • MGUG does not support a Park and Loan product since it would negatively affect the capacity of the pipeline to the detriment of balancing costs, PR availability, and Overrun and running mismatch tolerances; and • Park and Loan would also undermine the development of a deep and liquid trading market for gas commodity, including the resulting price signals.
Methanex	**OBAs** • It is unclear how the proposed OBAs may differ from the MPOC OBAs. Methanex has a strong preference for retaining the MPOC SQ and OI mechanisms for measuring and incentivising parties to match their nominations or pay for excess/parked gas. **Principles for buying and selling balancing gas** • Principles similar to s3 of the MPOC – such as transparency, seeking the lowest cost and making use of the market where possible – should also be in the *GTAC*.
Nova	• Nova agrees with the Balancing principles to be applied and the proposed method of implementation. Using the incentive price rather than cash-outs requires the shipper to rectify the imbalance through revised receipts or deliveries, trading gas, or using the park and loan facility, if available. It is also important however that shippers have the information and flexibility in the systems available to them to manage their positions; and • First Gas should explain how it will set the incentive price – even if that is at a conceptual level only. Nova's preference is for a market/cost reflective imbalance charge with title transfer instead of a punitive "incentives" scheme. If there is no title transfer, then the 'incentive' is essentially a charge for an unauthorised Park or Loan. **Park and loan** • The proposed park & loan facility is a useful concept but to evaluate it information is necessary on what the park/loan period would likely be; and • Nova suggests than one possible guide to pricing of a park and loan service will be EMS Tradepoint and consideration should be given to competition between the pipeline park/loan service and that market.
Shell	Shell asks for clarification of: • whether shipper or interconnected party is responsibile for mismatch and balancing charges at each point; • shipper and welded party obligations for daily balancing (Shell suggests using UK shipper licence requirements); and

	• whether receipt and delivery point nominations are independent (ie not "chained"), and allow independent curtailment at any point. In relation to the balancing incentives, it asks: • for examples of how they are calculated; • consideration of whether they are strong enough; and • consideration of whether Park and Loan could compromise stable pipeline pressures and/or require excessive balancing incentives.
STOS	**Target Taranaki Pressure** • STOS is concerned that only 'linepack management' (implicitly being energy linepack) is discussed in the *EV Paper*, with no mention of pressure management. The Taranaki Target Pressure requirement in the MPOC is imperative to the safe and efficient operation of STOS facilities; • The facilities were designed on the assumption of defined pressure requirements for delivery of gas into the pipeline. The 48 barg maximum pressure is a constraint that is used in determining the remaining Gas Reserves in the STOS fields, and any lack of certainty on this maximum pressure limitation will result in a Reserves write-down; and • High pressure is a greater concern low pressure (although low pressure is important with respect to contingency volumes in the pipeline), since it has the effect of: ○ Decreasing field reserves; ○ Reducing field deliverability (threat of not meeting scheduled quantities); ○ Risk to meeting hydrocarbon dewpoint specification; ○ Increasing operational costs; and ○ Increasing the threat of plant trips (reliability issue). **Park and loan v ROIL multipliers** • STOS considers that the park and loan service may be useful to it. To operate the STOS facilities efficiently, it needs a mechanism to allow it to shut-down those facilities for short periods of time for testing, critical maintenance or projects. However, since the park and loan service would only be granted on a 'first-come, first serve' basis, on application made a day in advance, it may only be suitable for planned outages, not unplanned outages; • Currently planned and unplanned outages are managed using the 'ROIL multipliers'. These allow any interconnected party (with the agreement of the Pipeline Operator), to schedule flows for the day such that outages can be completed with minimal disruption to the gas market. For planned outages, interconnected parties can schedule their delivery or offtake such that the pipeline linepack is maximised during the outage, then catch-up any shortfall afterwards; and • STOS maintains that ROIL multipliers are still the best arrangement for providing operational flexibility and mutual benefit to pipeline users during planned and unplanned outages. Its strong preference is to retain this arrangement.

	Gas Day • STOS considers much of the problem with primary balancing is the constraint that is caused by the Gas Day. Under the MPOC (pipeline conditions permitting) it is possible to be significantly ahead or behind on actual flow vs deemed flow throughout the day, but at the end of the gas day excess imbalance is automatically cashed-out; • This can have undesirable effects. For example, a short trip of a major facility at 11:00 PM could result in a shortfall for the day of several TJs. This could encourage the curtailment of nominations, to avoid balancing charges, even though it is possible to get back "on target" within a few hours; and • If an alternative primary balancing system could be designed, and serviced by off-the-shelf software, that avoided this problem, much of the noise might be removed from primary balancing.
Trustpower	-
Vector	**Park and loan** • Vector generally supports the First Gas park and loan and balancing regime proposals. It suggests that First Gas develop measures to ensure the transparency of these mechanisms to market participants.
Allocation	
Contact	• D+1 works well, but a more accurate, timelier and cheaper alternative would be welcome. More detail is required on the alternative proposal.
Genesis	• Genesis agrees that the proposed allocation arrangements could meet the allocation design objective of allocating gas flows to identified parties in a timely, accurate and consistent fashion, subject to further consideration of First Gas' proposed replacement of the D+1 pilot; • It supports existing code arrangements at receipt points remaining available, and agrees an OBA should be an option at receipt and dedicated delivery points; and • It may support an allocation algorithm based on DNC nominations if it delivers the reduced cost, increased reliability and improved timeliness benefits promised. (It suggests First Gas benchmark the costs against the upfront and ongoing investment cost that would be required to move D+1 from its pilot phase).
Greymouth	• Greymouth notes that an outcome from the 14 June 2017 DAWG meeting is for GIC to scope different allocation options. In the meantime it has modelled its position for 2016 and 2017 under various allocation methods and finds that: ○ Its old actual initial allocations are better than the current D+1 allocations, materially better on some days. But while there are daily cash-outs it continues to value timeliness at the expense of accuracy; and ○ The proposed pro-rata on DNC initial allocation is problematic because of the high value of wash-ups that would impact on prudentials, cash-flow and sourcing of short-term gas. Also, even with intra-day nominations, it is unlikely that it would be as accurate as the D+1 model. (The only way to test this for certain is to run a real-time trial period.).

	• It concludes that if D+1 is needed, it has to be made robust and incorporated into the *GTAC* and the downstream rules. This will involve: ○ Formalising the business rules somewhere; ○ Amending the downstream rules to replace the initial allocation process with the new methodology (rather than doing it via the special allocation process) and to progress any other related initiatives; ○ Formalising/amending other supply chain contracts, such as with meter owners; ○ Analysing the wash-up methodology (which would probably sit inside the *GTAC*), and analysing how the temporary arrangement has worked to date and renegotiate if required; ○ Capping shippers' allocated balancing costs at its level of Running Mismatch; ○ Codifying the position on corrections and data validation, and protecting shippers from unforeseen and uncontrollable shocks; ○ Formalising Service Level Agreements with key parties, including the process and penalties for when data is not available; and ○ Capturing all AG1 and AG2 data.
MGUG	-
Methanex	-
Nova	• Nova favours early and accurate allocations in order that parties can best keep their DNC nominations as accurate as possible, and to be able to either park and loan, or trade gas in order to balance their net positions; • D+1 data is an important tool for shippers to manage imbalance and potentially (but not necessarily) capacity nominations; • Nova will support a system incorporated within the OATIS replacement if that can be shown on a cost/benefit basis that a new allocation algorithm is better than the current GIC provided algorithm; • Further consideration should be given to how the daily allocation algorithm quantities are used in the allocation of imbalance and transmission overrun charges. In particular, should there be wash-ups of those charges as more accurate allocation data comes available through time; • Given that the industry has been working under the current D+1 arrangement for a period of time there will likely be some benefit in examining allocation data and the impact on imbalance and transmission charges. Given the nature of the data it will be appropriate for a party independent of retailers to perform any analysis and provide anonymised or aggregated results that may help inform design decisions; and • Clause 5.17(b) in the draft *GTAC* refers to 'the second Business Day after the Day on which the Allocation Agent receives the necessary input information'. That is an excessive delay in providing Shippers Delivery Quantities. The allocation process should be able to be completed in a much shorter time frame.
Shell	Shell: • Asks what default rule will apply if parties can't agree allocation method; and

	• Proposes that Day is defined in NZ standard time and consideration be given to moving it to a 9am start.
STOS	-
Trellis	• In Trellis' experience, the default allocation method is to prorate by Scheduled Quantity. The Scheduled Quantity is the guaranteed volume of gas that the pipeline has committed to the shipper, so this both a common and fair way to allocate.
Trustpower	-
Vector	• The initial allocation proposal (pro-rata to DNC) is likely to be less accurate than allocation under D+1; • The wash up of balancing incentive charges and the gas under the *GTAC* would also need to be much more sophisticated than under D+1 to minimise incentives for gaming; and • Vector proposes that First Gas implement the recommendations of the GIC and the Downstream Allocation Working Group (DAWG), which will focus on allocating cost to causers.
Other matters	
Contact	**IT and timeframe** Contact is concerned that the timeframe for IT procurement is very tight. Any new IT system should include shipper capability/portals to increase nomination and modelling efficiency and reduce cost.
Genesis	**IT and timeframe** • Genesis would support a system that offered increased flexibility, to the extent that nominations can be updated more frequently than intra-day. It believes that the current system of four intra-day nominations is outdated and inflexible. Similar to the electricity system, it would like to see software that accounted for hourly updates; • Genesis considers that the timeframe – August 2017 - for issuing a statement of requirements and a request for purchase to vendors does not account for further feedback that will be received during the full code review phase, also scheduled for August 2017 and • The full code review is the first opportunity stakeholders will have to consider the proposal as a whole; the significance of this cannot be underestimated. **Cost Benefit** To determine whether the *GTAC* is in the best interests of its customers, its business and the gas sector as a whole, Genesis needs to understand the cost/benefit ratio of the *GTAC* compared with the status quo.
Greymouth	-
MGUG	**Gas quality** To aid its assessment of the proposals, MGUG asks for more information on the gas quality assurance arrangements (how FG is assuring compliance with ICA requirements on the quality of gas injected into the transmission system).

Methanex	**First Gas discretion** Methanex believes First Gas may have too much discretion in some areas and that an overrding OBA principle should apply, and clear boundaries to set. Particular areas of concern are the discretion to: • Change the number and make-up of delivery zones. This should only be permitted through the change process since it would potentially affect user rights and obligations; • Amend MHQ; • Change overrun tolerances; • Change the percentages applying to mismatch tolerances; • Change the timeframes for notifying receipt quantities; • Change the mismatch fee and adjustment factor; • Determine balancing gas prices; and • Change metering requirements without notice or consultation. **Onerous provisions** • The GTPM and transmission fees cannot be disputed under the *GTAC*, but it needs to be clarified that they can be challenged or disputed in any other manner; • Only permitting invoices to be disputed for manifest error, and only within 10 days, is far too restrictive; and • Only permitting allocation results and delivery quantities to be disputed on manifest error by First Gas is extremely limiting. For example, what if the error is caused by another party.
Nova	**Information** • The better the information available from the pipeline operator the less investment that individual shippers need to put into their own systems to manage their exposure to charges. **Simulation** • Simulation is required to determine if the processes proposed by First Gas are workable and would be an improvement on the status quo. Such simulation should be from both the perspective of First Gas and pipeline users; particularly retailers, major users and producers. **Implementation** • An implementation plan for an orderly transfer is required. It may provide for post implementation phasing-in of some new code elements, such as park and loan service, priority rights auctions etc.
Shell	Shell: • Proposes a continuation of the arrangements that let producers and the pipeline operators agree a profile for start-up and shut-down; • Asks for confirmation that the pressure limit in Taranaki to be less than or equal to 48 bar g at Bertrand Road; • Asks for verification from prospective IT suppliers that the proposed design can be accommodated, has been proven in operation, and will not require extraordinary bespoke modifications; and • Requests a full draft of the *GTAC*.

STOS	**Gas Quality** In providing information on how it manages and assures quality of the gas it injects into the Maui pipeline, STOS has identified some areas where it feels that gas quality monitoring could be improved. For example, it believes that some of the requirements around contaminants, total sulphur and unsaturated hydrocarbons could be reviewed. STOS welcomes any opportunity to discuss this further. **Start Of Gas Day** Starting-up and shutting down of gas fields / major gas processing facilities requires unsteady-state / transitional operating modes that are recognized as being a significant hazard. STOS strongly prefers to execute these activities during daylight hours, which are generally not aligned to the Gas Day. STOS has raised this as an issue before, and it is appropriate to do so again as the new Gas Code and the software platform are considered. Our preferred timing is 09:00. **Pipeline maintenance activities** In the past, STOS has supported the pipeline operator in its need to execute maintenance activities (pigging, compressor outages) by agreeing to flow profiling. This has been done on a best endeavours basis, to the benefit of the entire industry, provided that it does not place undue risk on STOS operations, or result in additional costs. The revised code should allow such pipeline maintenance activities to continue.
Trustpower	**Consistency with the objectives of the Gas Act and GPS** Trustpower notes several area where it considers the proposals are inconsistent with the Gas Act and GPA objectives. **Commerce Act considerations** It is important that participants do not find themselves in the position of inadvertently being in breach of the Commerce Act as a result of adhering to the new Code. Trustpower advises First Gas to work with GIC and Commerce Commission to determine whether authorisation of the new Code should be sought under section 58 of the Commerce Act. **Transparency** Trustpower strongly supports greater transparency of information in the New Zealand gas market to enable more efficient decision making and reduce information asymmetries. It also facilitates monitoring of the level of competition and identifying any incidents of potential market power abuse. Specifically, Trustpower advocates transparency of: • near-term and historical information, including special transmission rights, capacity outlook information (line pack information and forecast capacity of pipelines, gate stations, production facilities etc.);

	• forecast and actual flow information (DNC, unplanned production outages, aggregated consumption information etc.) and details relating to Priority Right auctions (bids, outcomes etc.); • The information should be published at the right time to ensure the market is well aware of events that may impact congestion or pricing in advance; • First Gas should consider implementing arrangements similar to those adopted in Australia with the Gas Bulletin Boards (GBB) for the east and west coasts; and • Transparency of the delivery points at which congestion is anticipated to occur (ex-ante), or is actually occurring (real time), will be vital for the PR auctions to deliver efficient prices (assuming First Gas adopts a standard auction clearing approach of marginal pricing, and the price floor is removed). **Cost Benefit Analysis** • Prior to making any final design decisions we recommend that First Gas ensures best-practice decision making by undertaking a cost-benefit assessment of the arrangements, along with any alternatives that have been identified including Trustpower's alternative Interruption Call arrangement; and • Ensuring costs to industry as a whole are minimised should be an important consideration, ie not just that First Gas's costs. **Critical Contingencies** Trustpower suggests the relationship between Priority Rights and Critical Contingency arrangements be explored further in relation to the incentives to curtail users. Eg will a shipper who has PRs and is curtailed receive compensation? And, will the contingency event procedure be updated to reflect the existence of any PRs? **Implementation** Trustpower supports First Gas: • testing the new systems for a period of time, potentially as part of a parallel run and working closely with IT vendors to develop an optimal solution; and • including provision within its project plan for the IT system to be audited against the *GTAC* requirements to ensure the system is compliant with the *GTAC* requirements from the offset.
Vector	-

Appendix B Timeline of *GTAC* development

The following table lists the key documents and workshops involved in the *GTAC* development to date

Key communication	Author	Date
Memorandum on Single Code Development Process	**FG**	12 August 2016
Stakeholder workshop 1		24 August 2016
Single Code Options Paper (SCOP1)	GIC	13 September 2016
Stakeholder workshop 2		20 September 2016
Stakeholder workshop 3		9 November 2016
SCOP1 Analysis of Submissions	GIC	23 November 2016
Single Code Options Paper (SCOP2)	FG	28 November 2016
Stakeholder workshop 4		5 December 2016
SCOP2 Analysis of Submissions	GIC	27 January 2017
GTAC Development: Proposed Decisions and Next Steps	FG	17 February 2017
Stakeholder workshop 5		28 February 2017
GTAC Governance Options	Concept	20 April 2017
Emerging Views on Detailed Design (EV Paper)	FG	12 May 2017
Stakeholder workshop 6		17 May 2017
Initial Summary of GTAC IT Risks	GIC	7 June 2017

Key communication	Author	Date
Preliminary Draft Code Changes (Transition Paper)	FG	12 June 2017
GTAC Governance Options Final Advice to GIC	Concept	12 June 2017
Stakeholder workshop 7		22 June 2017
EV Paper Analysis of Submissions (ie this paper)	GIC	13 July 2017
Stakeholder workshop 8		19 July 2017

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'.

FURTHER INFORMATION CAN BE FOUND HERE:
www.gasindustry.co.nz

ENQUIRIES:
Ian Wilson
ian.wilson@gasindustry.co.nz