

#### Shell New Zealand (2011) Ltd

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23 December 2016

Gas Industry Company 95 Customhouse Quay WELLINGTON

Attn: Ian Wilson

Dear Ian,

#### Submission: Single Code Options Paper (SCOP2)

Please find attached out submission providing comments on the Single Code Options Paper (SCOP2) prepared by First Gas Ltd (FG), for the consideration of FG and the Gas Industry Company (GIC).

Shell welcomes the opportunity to provide a submission, and we seek to assist the GIC's assessments of the proposals for new access arrangements.

Please find our response to the GIC's submissions template in Attachment 1, and various comments to FG's SCOP2 paper in Attachment II.

However, we provide some general comments on FG's paper as follows:

- We are somewhat disapppointed at the lack of detail in the options, and the ambiguity of some of the detail that was provided, and the incongruity of the paper with some remarks that FG made in the meeting of December 5<sup>th</sup>.
- We are concerned with the time between this paper and the next opportunity for submission. During that time FG will have made many design choices that may not be acceptable, and to the extent that its choices are not acceptable to the GIC, this could have an impact on FG's schedule;
- We recommend GIC encourage FG to make its design choices in accord with as good gas transmission operating practice that has been applied internationally. We trust that the GIC does not underestimate the difficulty of justifying regulation of a regime which does not conform to this standard.

Marrier Archson Yours sincerely, Murray Jackso

### Attachment I: SUBMISSION SCOP2 – Shell New Zealand (2011) Ltd

Question	Response
Q1: Do you agree with the objectives proposed in this paper? Are there any other objectives or outcomes that we should be aiming for that are missing?	<ul> <li>The proposed objectives are not complete. There should be a requirement to meet the government policy, for example, additional objectives for the code derived from these should be: <ul> <li>Stable protocols and standards for reconciling and balancing gas (Gas Act);</li> <li>Efficient arrangements for the short-term trading of gas (GPS 2008<sup>1</sup>);</li> <li>Accurate, efficient and timely arrangements for the allocation and reconciliation of upstream gas quantities (GPS 2008);</li> <li>Accurate, efficient and timely arrangements for the allocation and reconciliation of downstream gas quantities (GPS 2008).</li> </ul> </li> <li>We have reservations about the utility of the objective: "Keep it Simple". In the end each feature that might be seen to add to complexity will have a design function. It is not usually a good design choice to try and make one feature do multiple functions for the sake of apparent simplicity, because one of those functions will inevitably be compromised.</li> <li>Similarly with "Ensure Flexibility", to the extent this idea relates to technical tolerances, we think that could lead to pressure for the system to provide flexibility it does not have and so lead to more issues and costs for the industry in the future. To the extent that "Ensure Flexibility" undermines the requirement for stable protocols and standards for scheduling, delivering, and allocating gas and reconciling allocations with purchases, and creates excessive pressure fluctuations, then we think the objective should be treated with caution.</li> </ul>
	Also, we would be concerned to ensure the "Ensure Flexibility" goal should apply to code changes or the code change process.
	We consider the First Gas Ltd (FG) should re-assert its commitment to develop and operate the code as a Reasonable and Prudent Operator meaning that the development and operation will conform to <i>good transmission practice applied internationally</i> <sup>2</sup> . We feel that should be a given and uncontroversial as it an existing contract standard which FG and its counterparts under both codes have already agreed to. Of all the objectives, this is the one most likely to deliver a code which is efficient, low-cost, and meeting regulatory and legislative requirements. In any event, for the existing codes to be replaced by the change provisions of the existing codes, this objective is a contractual precondition for any change.
	We observe that the objectives appear to be more aimed at efficient transportation through the pipeline, rather than entry to/from the pipeline. From a Producer perspective, it must be recognized that the key requirements to encourage connection to a

<sup>&</sup>lt;sup>1</sup> GPS2008 = Government Policy Statement of April 2008:

http://www.mbie.govt.nz/info-services/sectors-industries/energy/gas-market/government-policy-statement-on-gas-governance

<sup>&</sup>lt;sup>2</sup> The full definition set out both in the MPOC and the VTC states that First Gas and its counterparties will all conduct themselves so as to " conform to a standard that is equal to or better than good gas transmission operating practice as determined by reference to proper and prudent practices recognised internationally as applying to the operation of such systems"

Question	Response	
	Transmission System is stable operation of the Transmission System within a defined Operating Envelope. None of the objectives are specific on a stable operating envelope (in fact, a possible outcome of "Promote Flexibility" is a less-stable pipeline).	
Q2: Which objectives do you see as most important?	As above: the overriding objective is for the code to be developed and operated to the standard of a Reasonable and Prudent Operator, applying proper and prudent practices that are recognised internationally. This objective is particularly important in relation to establishing the following aspects of code development:	
	<ul> <li>proper nominations protocols, with confirmation processes between operators prior to gas flow (see extracts from <i>COPAS</i> in the appendix to this Attachment 1);</li> <li>requirements and incentives to flow gas in accordance with nominations;</li> <li>standard allocation algorithms are applied (standard algorithms being OBA, pro-rata, swing, ranking, percentage),</li> </ul>	
	<ul> <li>Reconciliation of allocations with purchases to determine imbalances and daily resolution of the resulting imbalances (daily balancing);</li> </ul>	
	We agree with the concept of "Enable the use of gas", but in the wider context such that not only should FG be seeking to remove barriers to transporting gas, but FG should also be seeking to incentivise gas production and gas use. In particular, in practice, the application of this objective should mean: no barriers to entry; no capacity hoarding, no risk of contractual congestion, no incentives to reserve capacity that are not linked to real congestion risk.	
Q3: Do you agree that the objectives proposed in this paper are compatible with the regulatory objective presented in SCOP1?	FG's suggested objectives are not sufficient in themselves to be any proper guide to the establishment of a gas transmission regime that conforms to the Gas Act objectives and international good practice.	
	We suggest that the industry needs to look wider than simply the cost of "transporting gas", and note that the physical operation of the pipeline has an impact upstream, and possibly downstream. Not only should FG seek to minimise the cost of transporting gas, but should also minimise the "cost" of injecting or receiving gas from the pipeline. This "cost" needs to include the cost to producers in terms of the effects of backpressure on their operations (increased compression duty, reduced well deliverability etc.).	
Scope of the Gas Transmission Access Code		
Q4: Do you agree that the five other legal or subsidiary instruments presented above are all relevant to establishing the boundaries of the new code? Are there any other legal or subsidiary instruments that are missing?	We are surprised at the lack of mention of the Gas Act in this diagram. Any replacement of the MPOC may require regulation under this Act. We have no other comment at this stage, except to observe that this could be a useful starting point for the discussion of scoping decisions.	
Q5: Do you agree with the way that we have described what should sit inside the code, and what should fall outside?	We consider that all operational terms of interconnection must be incorporated in the Code, particularly in relation to: nomination and confirmation processes, daily balancing, and standardisation of allocation algorithms.	
	i maris, pour interconnecteu parties as well as snippers snould be bound to property observe.	

Question	Response
Are these particular elements of the arrangements that we have described as sitting outside the code that you consider should be covered by the code (or vice versa)?	<ul> <li>proper nominations protocols, with confirmation processes between operators prior to gas flow;</li> <li>requirements and incentives to flow gas in accordance with nominations;</li> <li>standardised allocation algorithms (standard algorithms being OBA, <i>pro-rata</i>, swing, ranking, percentage);</li> <li>Reconciliation of allocations with purchases to determine imbalances and daily resolution of the resulting imbalances (daily balancing);</li> </ul>
	Adoption of nominations for gas flow (irrespective of the mode of capacity booking) is almost a universal approach adopted by the UK, Ireland Australia, Europe, and FERC in the USA. E.g. <u>https://www.federalregister.gov/documents/2014/04/01/2014-06757/coordination-of-the-scheduling-processes-of-interstate-natural-gas-pipelines-and-public-utilities</u>
	We agree there is some scope for some limited forms of non-standard agreements as outlined, particularly in relation to technical issues or pricing to address potential bypass situations, but care should be taken to fulfil the PEA objective that "transitions" can be made away from non-standard arrangements.
	With regard to Operating Policies and Standards, we note that comment that "We have strong incentives to operate the transmission system responsibly and efficiently.". We believe that different people could have very different views of the term "efficiently". Is tolerating high pipeline pressure instead of running compressors in summer "efficient"?, Is tolerating pressures above the target pressure "efficient"?, Will FG take into account the detrimental impact on producers of high or fluctuating backpressures? Where are FG's "strong incentives" to consider producer costs?
	DRR Regulations <sup>3</sup>
	We agree that the code need not include reference to DRRs.
	We consider it likely to prove inefficient for FG to apply the DRRs to determine delivery allocations from the transmission system, and so it will likely to be contrary to the goal of having efficient arrangements for the allocation and reconciliation of downstream gas quantities (GPS 2008).
	We suggest that use of the DRRs should be confined to determining receipt allocations into distribution systems from gate stations (as distinct from delivery allocations into distribution systems from the transmission system). Because title to gas flows downstream (from the Crown as owner of the resource, then to producers, then to their customers, etc.), we think delivery allocation should be determined by FG according to confirmed nominations and capacity priorities into capacity zones.
	By way of example: given that FG's Option 2 employs a "daily capacity nomination", we think the question of the congestion management and capacity prioritisation could be considerably simplified if deliveries from the transmission station to within a capacity zone were prioritised by a "ranking" allocation mechanism applied to delivery nominations for a zone, with ranking being determined by the value of "lost load" of the gas from the perspective of the shipper. DRRs and allocations by ranking can then be reconciled by exchange of imbalances subsequent to gas flow by pricing at the greater of the reference market price, or the value of the "lost load" of the marginal shipper to the capacity zone.

<sup>3</sup> DRR = Downstream Reconciliation Rules

Question	Response
Q6: Are there any other elements to the scope of the code that we should consider?	The code must ensure that the pressure in the vicinity of Bertrand Road is limited and maintained below 48 barg because production stations have been designed in reliance on that pressure limit being retained.
	Developable Capacity
	We suggest that users should have the right to invest (whether directly or indirectly) for capacity reinforcement of the system if FG as the owner chooses not to do so for any reason.
Overview of options for the access regime	
Q7: Are there other code options that you believe should be considered in the process of developing a new code in addition to those described above?	We think the MPOC nomination/confirmation and allocation protocols should be considered for adoption across the whole system. Adopting MPOC protocols would have the benefit of demonstrating stability as required by the Gas Act, and it would have the advantage of familiarity and low cost for transition. In addition, instead of the various options suggested by FG, we suggest the Authorised Quantity priority mechanism can be applied to Zones, and in respect of supply to gate stations and small delivery points, nominations can be aggregated within a particular Zone and that aggregate can be compared with the aggregate of corresponding meters in the Zone for the purpose of determining an operational imbalance.
	FG has introduced a concept of "daily capacity nominations" which seems to combine two separate functions: nominations for gas flow and booking of capacity. That is, FG is suggesting a capacity allocation method where both transmission capacity and a corresponding quantity of gas are nominated at the same time. We would see that, more commonly, nominations processes and booking mechanisms are operated separately until the confirmation step (at which point low priority nominations in excess of available capacity will be curtailed or "bumped").
	This option could be efficient if, as implied by FG's paper, this capacity allocation mechanism were to operate in combination with a conventional nomination processes so that a capacity priority for delivery to a zone were provided implicitly as part of a confirmed nomination. This has the potential to be quite efficient.
	However, in the GIC's meeting on Dec 5 <sup>th</sup> , a FG spokesperson emphasised that there is no necessary link between "daily capacity nominations" and expected gas flows. This would be concerning if this were actually FG's considered view and, in our view, such an approach would not be in accord with <i>good transmission practice applied internationally.</i>
	We trust that good gas practice will prevail such that if "daily capacity nominations" are to be advanced further, we trust they will correspond with confirmed nominations of expected gas flows.
	<ul> <li>Provided that the "daily capacity nominations" concept is developed to be in accord with:</li> <li>proper and conventional nomination protocols (so that nominations are confirmed and scheduled to reflect the expected flow of gas); with</li> <li>conventional algorithms for gas allocations for injection points, and</li> <li>reconciliation of those allocations with purchases to determine imbalances; and</li> <li>daily resolution of the resulting imbalances (daily balancing);</li> </ul>
	then perhaps Option 2 could have the potential to be developed to an acceptable regime. Given that this proviso is true, then we

Question	Response
	would not wish to widen the debate about other options given the challenging timetable.
	We have not yet been able to see how a "daily capacity nomination" is useful alongside a capacity booking mechanism as suggested in Option 1; it suggests one or other mechanism is redundant.
	We consider that Option 3 would have to be developed to meet minimum requirements. We think that the minimum requirement is a nominations system from all injection points into a notional balancing point. These upstream nominations and gas reconciliations must conform to good practice with (see the 4 bullets above in this box).
	As a producer, we have interest in stability. Variations in flow are invariably problematic, but it is a reality of the current gas market with peak demand periods. None of these options are described such that we can assess which best provides the optimum stability. However, if each option has good nomination/confirmation protocols, and strong "daily balancing" incentives encouraging primary balancing, we think each have potential to provide the required stability.
Q8: Are there particular lessons from international experience that you consider First Gas should seek to learn from when designing and implementing the new access code?	The major lesson from international experience is to learn from international experience and to adopt proven standards and protocols. What may look like a simple idea may not work if the market evolves. Novel arrangements could impede future evolution such as separate selling from gas fields, or lead to major disputes affecting the whole industry.
	<ul> <li>Other common features of international experience are: <ul> <li>A sound nomination regime is essential (see standard practice in North America, UK, and Europe). The nomination regime should be compatible with already established conventions of gas commerce such as that described by COPAS (e.g. pre-determined allocations, nominations and confirmations between transmission operator and interconnected operators (particularly production operators));</li> <li>Sound allocation processes using conventional allocation algorithms should be mandatory (standard algorithms being OBA, pro-rata, swing, and ranking). In particular, standard allocation algorithms should be mandatory on all upstream injection points.</li> <li>There should be a default algorithm applying if there is lack of agreement on the allocation algorithm, an appropriate algorithm must be in place before gas flow is permitted;</li> <li>There should be adequate incentives to ensure that nominations are good faith estimates of required gas flow (e.g. such as from "daily balancing" mechanisms);</li> <li>The transmission operator and operators of interconnected systems should confirm nominations prior to gas flow, and if there is any discrepancy, the "lessor of" rule should apply.</li> <li>There should be no risk of contractual congestion;</li> </ul> </li> </ul>
Q9: How much focus do you think should be placed on ensuring that transmission access arrangements facilitate further development of the wholesale gas market?	Poor system design that fails to employ stable protocols and standards will not be conducive to development of the wholesale gas market. A great deal of focus is warranted because the Gas Act requires such issues to be considered, including for protocols and standards for reconciling and balancing gas.
Are there particular features of a new access code (in addition to short term availability of capacity) that are	Standard nomination and confirmation mechanisms, with title transfer being driven by a standard allocation mechanism applied to confirmed nominations, and "daily balancing" (being the daily resolution of imbalances arising from reconciliation) will be important

Question	Response
important?	for proper function of the wholesale gas markets
	Non-standard Agreements
	We note with concern that FG intends to "honour existing non-standard agreements entered into under the VTC" (para 3.13). We consider that any elements of non-standard agreements (other than price and metering arrangements) should be rejected and be required to conform to the new code. The GIC in its SCOP1 paper recorded the following conclusion of the PEA:
	Transition away from grandfathering and supplementary agreements
	Current arrangements that give incumbent shippers a preferential renewal right to firm capacity (VTC reserved capacity rights based on a contract's previous capacity reservations) or preferential rights to physical capacity if curtailment arises (MPOC category B nomination provisions) should be phased out.
	Such elements of non-standard agreements must be eliminated in the new code.
Option 1: Menu of capacity products	
Q10: Do you have a view on whether the priority right product should be designed as an option (subject to nominations) or a fixed property right?	We are uncertain as to how "daily nominated capacity" option can work in Option 1, it seems to duplicate the capacity booking mechanism that defines this option
	The product should not provide any property right that, when exercised, has any potential for excluding others from capacity that is not utilised by the holder of the right (hoarding). The priority right can either be applied by a "ranking" allocation at delivery point, or by bumping or curtailments, the priority right should exist only up to a certain point of time after which use of available capacity is still practicable by another party.
	A system of nominations is essential to forecast the expected utilisation of capacity, and to deal with excessive demands on capacity in real time.
	We note that the GIC has assessed Option 1 as being "VTC like (i.e. point-to-point with advance reservations)". To the extent that Option 1 has any resemblance to the VTC arrangements we reject Option 1. We seek that the system operates flexibly; free of the restrictions of point-to-point capacity reservation, with no risk of congestion caused by artificially imposed Overrun penalties, with certainty as to gas allocation arrangements based on confirmed nominations.
Q11: Do you consider that there would be sufficient interest in priority rights to justify the effort in administering this product?	FG has identified areas where capacity is already important. In addition, capacity could become an issue in other areas, such as the Maui Pipeline, e.g. if FG chooses to devote system capacity to providing other services such as "Park and Loan" and increased tolerances, then capacity on the Maui Pipeline could be significantly reduced.

Question	Response
	For the system to be robust to growth, it must have proper means designed within it to cope with capacity limits etc.
Q12: Do you have any views on the broad features of the priority right product, such as the length of the contract, the frequency of booking rounds, etc?	These are important functions for parties to deal with the risk of congestion or capacity reduction. However, currently there is insufficient detail on Option 1 for comment to be provided on these matters. We are concerned that FG might be incentivised to oversell capacity under this option by assuming a higher backpressure on producers above optimal levels. Generally, there should be some means by which a new user with large new investment can obtain a high priority for gas so as to
	support that user's investment requirements. We agree that FG should place some limits on the proportion of pipeline capacity that can be sold as priority right. We agree that a limit for commitment of about 70% is reasonable, provided that access to the residual 30% does not involve costs above average transmission costs when there is no risk of congestion.
<ul> <li>Q13: Do you have any views on:</li> <li>the frequency and timing of nomination cycles, and</li> <li>the role of nominations?</li> </ul>	The week-ahead provision, day ahead changed provisional, should remain as at present under MPOC because they are a conventional approach, but also because gas contracts have been developed to match those cycles.
	At least 4 intraday cycles is preferred, but the incremental value of each additional cycle would seem to diminish significantly beyond about 6 cycles. The current timing of nomination cycles seems to be functioning reasonably well.
	We recommend a change to the start time of the Gas Day to early morning: to allow safer operation of facilities that are responding to new schedules of gas quantities at the start of the new gas day; and the new gas day to start at maximum inventory because maximum inventory generally occurs at the start of a working day.
	The adoption of industry-standard nomination and confirmation processes is essential for coordinating upstream inputs and setting up the title chain on a solid and stable basis. It is also important to give priority as applicable, manage congestion, and maximise utilisation of capacity by ensuring that parties who do not use their booked capacity will lose it so as to avoid the problem of "hoarding" of capacity.
Q14: Do you have any preferences on the allocation methodology at receipt points and delivery points (OBAs, rules based approaches, or a combination of different approaches)?	It is essential at upstream injection points that standard allocation algorithms are applied using confirmed nominations. As recognised by government policy, a stable regime of this kind is essential for upstream interconnection points because the transmission operator must ensure that there is no possibility of disputes in relation to allocation and title of gas entering the system.
	We consider that OBAs must be an allocation available to producers and large users. OBAs facilitate " <i>displaced gas nominations</i> " which are valuable tools for interconnected parties, e.g. with users can sell gas from delivery points to supply into the pipeline and producers can buy gas from receipt points to take from the pipeline. Competitive dynamics will be reduced if this allocation option is withdrawn.
	Allocation arrangements at any interface (injection points, at delivery points or within zones) should be confined to various easily computable options (specifically a choice between: OBA, <i>pro-rata</i> on nomination, swing, ranking and percentage). The ICA counterparty (to FGL) at the relevant upstream interconnection point should have discretion as to which of the standard allocation algorithms will apply at the outset of the new code, but with a default allocation of OBA if parties at the point do not agree.

Question	Response
Q15: Are there any aspects of the menu of capacity products option that you see as particularly valuable, or particularly concerning?	We have concerns with the suggestion that Overrun Fees are being considered. We do not consider that use of overrun fees is conducive to the requirement of seeking "Efficient arrangements for the short-term trading of gas (GPS 2008)";
	protection of incumbents, and anti-competitive behaviour (e.g. via hoarding). We would be concerned if fixed Overrun penalties were set to incentivise capacity booking: -instead we think that incentives for capacity booking should relate only to the real risk of curtailment, perhaps as identified by prices set by a traded market, and for points where there is no risk of congestion they should have no effect.
	More detail is required; the current description of the application of overrun fees is confusing, lacking justification and clarity.
	We seek that the capacity products should be established as priority rights and applied to nominations, and should not be established as capacity reservation property rights. Property rights on capacity can too easily be misapplied for "hoarding" and exclusion of competitors, and they also have been shown to lead to contractual congestion (as distinct from real congestion).
	We have received anecdotal commentary over the years from parties who have been discouraged from developing gas applications because of the mechanisms of the VTC that can create artificial congestion leading to high costs or exclusion of new entrants.

#### Option 2: Daily nominated capacity

Q16: Do you have any views on how scarcity should be signalled if a "daily nominated capacity" option was developed?	The "daily nominated capacity" option has not been fully described in the paper to form a firm view. However, on the basis of what we can infer and its potential, we think it has the most promise to deliver a cost-effective system.
	We think that the "daily nominated capacity" if designed to perform the dual role of confirmed nomination with implicit capacity priority for delivery within a zone, has the best potential to deal with scarcity in an economical way, while still providing a flexible system.
	We think the implicit capacity priority can be contained within a "daily nominated capacity" by the shipper who could specify the cost of lost load within the nominated delivery zone if deliveries are not allocated. Deliveries to the relevant delivery zone could then be allocated by rank according to the most valuable nomination down to the least valuable nomination. The process of this ranking allocation within a zone combined with reconciliation of imbalances within the zone would yield a clearing price that will signal scarcity within a delivery zone to the extent it exceeded the market price.
Q17: Are there any elements of the "daily nominated capacity" option that you consider should differ from capacity nominated as part of a menu of capacity products (option 1), such as the frequency and timing of nomination cycles, and the role of nominations?	As we see it, there is a significant difference between Option 1 and Option 2.
	We see the potential of this Option 2 is to have the capacity allocation and delivery allocation aligned, so negating the need for separate processes for acquisition of capacity from the acquisition of gas that characterises Option 1.
	As indicated in Q15 above, we have concerns about the application of Overrun penalties, particularly if they are not linked to congestion risk. We can see that this Option 2 can be developed without any need for Overrun penalties, in fact we see no application for such penalties.

Question	Response
Q18: Are there any aspects of the "daily nominated capacity" option that you see as particularly valuable, or particularly concerning?	We would be particularly concerned if the concept of "daily nominated capacity" is not firmly linked to conventional nomination systems and protocols.
	We would see this option as potentially quite efficient and flexible if it were developed so that delivery allocations were aligned with the implied allocation of capacity such that shippers who valued gas most highly were assured of having their nominated gas delivered to a zone.
Option 3: Flow to demand service	
Q19: What information do you think it would be realistic for shippers to provide as forecasts for managing the transmission system under a flow to demand service option?	We do not regard forecasts as a substitute for proper nomination processes. There would need to be a regime of nominations confirmations and allocations for gas taken from all injection points.
	The provision of a nomination function for expected flows of shipper transport from upstream points is essential. A large proportion of the upstream industry has relied on the MPOC to provide a stable set of conventions for measurement and allocation of traded gas, including allocation of balancing responsibility. Long running GSAs have been established on these conventions. We would also note that:
	<ul> <li>The Gas Act requires that there should be stable protocols and standards for reconciling and balancing gas;</li> <li>The 2008 GPS requires:</li> </ul>
	<ul> <li>Efficient arrangements for the short-term trading of gas.</li> <li>Accurate, efficient and timely arrangements for the allocation and reconciliation of upstream gas quantities.</li> <li>Risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties;</li> </ul>
	For these to be complied with requires nominations and allocation protocols (currently established within MPOC): -any changes would add a lot of cost and inefficiency to the industry.
Q20: What information would you require from First Gas to provide you with confidence in security of supply both in the short and long term under this approach?	We are not convinced that FG can offer security of supply in this approach without strong incentives for "daily balancing" and a proper nomination/confirmation regime at all upstream injection points.
Q21: How dynamic do you think pricing should be under a flow to demand service approach?	No comment
Q22: Are there any aspects of the flow to demand service option that you see as particularly valuable, or particularly concerning?	See comments above and in response to Q24.

Question	Response
Link between access options and system characteristics	
Q23: Do you believe that the new code access arrangements should reflect the physical constraints on the transmission system?	The code should recognise that every system has physical constraints, and have means to address those constraints.
If so, which option does this support in your view?	Option 2 seems to have the most scope to be developed into an efficient and cost effective system. Option 1 could be an expensive option.
Q24: Do you have any views on how capacity on the system should be defined and priced (i.e. between points or between zones or between points and zones), and why?	Option 1 has not been inadequately described. We do not support capacity reservation defined on a point-to-point basis, we suggest that either zone-to-zone or point-to-zone is likely to be more efficient. We suggest that separate trading of commodity and capacity may not be economic in the small NZ market.
	We see that Option 2 need not have any specific definition of capacity or pricing of capacity, there need only be a tariff for transport of gas from zone to zone or point-to-zone, perhaps with a distance related component within a zone. As indicated above, capacity scarcity would be indicated by the clearing price of imbalances within a delivery zone, rather than a separate price for capacity.
	Provided that Option 3 adopted MPOC protocols for nominations, confirmations and allocations from injection points, perhaps with delivery of nominations directed to a balancing point rather than delivery points, then perhaps it may have potential as being the cheapest option. However, we see that because with this Option 3 there would be no means to manage congestion we would expect FG to warrant that it will provide system reinforcing to remove any risk of congestion or curtailment.
Q25: Of the options described in this paper, which do you prefer and why?	We see the best potential for Option 2 to be developed because it could be designed to provide significant cost and operational advantages over Option 1.
	Depending on other design choices, this Option 2 offers the following potential:
	<ul> <li>It could provide a simpler capacity allocation method than having capacity auctions and commodity acquisition occurring independently (as suggested for Option 1).</li> <li>It could always be assured of having matching quantities of purchased gas and booked transmission capacity.</li> <li>It could lower costs in respect of administration and IT platform development;</li> <li>It could put the interaction with distribution networks on a sounder basis with market referenced mechanisms for managing congestion by curtailment<sup>4</sup>.</li> </ul>

#### Code governance

<sup>&</sup>lt;sup>4</sup> See comments in relation to DRRs in response to Q5 above.

Question	Response
Q26: Do you have any preference on the legal form for the new code,	We recommend a code in the same form as the MPOC is adopted because it is a more efficient option for coordinating the industry, and more in accord with international good practice.
and who should be counterparties to the new code?	In addition to shippers, all interconnected parties must also be counterparties to the code.
Q27: Are there particular code change processes or features that you consider important or valuable for the new code?	<ul> <li>Operational contractual parameters and procedures should be able to be adjusted without a code change, provided any changes are consulted on and are in accord with RPO practice.</li> <li>We think all changes should require approval from the GIC for assurances that the proposed changes are: <ul> <li>Are in accord with good transmission practice applied internationally, ideally with independent assurance of that assessment; and</li> <li>Are in accord with the Gas Act and Government Policy Statements, and</li> </ul> </li> </ul>
	Are not detrimental to the interests of potential new entrants.
	Voting mechanisms that allow incumbents to define their access arrangements, potentially to exclude new entrants, should be rejected.
Balancing, linepack management and allocation	
Q28: Do you agree with the comments on balancing and linepack management above?	The code should require that parties are responsible for imbalance (whether with mismatch in relation to shippers, or operational imbalance when OBAs apply with an interconnected party) beyond the suggested level of "reasonable endeavours".
If not, why not?	The industry's experience with MPOC and the VTC showed that a "reasonable endeavours" obligation to resolve imbalances did not provide an adequate incentive by itself for primary balancing.
	In addition, for security in the chain of title, there should be no basis for dispute in relation to any resolution of imbalances by compulsory purchase or sale and so the consequence for failure to balance (by shippers or interconnected parties) should be very clear and unambiguous. We suggest the appropriate obligation is best expressed in the UK licence for shippers:
	"the licensee shall take all requisite steps both before and in the course of a particular day, to secure, as nearly as may be, that the amounts of its offtakes of gas on that day from the relevant transporter's pipe-line system and of its deliveries of gas thereto on that day are equal"
	https://epr.ofgem.gov.uk/Content/Documents/Gas shipper full set of standard licence conditions consolidated - Current%20Version.pdf
	In short, " <i>daily balancing</i> ": being the principle of daily resolution of imbalances (whether as mismatch or operational imbalance), by either primary balancing or by the user yielding to compulsory purchase or sale of the imbalance; should now be accepted as a given and a central pillar of any new regime.
	We note that in 5.17.1 that " the costs and credits from the purchase or sale of balancing gas should be recovered from, or reimbursed to shippers." We suggest that if, over a long term, there is over-recovery of balancing costs, it is important all parties who are exposed to balancing costs receive reimbursement.

Question	Response
	We are concerned over the idea of " <i>park and loan</i> ". If this results in high pressure to producers (by gas parked in the pipeline), this has a direct material cost to use in terms of production efficiency and optimisation. Even now, prior to allowing "parking", the backpressure is frequently higher than the MPOC Taranaki target pressure (48 barg). Will FG be compensating producers for costs of higher or unstable backpressure that arises from any "parking" service?
Q29: Are there any particular arrangements for balancing and linepack management that are not discussed in this paper that you consider critical to include in the new code?	The system should provide users with sufficient, well-timed and reliable information on their balancing status, and the status of the system, to enable users to balance effectively. In addition, it is important for security of supply that all major metered points should have real time comparison of confirmed scheduled quantities (nominations) with actual gas flow.
	Incentives for resolution of imbalances/mismatches should be sufficiently strong to minimise the frequency of system events (critical contingencies with low pressure, or overpressure events)
	If the current MPOC mechanisms are employed, we suggest formalisation of 'the rules' on ROIL multipliers.
	We suggest the regime a system could better support shut-down and start-up of major facilities for maintenance. We consider a change to the start of the gas day might be useful in this respect.
	We would like more up-to-date information on pipeline status etc., to be available for better decision making (e.g. real time rather than delayed hourly reports of pressure and linepack).

#### **Non-standard Agreements**

Q30: Do you agree with the comments on non-standard agreements above? If not, why not?	See our comments in relation to Q9. We are sceptical about non-standard agreements being applied other than in purely technical areas such as metering arrangements, or in relation to price to address potential bypass. Non-standard agreements should be subject to periodic review and should not be allowed to impede the efficient development of the industry. Most importantly, the agreements should not be confidential; all non-standard arrangements must be fully disclosed.
Q31: Are there any particular arrangements for non- standard agreements that are not discussed in this paper that you consider critical to include in the new code?	<ul> <li>Non-standard agreements should not be available in the following areas:</li> <li>proper nominations protocols, with confirmation processes between operators prior to gas flow;</li> <li>requirements and incentives to flow gas in accordance with confirmed nominations;</li> <li>standardised allocation algorithms to reconcile gas;</li> <li>Daily balancing (with daily resolution of imbalances or mismatches)</li> <li>Capacity booking and structure of tariffs;</li> </ul>

#### Gas quality

Question	Response	
Q32: Do you agree with the comments on gas quality above? If not, why not?	They look reasonable at this stage.	
Q33: Are there any particular arrangements for gas quality that are not discussed in this paper that you consider critical to include in the new code?	We understand that other overseas operators (e.g. Australia) have a tiered approach to dealing with Gas Specification excursions, where the actual specification limit exceeded, by how much and for how long, are all used to guide the response. Consideration should be given to adopting such a standard (e.g. which could also recognize that some quality excursions such as Wobbe is more serious than others, such as temperature). We support the ongoing efforts to improve monitoring of compliance.	
Next steps		
Q34: Do you have any comments or concerns on the process for developing the detail of the new code throughout 2017?	There is a risk that that code replacement could be significantly delayed if FG develops its code other than in a conventional manner (that is, by reference to good transmission practice applied internationally).	
Q35: Are there particular issues or aspects of the new code that you would particularly like to be more closely involved in, including by participating in workstreams to prepare code exposure drafts and working papers?	<ul> <li>We would be happy to contribute to the development of issues and processes. We trust that in critical areas of the code<sup>5</sup> there will be a foundation requirement (a "given") that outcomes must be developed by reference to <i>good transmission practices recognised internationally</i>.</li> <li>We have particular interest in the development of the following: <ul> <li>Inventory and pressure management.</li> <li>Gas Quality.</li> <li>Cycles times / Gas Day definition / nomination and confirmation protocols.</li> <li>IT user requirements for the replacement system, particularly: <ul> <li>Data communication protocols and standards</li> <li>Curtailment mechanisms at a welded point.</li> <li>Mobile access.</li> </ul> </li> <li>Data as close to "live" as possible.</li> </ul></li></ul>	

<sup>&</sup>lt;sup>5</sup> Critical areas of the code will be areas such as nominations and confirmations, allocation methodology, daily balancing, and capacity priority.

Appendix to Attachment 1: COPAS Guidelines

COPAS – (Council of Petroleum Accountants Society): Accounting Guideline AG8		
NOMINATION PROCESS		
OVERVIEW		
There are three primary transactions involved in the nomination and delivery of natural gas: 1) the Title Transfer of the commodity ownership (sell/purchase), 2) the Transportation Transfer across a pipeline, Local Distribution Company (LDC) or other transporter (transport/ship), and 3) the Custody Transfer or physical exchange of the commodity between the source (e.g. well) and the various transporters to the ultimate destination (e.g. consumer). Numerous legal entities are parties to these transactions. It is important to identify the specific role a particular legal entity is playing in each of these various transactions.		
Sellers and Purchasers are parties to the Title/Transfer transactions. Sellers can include producers, pipelines, local distribution companies (LDC) plant processors and marketers. Purchasers can include pipelines, producers, LDCs, plant processors, marketers and consumers.		
Transporters and Shippers are parties to the Transportation Transfer Transactions. Transporters can includ gatherers, processing plants, pipelines and LDCs. Shippers can include producers, pipelines, LDCs, plant processors, consumers and marketers.		
Finally, Operators are parties to the Custody Transfer Transaction. Operators include well operators, gatherers, processing plants, pipelines, LDCs and consumers. Well Operators typically represent the various producers or selling interests in a reservoir. Transportation Operators can include gatherers, plants pipelines and LDCs.		
A Transportation Operator is typically the same party that is involved in the Transportation Transfer Transaction. However, their role in the Custody Transfer Transaction is to coordinate the physical exchange of gas at interconnects with upstream and downstream operators. This coordination includes confirming the specific quantities under the numerous contracts that are being exchanged at an interconnect.		
There is a strong interderendency between the Title Transfer. Transportation Transfer and Custody		

There is a strong interdependency between the Title Transfer, Transportation Transfer and Custody Transfer transactions. All three transactions must be confirmed from source to destination in order to account for the complete delivery. This requires a complex interactive process between all the parties involved in each transaction.

# **COPAS – (Council of Petroleum Accountants Society):** Accounting Guideline AG15 - Natural Gas Admin

#### OVERVIEW

A nomination is a communication by the shipper to its transporter that depicts the requested quantity of gas and the time period, along with the associated receipt and the delivery location(s). This communication is typically performed via the transporter's electronic bulletin board (EBB). There are four nomination cycles: Timely, Late, Intraday 1, and Intraday 2.

A confirmation is an agreement between the transporter and the interconnected operator to deliver a specific quantity of gas for a specified period at one specific location. It is tied to the nominations made by the shippers and processed by the transporter. The nomination/confirmation process is a series of nominations and confirmations between the participants assuming various roles.

The result of the nomination/confirmation process is a scheduled quantity representing agreement among participants to sell, purchase, transport, ship, and physically exchange a quantity of gas for a specified period of time. The operator at each custody transfer point should act as the facilitator of this process, which typically occurs after each nomination cycle.

#### PROCESS, ROLES, RESPONSIBILITIES, AND TIMING

The nomination/confirmation process requires timely and accurate communication among all participants to be successful. There is a strong interdependency between the available for sale, dispatch, gas sale, transportation, and custody transfer transactions. All five must be confirmed in order to account for the complete delivery of gas. This necessity requires a complex interactive process among all parties involved in each transaction. This process, as well as each party's role and responsibilities, is identified on the following page.

## Appendix II: Comments on Extracts from the FG's SCOP2 Paper

Extract from SCOP2 Paper	Comment
Page 3 "the code needs to protect the legitimate interests of other network users to maintain quality and reliability of supply "	Agree: as the Gas Act has identified, stable protocols are essential for efficiency
<ul> <li>Page 4</li> <li>Important Design Choices <ul> <li>Form and content of nominations</li> <li>Allocation of receipts and deliveries</li> </ul> </li> </ul>	<ul> <li>Agree,</li> <li>these are critical design choices, stability in these areas is essential particular in relation to injections into the system from the "upstream"</li> <li>the code should use standard protocols that have been applied in the MPOC, or have been proven overseas. It costs significant resources and time to accommodate change in these areas.</li> </ul>
Page 5 "we will consider incentives to encourage accurate nominations"	Agree, we think nominations that are confirmed between operators is the best estimate of expected gas flow and there should be incentives to ensure that gas flows to schedule within reasonable tolerances.
"Nomination: A notification by a Shipper of an intention to transport a specified quantity of gas from one point or zone to another. Upon confirmation the nomination is scheduled by the pipeline operator"	Partially Agree: we see that nominations must be confirmed between operators of the pipeline and interconnected systems, particularly in of injections.
1.16.3	Note: The MPOC does not have the concept of Overrun because it relied only on congestion risk for parties to be incentivised to seek the priority AQ product, rather than use penalties like the VTC Overrun fee .
"Simplicity is likely to favour conventional proven approaches that are used internationally to manage similar gas transmission systems"	Partially agree However we would say that economic efficiency favours adoption of international good practice. This can sometimes conflict with the superficial attractiveness of "simplicity".
Para 3.27 "DRRs set out the processes for determining shippers deliver quantities at each shared delivery point".	We do not believe there is any requirement for DRR rules to be used to determine delivery quantities from the transmission system. Delivery quantities into a zone that has limited capacity should depend on the shipper's purchases of gas and the reliability of the transport that it contracts, not on what is taken.

Extract from SCOP2 Paper	Comment
Para 4.8 "The flow to demand service is not commonly used in open access systems internationally".	For this reason alone Option 3 should be assessed with caution. At the very least, injections from the upstream need to managed via a system of confirmations and nominations, with standard algorithms for allocation.
4.9 "the most important thing is that short term capacity is made available and can be traded efficiently"	This is important in Option 1 but there are also other aspects of equal importance such as: nomination standards, allocation protocols, and reconciliation via daily balancing. Trading of capacity should not be needed if capacity allocation is implicit in the "daily capacity nomination" concept (Option 2). As identified in Option 3, there may be no capacity instruments at all, so nothing to trade.
4.22.2 " nominations would also serve the purpose of scheduling gas flows from producers and would be the means of establishing title to gas"	Agree However, comments from a FG spokesperson in the Dec 5 <sup>th</sup> meeting suggested that "daily capacity nomination" need not be linked to the expected gas flow. Those comments created a concern that FG is not appreciating the importance of the nominations/confirmations process for efficient gas commerce, particularly for the upstream. The lack of such a regime on the VTC upstream injection has, in our view, contributed high costs to several expensive disputes.
4.24 "First Gas believes that the best such mechanism is an overrun fee"	Disagree: We think overrun penalty fees can be highly distortionary, favouring incumbents over new entrants. Incentives for acquiring capacity priority relate to consideration of the risk of curtailment, and not on the imposition of penalties that are not genuine pre-estimates of congestion risk.
<ul> <li>4.26 "To ensure efficient use of system resources an incentive is also likely to be required under this option to match actual injections and demand with nominations".</li> <li>4.29 "The MPOC currently applies a limit for AQ of 70% - which we consider strikes a reasonable balance between ensuring that priority access can be obtained by parties who value it, while still enabling some flexibility on the day to access</li> </ul>	Agree: All viable options (1 2 and 3) will require incentives for actual flows to match scheduled flows within reasonable tolerance. Agree: at least 30% of capacity must be available for flexible access at no additional cost,- unless there is a congestion risk.

Extract from SCOP2 Paper	Comment
4.56 "The flow to demand option takes	Disagree:
complexity off shippers and puts it on First Gas."	Unless injections from the upstream are
	managed through a proper
	nomination/confirmation process, it will not
	reduce complexity for shippers. Shippers will be
	responsible for mismatch charges if their
	supplier fails to deliver with the shippers offtake;
	- disputes could arise between shippers and their
	suppliers. New entrants might suffer because
	they cannot get incumbents to modify allocation
	agreements.
	Without having oversight inputs and outputs
	relative to scheduled flows, then Critical
	contingencies will be more difficult to manage
	and perhaps will become more frequent.
5.6 "Our preference at this stage is to have TSAs	Disagree
that incorporate the provisions of the new code,	TSAs and ICAs should be set out in one code.
with ICA agreements that are separate bilateral	A system requires component parts to interact
contracts with terms that may differ from other	with each other in predictable ways particularly
ICAs (where appropriate)."	in relation to the upstream.
5.9 "First Gas is of the view that decisions on the	Partially Agree
code amendment process should require	In addition, proposals from First Gas should
appropriate industry consultation (including	always be required to be consistent with its RPO
input from the GIC), but should be primarily	responsibility to be a Reasonable and Prudent
driven by an independent assessment of the	Operator applying "good gas transmission
value of the proposed change in meeting gas	operating practice as determined by reference to
industry policy objectives .	proper and prodent practices recognised
	Any proposal should reference examples of such
	international good practice to support any
	change
5 14	Disagree
"First Gas believes that balancing gas is simply	This omits consideration of the "operational
shippers' aggregate mismatch"	imbalance" that interconnected parties will have
	with FG. FG must provide an option for
	interconnected parties to continue with OBA
	allocations.
5.17	Notes: Because OBAs must be made available as
	an allocation option then "operational
	imbalance" will need to be balanced as well as
	shipper's mismatch
5.17.4 " arrangements that incorporate daily	Note:
incentives for Balancing and pass through line	Daily balancing, being the daily resolution of
pack management costs/credits to causers align	excessive mismatch and imbalances by
well with the operational requirements of the	compulsory sale or purchase (reconciliation),
transmission system"	should be specified as a central pillar of the
	regime.
5.19.1	Daily balancing should be applied on a daily
	basis.

Extract from SCOP2 Paper	Comment
5.22 "If OBA arrangements and incentives are	Disagree
preferred but are not practical for delivery	There is no basis for the assertion that OBAs are
points with multiple Shippers, then an	not practical for delivery points with multiple
alternative for those points would need to be	shippers. We suggest the opposite is true, that
considered"	OBAs are the most practical allocation
	mechanism for points with multiple shippers.
5.29 "non-discriminatory access to shared	Agree
transmission infrastructure would not allow any	Non-standard terms detract from the concept of
differentiation of the terms and conditions of	goal of providing non-discriminatory open
access applicable to different shipper"	access.
	NZ experience indicates that the use of non-
	standard agreement has enabled vertically
	integrated incumbent parties to entrench their
	position, and the industry is prevented from
	evolving if non-standards are too entrenched.
5.59 "MDL indemnifies other pipeline users for	Incorrect
losses they incur as a result of non-specification	This is now FG's responsibility
gas being injected"	