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Memo

To: Trustpower

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Subject: **Assessing the GTAC: Lingering Issues**

1 Perspective

The most striking differences of the NZ gas market with the major integrated markets such as those found in Europe and North America lie in the number and diversity of both market participants and available contractual instruments to manage both operational and commercial risks. This market depth and diversity permits regulators to focus on maintaining informational transparency, minimizing transaction costs and ensuring that all market participants have the latitude to focus on commercial optimization within a stable rules-based operating system. The depth and diversity of market participants, the operating flexibility afforded by integrated T&D networks of pipelines and storage plus multiple supply and demand nodes under differing levels of operating stress allow for continuity of service for producers and end-users while the commodity/capacity portfolio managers in between attempt to maximize profits with proper heed to incumbent financial risks. Transaction volume, standardized contracts and competition minimize contractual costs. Market entry is open to

all, while market exit due to poor risk management causes little disruption in market operations. Someone else is always available and eager to pick up the slack.

By contrast, the NZ gas market features much less depth and diversity of both participants and supporting infrastructure. Under such circumstances elsewhere as well as in NZ, both regulators and participants have valid reasons to seek alternative means of achieving as many of the positive features of competitive commodity/capacity markets as possible while reducing the complexity and associated costs of transaction risk management and pipeline capacity allocation.

Such simplification inevitably introduces market distortions, some due to the prevailing market structure and others due to the lack of a full suite of contract portfolio management tools to hedge against commercial and operating risks.

Where simplifications in market structures, processes, or offerings are considered necessary given some limitation or constraint, it is not a matter of logically deferring to "market-based" solutions ahead of, or in priority to, regulated solutions. It is a case of identifying the most practically effective blend of both – holistically.

1.1 What are we trying to do?

The history of how the NZ gas industry has gotten to this point is marked by years of challenges, changes in approach, and the periodic establishment of objectives. The journey is reaching a point of confounding abundance.

Under the Gas Act, the *principal objective* is to ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner. Well of course it is. Surely no one has ever espoused the political or societal virtues of unsafe and unreliable gas delivery. And who would argue against efficiency when it is just a single word without context or specific application? Such *principal* objectives are so high level as to be unhelpful in any practical sense.

The Gas Act (clause 43ZN) also incorporates numerous additional objectives – cast in the style of a HEPA filter seeking to capture anything and everything that could possibly be important:

- the facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements:
- minimizing barriers to competition in the gas industry;
- maintaining or enhancing incentives for investment in gas processing facilities, transmission, and distribution;
- sustaining downward pressure on gas costs and prices;

- ensuring all parties are able to properly and efficiently manage risks relating to security of supply, including transport arrangements;
- maintaining consistency with the Government's gas safety regime.

In addition, the Government Policy Statement (2008) add a further set of objectives to be applied to "all Gas Industry Co. recommendations for rules, regulations or non-regulatory arrangements for all parts of the gas industry":

- Energy and other resources used to deliver gas to consumers are used efficiently;
- Competition is facilitated in upstream and downstream gas markets by minimising barriers to access to essential infrastructure to the long-term benefit of end users;
- The full costs of producing and transporting gas are signalled to consumers;
- The quality of gas services where those services include a trade-off between quality and price, as far as possible, reflect customers' preferences; and
- The gas sector contributes to achieving the Government's climate change objectives as set out in the New Zealand Energy Strategy, or any other document the Minister of Energy may specify from time to time, by minimizing gas losses and promoting demand-side management and energy efficiency.

A key challenge in the GTAC is to emulate a multilateral market construct from building blocks that are basically bilateral agreements between each shipper and the pipeline owner. The problems arise when Shipper "A" can do something that impacts Shipper "B" but does not impact the pipeline owner. Capacity management is in this category as are a host of factors such as managing overruns and underruns. In order to get to an industry agreement it is necessary to appropriately replace a series of bilateral agreements which have unclear and ill-defined or undefined cross-impacts with an overall system that imposes multi-lateral economic signals and commercial discipline.

Ultimately, these often ambiguous, certainly numerous, and frequently overlapping objectives increase the difficulty of charting a course forward. However an essential aspect of these objectives is that they touch on common economic concepts.

An overarching practical distillation seems advised, especially given the multilateral impacts of the proposed GTAC.

1.2 The Complementarity of Competition and (not or) Regulation

Amidst all the conflicting objectives there is a basic direction that aligns with increasing value to New Zealand over time. If indeed competition is desired as the basis for industry interaction, *then steps that enhance competition are, all else equal, clearly preferable to those that do not.*

When thinking about objectives and evaluating various aspects of the proposed GTAC, the overarching perspective ought to be how well the changes facilitate competition as a way to promote discovery and integration of information and preferences that would otherwise have been ignored, overlooked, or left unacknowledged. In a submission concerning electricity transmission pricing, George Yarrow[1] highlighted an apt quote by F.A. Hayek:

> *As Hayek has put it "... competition is important only because and insofar as its outcomes are unpredictable and on the whole different from those that anyone would have been able to consciously strive for; and ... its salutary effects must manifest themselves by frustrating certain intentions and disappointing certain expectations." This accords with an everyday sense of the value of competition: a Rugby or Soccer match will likely be described as highly competitive when the teams are evenly matched and there is maximum uncertainty about the prospective outcome. The result/outcome is 'discovered' by a competitive process. If we all had full foresight about what was about to happen on the pitch, attendances would be rather lower than they are.*

In simplest terms, a preference for competition as a means of organising industry activity implies the intrinsic validity of giving higher weight and priority to changes that have the potential to *enhance competition*. Indeed it is the objective of enhancing *competition* rather than pursuing economic efficiency *per se* that best achieves the economic efficiency that might otherwise be pursued. When the choices one sees are in fact a product of a process that generates those choices, reforms that seek optimality from amongst what can be seen are likely inferior to reforms that seek to bring to light that which may currently be invisible.

All this is good, but First Gas has a practical challenge, not a theoretical or philosophical one. In practical terms, how can competition best be enhanced by changes in the GTAC while preserving safety and reliability of supply? As a corollary, where competition cannot be enhanced or enhanced effectively or at reasonable cost, how can regulation be most effectively applied overall or as needed to mitigate the negative consequences of unavoidable market failure?

In our view, the original GIC regulatory objective for transmission access[2] makes sense in this context, having been:

> *"To define a transmission access framework that facilitate competition in the upstream and downstream gas markets, recognising the natural monopoly characteristics of gas pipelines." [emphasis added]*

To that end, we advise that where given a choice amongst options, those that clearly enhance or promote or facilitate *competition and discovery of information* and preferences

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1 Professor George Yarrow, "*Some awkward problems raised by the Electricity Authority's review of the Transmission Pricing Methodology*", February 2017

2 "Transmission Access Framework Progress towards a Statement of Proposal (August 2007)", Gas Industry Company Limited, p. 4.

and that *reduce barriers to entry* by avoiding distortions and enhancing or enabling mechanisms to manage risk are *prima facie* consistent with creating value for New Zealand and also consistent with the overlapping objectives of the Gas Act and GPS.

But this means that options should be evaluated against whether they are in fact fully pro-competitive and consistent with economic principles or whether they in fact embed quasi-regulatory or non-market mechanisms to a degree that no longer justifies ex ante priority consideration relative to regulated solutions or hybrid market/regulatory solutions that deal with market failure or other unmanageable risks explicitly.

2 Capacity Management and Priority Rights

We then need to apply these regulatory objectives when evaluating the GTAC in relation to capacity management and priority rights.

2.1 What is the Problem

First Gas has devised a system of "priority rights" ("PR") to allocate available pipeline capacity under shortage conditions. This scheme is claimed to be a proxy for more traditional and familiar market-based schemes that incorporate tradable capacity rights and other means of risk management, thereby transmitting price signals to the market on the value of various forms of capacity based on the prices market participants are willing to both pay and accept the commercial consequences.

We have previously suggested that the implications of the proposed PR regime are not fully thought through. This remains our general criticism, and our specific concerns have deepened upon further consideration of the proposed regime. The PR regime is dressed up in the right words, but the words do not fit the underlying reality.

We say this because:

- The PR regime skirts the essential ingredient of effective capacity markets globally – the existence of an obligation to deliver on the part of the pipeline operator. This point is not mitigated by an intent that the extent of "firmer-ness" is enough firm that First Gas expects it will be "firm". The firmness of the PR regime can, at best, be interpreted as constituting a best endeavours aspiration.[3]
- Related to the first point, the pricing and impact of PRs on the market are subject to unusually wide-ranging discretion by First Gas (clause 3.19(d) of the most recent version

3 Ultimately, PRs may indeed be "firmer", and possibly are "pretty firm" or and may even be "pretty darn firm" most of the time, but they are not the same and should not be conflated with firm rights in markets with conventional tried and true traded capacity rights arrangements. The essence of a "firm" right is one that binds the transmission company to make the delivery by having "skin in the game", which First Gas does not have. There must be consequences to breaking a binding commitment.

of the GTAC). In fact, by altering the amount of PRs that are released, First Gas can directly influence PR pricing and perceptions of congestion. To date, inability to agree on whether PRs should be set as some fraction of estimated capacity (say 70%) or full capacity (100%) signals significant uncertainty and risk as to how well the market will work.[4] A shortage of PRs need not necessarily imply a corresponding shortage of physical capacity, but stakeholders would still be commercially exposed to pricing of PRs – particularly stakeholders mainly serving inflexible / inelastic customers.[5]

- The PR regime cannot establish a clear, unambiguous market price for capacity at the time they are awarded because the commercial cost and impact (pricing) is not established by the clearing of supply and demand, but by the net impact of the PR auction and the subsequent PR rebate. Recycling or rebating of revenue by First Gas as proposed to date will introduce material pricing distortions and inefficiencies and violates basic market economic concepts. God help those who try to figure this out. Most likely God will help those who have enough left hands and right hands in which to be dealing in PRs and receiving rebates such that the net variance (to them) is (sufficiently) reduced (as a monopolist would get all its PR expenditures back as rebates) so, by definition, the harshest and most volatile impact will be saved for the most perfectly competitive, pure player with disproportionate sales in a constrained area.
- The PR regime remains largely unproven being still conceptual in design. Almost any relevant detail to resolve any of the above concerns is missing at this time. It is difficult to see how the GIC can make an assessment of the GTAC inclusive of the PR regime except on faith that those elements that are reserved for later development (such as the auction) are to be considered at a later time. Most specifically, it is not clear what it means to approve the GTAC in the event that any of the issues reserved for later or that are already problematic by design (such as the rebate) are then found to be material.

A situation therefore is emerging in which a core component of the GTAC – capacity management – is stubbornly being described in terms that sound "market-based" yet has been developed using mechanisms and processes and assumptions that violate or ignore basic

4 If it is not possible to agree whether and how important it is (or if it is indeed considered vitally important and material) to create artificial scarcity of PRs because of concern of hoarding of access then why is this not considered a fatal flaw from the get-go? Either PRs are for 100 percent of the estimated capacity (or say 95++ percent in the event of concern of estimation error) or the idea needs re-thinking. Artificial scarcity does not an economically efficient market make.

5 Markets with real capacity rights solve this by linking capacity rights and performance penalties to revenue adequacy. A pipeline has an incentive to raise revenue by selling capacity and to avoid performance penalties by ensuring the capacity is available. Optimising these two is key to creating value and to efficient expansion proposals.

economic principles of markets. As discussed below, PRs are an administrative means of determining First Gas's daily flow regime. They constitute a *nongovernmental regulatory regime*, rather than a market-based solution.

Consequently, in our view and given an overarching objective of enhancing *competition,* the proposed PR regime merits no special consideration or favouritism ahead of regulated approaches. Just because money changes hands (in this case, twice for each PR award) doesn't make a process a *market*. As proposed, we strongly caution that PRs are likely to become a complicated, self-motivated, and anti-competitive private sector proxy for regulation, not a price discovery system incorporating innovative and value-enhancing market dynamics.

2.2 Evaluating the PR Regime Proposal

First Gas commissioned a cost benefit analysis by Sapere Research Group (Sapere) which discusses the PR regime. That the "rules must improve upon the status quo" is put forward as the relevant test. While necessary and reflective of the test recently incorporated into the Maui Pipeline Operating Code, however, it is not a sufficient test.

Consider a choice between two projects:

- Option 1 involves a project that costs 100 and has benefits of 110
- Option 2 involves a project that costs 110 and has benefits of 111

The two projects are mutually exclusive options to improve upon the current status quo. The obvious (seemingly) choice is Option 1, which creates 10 units of additional benefit. But suppose that upon inspection option 2 includes a cost for management to take a lovely but wholly unnecessary retreat to Bora Bora at a cost of 15. A strict reading of the "is it better" test would suggest no responsibility need be taken to look more closely at Option 2. Just take it at face value and reject it. Yet, doing so violates the implied principle that all the effort that goes into these complex evaluation processes should not be wasted. Wherever and whenever it is easy enough to identify the costs of the unnecessary Bora Bora trip, then Option 2 suddenly costs 95 and still has a benefit of 111, which clearly surpasses Option 1.

Alas, there is neither rest for the wicked nor the diligent. Once one commits to a complex and resource intensive evaluation process, the little things matter. It is not enough to be satisfied just when it appears that benefits exceed costs. One should ensure that there is not some easily fixed issue that would make things even better. In short, an economically efficient process does not stop just at the point when benefits exceed costs but rather only after one is satisfied that further costs of improving upon an option are no longer worth incurring.

To that extent, it is crucial to characterise the PR regime clearly so it can be determined where potential improvement is likely to be possible at least effort and cost. Indeed, the

basic challenge of any systematic review is to first ensure an accurate characterisation of all aspects so that possible improvement at low or no cost can be more easily identified.

For example, Sapere suggests that the PR regime provides First Gas with a motivation to assess capacity versus demand, but this cannot be the case. First Gas *already* has a motivation to assure the operational integrity of its pipeline system as well as to find ways to justify capital investment to expand the system under its regulatory regime. The existence of PRs does not change these fundamental motivations. Whereas it is claimed that PRs can provide information that may assist First Gas in gaining approval for new investment, even this claim cannot be evaluated independently of the fact that First Gas would have unusual discretion and incentive (relative to true market-based mechanisms and systems of capacity management) to manipulate the PR regime.

Instead, PRs simply provide a different way for First Gas to interact with its shipper customers and determine who will be affected by curtailments that it would otherwise have to apply anyway. It is not a case that First Gas will suddenly pay attention to the operational integrity of its pipeline system. Not at all. So the economic efficiency questions are whether PRs are better ***and*** whether they are better ***enough***.

Without skin in the game, First Gas has no particular or systematic incentive (arising from the proposed PR regime) to be efficient or unbiased in relation to its assessments of PR availability or development. But it certainly has an incentive to identify ways to manipulate the PR regime to create perceptions of stronger investment signals than might otherwise exist.

Interestingly, Sapere makes the point that in the short term PRs are "unlikely to have a lot of value" to shippers "until there are actual or perceived shortages." Accordingly, it would be nearly costless to delay PRs until some of the more challenging issues are worked through. Alternatively, it would be nearly costless to provide an alternative firm service product for mass market customers, leaving the PR regime to those stakeholders with more flexible and diverse usage characteristics.

2.2.1 Why does this matter?

The most obvious issue is the contradiction of treating a nongovernmental regulatory regime administered by First Gas as a presumptively superior market-based (or formal regulatory) approach that creates a runway for further steps toward market efficiency and transparency.[6] It is wrong to apply a simplistic test to determine whether to accept the GTAC *en*

6 Logically, there is no reason to believe ex ante that a quasi-regulatory approach controlled by First Gas (one in which by definition does not deal sufficiently with all material sources of market failure) is, or will be, preferable to either a governmental regulation-based approach or a true market-based approach – philosophically, operationally, or from the perspective of economic efficiency.

bloc when there are constituent components that remain problematic and are likely to have relatively easy (or high value) fixes.

This is the crux of the problem with PRs. They are neither a market-based regime nor do they comprehensively address the problem of capacity value under scarcity conditions. Consequently, evaluating PRs *as if* they are a market-based solution meriting a higher priority (pun intended) consideration over a regulatory solution is not justified (and has not been justified in fact) by the nature of the PR proposal (or any description or analysis of it put forward by First Gas or any stakeholder) itself. Let's at least call a spade a spade and not pretend we are evaluating something that has been comprehensively developed according to economic principles.

The biggest risks posed by the PR regime are bound up in the way that the PR regime can punish small entrants and mass market retailers (but also others) – in a manner that reduces the prospect of enhancing competition – through (unnecessary) uncertainty of pricing and priority.

2.3 The Achilles Heel of Recycling

One of the challenges of a regulated entity is how to handle overages and under-collections. When these arise due to simple tariff setting deviations (more or less volume than expected, for example), the true-up mechanism is usually some sort of periodic tariff adjustment to keep the overs/unders account within acceptable bounds. In effect, the same stakeholders who benefit from the under-collection pay the top-up, and the stakeholders who bore pain of overcollection get the reprieve. Everything scales, or should.

But what to do when excess revenues derive from non-tariff related revenues, such as overrun and underrun penalties or Priority Rights auctions?

The essential insight is that when there are special revenues collected for some reason, the excess should be refunded in a manner consistent with the logic by which the excess was generated. If someone pays something because they performed poorer than average, then by contrast someone must have performed better than average. Recycling offers the potential to join these two sides up, taking from one and giving to the other so as to sharpen the incentive while maintaining consistency of messaging and purpose.

But this is not the logic that First Gas has glommed onto, which is unfortunate. In its 1 December 2017 memo on "Transmission Incentive Charge Rebates", First Gas states:

> *We accept that to be non-distortionary, rebates should be recycled against something that the party will not change due to the existence of the rebate. In our view, this makes DNC the ideal candidate for not distorting decisions – a point that was explained in our "GTAC Emerging Views on Detailed Design" paper in relation to recycling revenue from PR auctions (on p21). Submitters generally agreed with our proposal for refunding PR revenue. While there are differences between transmission incentive fees and PRs, in our view the same logic applies to transmission incentive charges.*

Now, it is certainly true that there is a class of fees and surcharges seen in regulated settings where the economically efficient approach is to find a way to raise the associated revenue in the least distorting manner. Typically this is because the revenue being collected is for something that has no nexus to the current state of affairs in the industry with respect to generating electricity or delivering or producing gas.

Globally, for example, efforts to devise less distorting fees and surcharges routinely crop up around things like "stranded cost recovery" or "costs associated with enabling or operating market or regulatory governance or oversight bodies" or "special purpose social programmes" – for which there is clearly no immediate nexus to the economic cost of making gas (or electricity or water etc.) available. Words like "non-bypassable", "unavoidable", or Ramsey Pricing all come into the associated lexicon when one seeks to raise money with some semblance of respect for economic efficiency for purposes unrelated to the core utility service otherwise being provided.

But this is not what overrun and underrun charges or PR regime revenues are all about. Such sources of revenue are very much exactly about the cost of providing services. And they are revenues that differentiate by stakeholder in accordance with things that each stakeholder *does* differently.

A rebate regime to reallocate the revenues from PRs, or from Daily Overrun Charges, Underrun Charges, Hourly Overrun Charges and Over-Flow Charges deals in value that derives from what stakeholders do on / need from the system. Rebating these revenues based on unrelated or irrelevant metrics unavoidably creates different marginal prices for different customers for the same thing. Such an outcome is the antithesis of a "market mechanism" where the marginal prices or costs are a consistent market-wide phenomena against which all sources of demand and supply competitively respond and organise themselves. The troika of allocative, productive, and dynamic economic efficiency depends on consistent market signals that all stakeholders respond to.

The simple solution is to rework the concept of rebates and recycling so that the revenues collected are rebated in a manner that is consistent with the objective that guided the revenue collection in the first place. Recycling is a way to make incentives sharper by making the same amount of money work harder. If you arbitrarily dull one blade of a scissors, it cannot cut nearly as well, may not cut without distortions, and may not even cut at all.

The challenge is to keep each mechanism and incentive separate and non-polluting of other signals. By this standard the rebate mechanism proposal described by First Gas fails a basic economic test.

By the same token, if recycling is to be based on arbitrary and irrelevant metrics, then two additional concerns surface which can introduce further complications. First, when recycling is based on arbitrary or irrelevant metrics it should be seen as inherently less robust or sus-

tainable as unintended consequences, including further reforms, are likely to result. If recycling is over a short (enough) period (short rebate cycle), then participants will benefit from greater certainty of getting their expected rebate (and to the extent that the cycles are short enough it may assist in participants learning how best to game the system). On the other hand, if the recycling is over a longer period (such as a year), the result is less clear and therefore may reduce concern over gaming, but the overall cost of the rebate programme increases, as it holds liquidity out of the market for a longer period of time. In principle, held back rebate value should be paid an interest rate commensurate with the time value of money. Yet, ultimately both approaches (frequent recycling with greater risk of gaming and less frequent recycling with greater overall costs) fail because *recycling without regard to value introduces unavoidable pricing distortions*.

2.3.1 Application to Priority Rights

If a portion of one's payments for Priority Rights will be rebated at some point according to some allocation metric, then the price paid for Priority Rights becomes contingent on understanding the allocation metric, necessarily introducing a potentially major pricing distortion.

Rebating money in any way that is somehow seems "neutral" because of irrelevance to time-dependent (and participant-dependent) capacity value is in fact the very opposite of neutral as shown in Table 1. Assume that rebates are administered along the metric of DNC charges. In a situation where one participant pays more total DNC charges, recycling completely alters perceptions of PR costs.

Table 1: Distortions from Recycling based on Irrelevant Metrics

Percent of DNC Charges		Exposure to PR $		PR $ Recycled	Effective PR Cost	
Big Co	Little Co	Big Co	Little Co		Big Co	Little Co
90%	10%	50%	50%	$100	$ (40.00)	$ 40.00

Instead, rebates need to be structured as if a mirror image of the process that generated the associated cost. Just as tariff overs and unders should be "rebated" through tariff adjustments within a constant tariff structure, PR rebates should be distributed in relation to actual curtailment exposure and transmission over and under run charges and such should be rebated to the benefit of those who did not contribute to such charges (or contributed less than the average).

A market-based regime involves those who do not need capacity (if it costs them too much) selling their rights to those who do – the resulting money changes hands along a gradient of increasing economic welfare. Those who value capacity less make it available to those who

value it more. The challenge associated with recycling PR revenue is to identify an appropriate value gradient.

If there is to be a value gradient (and to address the objectives of economic efficiency there must be), then the money from those who pay more for rights (and whose rights are then honoured) would need to be recycled to those who pay less for the rights (and whose rights are *not* honoured). Under all other situations, the payments should cancel (such as any time there is enough capacity to honour all rights). For example, if 100% of the gas desired to be shipped is shipped then all payments for PRs should be refunded to those exactly as they offered. If 90% of the gas desired to be shipped is shipped, then the additional revenue from those who paid higher PRs should be rebated to those who did not get their gas shipped presumably in inverse proportion to their PR bids. To do anything else involves a senseless churning of money from some participants to others without any underlying value gradient.

To date we have not seen any serious consideration of these issues, which go to the heart of establishing an appropriate value gradient. Neither have we seen any analysis of the potential market power or strategic gaming impacts other than their dismissal as likely not major issues.[7] Yet, unless or until PRs can be evaluated fully across their impact – and associated value gradient – the concept is fatally incomplete and anti-competitive. To be blunt, it is hard to see how one can evaluate a regime satisfactorily ex ante based on competition concepts if the regime itself does not utilise pricing concepts from competition theory.

It should be noted – and surely goes without saying but we will say it anyway – that devising and implementing such a plan incorporating a reasonably proxy value gradient to that which might evolve in a real capacity market – is simplest when one ignores economics. Obviously one can always create a mechanism or a rule, which necessarily will create *impact*, but the challenge is to create *value.* Establishing how the proposed PR regime with some thought-to-be-suitable recycling metric would create value (at lower cost than simply sorting out a true capacity rights product and trading regime) would be an arduous exercise, as the available gross value transfer would differ with every (PR guided) curtailment, as would the number of parties and associated volumes involved. Claims of economic inequities and strategic bidding / gaming would no doubt follow.

7 As noted by Sapere: "The possibility of capacity hoarding (via the priority rights system) exists, but the risk of it happening is less pronounced than might appear at first glance. This is because there is no annual capacity reservation, no grandfathering and priority rights are only valuable if daily nominated capacity is nominated (and there is an underrun charge to discourage over- nominations)." That being said, there is also no single market clearing price and thus no single market-wide incentive. So while there may indeed be some aspects that argue for less concern, there are other overlooked aspects that argue for (much) more concern.

2.4 The Need for a Regulated Firm Service

The Gas Industry Company's prior access framework included consideration of the principle that "as far as possible, parties should only be responsible for risks that they can manage." [6.5]

This principle is well established and relevant to the discussion of PRs and should be applied consistently insofar as practicable. The problem is that PRs introduce risks that cannot be managed, particularly for mass market retailers and customers, and they do not allow for efficient management by any stakeholder (other than First Gas) of risks that do arise. Yet, oddly, this reality seems to be overlooked or discounted by First Gas. We clearly see this as a serious problem.

But most importantly, those who actually need the capacity to serve inelastic customer demand would not have *any way* ex ante to manage the cost risk associated with exposure to PR costs (net of recycling). The absence of an ex ante firm product with a known ex ante firm product price introduces an extraordinary open-ended risk to the mass market. It may not happen often, it may be less than we worry about, but one does not prudently plug an open-ended commercial risk with prayer.

The irony is that any mass market retailer would be willing to pay a higher price for a firm product ex ante. According to the principles of a value gradient, the higher revenues would be an offset to the remaining costs to be recovered from elastic customers. Yet this very simple concept has been, it seems, completely overlooked.

All that would have to be done in the short term is offer mass market default PRs at some estimated premium price that is fixed and firm and inviolate. If the rest of the industry is able to manage the proposed PR regime risk, then so be it, otherwise work could also get started to develop an actual firm capacity rights product that is extended through all customer classes to replace a combination of default and traded PRs.

2.5 A Mass Market Surcharge and Exception

The trick for assessing the value of firm transport is to come up with some metric for the associated risk of interruption in a given time period (annual, peak months, whatever) and attach a monetary value to it. This could be done with an estimate of the probable number of days of inadequate capacity in the coming time period based on historical data, long-range weather forecast and any other variables necessary to please everyone, but all related to refining the estimate.

If that number is zero, then no premium would be charged for this firm service, which we will just call short-term firm. If that number is 10% of the total days, then there would be a 10% premium paid up front for short-term firm service over the period. The resulting revenues would be distributed evenly amongst those not subscribing for firm service to defray

any contractual costs for interruption of service. The cost of short-term firm service would rise with system demand and interruptions in service.

As system demand increases, and available capacity is exhausted more frequently, there will come a point when it makes more sense for firm shippers to sponsor pipeline expansions. At that point, true longer-term firm service could be offered to secure whatever investment is required by First Gas. (There's probably a need to go zonal at this point so those unaffected by the change of capacity through a specific pipeline segment would see no new costs or benefits.) Those paying for the new capacity would be entitled to it (at higher cost), but this would decrease the number of days of interruption, thereby lowering the premia paid by all seeking short-term firm service under the allocation scheme as well as the discount received by nonsubscribers. The economic equities should be largely symmetrical, although we have not considered all possible counterexamples.

Absent the existence of a firm service for mass market customers and a significant rework of the rebate/recycling concepts, the proposed PR regime introduces commercial risks (and, we suspect, political risks as well) that cannot be efficiently managed.

- Creates unavoidably material pricing distortions.
- Not pro-competition
- Provide less certainty than a firm product
- Are not suitable for inelastic mass-market customers

Priority Rights, as currently conceived, make for an awkward stopping point, being an economically inefficient capacity management product without justification for why such compromise is required.

2.6 GTAC Approval Is Premature

Our overriding concern is that key aspects of the GTAC, as so far proposed by First Gas, constitute an inadequate response to a problem that while relatively benign at present will only increase in importance and value-impact over time. Key outstanding issues are material, particularly with respect to PRs and the proposed rebate/recycling features of the new arrangements.

So what exactly happens if the GTAC is adopted and these flaws, which we consider serious, turn out to be serious, in fact. How will the overall GTAC actually work in practice? What is the process of remedy if something happens whereby the actions of one or more stakeholders has an adverse impact on one or more other stakeholders? What happens if the proposed mechanisms do not work as advertised? How, for example, would issues that emerge be handled if, say, auctions became subject to abuse or rebate-related distortions proved material?

It is difficult to abstract away from the fact that the GTAC is not the product of an independent regulator or policy body with on-going authority and responsibility to implement and enforce objectives or to review and adjudicate outcomes. Instead, the GTAC is implicitly a multi-lateral framework that aims to capture and guide what are essentially a nest of bilateral agreements.

Presumably, an effective compliance regime will be required to ensure that workably competitive transmission access outcomes can and do eventuate, particularly given the level of concentration in the market overall.

At a minimum, participants need to be certain that, if the actions of another participant cause economic or commercial harm, that there is a suitable and effective process for recourse. Compliance monitoring will be essential, but there appears no formal arrangement to assure this can occur. Optimally, it would seem to be the minimally appropriate role of regulation or a regulatory solution.

In the absence of such an arrangement we note that First Gas has attempted to address concerns regarding rights of recourse through the development of a subrogation arrangement but that such arrangement may not prove workable in practice.

If no solution exists, then it would seem that there is no effective ability for a participant to seek recourse in matters where they consider another party's actions have impacted on them negatively. The price setting and gaming aspects of the PR regime, the uncertainties of the auction process and effectiveness, and the distortions of the rebate regime are all fertile ground for disputes.

Consequently, whereas the proposed GTAC incorporates useful and sensible aspirations, the net result is still short of the mark. Accordingly, as the GIC noted in its earlier international review of access principles:

> *"In the broadest sense, therefore, the governance arrangements define how the access principles will operate in practice. As such, the design of an access regime must address both the governance arrangements and the access principles, thereby ensuring that they work together appropriately." Page 4 of International review of access principles*

More specifically, the challenges ahead include:

- How to define a firm access product for retail market supply to deal with the challenges of inelastic demand and the arbitrary value destruction associated with introducing risks that cannot be managed;
- How to develop a commercially firm access right that has the properties desired in terms of there being an inherent incentive to maximise utilisation of pipeline capacity while also providing economically efficient penalties for overs and under, and practical signals for expansion;

- How to recognise and avoid the arbitrary distortions that favour larger, diverse, shippers and that work against emerging competition from smaller retailers, local entrants, and in the mass market sector.

At this stage, the proposed GTAC still falls short.