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Dear Ian,

We thank the Gas Industry Company (GIC) for its invitation to submit on the document proposed by First Gas Limited (First Gas) that has been labelled as the Gas Transmission Access Code (GTAC).

Shell has been safely operating in New Zealand for over 100 years. Our business activities in New Zealand now centre on natural gas production. We have been involved in developing and operating some of the country's largest natural gas fields for more than 60 years. As an operator, we are supportive of the goal of unifying the two gas transmission regimes to improve efficiency and promote competition. Unfortunately, we do not see the proposed GTAC, as it stands at the moment, as being better than the current arrangements, for reasons we set out in this submission.

The GIC has asked that submitters direct their submissions as to whether the proposed GTAC is "materially better" than current arrangements. This criterion is necessary to address the requirement under MPOC s22.16(b), that specifies that termination of MPOC arrangements can only proceed if:

- There has been an "an appropriate consultation" on the New Code;
- GIC arrives at determination that the New Code is "materially better" than current terms and conditions for access to and use of gas transmission pipelines.

However, we point out the that MPOC s22.16(a) requires that the New Code must include provisions that allow all Welded Parties to continue to connect their respective Pipelines to the Maui Pipeline, and that the proposed GTAC does not conform with this requirement of the New Code. The New Code that First Gas publishes under 22.16(a) must be the same New Code that the GIC examines under 22.16(b): - and the only document that has had any consultation to date is the proposed GTAC. While the proposed GTAC sets out obligations to Shippers relating to how First Gas will set up Interconnection Agreements, the proposed GTAC has no provisions enforceable by Welded Parties, and none that allow Welded Parties continued connection. We provide additional commentary regarding the absence of certainty in interconnection point arrangements below.

Format of this Submission

The GIC has provided a template inviting submitters to present their comments organised by section in the proposed GTAC. We provide those comments in the Attachment. Where no comments on a section

are provided, it is because the section is either not relevant to our business, or because the GTAC section is either similar to the MPOC in its requirements, or is something we can accommodate.

However, we wish to comment at a higher level about the design and formation of the proposed GTAC,as follows:

Assurance of Continued Connection

We submit that the GIC cannot make a determination that the New Code is "materially better" than the current terms and condition for access to the gas transmission pipelines because the proposed GTAC fails to properly address the terms of access of interconnected parties and their interaction with shipper parties. The detailed terms of access of interconnected parties have not been developed by industry workshops etc. Because they have not been settled or finalised by First Gas no finding can be made that terms of access for interconnected parties the New Code is "materially better" than the current terms under existing ICAs which are part of MPOC.

A transmission code is not simply a gas transmission agreement. In the absence of detailed regulation as in New Zealand, a gas transmission code is essential to ensure that the system operates as a complete self-supporting system, describing the necessary function of each party that contributes to the proper operation of the system. These parties are not confined only to shippers and the pipeline operator, other important entities are interconnected parties and market operators.

The proposed GTAC is not an adequate replacement for the Maui Pipeline Operating Code because it has confined itself to only addressing obligations between shippers and First Gas, omitting many essential requirements that make an operable transmission system, particularly the obligations as between the pipeline operator and its interconnected parties.

We note that the European Parliament has expressed the perspective that (e.g. via Regulation (EC) 715/2009 of the European Parliament):

- A gas code is necessary to support an internal market in natural gas that aims to achieve efficiency gains, competitive prices and higher standards of service, and to contribute to security of supply and sustainability.
- Gas codes must define adequate conditions for access to the natural gas transmission networks to enable and sustain the creation of such an internal market in natural gas.
- Codes must provide a minimum guarantee of equal market access conditions that are legally enforceable. A common minimum standard of access is necessary to ensure that third party access services are sufficiently compatible and to allow the benefits accruing from a well-functioning internal market in natural gas to be exploited.
- Code must lay down, on the basis of those guidelines, basic principles and rules regarding network access and third-party access services, congestion management, transparency, and balancing.

By not including interconnected parties, the proposed GTAC falls short of being able to be described as a Code by such a standard.

Reasonable and Prudent Operator Standard

We consider that the change in the operational standard in the proposed GTAC is of a lessor standard than that which applies under the MPOC (requiring good gas practice recognised internationally). Consistent with our previous submissions, we consider this standard is important to ensure that:

- The New Zealand gas industry learns from the experience of others, adopting and adapting measures that have been proven to work elsewhere.

- New Zealand remains an attractive destination for international gas explorers by having its gas systems designed and developed in a way that can be easily recognised as workable by reference to other gas systems.

As indicated above, we consider that the New Code to replace the MPOC must be developed by reference to the standard required by MPOC. We consider that a proposed New Code that does not meet this criterion should not replace MPOC, even if it has been approved by the GIC. It should also be an important factor in the GIC's assessment of whether the proposed GTAC is materially better: - because failure to maintain this standard will mean New Zealand's arrangements will potentially have: less appeal to new entrants from overseas, higher risks, reduced reliability, and lower efficiency.

Final Comments

We consider that one unifying code has the potential to be a 'materially better' code than the current two regime arrangement. However, while it may be unifying shipper arrangements, the proposed GTAC falls short of being 'materially better' than the current two-regime arrangement.

The primary changes we believe are required for the GTAC to be better than current arrangements:

- Interconnection Agreements need to be settled by consultation, and approved by GIC, contemporaneously with and linked to the proposed GTAC arrangements. Such arrangements should also include a provision that gas transfer agreements for any new interconnection agreements for receipt points will have allocation based on confirmed nominations (plus other associated conventions for gas transfer);
- Reasonable and Prudent Operator provisions are modified to be of the same standard as the MPOC standard (i.e. including reference to good gas practise recognised internationally). We would also seek removal of clauses that deem a party to have failed to meet RPO provision when their processes and equipment might be consistent with the RPO obligation.
- Reinstatement of daily balancing MPOC arrangements and pressure control obligations to address our concerns about the stability of backpressure on our producing plants.

We understand that First Gas is pointing to time pressure for implementing its new IT system, and this might be a factor in the GIC's decision in this matter, However, we do not see that the changes needed to the proposed GTAC, and the development of interconnection arrangements, will significantly affect the design of the new IT arrangements: - the functionality required for our suggested changes is not materially different to the functionality already planned for the proposed GTAC, and moreover the functionality we are suggesting will already be a feature of IT systems which have been developed in accord with good gas practice recognised internationally . As such we do not consider that concerns about IT arrangements can be relied upon as a basis for not dealing with our concerns.

Yours sincerely

M E Jackson
Shell New Zealand (2011) Ltd

ATTACHMENT: Comments by GTAC Section

Section 3: Transmission Products and Zones

We see that the changes to the VTC regime to apply Daily Nominated Capacity, Delivery Zones, and Priority Rights are a welcome improvement over the current VTC regime, but we also note that:

- there is a reduction in efficiency to the Maui regime because Maui provides priority only up to the change provisional cycle: - preserving priority rights during the delivery day increases complexity, cost, and uncertainty in the gas market; and
- there is a reduction in flexibility to the Maui regime which limits priority rights to only 70% of delivery zone capacity, which will encourage shippers to optimise the financial risk. With the proposed GTAC regime likely to be committing 100% of capacity there will be an inherent driver for parties to seek priority rights if they see others taking them because the financial risk will not be so manageable.

Section 4: Nominations

Under the current MPOC, the Welded Party is permitted to curtail nominations under a MPOC S15.2 Force Majeure notification. Provided this is advised to the system operator ~15-30 minutes before the end of each hour, it can be enacted quickly, curtailing to Deemed Flow. This approach makes sense in that by reducing the scheduled quantity it efficiently communicates to all operators in the system that a source of supply (or demand) is down.

However, under the proposed GTAC, this mechanism has been replaced with the Extra Nominations Cycle. Under this mechanism all parties must be given at least 60 minutes prior warning. This delay means that for any outage that requires a curtailment, there will be an hours delay and uncertainty in enacting the curtailment. This will:

- Increase risk to all pipeline users, in that the impact of outages may be exacerbated.
- Place additional financial risk on the Interconnected Party in terms of deemed flow that cannot be not delivered (exposure to excess imbalance charges or cash-outs).
- Increase workload for the operator's nominations team (who will have to wait until the nomination cycle is in effect, and then process it). Previously they could advise the pipeline operator, and then concentrate on managing other aspects of the outage.
- Lead to an uncertain result depending on the response from gas customers taking gas from the receipt point.

Section 6: Energy Allocations

Requirements for Gas Transfer Agreements in the proposed GTAC are poorly specified and so fail to meet minimum standards by the RPO standard of MPOC in respect of the development of the New Code, and the Gas Act. The inadequacy of these requirements will mean higher risk for balancing performance and higher risks of disputes that have the potential to affect third parties to the disputes. First Gas and the GIC may be unaware of gas allocation disputes that have occurred upstream of the transmission system, however, our experience is that they can be prolonged and expensive. A New Code that set outs proper "protocols and standards for reconciling and balancing gas"[1] is necessary to support the wholesale market (in the continued absence of such protocols in regulation).

[1] Section 43F of the Gas Act

It is well recognised internationally that efficient gas markets require "*fast and effective nomination, confirmation and allocation processes to (1) maintain operational integrity (2) to sort out ownership of gas in an expeditious manner, and (3) to provide information such as quantities produced, purchased and sold, received and delivered, imbalance statements, invoices and payments timely so all entities can make business decisions based on data that does not change*".

To achieve fast and effective gas transfer management processes in open access systems, it is established practice[2] that allocations should be based on confirmed nominations between interconnected operators that apply standard algorithms that can compute allocations in real time between entities that transfer gas.

Failure to adopt processes that involve confirmation of gas flow between interconnected parties will result in an increased risk of late communication of information, lack of agreement on allocations, and excess reliance on retrospective adjustment that potentially can leave other third-party entities at risk for gas imbalances.

While such flow confirmation processes, and allocation based on confirmed nominations have been been applied in the MPOC, and accepted in the proposed GTAC for OBA allocation, there is no such process required for other receipt points under the proposed GTAC. This deficiency is contrary to the MPOC RPO standard with potential negative implications for imbalances, trading efficiency, and backpressure control. We believe all receipt points should be required to allocate on standard algorithms applying to confirmed nomination. At a minimum, if legacy arrangements cannot be changed to accommodate this basic requirement, then at least the requirement should apply to all other receipt points.

Section 7: Additional Agreements

Under the proposed GTAC, some Existing Interconnection Agreements will not expire, which is discriminatory in favour of existing interconnected parties who will not be bound by the new terms of interconnection (such as outage disclosure). Such differences go against the principles of "Open Access" requiring that all parties are treated equally and without prejudice. We consider that the exclusion of Interconnection Agreements from the proposed GTAC, and the uncertainty as to the terms of connection that will be imposed, is a materially worse position for affected welded parties under MPOC and our business. The retention of Existing Interconnection Agreements is not only manifestly unfair on MPOC parties relative to their counterparts under VTC, it appears to have led to constraints to the development of the proposed GTAC which has caused it to depart significantly from good gas industry practice (see comments in relation to Energy Allocations).

Under the proposed GTAC, First Gas has promised the Shippers that it will impose certain obligations on new interconnected parties. The following comments are therefore based on the draft interconnection agreement and the contents of section 7:

Excess Running Mismatch Charges

With respect to fees and charges, returning Receipt Point excess running mismatch charges back to Producers is an improvement over the current situation where they are rebated only to shippers. However, it is also a concern because it means that incentives for primary balancing is diluted. Overall our concern over primary balancing expressed elsewhere in this note overwhelms the benefit of the changed approach.

[2] E.g. COPAS AG-15 Gas Accounting Manual, or NAESB flowing gas standards

As an incentive to manage primary balancing, we consider this mechanism to be unproven and inferior to daily balancing (called market based balancing) as applied in the MPOC. Further comments are provided under Section 8 (Balancing) below.

Reasonable and Prudent Operator – Gas Quality

First Gas has proposed that a minimum requirement for all Interconnected Parties is that they agree that "injection of gas into the Transmission System that is not Gas (i.e. does not meet the NZS5442 specification limits) shall constitute a failure by the Interconnected Party to act as an RPO".

Such a clause is a significant material concern to our business, and could present us, and many other parties seeking interconnection, with intractable governance difficulties to enter into an agreement that has this clause.

First Gas have argued that it is the same as the MPOC equivalent clause. The MPOC is not as explicit. It states that:

> 17.21 For the purposes of section 28 and the definition of "Reasonable and Prudent Operator", any failure by a Direct Injecting Party to comply with this section 17 shall constitute a failure to act as a Reasonable and Prudent Operator.

Section 17 deals with the requirements to measure gas quality and notify any excursions. One sub clause (17.2) states that:

> Each Direct Injecting Party shall: (a) ensure that all gas that it injects into the Maui Pipeline complies with the Gas Specification;

This is cited by First Gas as the reason by which they see the clauses as identical.

In terms of contract interpretation applied to the MPOC, we have acted in compliance with the S17 requirements of the MPOC with respect to monitoring gas quality and notifying excursions. Despite having notified several excursions, there have been no examples where the pipeline operator has sought to characterise this as failing the RPO obligation, and therefore the MPOC clause must be interpreted in this way, with Section 17.21 referring to the need to follow Section 17 overall (monitoring, reporting, managing), rather than being focused on 17.2.

The proposed change by First Gas to make a gas specification excursion a deemed failure to act as a RPO is therefore materially worse than current arrangements. The potential reputational, contractual and legal ramifications of this provision could present difficult governance issues for Shell if Shell is faced with First Gas's demand for this clause to apply as a condition for access to the pipeline.

Taranaki Target Pressure

The requirements under the MPOC are (Section 2.5 (c))

> Subject to complying with section 2.19, use reasonable endeavours to manage the Target Taranaki Pressure to be as low as practicable while maintaining sufficient Line Pack to meet its obligations under this Operating Code;

The corresponding proposed clause in the proposed GTAC (to be included in interconnection agreements, not the Code) is as per 7.13(e):

> for any Receipt Point on First Gas' "400 line" between Oaonui and the Turangi Mixing Station as at the date of this Code, that First Gas will use reasonable endeavours to maintain the pressure in that line at or near the Bertrand Road Offtake between 42 and 48 bar gauge (*Target Taranaki Pressure*), subject to a Critical Contingency, Force Majeure Event, Emergency, Maintenance or the aggregate ERM of Shippers and/or OBA Parties, and that any change to the Target Taranaki

Pressure shall be subject to a Change Request not to be effective earlier than 12 Months following its approval;

Pressure in Taranaki must be limited and stable for the benefit of New Zealand's energy security both in the short and long term. Higher pressure in Taranaki will result in increased costs. We have submitted on this concern before: for a quantitative evaluation of the impacts, we refer GIC to Shell Exploration New Zealand's report in support of the submission on Market Based Balancing, from December 24th 2014 (submitted in confidence).

Effective controls on pressure are required to meet the objectives of the Gas Act and the Government Gas Policy Statement. In particular, high pressure / poor controls on pressure will fail the objective of "Increasing downward pressure on delivered gas costs and prices". We also consider that it fails to reduce barriers to competition or improve incentives for investment (if pressure excursions above the 48 barg limit were to occur frequently, new gas fields will have to be designed for a higher pressure, which will increase development costs)

The proposed GTAC is clearly materially worse than the MPOC:

- It does not require reasonable endeavours to manage the pressure to be "as low as practicable";
- It allows the pressure range to be ignored in certain circumstances when there is an aggregate excess running mismatch of shippers and/or OBA parties;
- It allows incentives to be significantly diluted by rebate mechanisms. We see that because excess running mismatch incentive payments are distributed back to parties in the month following that during which they were incurred, some larger parties may find that most charges are rebated, which means that the incentives applied to discourage excess running mismatch which are already inadequate, will be further weakened.

By the proposed GTAC provisions alone, we have little basis for confidence that First Gas will control the pressure adequately. Further comments will be provided under Section 8 (Balancing).

Publication of Outages (clause 7.13 (g))

First Gas has included the requirement that interconnected parties will be required to notify First Gas of outages for publication. There is no timeframe given to this requirement, it seems to be at the discretion of First Gas, and we are concerned that First Gas might impose a time greater than the normal nomination cycle times in the ICAs. Because of this uncertainty we can only assume the worst, and would see such an imposition as being unacceptable as well as discriminatory. We see that it is necessary for any requirement for such advance notification needs to be dealt with by regulation, so that all parties, including those with Existing Interconnection Agreements, are included.

It addition to be applied to all by regulation, we consider that such rules must be pragmatic (eg. only material outages need to be published) and that they are consistent for all users (all producers as well as consumers). Shell may have significant governance and contractual issues if this requirement is imposed within ICAs without supportive regulation.

Section 8: Balancing

Linepack Management

All references to line pack management in the proposed GTAC are based on the energy in the entire pipeline system. This is a simplistic view of how a pipeline should be managed: the location in the network that energy is at any time is also an important consideration, measured as pressure.

The MPOC defines operational balancing requirements of the pipeline operator as follows:

3.1 TSP may undertake Balancing Actions with the objective of:

(a) maintaining Line Pack and/or pressure on the Maui Pipeline within operational limits, or returning them towards the operating range within those limits;

(b) managing Line Pack, including to support the transportation of Approved Nominations. to take balancing actions

This considers both line pack and / or pressure, and makes no distinction about where in the system the issue arises. This is a recognition of, and consistent with, the Critical Contingency Regulations. The Critical Contingency regulations define minimum pressure thresholds as triggers at various points on the system, and do not have triggers for energy linepack.

The proposed GTAC focusses on energy management only. The proposed GTAC has no provisions to allow the issuing of Low Pressure and High Pressure notices (which we advocate should also affect I_N (section 8.12) and I_P (section 8.13) multipliers for excess running mismatch charges). The only mechanism to deal with an imminent critical contingency event is Curtailment or an Operational Flow Order (section 9).

Without the provision to issue notices and change primary balancing behaviour in response to low or high pressure in the pipeline, we conclude that the requirements for First Gas to manage pressure, and its available tools for managing pressure, are materially worse than those under the MPOC.

Excess Running Mismatch charges

The proposed GTAC applies ERM incentive fees as an incentive for primary balancing, to replace the Market-Based Balancing ("cash-out") mechanism under the MPOC. Without knowing the ERM tolerance thresholds, it is not possible to quantitively evaluate the impact of these charges. Nevertheless, we have the view that the ERM fees need to be linked to the market price for gas to be effective.

First Gas claims to have set the price based on the equivalent "cash out" fee under the MPOC. The difference is that the MPOC has a change in title, so the incentives are not directly comparable. Also, Excess Running Mismatch charges are rebated to parties in the month following, which (depending on behaviours of other parties) could mean that much of those charges could be rebated to those same mismatched parties shortly after the event: - the incentive charge may not provide any meaningful incentive at all.

We conclude that the mechanism is materially worse. Significant work, resources and industry feedback went into the development of the MPOC cash-out mechanism based on practice elsewhere, and the GIC has produced evidence showing it has materially improved primary balancing. First Gas has not provided an adequate rationale for the proposed change, nor any evidence as to where it might have been applied elsewhere to prove that it might work, and no analysis as to the effects of the change. This proposed imposition of a new balancing has not been shown to be necessary, and given the history of this matter, such change is neither reasonable nor prudent for First Gas to propose nor would it be reasonable or prudent for GIC to accept.

In addition, we have some mathematical concerns with the way that excess running mismatch tolerances will be set, being proportional to the share of the total metered quantity on the previous day, with no minimum tolerance quantity. This mechanism is materially worse for our business:

- During an extended facility turnaround, the second day of the turnaround (being the first day after our metered flow is zero) will mean we have zero running mismatch tolerance, and will therefore incur excess running mismatch charges, even if our absolute running mismatch is small. First Gas have proposed that we trade this mismatch, but this has difficulties for the operator of fields with joint production.

- Having tolerances reflect prior days flow will cause strange impacts with intra-week profiles. When nominations are lower on weekends (which is frequently the case for supply into I&C and Power Generation), tolerances will be relatively reduced on Mondays and higher on Saturdays. This could have unexpected consequences and will likely be adverse for pipeline stability.

Park and Loan

Under the MPOC, we currently enjoy the use of "ROIL Multipliers" as a temporary park or loan of gas, as a tool for managing planned and unplanned outages. These are subject to strict conditions (mainly around the park or loan being temporary and limited, and the pipeline being healthy). These are provided free of charge, albeit used only infrequently. The proposed GTAC replaces this mechanism with the invitation to use a Park and Loan arrangement whose details have yet to be established but which will have a cost. We fail to see how Park and Loan can be anything other than "worse". Combined with with inadequate incentives fo resolving imbalance (see comments on ERM above), "Park and Loan" must increase the volatility of backpressure and hence will increase our operating costs.