



“Form of Control”

**Commerce Commission
Submission by
Maui Development Limited**

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1. Background

Maui Development Limited (MDL) welcomes the opportunity to make a submission on the “form of control” section of the “Initial Default Price-Quality Path (**DPP**) for Gas Pipeline Businesses” Issues Paper (**Issues Paper**) that was distributed by the Commerce Commission (**Commission**) on 12 April 2010¹.

MDL notes that the Commission is looking to implement a standardised DPP for Gas Transmission Businesses (**GTB's**). Should this DPP structure not be suitable for MDL, MDL will be required to submit a Customised Price Path (**CPP**) proposal to cater to its specific needs.

This submission discusses these various forms of control and evaluates the form of control that is considered most applicable to the Gas Transmission Industry, and the MDL. In particular, this relates to a recommendation as to whether the DPP for GTB's will have a revenue cap or a weighted average price cap.

Please note that MDL's position in relation to the issues may change as a result of further information being provided by the Commission.

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2. DPP or CPP

A CPP proposal is described as a “full building blocks approach” which involves significant information disclosure and performance monitoring requirements and is anticipated to cost significantly more than a DPP. A DPP is considered the most cost effective regulatory solution for MDL as it has a broad industry focus rather than a specific company focus. The gas transmission industry includes only two companies, MDL and Vector, each with very different business structures. Vector has adopted a firm carriage regime whereby its shippers reserve capacity on Vector's pipeline while

¹ Pages 13 through 19

MDL has adopted a system of common carriage which is, in effect, a “pay as you go” regime.

MDL considers that due to the key differences described above, which will be explained in more detail in the following sections of this submission, the DPP will not be suitable for both MDL and Vector, but might be suitable for one GTB.

In MDL’s view, if the DPP structure for GTB’s were not suitable for either Vector or MDL and both suppliers were required to make a CPP proposal, then this would result in excessive regulatory costs, with the consumer being required to absorb the bulk of these costs².

3. “Form of Control” Options

MDL agrees with the Commission in that rate of return regulation is a low risk from of control, as supplier prices are allowed to closely reflect actual expenditure³. Incentive regulation is intended to provide incentives to increase efficiencies over the regulatory period. The Commission considers incentive regulation better achieves the “efficiency” objectives of the Commerce Act (**the Act**)⁴ and is currently in consideration over a total revenue cap and a weighted average price cap as two viable forms of incentive regulation.

4. Incentive Regulation: Weighted Average Price Cap

The weighted average price cap (**price cap**) sets a price limit for tariffs over the regulatory period. Where there are multiple tariffs, the cap will be a weighted average price of the various tariffs. The initial price allows a supplier to earn its Weighted Average Cost of Capital (**WACC**) (based on forecast throughput). Prices are then likely to be permitted to increase by a rate related to the CPI. Under the price cap, where throughput increases, the GTB will earn additional revenue calculated as the additional throughput volume (multiplied by distance traveled) multiplied by the price. Where throughput decreases the GTB will experience reduced income. Thus under a price cap, the return the GTB receives is exposed to changes in gas demand.

5. Incentive Regulation: Revenue Cap

The total revenue cap limits the total revenue a supplier is allowed to earn over the regulated period. Whereas under a price cap, the price is fixed, under a revenue cap, the supplier is permitted to adjust prices to ensure that it earns its allowable revenue, which is calculated on the basis of its Weighted Average Cost of Capital (WACC) multiplied by Optimized Deprived Value (**ODV**). Thus if demand falls, a

² The Commission proposes 70% recovery, *Input Methodologies (Gas Pipeline Services) Emerging Views Paper*, Commerce Commission, December 2009, page 61, para 2

supplier can increase tariffs to earn its required revenue. If demand increases, tariffs will need to be reduced in order to remain under the revenue cap.

Some revenue uncertainty based on changes in demand will nevertheless persist under a revenue cap. The supplier will be required to forecast gas demand for the year in advance. Where demand is higher than forecast, the supplier will over recover and where demand is lower than forecast, the supplier will under recover.

6. Gas Demand in GTBs

Vector⁵ has argued that there is uncertainty about long-term demand in GTB's as compared to gas distribution businesses due to the following:

- Gas supply issues for power stations, which will impact gas demand for electricity generation.
- Risks associated with gas discoveries in the North, which may restrict future supply and thus lead to higher prices for a given level of demand and thus make gas less (or more) attractive as compared to alternative energy sources.
- Policy risks, such as Government's "Energy Strategy to 2050" thermal ban, which may reduce, or even eliminate, long term demand for gas.

The transmission component (total of both Vector and MDL) of the final price of delivered gas is perhaps less than 10%⁶. Thus, demand elasticity of GTB tariffs is considered somewhat low. A reduction of gas transmission prices will have very little impact on the overall price of gas, leaving a GTB with few tools to affect gas demand. In general a GTB's main concern is to ensure that it has sufficient capacity to meet increased demand.

Furthermore, costs of GTBs are generally fixed in nature and tend to be poorly related to demand for their services. Part of the reason for the high fixed cost component rests on a GTB's requirement to meet safety standards. Safety related costs can not be adjusted downwards in response to changes in demand as maintenance of safety standards is considered a top priority. This results in GTB's having a limited ability to reduce costs in response to a reduction in demand and therefore the ability to insulate themselves from demand changes by reducing their cost base.

Another consideration is the form of the tariffs charged by the GTB. MDL's tariffs are based on throughput times distance, (Tariff 1) and throughput alone, (Tariff 2). There are currently no fixed or capacity related charges. Capacity charges do give some protection against changes in gas demand as they provide income that is not immediately demand related. See the discussion on Firm versus Common Carriage below.

³ Issue paper, page 14, section 4.5

⁴ Section 52A(1)(b) Part 4 Commerce Act 1986

⁵ Vector Presentation, "Differences between gas transmission and distribution", Presentation at Emerging Views Conference, 24th February 2010

⁶ MDL Competition Analysis, Commerce Commission, 2 December 2005

MDL Gas Demand

MDL has a more volatile demand profile than Vector GTB. This is due to its customer profile which is outlined below.

Maui Pipeline provides a gas transmission service from the Oaonui Processing Plant and other connection points in the Taranaki to two large stations and interconnection points for the transmission network owned by Vector. In the last two years around 75% of the gas transported through the Maui Pipeline was used either directly or indirectly for electricity generation and methanol production⁷.

As there is a higher marginal cost to gas sourced electricity generation (as opposed to hydro or wind generation), a small decrease in national electricity demand, an increased supply of generation with low fuel costs of a "dry" year can have a large impact on gas demand at Huntly Power Station. In this respect gas demand by Huntly is likely to be more sensitive to real aggregate output shocks than other gas customers. This demand elasticity of gas for electricity generation is very high.

The Methanex Methanol plant, at Motunui near Waitara, is also highly sensitive to changes in real international demand, the price of gas, and availability of gas. For example, when the published price of Methanol decreased from US\$2.50 per gallon in January 2008 to US\$0.60 per gallon in June 2008 as the global financial crisis struck, this resulted in a significant reduction in gas demand from Methanex.

Overall, price elasticity of gas in New Zealand is high. There are a number of electricity generation alternatives to gas, and there are also electricity alternatives for reticulation. Methanex demand is also sensitive to changes in the price of gas. Methanex compares New Zealand gas prices against prices of gas in other countries where it has Methanol production facilities when deciding on a location to produce Methanol and its operation is considered highly mobile.

Demand on the Maui Pipeline is thus extremely volatile while the factors effecting demand are outside MDL's control. This makes it very difficult to predict demand with any degree of accuracy, particularly over the medium to long term.

MDL supports the Commission's initial view that a revenue cap is preferable to a price cap so that a GTB can compensate the demand risk by adjusting tariff rates.

7. Price Cap Evaluation

The following assesses some relative benefits of a price cap over a revenue cap.

- A price cap gives price certainty to a GTB's customers, albeit at a higher price to consumers⁹.

⁷ Cost of Capital Workshop 12th-13th November 2009 Cross-submission by Maui Development Limited, 2 December 2009, page 10, last para

⁸ <http://www.methanex.com/products/methanolprice.html>, 23 November 2009

⁹ KPMG estimate for difference in Asset Beta between price cap and revenue cap is 0.1. Thus under a price cap, a GTB would theoretically enjoy a higher expected return on its assets.

- While a price cap provides additional price certainty to suppliers, some certainty will remain under the price cap where pass through costs (such as balancing gas costs) are variable and are intended to be passed on to consumers.
- Where a GTB is vertically integrated in that it owns gas distribution businesses and electricity retail businesses, where the GTB under recovers due to its inability to increase tariff rates (in response to a reduction in demand), its downstream operations will pay the reduced tariff. Thus a GTB that is vertically integrated will have a degree of natural hedge against changes in demand.

8. Price Cap impact on Asset Beta

KPMG argue that a price cap increases volatility in return on investment and as such, KPMG estimates that MDL could expect around a 0.1 increase to its Asset Beta should it be required to move from its current revenue cap to a price cap.

While increasing Asset Beta will increase the expected return on the Maui Pipeline asset, an increased expected return will not mitigate the additional volatility of return that is bought about by a price cap. Nor, due to medium to long term demand fluctuations, is there any guarantee that over recovery and under recovery will offset to ensure that a supplier will earn its required return over a five year timeframe.

MDL has given consideration to potential hedging strategies or insurance products that might succeed in mitigating demand risk. One potential hedging strategy would be vertical integration via MDL investment in downstream activities. However, this is not considered a viable alternative. Furthermore MDL contends that participation in downstream businesses should not be a prerequisite to enable MDL to be able to manage its gas transmission risks.

9. Commission's Initial View on Revenue over Price Cap

The Commission's initial view is that a revenue cap is better suited for GTB's¹⁰. The revenue cap is preferred as it:

- allows a GTB to better manage its demand risk, particularly on the basis that gas demand fluctuations are outside a GTB's control; and
- a GTB's costs are largely fixed and thus GTB have limited ability to absorb changes in revenue.

MDL supports the Commission's initial view.

¹⁰ Issues Paper, page 19, section 4.27

10. Wash Up Mechanism with a Revenue Cap

The Commission has requested that MDL address the potential requirement for a wash up mechanism. In MDL's view, a wash up mechanism will exist in a revenue cap whether it is specifically prescribed or not. The basis for this view is as follows:

- Penalties and Rewards are effectively a "watered down wash up". If a GTB significantly over recovered, and in doing so, incurred a penalty, the penalty would effectively reduce the tariff in the following tariff year whereby the value of the penalty is returned to the consumer via the tariff adjustment. The penalty acts effectively as a wash-up mechanism.
- In the situation where penalties for over recovery were structured very loosely or did not exist at all, GTBs would be tempted to understate their demand forecasts to ensure that they do not under recover.
- Suppliers might have an incentive to adjust their gas demand forecasts to balance out over recovery or under recovery from the previous year, particularly where by doing so, they could avoid penalty. Thus recovery over time would tend to balance out.

Transmission gas demand is very difficult to forecast, particularly over the longer term, and since suppliers effectively have no control over it the forecasts are likely to be inaccurate in some years. MDL considers a wash up mechanism, which can be monitored, to be a better and more transparent choice than one based on penalties imposed for inaccurate forecasting.

11. Firm Carriage versus Common Carriage

Vector operates under a system of firm carriage whereas MDL operates on a common carriage basis. Firm carriage effectively means that Vector sells reserved capacity on its pipelines. Vector's shippers pay Vector through a combination of capacity reservation fees, throughput fees and over run charges. Vector shippers with reserved capacity pay a portion of tariffs on the volume of capacity that is reserved regardless of the volume they ship.

Under MDL's common carriage system, its shippers pay tariffs mainly based on gigajoule kilometers transported. In other words, a shipper pays for the amount it ships and for the distance it ships only. Thus where demand reduces, MDL's shippers would reduce their nominations and pay reduced tariffs.

Under firm carriage, a shipper is required to meet its fixed reserved capacity tariff regardless of demand levels whereas under common carriage a shipper will reduce its nominations and pay on the basis of its reduced nominations only. Consequently, Vector's firm carriage regime has more income stability than MDL's common carriage regime.

Capacity under common carriage is allocated out on a "first come first served" basis. Capacity constraints on the Maui Pipeline have so far not been systematically

breached even at peak times and thus, unless there is an interruption on the pipeline, or at a welded point, a shipper is generally able to ship its requested quantities.

MDL does have a “quasi” firm carriage system, known as “Authorised Quantities” (**AQ**), which is written into the Maui Pipeline Operating Code (**MPOC**). AQ is intended to provide “optional” reserved capacity to MDL’s shippers whereby a shipper may opt to buy a volume of AQ which will have a higher level of priority than gas volumes that do not have the AQ status. Thus, if capacity is reached, non AQ gas will be curtailed before AQ gas.

AQ is a project that has never been implemented by MDL. The AQ service has not actually been offered because MDL anticipates that its shippers will not want AQ when there are no effective capacity constraints. AQ quantities are only anticipated to become attractive where demand surpasses MDL’s capacity to deliver.

There is a perception that firm carriage may encourage shippers to buy firm capacity and then sell at a profit to other shippers on a secondary market causing “hiked” transmission fees. As a pipeline reaches capacity, a scramble to secure firm carriage rights may result in some shippers being excluded from participating in the market altogether.

Research undertaken by MDL has revealed that the bulk of its shippers value the “pay as you go” system and would not support the implementation of firm carriage.

If the Commission settled on a price cap for a DPP, a full firm carriage regime would be one way for MDL to manage its demand risk. However, MDL is of the view that common carriage, along with a revenue cap, best serves the needs of its customers who, due to volatility in demand, prefer a “pay as you go” system. As more gas peaking plants are built to address the security of New Zealand’s electricity supply, the preference for common carriage on the Maui Pipeline system is unlikely to change.

12. Investment Incentives

Incentivising innovation and investment is an important objective of Part 4 of the Commerce Act. Over-rigid price-quality path regulation may reduce the incentive to invest in a regulated industry as most companies will have the ability to make alternative investments in unregulated areas. It has been argued that a price cap incentivises investment more than a revenue cap because under a price cap, if sales increase due to investment, the supplier will generate additional revenue whereas under a revenue cap, the supplier will be required to reduce prices so that the revenue remains constant.

However, in reality, an increase in demand will normally occur gradually over time. At first capacity will only be exceeded on a few peak days and then capacity constraints will be increasingly felt as demand continues to grow. Average demand may not increase very much at all. Thus, the additional income from a capacity upgrade, will yield additional revenue slowly, at least in the initial years following an investment. On this basis it can be argued that a price cap will not incentivise a supplier to invest in additional capacity until the overall level of demand reaches a

point well beyond the existing capacity. However, delaying capital investment in this manner may hinder development of the market and negatively impacts important markets which rely on “security of supply” in times of need.

One way of achieving a better result is to allow GTBs to obtain a return on a new investment as soon as it is made by adding its cost to the RAB. This process will work well when combined with a Revenue Cap calculated from the RAB multiplied by the WACC. MDL would prefer this to be achievable as part of the DPP process through a Contingency Project regime rather than going to the expense of applying for a CPP.

13. Efficiency Incentives

While a gross revenue cap would incentivise efficiencies by allowing the supplier to realize (at least a portion of) reduced costs as additional increased profits during the regulatory period, a net revenue cap would facilitate the transfer any efficiency savings directly to the customer and therefore remove the incentive for a supplier to realise efficiency gains.

MDL recommends a revenue cap and that this revenue cap be a gross cap rather than a net cap.

14. MDL Past Compliance

Should a DPP not be suitable for MDL’s purposes, it will be required to apply for a CPP. MDL considers the CPP approach less suitable for the following reasons:

- MDL’s business is very simple. It is an unincorporated joint venture with a synthetic balance sheet that is derived for the purposes of calculating a regulated return.
- It has a very small capital expenditure program as compared to other regulated suppliers. There are very few significant CAPEX projects.
- It is a relatively small business, approximately 1/5 the size of Vector Transmission on the basis of income and thus does not warrant significant compliance costs.
- MDL’s operations are managed through TO, SO and CO contracts. These contracts are managed by the MDL Board. They are considered to be competitive contracts.
- MDL is already subject to significant industry scrutiny and also regulatory scrutiny via the Gas Industry Company.

MDL has employed building blocks since beginning of open access and in MDL’s view it has taken a conservative approach in the application of building blocks principles. Since Jan 2008, by its own calculation, MDL has increased prices by an amount significantly less than CPI which supports its assessment that it has taken a conservative approach. Since the beginning of Open Access, MDL has contracted

KPMG to provide an independent review of its tariff calculations and to sign them off on the basis that they are in accordance with

- General industry practice, as exemplified by the Commission's decisions; and
- In compliance with provisions of the MPOC.

MDL believes that high compliance and monitoring costs associated with a CPP are not warranted for MDL.

15. Conclusion

- A DPP is considered the most cost-effective regulatory solution for the industry.
- In MDL's view, due to differences in their business structures, the DPP cannot be suitable for both MDL and Vector but it should be suitable for either MDL or Vector as it would be unduly costly for the industry to require both GTB's to have a CPP.
- A price cap is seen as suitable for a company with low demand volatility and where costs are largely variable in nature
- A revenue cap is suitable for a company with high demand volatility and where costs are largely fixed in nature. MDL accordingly requests a revenue cap. This is due partially due to MDL's common carriage regime whereby its shippers "pay as you go" and thus income is considered volatile and based on demand forces that are outside MDL's control.
- A move from revenue to price cap would entail MDL taking on additional demand risk. While KPMG values this at an increased Asset Beta of 0.1, this increase would not, in MDL's view, compensate for the additional risk as it would not be capable of hedging against it.
- MDL supports the Commission's initial view of a revenue cap.
- Since gas demand is very difficult to forecast, particularly over a longer term, and since suppliers effectively have no control over demand, it is considered appropriate that a transparent wash up mechanism be put in place. It is MDL's view that an "unofficial wash up" will exist whether or not this is specifically endorsed by the Commission.
- MDL recommends that the Commission consider incentive to invest as a top priority. In particular it is recommended that the Commission incentivise investment to ensure sufficient capacity exists to meet increases in demand. MDL is of the view that this cannot be effected through a price cap and that a Contingency Project structure is required for the DPP.

Yours sincerely,

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