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Regulation Branch  
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Dear Keston,

Please regard this letter as our submission on the "Update paper on the cost of capital topic" dated 30 November 2015 for the Input Methodologies review. In this letter we will use the terms "MDL", "we", "us" or "our" to refer to the Gas Transmission Business (GTB) of Maui Development Limited.

## Introduction

We mostly refrained from making comments on cost of capital issues in our previous submissions for the current IM review. We note those issues were extensively discussed prior to determinations in 2010, subsequently litigated, and then reviewed again as part of later determinations by the Commission. Our overall inclination at this stage is to enhance certainty and stability on cost of capital, and only make incremental changes where they can be clearly justified.

Many of the cost of capital issues are generic and not specific to gas transmission. We will mostly avoid commenting on those and focus instead on issues for GTBs specifically. Our main points are set out below under the following headings.

- GTBs should have a higher asset beta than EDBs
- Form of control should not impact asset beta for GTBs
- GTBs should have a higher debt premium than EDBs

We will close this submission with some additional points for consideration.

## GTBs should have a higher asset beta than EDBs

The Commission has indicated that it intends to evaluate evidence on the rationale for adjustments to asset beta across different sectors. In its update paper (at paragraph 2.14) it quotes from a report by Frontier Economics. That report accompanied an earlier submission by Transpower on the Commission's problem definition paper of June 2015. In order to provide more context, we would like to more fully quote from the section in that report where Frontier Economics specifically addresses beta estimates for gas pipelines:

"... in the Commission's analysis of beta estimates from listed firms there is no evidence of any difference in empirical beta estimates amongst gas and electricity firms. The Commission concluded that there was sufficient theoretical evidence to adopt a different estimate of the cost of capital for a gas pipeline compared to an electricity distributor. However, the single quantitative measure of risk failed to reflect the differences in risk characteristics between gas and electricity networks that the Commission accepted. The reason this occurs is because the risk measure – the regression-based estimate of beta – is not a reliable and complete measure of the risk that equity holders are exposed to

and which is incorporated into equity value. For the avoidance of doubt, we are not arguing that the risk profiles of gas and electricity networks do not differ. Rather, we are arguing that the single measure of risk used by the Commission (i.e., the equity beta) is unable to identify any differences that may exist.”

We believe the key point made here by Frontier Economics is that regression-based estimates of beta are not a reliable and complete measure of risk.

We agree with that point and would like to expand on it to note that obtaining regression-based estimates of beta applicable for GTBs in New Zealand is extremely difficult to begin with.

- There are no GTBs in New Zealand that can provide information for such a regression. MDL is privately held. Vector is a publicly listed company, but its GTB is only a small part of its business portfolio and unlikely to be responsible for any significant proportion of movements in its share price.
- We expect that the number of publicly listed overseas companies that can be regarded as “pure play” GTBs is also extremely small.
- As a result, obtaining a meaningful sample size to allow beta estimates for GTBs specifically is practically impossible.

This justifies the Commission’s approach to obtain beta estimates for GTBs by using a wider sample of publicly listed utility companies, mostly in the USA, without making a more detailed assessment of their business portfolio composition. Indeed, considering the significant differences between public utilities in the USA and GTBs in New Zealand attempting to make such a detailed assessment may not yield meaningful results. However, the result of the Commission’s approach is that distinctions between sectors are lost.

The reasons why GTBs in New Zealand are riskier than the average of firms in the sample used by the Commission include the following.

- Most of the USA-based utilities in the Commission's sample combine the roles of retailer and distributor. This means they have large populations of customers and are not exposed to large risks from a single customer.
- By contrast, two-thirds of our throughput is for two customers only. Methanex by itself represents more than half of offtakes from the Maui Pipeline. This is roughly similar to Transpower being exposed to risk from three Tiwai smelters.
- This means GTBs in New Zealand are subject to much greater demand risk when compared to other types of utilities, and even when compared to GTBs in other countries. Demand is localised and spread among a relatively small customer base.
- Even GDBs in New Zealand are exposed to greater demand risk than their counterparts in other countries. Residential customers, which represent the most predictable type of usage, take less than 5% of gas consumption in New Zealand.
- This can be compared with residential usage, as a percentage of 2013 inland gas consumption, in European countries and in the USA as follows.

UK	40.6	Germany	30.9	Poland	24.9	Denmark	19.4
France	32.6	Czech Rep.	29.2	Netherlands	23.8	Austria	17.8
Hungary	32.6	Belgium	25.8	Slovak Rep.	23.8	Ireland	15.6
Italy	31.5	Romania	25.0	USA	20.5	Spain	12.2

- The cumulative effect is that all gas pipeline businesses in New Zealand have only a small customer base that can be considered as stable, in comparison to utilities in other jurisdictions.
- Another important factor is the disparity in scale and scope of operations of publicly listed overseas utilities compared to GTBs in New Zealand. A “pure play” GTB is almost inevitably exposed to more systematic risk than a diversified utility that combines retail and distribution across gas and electricity sectors.
- Looking at size alone, it is relevant to note that GTBs in New Zealand would probably be classified as micro cap stocks in the USA.
  - Applying the notional leverage of 44% determined in the IM to the latest disclosed RAB of MDL and Vector’s GTB provides an equity proportion of \$163 and \$282 million respectively.
  - With an exchange rate of 0.65 USD/NZD this translates to equity values of US\$106 and US\$ 183 million respectively.
  - For both GTBs this is in the range of US\$50 to US\$300 million that is typically used to classify a micro cap stock.
  - Even the combined total of US\$ 289 million would still fall within this range. At best, if such an equity valuation were considered too conservative, the combined entity would be considered as a small cap stock.
- We have not reviewed the market capitalisation of the listed companies that the Commission uses to determine its asset beta estimates. However, we do not expect many (if any) of those to fall in the micro cap category. We expect almost all of those will have substantially larger market capitalisations than GTBs in New Zealand would have (if they were listed as a stand-alone entity).
- It is generally accepted that risk and price volatility reduces as market capitalisations increase. This means that the asset beta derived by the Commission from its sample of listed utility companies is likely to substantially underestimate the beta that would be appropriate for GTBs in New Zealand.

In addition to considering these differences between GTBs and the sample of undifferentiated utility companies used by the Commission, we would also like to refer to the report on specific risk differences between electricity and gas networks from Concept Consulting Group that was submitted by Powerco on 28 January 2016.

In conclusion, we agree with the original point from Frontier Economics that it is probably not possible to find reliable quantitative evidence from the Commission’s sample and approach to justify an uplift of 0.10 to the beta estimate for GTBs. In view of all the reasons listed above, however, we consider that such an uplift is not only justified, but probably under-estimates what a true risk assessment for GTBs in New Zealand (if it were possible) would provide.

### **Form of control should not impact asset beta for GTBs**

The question about the potential impact of the form of control on beta is not new. It was considered when the Commission made its initial IM determinations in 2010. It was flagged for review in the Commission’s problem definition paper of June 2015. In its update paper, at paragraph 2.18, the Commission states:

“We are grateful for submissions and the evidence provided, however at this stage we think it would be premature to rule out any link between asset beta and the form of control without further analysis. There has been significant debate on the impact of the form of regulation on the systematic risk of a regulated firm and we wish to consider this area in more detail.”

The Commission then refers to a discussion paper from the Queensland Competition Authority (QCA) on the same topic as an example. We consider that example useful to illustrate that this question is of broad interest to many regulators. After reviewing the submissions made to the QCA, we would like to refer the Commission to the [report](#) prepared by NERA Economic Consulting, dated 28 March 2013, and submitted by Aurizon Network Pty Ltd. We particularly appreciated Section 4 of that report, which specifically addresses the question of the Impact of Form of Regulation on Beta.

We understand the intuitive appeal that, all other things being equal, a different form of control could lead to a different risk exposure, which should lead to a different beta. Operationally, however, there are several considerations that reduce or negate the validity and/or implementation of that concept in real world situations.

A key point is that other “things” are not likely to be equal.

- In our submission of 28 January 2016, as further input for the IM review focusing on the Gas Pipeline DPP reset, we addressed the relation between form of control and pricing approaches. In short: different forms of control can incentivise different pricing approaches.
- This can be illustrated to some degree by the different transmission products and pricing used in other countries. For example, transmission pricing in the EU is based on entry and exit capacities. Transmission pricing in the USA would be commonly based on multi-year contracts for point-to-point capacity allocations.
- We expect these different pricing approaches in different countries reflect not only the differences in forms of control, but also the size and diversification of their local gas markets.

As a consequence, it will be practically impossible to find reliable evidence for any impact on asset beta that is only caused by differences in form of control.

- As the Commission previously pointed out, the publicly listed utility companies that it uses as a sample to estimate asset beta are already subject to a wide range of different forms of controls. Even within the USA, different state regulators can apply different arrangements. As a result, it would be a very difficult exercise to tease out which beta would be appropriate for any form of control selected by the Commission if the intent was to only find comparables subject to the exact same form of control.
- Moreover, even if that were possible, it would then be necessary to also take account of differences in product and pricing approaches and market size for each company within each such sub-sample.

Finally, even if evidence could be found, we expect any impact of form of control by itself on asset beta would be small; particularly in comparison to other factors. The form of control is only one component of regulatory risk that we are subject to. The regulatory risk is only one component of the various business risks that we are exposed to. As a result, we submit that attempts to assess an impact from the form of control on asset betas are unlikely to provide meaningful results; and that any such attempts should recognise that demand risk exists under all forms of control (including a pure revenue cap).

## **GTBs should have a higher debt premium than EDBs**

To a large degree, this point is the mirror image of our previous point that GTBs should have a higher asset beta. The effects of higher risks faced by GTBs are not restricted to the asset beta. They should be reflected in the debt premium as well.

The most appropriate way to reflect those higher risks would be to lower the assumed credit rating for long-term debt issued by GTBs.

In addition to that point, we should also note that the assumed tenor of 5 years for such debt remains unrealistically short. In this context, we believe it is relevant to note that asset lives for GTBs are longer than for other price-regulated businesses.

- The bulk of our transmission assets have a standard physical asset life, specified in Schedule A of the IM for GTBs, of 80 years.
- Schedule A in the IM for GDBs is identical, but GDBs have the vast majority of their pipeline assets at Medium Pressure with a standard physical asset life of 60 years.
- We have not reviewed the composition of assets for EDBs, but the longest standard physical asset life they can have (for PILC cables and substation buildings) is 70 years.
- The longest standard physical asset life that Transpower can have (for transmission lines, substations and transformers) is 55 years.

We acknowledge that there is no direct linkage between asset lives and debt tenors. Considering normal corporate finance practices, however, we submit the Commission should assume some relationship. (We do not agree with the notion that regulated firms should only use debt horizons equal to a regulatory horizon.) Longer asset lives should correspond with longer financing structures. As a result, the debt horizon for GTBs should be assumed to be longer than it is for other price-regulated businesses.

We realise that the Commission introduced the TCSD concept to deal with longer debt tenors. This intended solution has not worked for MDL. We already addressed our problems with it in our cross-submission of 4 September 2015 on the Commission's problem definition paper.

The Commission introduced the TCSD concept on the assumption (repeated in paragraph 4.27 of the update paper) that most suppliers do not issue longer-term debt. For GTBs this assumption is incorrect. We submit that the most appropriate approach for the Commission is to make realistic assumptions about the financing structures of an efficient supplier in real world conditions. We expect such a financing structure, particularly for GTBs with long-life assets, would include debt with a tenor of more than 5 years.

We note the Commission recently used a 7-year term for debt in its cost of capital determination for Chorus, combined with an additional allowance for swap costs. Instead of using a TCSD, such an approach could be more appropriate for GTBs as well. Considering the longer life of gas transmission assets, compared to telecommunications assets, we submit the appropriate term of debt for GTBs would be longer than for Chorus.

## **Other points**

In addition to our main points set out above, we would like to close this submission with some secondary points.

- While calculating estimates for individual WACC parameters, we encourage the Commission to also review the standard error of those estimates.

- In general, considering the uncertainty and poor reliability of making such estimates to begin with, we expect the standard error to be higher than previously estimated by the Commission.
- Noting the small universe of listed “pure play” GTBs that the Commission could use to derive estimates, and the need to derive estimates from other types of listed utilities instead — which reduces reliability even further — we note that the standard error for GTBs should be larger than for other price-regulated businesses.
- With respect to incentives to apply for a CPP, the Commission will need to consider the relevant timeframes for GTBs. We hope the Commission can design a DPP for GTBs that can eliminate most of the need to apply for a CPP. However, there remains a possibility that a GTB will need to apply for a CPP prior to 2020.

## Conclusion

We have appreciated the opportunity to provide this submission. For any additional questions or clarifications please do not hesitate to contact us.

Yours sincerely,



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**for Maui Development Limited**