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Dear Ian

Submission on Options for Vector Transmission Capacity

1. Vector Limited welcomes the opportunity to submit on the Gas Industry Company's consultation paper, 'Options for Vector Transmission Capacity'. We also appreciate the additional time you gave us to make this submission

2. We believe the consultation paper is a significant piece of work that we can build upon, together with other industry participants, to address capacity issues, particularly on Vector's North Pipeline.

The need for reform

3. The current transmission regime reflects historical features of the gas sector which prevailed in the 1970s to 1990s. Since the early 2000s, the sector has undergone a series of significant developments: the expiry of the Maui Gas Contract, the advent of universal open access to gas transmission pipelines, the sourcing of gas from a larger number of smaller gas fields and the instigation of the co-regulatory model for gas governance. These changes, the full effects of which are still to flow fully through, have created a more dynamic market where efficiency and competition considerations are paramount. Within these changing market conditions it has become apparent to Vector that aspects of our transmission regime need changing to better meet the changing needs of shippers and customers.

4. The current regime was also designed on the assumption that there would always be sufficient physical capacity on the pipelines to meet demand. This assumption is being increasingly tested on Vector's North Pipeline. If demand does exceed supply, then any capacity arrangements have to address this mismatch. In practice, the question the regime has to answer is: who will get the available supply, on what terms and at what price? We

think that this aspect needs to be given more, and more explicit, weight in considering the options.

The options for regime change

5. The GIC has undertaken an assessment of a number of options and concluded that two – its 'hybrid regime' and 'incremental options' – deserve fuller consideration.

6. The GIC's work in assessing and short-listing the options focuses on the salient issues and, importantly, on the tensions between different objectives that have to be managed in moving from the current regime to a new and better one.

7. Some of the key tensions that need to be addressed are:

   - The need to ensure that any allocative or productive efficiency benefits delivered from any change are greater than transition costs and impairments to dynamic efficiency brought about by change. This manifests itself most clearly in the need to design a regime that meets the needs of existing shippers (especially large ones) and does not act as a barrier to new entrants and downstream competition.

   - The need to ensure that the regime remains simple and inexpensive to operate. Notwithstanding that the gas sector has evolved in recent times, New Zealand's gas sector is still reasonably small and, in gas transmission, is characterised by predominantly point-to-point transfers by half a dozen or so shippers.

   - The interplay between the commercial capacity and physical capacity and the need for an investment signalling mechanism, be it price or demand forecast based.

   - The need for a reality check to ensure that proposed changes to the regime will not have unintended consequences or flow-on effects which are unpalatable either from a customer, shipper, asset owner or economy-wide standpoint.

8. Our initial view on the GIC's preferred options is contained in **Appendix A.**

9. What our analysis to date has brought to light is that within any broad label for an option – for example 'hybrid' – there is a host of sub-options, many of which will have quite different impacts on different parties. Attached at **Appendix B** please find a copy of some further work that Vector has

undertaken to describe and assess a number of such sub-options. These options sit across the spectrum of requiring minimal to moderate to substantial changes, but all of these options could be considered 'hybrids'.

A proposed way forward

10. The GIC has already indicated that it plans to proceed with more in-depth consideration of its preferred options. We suggest that this work needs to include describing the detailed nature of the options, and analysing the actual effects of the options on the various players before any final decisions can be made.

11. We suggest that an appropriate way forward would be to convene an industry workshop session in the upcoming weeks where all the options and sub-options can be discussed and debated. Those that are then recognised by industry and the GIC as the most promising should be considered further.

12. Vector believes that such an approach would assist the GIC make its recommendation to the Associate Minister. Industry would have had the opportunity to engage first-hand on a wide suite of options for change.

13. Vector looks forward to engaging with the GIC and industry participants to work out practical alternatives to the current regime and forge a common industry solution that benefits our current and future customers. We believe the GIC, as an industry body, can play a strong facilitative role in progressing these discussions.

14. Thank you for considering this submission. If you require further information or would like to clarify any aspect of this submission, please feel free to contact John Rampton, Vector's Manager, Industry Governance and Policy at 04 803 9036 or at John.Rampton@vector.co.nz.

Yours sincerely

For
Daniel McCarthy
Group General Manager Commercial

Appendix A: Vector's responses to questions in the GIC Options Paper

QUESTION	COMMENT
Q1 Do you agree the objectives are appropriate criteria for evaluating transmission capacity options?	Vector agrees that the selected "capacity objectives" are relevant criteria to assess arrangements for managing pipeline capacity against. We have proposed another objective as discussed below. Vector notes that there is a degree of redundancy in the GIC's objectives because of the considerable overlap or interdependence between some of the objectives, i.e. some objectives will be met with the achievement of another. For example, the attainment of "efficient pricing of capacity" should ensure or at least contribute greatly to achieving "efficient allocation of capacity". Pricing intrinsically rations the demand for goods or services and thus efficient pricing should contribute to efficient allocation. Likewise, there is a degree of interdependence between "efficient pricing" and "efficient allocation", and "facilitating competition in retail markets". There is also a link between "allowing price stability" and "providing the level of service firmness that users require and are willing to pay for". While interdependencies are not problematic in themselves, it can become problematic when used in an assessment table where criteria are qualitatively scored. Under such an approach, particular arrangements (in this case, the "hybrid" and "incremental" approaches) are given preference because they score well across a range of criteria when in reality there is a great deal of interdependence between the criteria. Consequently, this scoring approach may produce somewhat misleading results by suggesting that some options are vastly superior to others. We also suggest that the criteria inherently do not give enough emphasise to the concept of existing property rights, to ensure that investment incentives in upstream and downstream investments are not overly dampened or curtailed. This concept is particularly relevant for sunk assets, such as power stations,

QUESTION	COMMENT
	which are long-term and irreversible in nature, i.e. not readily transferred to alternative uses. A diminution in existing property rights could have a material impact on parties that have made considerable investment in downstream plant dependent on gas supply. Honouring existing property rights may be important in achieving dynamic efficiency, even if there is some downside in terms of allocative efficiency. We note that the GIC's paper only appears to consider the removal of existing property rights as a transitional issue, rather than an issue of efficiency. Accordingly, we suggest that a new objective be considered in developing practical solutions to the capacity issue - that the "recognise, to the extent practicable, existing contractual rights to pipeline capacity". We recognise that there is a natural tension between this and achieving other allocative and productive efficiency criteria and that most changes will have some adverse affect on property rights. However, these are not grounds per se for not including this concept explicitly in the criteria especially when no single one criteria is deterministic. Vector considers this objective to be consistent with the objectives of the Gas Act. Significantly, Vector is of the view that the GIC needs to prioritise the objectives. While we recognise that these objectives are derived from an assessment of the Gas Act objectives/purposes which in themselves are not prioritised, we think prioritisation is warranted given the way in which options are assessed against the objectives. We suggest that the GIC work with industry on the prioritisation that should be given to the objectives.

QUESTION	COMMENT
Q2 Do you agree with the evaluation of the current capacity arrangements?	Our specific comments on the assessment against the objectives follow: <u>Efficient pricing</u> The GIC notes that Vector's capacity charges are based on non-coincident peak demand, whereas pipeline capacity is driven by coincident demand. Vector considers that pricing arrangements must balance theory against the needs and objectives of shippers. There are practical benefits in charging on the basis of each shipper's peak demand. Most notably, it means that the charges are predictable and within the control of the shipper. This point was noted by the GIC in its Research Paper. We note the anecdotal reports from a few end users that they cannot switch to suppliers who might offer them the lowest overall delivered gas price. The current regime does not stop shippers from ensuring the new supplier has sufficient capacity. <u>Efficient Allocation</u> We disagree with GIC's view that Vector conservatively sets commercial capacity, and the suggestion that Vector is contributing to this capacity shortage by protecting its own interests. Such an assumption presupposes that Vector would deliberately issue less capacity than Vector believes to be available. Vector acts prudently when it comes to issuing capacity as per the prudency requirements in the VTC. Vector notes that it has a commercial incentive to issue reserved capacity. This point is reinforced by Vector's initial support for a weighted average price cap to apply to our transmission business, in preference to a revenue cap. We agree with the GIC's view that grandfathering of capacity, trading of commercial capacity and managing congestion may be contributing factors to inefficient allocation of capacity. We believe this not wholly an intrinsic

QUESTION	COMMENT
	deficiency in the operation of the current access arrangements but rather a result of the absence of secondary trading. Furthermore, shippers may have legitimate commercial reasons for retaining existing rights, rather than relinquishing these rights to a third party. It cannot be assumed that the absence of secondary trading necessarily indicates a market failure or deficiency in the access arrangements. Further analysis is required in relation to this issue.

QUESTION	COMMENT
Q2 (continued) Do you agree with the evaluation of the current capacity arrangements?	<u>Efficient investment</u> We agree with the GIC's findings that regulatory uncertainty and lack of a clear investment policy, which are interrelated, are impediments to investment. If the regulatory regime is sufficient to encourage investment in pipeline capacity and Vector invested in physical capacity, this would naturally lead to an increase in commercial capacity. To some extent the problems identified by the GIC in relation to the VTC would dissipate if additional physical and commercial capacity were made available. We acknowledge that our information on gas demand is not as good as it could be. As recognised in the paper, we obtain information from shippers about their forecast gas demand. For a number of reasons, shippers' total demand for reserved capacity is likely to be a poor indicator of the total demand for physical pipeline capacity. We also, however, recognise that the lumpiness of gas demand growth makes it difficult to forecast demand. This is more so than in electricity, where demand is linked more to organic growth. In gas, a large new industrial plant, such as a power station can cause a significant step-change in gas demand.

QUESTION	COMMENT
Q2(continued) Do you agree with the evaluation of the current capacity arrangements?	<u>Simplicity and Transparency</u> Vector is in favour of improving transparency. Vector accepts that additional information and formality around Vector's processes would be helpful in improving transparency in the company's assessment of commercial and physical capacity. It is important to note, however, that measuring physical capacity and translating this into an assessment of available reserved capacity is not an exact science. Furthermore, detailing Vector's process for estimating the available physical and reserved capacity may not provide much practical benefit to shippers. For this reason, Vector would be pleased to work with shippers to meet their requirements. <u>Price Stability</u> The GIC makes the following observations regarding price stability: "Capacity reservation fees are stable from gas year to gas year, as are interruptible prices. However, overrun prices are high and users who are unable to obtain sufficient commercial capacity may incur higher overrun charges. Thus, during capacity shortages, the overall price paid by users is not stable and can increase significantly." Vector does not agree that overrun prices are 'high' per se. An overrun multiple is required in order to deliver appropriate price signals to shippers. Vector accepts that overrun charges are more likely to apply if the pipeline is reaching full capacity. However, this does not imply that the price signal is inappropriate or that pricing is 'unstable'. On the contrary, the pricing is posted ex ante, and therefore, it does not exhibit the degree of volatility that could result from a more dynamic

QUESTION	COMMENT
	pricing arrangement. <u>Firmness</u> The GIC describes the current arrangements as not providing intermediate services, where shippers value firmness but would willingly accept compensation if interrupted. Vector acknowledges that the introduction of an intermediate service could have potential benefits – and it would be useful to obtain feedback from shippers on this issue. Evidently, the introduction of an intermediate service would add further complexity, and therefore, the benefits of such an arrangement would need to outweigh the costs. It should also be noted that the VTC does not preclude the development of an intermediate service.
Q3 Do you agree with the evaluation of the contract carriage option?	We agree, generally. We do not believe that a purer form of contract carriage is suitable primarily because a pure contract carriage regime is not consistent with supporting retail competition. Notwithstanding that the development of a more liquid secondary market may be possible, we doubt that it would be liquid enough to allocate capacity efficiently under a pure contract carriage model.
Q4 Do you agree with the evaluation of the common carriage option?	We agree, generally. As recognised by the GIC, the introduction of a common carriage regime across all shippers on the pipelines is not a feasible option in the short-medium term because its implementation would involve the termination of existing long-term contracts which may not only require compensation but may also have an adverse effect on investment certainty and incentives to invest.

Q5 Do you agree with the evaluation of the current hybrid option?	We agree with the GIC's assessment that the hybrid approach performs well against the efficient pricing and allocation criteria. However, as discussed above there is a high degree of interdependence between these criteria. We have reservations with the GIC's evaluation of its hybrid option with respect to some of the criteria. In our view, its assessment against the criteria "simple and transparent", "firmness", "transition costs" and "price stability" is overly optimistic and that from a competition perspective there could be effects which in fact aggravate perceptions of competition. <u>Simple and transparent</u> The GIC's hybrid approach is inherently complex. It would entail a contract carriage regime operating alongside a common carriage regime on Vector's pipeline system. Allowing shippers to choose between contract and common carriage for different loads could potentially lead to shippers being able to choose the form of carriage almost on an ICP-by-ICP basis. Likewise Vector would have to hold two prices for all loads. Furthermore, heightened complexity normally creates opportunities for parties to 'game' the system at others' expense and undermines overall efficiency. Naturally, it may be difficult to identify all of these gaming opportunities at the outset. It is feasible, for example, that parties with a portfolio of common and contract carriage transmission rights could arrange their affairs to exploit differences between the regimes. Allowing Shippers to choose between contract and common carriage arrangements could introduce significant complexity and runs the risk of creating new issues to be resolved. Vector suggests that other hybrid approaches as outlined in this submission are explored.

	Transition costs The GIC's hybrid approach is assessed to have moderate transition costs. We believe that this is an overly optimistic assessment. The transition costs are high because transmission contracts would have to renegotiated because the contract terms are different. Whilst this requirement is recognised in the paper, not enough significance is attached to the difficulties of achieving this. Furthermore, there would be a requirement to modify OATIS considerably to provide for the dual contract and common user service on Vector's pipelines. Although we have not estimated the costs of the necessary changes, they are likely to be in the order of many millions of dollars. Firmness We also note that one of the outworkings of the hybrid approach, because of the tightness of physical capacity, is that a common carriage service would have to be priced at a considerable discount to the contract carriage service to be attractive. This point was raised at the Auckland session where a number of the audience noted in effect that there was a risk that if you put in place a hybrid regime, it could default to a contract carriage regime because parties would want firm capacity when a pipeline is physically constrained. While it is entirely conceivable that a significant price disparity between the contract service and common service may be efficient, especially in terms of allocative efficiency, it could have ramifications to gas prices downstream. In particular, gas prices to major industrial users (including power stations) and major commercial user could rise. Furthermore, there could be more significant regional variations than currently, with regions supplied by constrained pipelines subject to relatively higher gas prices for major users. Is this outcome possible? Would it be economically and politically acceptable if prices rose for some classes of customers but not others? We believe these types of issues also need to be considered.

	Price stability We are of the view that the grade given to price stability is too high. The logic of the assessment is that users wanting price stability will opt for the contract carriage service. However, the attractiveness of price stability and firmness will be provided at a premium to the common carriage service. If there are no expected shortages in physical capacity, shippers would be less inclined to pay a premium for contract carriage services. The converse will be true if there are capacity constraints. Preferences are therefore likely to change over time. From an individual shipper's perspective, pricing is likely to be less stable over time than the current arrangements as shippers respond to changing market conditions. From Vector's perspective, contractual arrangements may be more complex as shippers want the flexibility to move from contract carriage to common carriage, especially if new pipeline capacity is added in the future. Competition We have a concern that a perception may develop that the approach is anticompetitive as larger users will likely choose contract carriage to lock in price and capacity – an option not easily available to new entrants, who alone could be expected bear the costs of future upgrades

QUESTION	COMMENT
Q6 Do you agree with the evaluation of the MDL carriage option?	Vector does not believe that applying the MDL carriage arrangement to Vector's pipelines is desirable. In our view, the application of this regime to Vector's system would create considerable transitional costs, require the unwinding of long-term contracts, and result in lower levels of firmness. We believe the transition costs are underestimated in the assessment. They should be rated as very poor because converting long-term contracts to AQ would not be supported by many shippers and would be a difficult exercise. Shippers do not regard the AQ mechanisms as conferring the same level of security as long-term contracts. In the development of the Maui Open Access regime, some shippers, especially those with long-term investments in gas fired power plant, expressed considerable opposition to the lack of firmness provided by the common carriage MDL regime and were not overly comforted by the AQ mechanism. With ample physical capacity, especially once the legacy rights expired shippers were sufficiently comforted in the knowledge that they would be able to obtain sufficient capacity to transport their gas. However, in the case of Vector's North Pipeline, there is a capacity constraint which would enliven shippers' concerns as to whether they would obtain sufficient firmness of service.

QUESTION	COMMENT
Q7 Do you agree with the evaluation of the incremental change option?	We agree that incremental approaches, in principle, are likely to be viable options for changing Vector's commercial arrangements. The reasons for this are, as follows: a. Incremental changes are likely to be less disruptive and have lower transition costs. This means that they are more likely to be able to be implemented quickly; b. The effects of incremental changes are likely to be better understood and appreciated by shippers ; and c. It is likely that the apparent problems with the existing VTC will dissipate to some extent if the regulatory regime facilitates new investment in pipeline capacity. However, the GIC's incremental approach includes significant changes- ie they may be incremental in form but are substantial in effect. The two most substantial are the proposal to assign capacity to users and the restructuring of interruptible payments. These would have substantial effect on the operation of the regime. We are of the view that other incremental changes are also required to be considered.
Q8 Are there other options you think should be considered and evaluated?	As discussed above, we believe that shippers should have the opportunity to review and provide feedback on the options that Vector has presented. These options relate to changes to the commercial arrangements of Vector's access regime.
Q9 Do you agree that only the hybrid and incremental change options should be considered further?	No, we would like the GIC to include Vector's options in its consideration: (see Q 10 and Appendix B).

QUESTION	COMMENT
Q10 Do you agree with the proposed next steps?	As indicated in the covering letter, Vector has developed practical options to address capacity issues, and is well placed, together with industry, to take this process forward. Vector's options are separated into 2 classes: Those with a contract carriage dimension and those with a common carriage dimension. Contract carriage dimension 1. Sub Option 1.1 End-user Capacity (minimum change) 2. Sub Option 1.2 Separate Residential End-users (moderate change) 3. Sub Option 1.3 Short-term Reserved Capacity (moderate change) 4. Sub Option 1.4 Annual Re-set of Reserved Capacity (minimum change) Common carriage dimension 5. Sub Option 2.1 Peak Demand Capacity (substantial change) 6. Sub Option 2.2 Nominations-Based capacity (substantial change) The above options are described in more detail in Appendix B. We suggest that the GIC convene a workshop in the upcoming weeks where the GIC and Vector's options for change are considered further by industry and those that are regarded as the most beneficial are progressed.

Appendix B

Some additional sub-options

This appendix contains some work that Vector has undertaken to describe and assess a number of sub-options to reform the current Transmission Regime.

These options sit across the spectrum of requiring minimal to moderate to substantial changes, but all of these options could be considered 'hybrids'.

We do not present a detailed description of the sub-options, or an analysis of their desirability against a set or criteria. Rather, we have described the nature of the options in some detail and we present some analysis of the effects of the sub-options on the various players in the gas market.

The terms "Contract Carriage" and "Common Carriage" mean different things to different people. Such terms are quite general and regimes of either classification could be designed to include quite different features.

The Common Carriage and Contract Carriage regimes discussed in this Section (Options 1 and 2, respectively) could each include various sub-options.

These sub-options, 1.1 – 1.4 relating to Contract Carriage, and 2.1 and 2.2 relating to Common Carriage, have each been placed under a descriptive heading. The central idea behind each of them is stated, as is the main issue the particular sub-option would address.

Some of the key features of Common Carriage and Contract Carriage, and of each of the sub options, are discussed. The emphasis is on practical rather than theoretical aspects.

Neither the range of sub-options, nor the discussion of each, purports to be exhaustive. It is hoped that what is presented here will provide a useful basis for comparison and more detailed investigation to assist in choosing the way forward.

The sub-options are not all mutually exclusive. An alternative to the present regime could well encompass more than one of them.

Option 1: Contract Carriage (Modified)

***Central Idea**: Modify the existing Contract Carriage regime to address shortcomings revealed by the North Pipeline constraint.*

Capacity Rights

1.1 The defining characteristic of a Contract Carriage regime is that it creates property rights out of transmission capacity (hence *Reserved* Capacity).

1.2 Reserved Capacity assures the Shipper who owns it that it won't be "bumped" by another Shipper, whether a competitor or not. Historically, such rights have been considered a pre-requisite for the largest loads, namely power stations.

1.3 Some Shippers have accordingly expressed a preference for Contract Carriage, as well as for annual Reserved Capacity. They also tend to argue that grandfathering of capacity is essential to enable them to service their retail gas supply contracts.

1.4 Despite the advantages of Contract Carriage however, problems can arise when the physical supply of capacity approaches its limit.

1.5 Transmission capacity is a means to an end: it is not the product that End-users consume. On a constrained pipeline, where an investment solution is uncertain or could take some years to implement, there should be a balance between the property rights of Shippers who hold capacity but who may not be fully using it, and the rights of other Shippers needing capacity to gain access to it.

1.6 Absence of such a mechanism could be seen as a case of "market failure", and an invitation to more heavy-handed regulation.

1.7 Constrained capacity on a crucial Pipeline is a new phenomenon for the Transmission System. If Contract Carriage is to continue, significant modifications to the current regime may be necessary. Such changes could take a number of different forms.

Align Capacity Supply With Demand

1.8 At present, Shippers request Reserved Capacity, and seek customers requiring the use of such capacity, as if these were unconnected activities. Since End-users are free to move to another gas supplier (subject to any term contract), this can result in some Shippers having too much capacity while others cannot get enough.

1.9 A possible remedy might be to establish a Shipper's right to capacity by the *act of contracting* an End-user. A Shipper would then have certainty of capacity – for as long as it continued to supply gas to the End-user concerned.

1.10 That could be achieved by attaching capacity to End-users, either individually in the case of large volume End-users or collectively in relation to small volume End-users (residential End-users in particular). (See sub-options 1.1 and 1.2).)

1.11 Selling Reserved Capacity only for a full year may also encourage misallocation of capacity, since gas supply contracts may start and finish at any time of the year. Capacity could be sold for shorter periods (see sub-option 1.3).

1.12 Sub-options 1.4 looks at a way of providing additional capacity to a Shipper taking on new (but existing) End-users by limiting Vector's capacity obligations for the following year.

1.13 The ability to transfer Reserved Capacity, other than perhaps for the same Receipt Point-Delivery Point, is technically unsound and needs to be removed. If the existing regime was modified as described in the sub-options set out below, other transfer of capacity would also be unnecessary.

Value of Capacity

1.14 Economic theory would suggest that ,if capacity is in short supply its price should rise, and it should gravitate to parties with higher value uses for it.

1.15 Vector sells "primary capacity" at fixed prices: it would be unlikely to benefit from any increase in the value of capacity in any secondary market due to price control.

1.16 The current regime provides for secondary trading of Reserved Capacioty. Shippers are free to sell capacity amongst themselves at any price they may agree.

1.17 It is difficult to consider a more market-based approach to allocate capacity without also considering the linkages to the gas market (wholesale and/or retail), and this paper does not do that.

Pricing Methodology

1.18 Vector considers that the current transmission pricing methodology is in need of a significant overhaul.

OPTION 1, CONTRACT CARRIAGE (MODIFIED): KEY DIFFERENCES FROM CURRENT REGIME	
1	**Annual reservation of capacity could be discontinued**
2	**Capacity could attach to End-users with AQ ≥ a threshold**
3	**Shippers could be able to reserve capacity for < 1 year**
4	**Residential End-users could be managed collectively**
5	**Capacity transfer compulsory on End-user switching; otherwise probably not required or permitted**
6	**No grandfathering of capacity**

Sub–Option 1.1: End-user Capacity (Minimal Change)

***Central Idea**: Capacity would attach to End-users: Shippers would pay to use it.*

***Classification**: Form of Contract Carriage.*

***Issue Addressed**: To facilitate retail competition for larger End-users by ensuring sufficient transmission capacity would be available to any Shipper.*

1.19 If transmission capacity attached to End-users, Shippers would not have to request Reserved Capacity from Vector, or obtain it from a competitor where the pipeline was constrained, when switching an End-user. Retail competition should therefore be enhanced.

1.20 A similar concept used to apply on the Auckland distribution network. United Networks required any End-user supplied under non-standard terms and conditions to sign a "Line Charges Agreement" (*LCA*)[1]. An LCA set out the (network) capacity to which the End-user was entitled as well as the (network) fees that UNL would charge the network user (ie the End-user's gas supplier) for the use of such (network) capacity.

1.21 Vector applies an interposed[2] model exclusively on the Transmission System[3] and is not advocating any change to that. Moreover, given that there are more than 200,000 End-users Vector would only be prepared to contract directly with the largest of them.

1.22 In all cases, Vector would continue to charge such an End-user's gas supplier (the Shipper) for transmission[4] services, though they would no longer own the transmission capacity they used.

1.23 A Shipper would become liable for transmission charges in respect of an End-user on the date it commenced supplying gas to that End-user. Such liability would cease on the date the End-user switched to another gas supplier.

1.24 It would need to be decided whether it should be mandatory for a Shipper to pass Vector's transmission charges through to the End-user with no margin added.

1.25 Key issues under to be addressed would include:

(a) the threshold (GJ/annum or GJ/day) at which transmission capacity would attach to an End-user;
(b) determination of the amount of transmission capacity to attribute to each End-user;
(c) definition of the attributed capacity;

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1 A number of such LCAs have yet to expire.

2 "Interposed" is where Vector stands between the gas supplier and the End-user, and transports gas for the gas supplier (Shipper): under the alternative "conveyance" model the End-user would be the Shipper and be billed directly by Vector for transmission services.

3 Except to the extent that the Shipper and the End-user are the same party.

4 It would continue to be open to an End-user to become a Shipper, by signing a TSA under the Code.

(d) periodic re-assessment of attributed capacity; and
(e) liability for exceeding the attributed capacity.

1.26 TOU data would be a pre-requisite in order to assess any End-user's capacity usage. In general a TOU device must be installed when an End-user's AQ is ≥ 10 TJ. Vector sees no merit in a lower threshold and would prefer it to be higher.

1.27 Vector obtains TOU data itself for End-users that are "visible" to it by virtue of being connected to SCADA or telemetry, or where it down-loads TOU devices. For many other End-users however, Shippers would need to provide TOU data to Vector:

(a) for at least the previous 2 years, to allow for initial capacity-setting; and

(b) on a continuing basis (monthly) to permit monitoring of the End-user's capacity usage.

1.28 Vector would determine the attribution of transmission capacity to End-users above the threshold. Such capacity would be a key input into Vector's transmission pricing methodology.

1.29 End-user capacity could be defined simply by an MDQ and MHQ, as for Reserved Capacity, constant across a Year. However, if the End-user's consumption varied markedly throughout the year it would seem preferable to attribute capacity in a way that broadly matched such usage.

1.30 Attributed capacity would need to be re-assessed from time to time; there should also be mechanisms to allow for either growth or decline in an End-user's capacity requirement and/or changes in its usage pattern through the year.

1.31 Ultimately, an End-user must be responsible for its own use so it should bear any related cost. Any overruns should be determined at the End-user level, since capacity would be attributed at that level (and priced accordingly).

1.32 With Vector setting End-user capacity, the Shipper could not reasonably be blamed for any overrun, unless (for example) it could be shown that the Shipper knew that the End-user had more gas-fired plant than indicated by previous data. Irrespective of how it might come about however, the consequences of an overrun could be just as serious as they might be under the present regime, so the present indemnity provisions (section 4.23 of the Code) would appear still to be necessary.

1.33 In keeping with the interposed transmission model, Vector would require the Shipper to pay any overrun charges and pass them through to the End-user.

1.34 A Shipper's offtake at a given Delivery Point would continue to be determined by the Allocation Agent in accordance with the Downstream Reconciliation Rules. However the Allocation Agent would need to provide Vector with a DDR[5] at month end for each End-user with attributed capacity[6].

1.35 With capacity attached to individual End-users, Shippers would no longer be in a position to apply diversity to their capacity reservations as they may do at present. That *might* require more capacity to be "on issue" in aggregate than is the case at the moment, for the same underlying demand. Vector would need to carefully consider the implications of that, including whether it would be prepared to take on any risk.

1.36 Under price control, Vector would not benefit from selling more capacity not resulting from additional throughput. Rather, the unit cost of capacity should fall[7].

1.37 Clearly, an accurate database of all End-users with attributed capacity, across all Delivery Points and distribution networks[8] would need to be maintained for such a regime to function. The Registry would appear to be the most appropriate database, with any necessary modifications.

Sub-Option 1.1 (*Form of Contract Carriage*)	
1	**Capacity would attach to End-users with AQ ≥ a threshold**
2	**Vector would determine the capacity required by such End-users**
3	**Shippers would pay for the use of capacity attributed to End-users**
4	**Capacity for smaller End-users would be treated differently**

5 Daily Delivery Report.

6 At the moment the AA provides such information only for much smaller number of End-users whose gas is shipped under a Supplementary Agreement. The AA has the necessary data already, since it is used in the allocation process at each Delivery Point.

7 It must be assumed that an appropriate pricing methodology would be in place, and that Capacity Reservation Fees would be adjusted accordingly.

8 Including distribution systems that are currently "closed" to all but a single retailer (Shipper).

Sub–Option 1.2: Separate Residential End-users (Moderate Change)

***Central Idea**: Manage capacity required to service residential End-users separately, based on numbers and deemed capacity per residential End-user.*

***Classification**: Form of Contract Carriage.*

***Issue Addressed**: To simplify the management of capacity for the (numerically) largest group of End-users; to enhance retail competition for such End-users by ensuring sufficient transmission capacity would be available to any Shipper.*

1.38 It does not seem practical for a Shipper to consider the mass of small End-users individually when determining the transmission capacity it requires to supply such customers.

1.39 By far the majority of such small End-users are in the residential sector. Sheer numbers make this group a large population from a statistical point of view. While the offtake of individual residential End-users undoubtedly varies widely it would seem possible to define an "average" residential End-user in a meaningful way.

1.40 In fact, when a Shipper has acquired new residential End-users in the past, Vector has often received a request for additional Reserved Capacity equal to the number of such End-users multiplied by 0.10 or 0.12 GJ/day/End-user.

1.41 All this suggests that residential End-users would be managed *en bloc*.

1.42 Collectively, residential End-users have a number of significant attributes, including:

(a) accounting for the vast bulk of customer switches;

(b) comprising a relatively small proportion of the total demand for transmission capacity[9];

(c) having a very high supply priority, being the last category of customer to be curtailed in the event of load-shedding being required[10];

(d) not justifying sophisticated metering, or telemetry;

(e) always being supplied on standard terms and conditions; and

(f) paying the highest prices for gas, transmission and distribution so that, while being of low value individually they generate considerable value *en masse*.

[9] On the Auckland distribution network, residential consumers account for <19% of total offtake (GJ); on the ex-NGC networks <13%.

[10] For purely practical reasons: loss of supply can be hazardous to the residents, while the sheer number of residential connections means that restoring lost supply is very time-consuming and expensive.

1.43 Treating residential End-users as described here could involve:

(a) defining a deemed transmission capacity requirement per residential End-user (*Residential-User Capacity*), which could be the same across the entire transmission system, or a value determined for each region or network (Delivery Point);

(b) a Shipper paying for capacity relating to its residential End-users equal to the number of residential End-users × Residential-User Capacity;

(c) the deemed Residential-User Capacity being automatically transferred from one Shipper to another when a residential End-user switched;

(d) overrun charges in relation to the residential End-user sector being eliminated, subject to periodic review and adjustment of the deemed Residential-User Capacity;

(e) Residential-User Capacity having the highest priority in the event of a contingency; and

(f) Residential-User Capacity not being interchangeable with other transmission capacity.

1.44 Given the number of switches involved there would need to be a reliable and streamlined process for tracking Shippers' capacity relating to the residential End-user sector.

1.45 Such a process could involve Shippers advising gains and losses in customers and Vector making *incremental* adjustments to Shippers' "opening" holdings of Residential-User Capacity. That would require Vector to *know* those holdings however, which would require Vector to maintain a complete database of residential End-users.

1.46 Rather than build such a database it would be vastly preferable to adapt the one that already exists, namely the Registry. Currently the Registry holds all ICPs[11] and certain other information, including: the relevant Delivery Point, switch date, ICP status and retailer (ie gas supplier). Use of the Registry would eliminate any disputes between Shippers as to if and when a residential End-user switched.

1.47 At each month end the Registry would provide Vector with an updated list of residential End-users, on the basis of which Vector would adjust each Shipper's total holding of Residential-User Capacity, and charge them accordingly.

1.48 As the retailer at an ICP may not be the Shipper, either the Registry would need to be modified to hold such information or Vector would need to run a filter through each report from the Registry to ensure that the correct Shipper was charged for capacity at the relevant Delivery Point.

[11] The Registry would need to hold ICP details for networks that are currently "closed".

1.49 Should a future transmission pricing methodology apply a different throughput fee to gas shipped for residential End-users, Vector would need to know the GJ/day shipped for residential End-users and other End-users separately. Ideally such information would come from the Allocation Agent, though at the moment the Allocation Agent does not hold it.

Sub-Option 1.2 (*Form of Contract Carriage*)	
1	**Shippers would not reserve capacity for residential End-users**
2	**Capacity per residential End-user would be defined**
3	**Residential-User Capacity would transfer automatically on switching**

1.50

Sub–Option 1.3: Short-Term Reserved Capacity (Moderate Change)

***Central Idea**: A Shipper would purchase Reserved Capacity in advance, for periods from a month up to a year. The price could be set by demand.*

***Classification**: Form of Contract Carriage.*

***Issue Addressed**: To enable Shippers to manage their capacity better; to price capacity more efficiently.*

1.50 Reserved Capacity is currently sold, at a constant price, for a full year in advance. However, the demand for capacity is generally lowest in mid-summer and highest in mid-winter. The relatively few exceptions relate to End-users like dairy factories (spring peak), fruit and vegetable processors (late summer peak) and certain industrial End-users with year-round operations that are not notably weather dependent.

1.51 Some Shippers have said they'd like the choice of being able to buy capacity for periods less than a year – short-term capacity. This reflects a wish to pay less for capacity at times when the Shipper is not selling so much gas.

1.52 There are various ways in which short-term capacity could be defined, priced and sold. These could have significantly different implications for Vector, whose overall revenue requirement would remain unchanged.

1.53 One possible option:

(a) Vector would define a *daily* Capacity Reservation Fee for a Receipt Point-Delivery Point prior to a year;
(b) prior to each month of the year a Shipper would request Reserved Capacity, for any number of days up to the full contract year (or remainder thereof);
(c) Vector would provide Reserved Capacity to the maximum extent it could; and
(d) Shippers would be invoiced for Capacity Reservation Charges in arrears as at present.

1.54 The obvious drawback for a Shipper booking month to month could be that when it came to request Reserved Capacity (say in June) it might find there was insufficient remaining: a Shipper or Shippers willing to book and pay for capacity for the whole year might have got in first.

1.55 The obvious drawback for Vector would be the increased revenue uncertainty, through the risk of Shippers' aggregate Reserved Capacity bookings being less than anticipated. Under price control it is very difficult to see why Vector would be prepared to take on such added exposure on top of the volume risk (via throughput charges) it already bears.

1.56 Another possible option:

(a) Vector would define the total amount of Capacity Reservation Charges to be recovered for each Receipt Point-Delivery Point in the coming year;

(b) Vector would then define the part of such total amount to be recovered in each month, equal to either:

(i) $1/12^{th}$ of the annual amount; or

(ii) a varying proportion calculated as (say) the annual amount multiplied by the throughput in the corresponding month of the previous year divided by total throughput in the previous year;

(c) Shippers would request Reserved Capacity prior to a month, for any number of days up to the full contract year (or remainder thereof);

(d) Vector would provide Reserved Capacity to the maximum extent it could;

(e) Vector would determine the Capacity Reservation Fee applicable to each month as the amount of Capacity Reservation Charges to be recovered for that month divided by the aggregate GJ/day of Reserved Capacity approved by Vector for that month; and

(f) Shippers would be invoiced for Capacity Reservation Charges in arrears as at present.

1.57 Again, a Shipper wanting to book capacity month to month could find itself short.

1.58 Vector would have revenue certainty, though its cash flow from Capacity Reservation Charges would no longer be steady throughout the year.

1.59 The obvious drawback of (b)(i) above would be that the cost of Reserved Capacity in high demand months would be lower (ie same dollars/recoverable/more capacity units) than in low-demand months: a seemingly perverse outcome. (Vector's cash flow would be steady in this case.)

1.60 For Shippers the cost of capacity would be uncertain, and would be determined by demand: their own and other Shippers'. Greater demand would tend to push the price down, but this would be limited by the amount of capacity Vector was able to offer. If demand turned out to be lower than expected (as in a mild winter) the cost of capacity could be higher than expected.

1.61 To mitigate such price volatility, Vector could publish an "advance CRF" that would be payable by Shippers willing to book capacity more than a month ahead. Shipper would

then have the option of "buying certainty" for part of their forward capacity requirement, while "riding the market" for the rest.

1.62 It would presumably be useful for a Shipper to know how much capacity was being booked to each Delivery Point where it might need capacity later. To "keep the market informed", Vector could publish the amount of Reserved Capacity it had approved for future months (ie all months beyond the next month) at the end of each capacity-booking cycle.

1.63 Vector might also be prepared to publish the capacity it would be prepared to sell for each Receipt Point-Delivery Point. If so, it should probably be defined as GJ/day for each day of the year, though Vector would need to be able to vary such capacity in response to changing loads.

1.64 Since this sub-option is essentially about providing Shippers with the ability to avoid carrying capacity at times they don't need it, there should be no general need to transfer capacity, which is an artificial capacity optimisation measure. Capacity transfers would only be permitted at the same Receipt Point-Delivery Point, ie between Shippers.

1.65 By definition, reserving capacity is a forward-looking process, involving a Shipper request on the one hand and an evaluation/approval/allocation process by Vector on the other. If Shippers were able to reserve capacity prior to any month, such processes would need to be streamlined, mechanical, dispute-proof and quick.

1.66 It is open to question whether, on a constrained pipeline, such a regime would simply default to the present one, with Shippers booking well ahead, if not for the entire year, in order to avoid being caught short of capacity.

1.67 Anti-hoarding measures might be needed on a constrained pipeline, perhaps in the form of an "Undertake Charge".

1.68 There would still be Unauthorised Overrun Charges. A capacity-rationing process would also be required to deal with any general excess of demand over supply.

1.69 Provision would need to be made for dealing with significant new loads (ie the requirement for more capacity).

Sub-Option 1.3 (*Form of Contract Carriage*)	
1	**Shippers could reserve capacity for any number of days ahead, up to a year**
2	**The cost of capacity would vary from month to month**
3	**No grandfathering of capacity**
4	**Capacity could be defined for each Receipt Point-Delivery Point**
5	**Overrun charges would still apply**
6	**Trading of capacity permitted only at the same Receipt Point-Delivery Point**

Sub–Option 1.4: Annual Re-set of Reserved Capacity (Minimal Change)

***Central Idea**: Annual capacity reservation continues. Vector approves additional capacity during the year, in respect of existing End-users, because it may reduce other Shippers' capacity accordingly for the following year. No grandfathering rights apply.*

***Classification**: Form of Contract Carriage.*

***Issue Addressed**: To facilitate retail competition by re-allocating transmission capacity to Shippers who require more.*

1.70 Annual reservation of capacity is not necessarily a problem so long as a Shipper is able to purchase additional capacity during the year if it picks up new End-users. A Shipper that loses End-users during a year may be able to sell any surplus. Failing that, the Shipper can reserve less the following year. Hence the annual capacity round can be seen as capacity "re-set" process.

1.71 Where capacity is constrained however, such a capacity re-set may not occur if a Shipper exercises its grandfathering right.

1.72 To avoid the problem of Vector approving additional Reserved Capacity for existing End-users , grandfathering should be abolished and a revised process for obtaining and allocating Reserved Capacity introduced. For example:

(a) for Year 1, all Shippers request Reserved Capacity (probably what they had currently have);

(b) during Year 1, an End-user switches from Shipper A to Shipper B, but Shipper B has insufficient Reserved Capacity;

(c) Shipper B requests additional Reserved Capacity from Vector, warranting that such capacity is for an existing, not new load; Vector approves additional capacity on that basis;

(d) Shipper B notifies Vector of the identity of the Shipper from whom it switched the End-user[12] (ie Shipper A); Vector records that information along with the amount of the additional capacity; also whether Shipper A requests cancellation of any amount of Reserved Capacity;

(e) for Year 2: where Shipper A requests the same capacity as in Year 1 despite losing the End-user, Vector reduced the amount of capacity it approves by the additional Reserved Capacity sold to Shipper B; and

(f) if, during Year 2, Shipper A switches an End-user from another Shipper it may request additional Reserved Capacity as described above.

[12] It might be better to have the Registry do this.

1.73 A key requirement of this sub-option would be to obligate any Shipper requesting additional Reserved Capacity to notify Vector whether such capacity would be used to supply existing End-users only, or to supply new load (including increased use by an existing End-user).

1.74 As noted in sub-option 1.2, due to the large number of switches that occur in any year there would need to be standardised (and streamlined) procedures in place for identifying the movements in End-users and recording the relevant associated information.

1.75 This sub-option could potentially be applied to all End-users, or specific categories (eg large End-users).

1.76 One benefit should be that if Shippers knew they could obtain additional Reserved Capacity in the event they gained new End-users they might be more willing to relinquish capacity on losing them (ie on a constrained pipeline)

1.77 Transfers of Reserved Capacity between Shippers at the same Delivery Point could still be allowed.

1.78 This sub-option might be a relatively easy transition from the existing regime. As noted above, Shippers could start out with their existing holdings of Reserved Capacity.

Sub-Option 1.4 (*Form of Contract Carriage*)	
1	**Retain annual capacity reservation**
2	**Shippers may purchase additional Reserved Capacity during the year, if switching existing End-users**
3	**No capacity grandfathering rights**
4	**Vector may reduce the Reserved Capacity of any Shipper that loses End-users for the following year**
5	**Capacity transfers between Shippers at the same Delivery Point permitted**

Option 2: Common Carriage

***Central Idea**: Vector assesses demand and efficiently builds capacity to meet it; Shippers pay for the transmission capacity they use and any new capacity.*

Provision of Sufficient Capacity

1.79 Vector would be responsible for forecasting future demand for transmission capacity. Shippers would be required to notify significant new loads, both planned and committed.

1.80 Vector would analyse the capacity of existing pipelines against forecast load. If a requirement for additional transmission capacity was indicated, Vector would notify Shippers of:

(a) the anticipated capacity shortfall;

(b) the most efficient capacity enhancement; and

(c) the likely effect on transmission fees if such capacity enhancement was implemented.

1.81 Unless any legitimate objection was raised, Vector would plan and carry out the capacity enhancement.

1.82 The value of the new investment would be rolled in to the transmission asset base and Vector would re-determine its transmission fees if required. As rational investments in transmission capacity are generally "lumpy"[13] there would be suitable mechanisms for spreading the cost over time, if necessary.

1.83 Shippers would be reasonably guaranteed access to capacity: no-one would be turned away, provided that any Shipper planning to supply a major new load gave Vector adequate notice[14].

1.84 As the *quid pro quo*, Vector would have protection against asset stranding if forecast demand failed to fully materialise (or existing demand was lost).

Shippers Charged for Capacity Used

1.85 Shippers would pay only for the capacity they used. Some (if not all) of a Shipper's transmission charges would probably be based on the Shipper's capacity usage coincident with peak demand on the relevant pipeline (see sub-option 2.1).

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[13] A pipeline compressor or a stretch of looping would create a step-change in capacity. At the time of commissioning, this could exceed the immediate requirement: it might be some years before all the new capacity was fully utilised. That is not an argument for sub-optimal investment: looping, for example, is best installed in lengths large enough to realise some economies of scale, thereby reducing the unit cost of new capacity.

[14] Large-scale pipeline investments may have a lead-time of 2 - 5 years.

1.86 Interruptible service would still be available, on a constrained pipeline only, and/or where it was demonstrably uneconomic to provide firm capacity.

Differential Rights to Capacity

1.87 Under a *pure* Common Carriage regime, no Shipper would be able to contract for any amount of firm capacity or have any preferential right to capacity. In the event of demand for capacity unexpectedly exceeding supply, cuts in capacity usage affecting all Shippers equally (ie on some proportional basis) would be implemented.

1.88 In reality, it is impractical to curtail a mass of small End-users[15]. They could not be contacted in sufficient time, nor could their compliance be verified[16]. Safety considerations in relation to distribution networks would also argue in favour of leaving them alone.

1.89 End-users should therefore be classified in order of supply priority. Interruptible End-users would obviously have the lowest priority and would be curtailed first. Other classes of End-user would be curtailed in ascending order of priority. Residential End-users (along with hospitals, public health facilities and the like) would have the highest priority. Probably, only a small number of larger End-users would be affected (or need to be) by a capacity shortfall.

Cost of Capacity

1.90 One might expect capacity that is less firm to cost less, and therefore transmission fees to rise with increasing supply priority. In that regard however, the *delivered* cost of gas should be considered. Large End-users are likely to enjoy markedly more competitive (ie lower) gas prices (and distribution charges) than small End-users. Given that in many cases transmission charges represent a very small portion of the total delivered cost of gas (especially on the constrained North Pipeline) it is questionable whether lower-priority End-users should be charged less for transmission, or how material any fee reduction could be.

1.91 Moreover, if transmission charges were based (even partly) on coincident peak use of capacity, any Shipper whose End-users were curtailed would face lower charges anyway, the benefit of which it would be able to pass on.

1.92 A Shipper who did not reduce its use of capacity when instructed to do so should be required to indemnify Vector against any loss, arising (for example) from other Shippers' claims.

Allocation of Available Capacity

1.93 A problem that could arise in transitioning from a Contract Carriage to a Common Carriage regime is that End-users on the upstream part of a pipeline could use so

[15] Except in dire emergency, such as following a pipeline rupture: needs must when the Devil drives.

[16] As noted elsewhere, verification of capacity usage requires an End-user's meter to have a TOU device.

much capacity that End-users at the far end could be left short[17]. This suggests the need to set aside certain amounts of capacity for different parts of a pipeline.

1.94 It would therefore need to be decided whether Common Carriage should be applied at a Delivery Point level, within a zone, or simply at a pipeline level. It should be possible to define the capacity that would be set aside (and be available to all Shippers) in specified areas by reference to historical capacity utilisation (ie throughput).

1.95 Downstream End-users should expect to pay more for transmission than those upstream, in view of the additional assets required to ship gas further. Transmission fees should therefore include some distance-related component.

OPTION 2, COMMON CARRIAGE: KEY DIFFERENCES FROM CURRENT REGIME	
1	**Shippers could not own, trade or transfer capacity**
2	**Shippers would pay only for the capacity they used**
3	**Capacity would be set aside for different parts of a pipeline**
4	**End-users would be assigned a supply priority; if capacity was short, Shippers would curtail End-users in that order**
5	**Transmission fees would include distance-related, and peak demand-related components**

[17] Under Contract Carriage, capacity is sold point to point, allowing the availability of capacity on different parts of a pipeline to be managed by the pipeline owner. Once a Shipper obtains capacity, grandfathering may prevent that capacity from displacement by demand elsewhere. Under pure Common Carriage there is no such mechanism.

Sub–Option 2.1: Peak Demand Capacity (Substantial Change)

***Central Idea**: Capacity charges would be allocated to Shippers in proportion to their share of peak demand, so a Shipper would pay for the true cost of its offtake.*

***Classification**: Form of Common Carriage*

***Issue Addressed**: To encourage efficient utilisation of transmission capacity; to charge Shippers in arrears only for the capacity they used.*

1.96 Total Capacity Reservation Charges are quite predictable. Under price control Vector's *total* recoverable revenue (ie aggregate transmission charges) could be fixed[18].

1.97 Whatever the revenue to be recovered via *fixed* charges, such charges could be allocated in proportion to Shippers' actual use of transmission capacity. So, for a given Shipper:

$$\text{Capacity Charge} = (P_S / P_T) \times C$$

where:

P_S is the Shipper's peak offtake;

P_T is the total offtake of all Shippers at the peak; and

C is the total of all fixed charges to be recovered.

1.98 The parameters P_S and P_T would need to be determined on an appropriate and consistent basis. Basing charges on the peak day would be appropriate, since it is the peak day[19] which usually determines how big a pipeline needs to be to supply the offtakes from it. P_S could therefore be a Shipper's total offtake on the peak day and P_T the sum of all Shippers' offtakes on that day.

1.99 The parameter C could be defined in a number of ways. For example, for:

(a) individual Delivery Points;

(b) groups of Delivery Points (ie zones); or

(c) a whole Pipeline,

as well as for different periods of time (eg monthly or annually). Clearly the choice would significantly affect the cost of transmission to different Delivery Points and/or at different times.

[18] The form of price control under which Vector will operate has not yet been finally decided.

[19] That is not to say the peak hour might not be equally, if not more significant at some Delivery Points. As a practical matter however, the Allocation Agent does not determine Shippers' hourly offtakes at any shared Delivery Point, hence Shippers' individual contributions to any aggregate hourly peak are unknown at such Delivery Points.

1.100 If C were charged at a Delivery Point level, the charge/unit capacity could be significantly higher in months where gas offtake was lower. Minimising volatility in the unit cost of capacity could therefore be a significant factor in defining both the level, and the time period over which C would apply.

1.101 Collecting 1/12th of C each month would be attractive to Vector from a cash flow point of view.

1.102 Transmission is largely a fixed-cost business. Vector might not wish to continue bearing the present degree of volume risk, ie where over 30% of its revenues derive from the Posted Throughput Fee. Under some future pricing methodology any per-GJ (throughput) fee could be substantially different to what it is today.

1.103 Capacity provided under Supplementary Agreements and remaining Non-Code TSAs would be charged for in accordance with the relevant agreements. Revenues obtained under such agreements would be taken into account in setting the value(s) of C applicable to Shippers on standard terms and conditions.

1.104 Vector would probably still offer an interruptible transmission service, though only on a constrained pipeline.

1.105 A Shipper would pay only for the capacity it used. A Shipper with a higher peak demand would pay proportionally more than a Shipper with a flatter load profile. That should encourage efficient use of the Transmission System, particularly appropriate on a constrained pipeline.

Sub-Option 2.1 (*Form of Common Carriage*)	
1	**Available capacity would be defined**
2	**Shippers would pay for the capacity they used, in proportion to their share of peak demand**
3	**No reservation, transfer or trading of capacity**
4	**No Unauthorised Overrun Charges**
5	**No Shipper would have a greater entitlement to capacity than any other**

Sub–Option 2.2: Nominations-Based Capacity (Substantial Change)

***Central Idea**: Shippers would nominate their capacity requirements; incentive fees would encourage accurate nominations.*

***Classification**: Form of Common Carriage.*

***Issue Addressed**: To encourage efficient utilisation of transmission capacity; to charge Shippers only for the capacity they intend to use.*

1.106 Nominations are central to use of the Maui Pipeline, which operates under a form of Common Carriage. These determine a Shipper's capacity use, transmission charges and delivery quantities.

1.107 Under the current VTC, Vector may call for nominations on the Transmission System, but only for information purposes. If this sub-option applied, nominations would play a key role.

1.108 A Shipper would be required to nominate its requirement for transmission capacity in advance of any Day, for each Receipt-Delivery Point. The process would essentially be the same as that set out in Vector's standard Interruptible Agreements (posted on OATIS).

1.109 Vector's Pipelines are much more complex than the Maui Pipeline. Most have significant branches, many more Delivery Points, flow-limiting sections and physical capacity that generally diminishes sharply the further gas is required to flow.

1.110 Vector would therefore need a capacity allocation process that was fair to all Pipeline users, and did not leave the most distant Delivery Points short.

1.111 If transmission capacity was defined daily, the need for Vector to assess diversity between Receipt-Delivery Points could be avoided. As a starting point, Vector could define aggregate transmission capacity requirements as being the capacity actually used for a given Receipt Point-Delivery Point in the most relevant prior period, and process Shippers' nominations accordingly.

1.112 Shippers would be required to advise of significant new loads not represented in historical offtake.

1.113 Nominations and actual End-user demand would have to be closely aligned. Powerful incentive fees to encourage the most accurate practicable nominations would be an essential part of the nominations regime.

1.114 Two tiers of incentive fees could be payable for differences between actual and nominated/approved use of capacity, for example:

(a) for differences of (say) ± 5%, 2 – 5 times the normal cost of transmission; and

(b) for greater differences, 20 - 100 times the normal cost of transmission.

Revenue from such incentive fees would be recycled to offset transmission charges the following year.

1.115 The rationale for such incentive fees would be to discourage both:

(c) under-nomination, ie where the Shipper used more capacity than it nominated or was approved to use (⇔ an Unauthorised Overrun), possibly reducing the capacity available to other Shippers as well as its own liability for transmission charges; and

(d) over-nomination, ie where a Shipper requested more capacity than it expected to use, to secure a greater share in the event Vector had to ration capacity, also possibly depriving other Shippers of the capacity they required.

1.116 Shippers' nominations would determine the allocation amongst Shippers of the relevant pool of transmission charges, to be determined as discussed under sub-option 2.1.

Sub-Option 2.2 (*Form of Common Carriage*)	
1	**Shippers' capacity entitlements would be determined by nominations: certainly week-ahead and day-ahead, and possibly intra-day.**
2	**No Shipper would have a greater entitlement to capacity than any other: Vector would allocate capacity pro-rata in the event Shippers' aggregate nominations exceeded available capacity**
3	**The cost of capacity could vary depending on how the monthly pool of recoverable transmission charges was defined**
4	**No transfer or trading of capacity**