



Maui Development Limited

Transitional disclosure of pipeline capacity

May 2013

Transitional disclosure of pipeline capacity

This document covers our transitional disclosure of transmission system capacity for the year ending 31 December 2012, as required by clause 2.12.2(2) in the Gas Transmission Information Disclosure Determination 2012 (ID Determination) issued by the Commerce Commission. The terms "MDL", "we", "us" and "our" in this document refer to the Gas Transmission Business of Maui Development Limited.

Our assessment of the extent to which our physical pipeline capacity is adequate to address the current and anticipated future needs of our consumers, taking into account our expected demands and investment plans, is presented below.

1. Analysis of available capacity

An analysis of the available capacity for each offtake point with a throughput of gas during the System Peak Flow Period (in respect of the 12 months ended 31 December 2012) of 2,000 GJ or more is set out below.

GJ / Offtake Point	System Peak Flow Period			Methanex Scenario		
	Peak Throughput	Maximum Capacity	Factor	Assumed Throughput	Maximum Capacity	Factor
South of Mokau						
Frankley Road	65,864	355,666	5.4	55,864	318,425	5.7
Bertrand Road	46,382	282,930	6.1	102,382	327,622	3.2
Ngatimaru Road (DP)	101,736	356,076	3.5	101,736	335,729	3.3
North of Mokau						
Pokuru	11,427	96,539	8.4	11,427	96,539	8.4
Rotowaro	165,304	250,416	1.5	165,304	250,416	1.5
Huntly Power Station	66,359	151,471	2.3	66,359	151,471	2.3

This analysis presents throughput and maximum capacity, and the multiplication factor between them, for those offtake points for two cases:

1. The System Peak Flow Period as presented in our transitional disclosure of peak flow information, dated 27 February 2013, for the 12 months ending on 31 December 2012. The System Peak Flow Period was the period of 24 consecutive hours beginning at 0000 hours (New Zealand Standard Time) on 18 July 2012.
2. A possible scenario in which Methanex would have increased its offtake at Bertrand Road by 56 TJ per day (as a result of additional demand at the Waitara Valley Methanol Plant) during the System Peak Flow Period.

Capacity modelling was carried out using Stoner SynerGee Gas, version 4.4.2, written by Advantica of the USA. The software is licensed to Vector. Details of the Maui pipeline and its intake points and offtake points are presented in the attached Schedule A. The input assumptions for the capacity modelling are as follows.

- Throughputs for all offtake points in the system (other than the points presented in the table) are based on actual flows during the System Peak Flow Period.
- Intake and offtake throughputs at the Frankley Road bi-directional point are netted off against each other.

- Failure trigger constraints for every scenario are pressure drops below: 42 bar at Bertrand Road, 32 bar at Rotowaro, or 32 bar at any offtake point south of the Mokau compressor station.
- Flows through the Mokau compressor station are constrained to a maximum of 330 TJ per day. This is based on an assumption of using only one compressor unit (of two available), with a 3 MW power threshold and maintaining an outlet pressure of 56 bar. It also allows for the system line pack required for flexibility and survival time. The 330 TJ constraint has not been converted to an hourly flow limit (i.e. 330/24), but is used in aggregate for the full day of the System Peak Flow Period.
- All of the intake points have their own composition associated with the gas they supply into the system. Those gas compositions are based on the same values as during the peak period for the year ending 31 December 2011. The model assumes an average constant gas temperature of 12.3 °C.
- All modelling is based on actual physical gas flows. The Maui Pipeline operating regime does not provide for fixed capacity reservations. All flows are interruptible.

Throughputs at each intake point (including the net intake quantity for the bi-directional point at Frankley Road) are as set out in the table below. The Methanex Scenario assumes that the additional 56 TJ offtake at Bertrand Road is provided by an additional 10 TJ from Oaonui, 36 TJ from Tikorangi #2, and 10 TJ taken from Frankley Road. The latter reduces the net offtake from Frankley Road.

	System Peak Flow Period	Methanex Scenario
GJ / Intake Point	Peak Throughput	Assumed Throughput
Oaonui	134,136	144,136
Frankley Road	0	(10,000 extra netted off)
Tikorangi	71,386	71,386
Tikorangi #2	23,604	59,604
Kowhai	0	0
Ngatimaru Road (RP)	157,885	157,885
Turangi Mixing Station	28,210	28,210

In all cases, the maximum capacity for an offtake point is modelled by allowing one of the intake points to increase its flow to a possible maximum while operating within minimum pressure constraints at all other points (and keeping all other points at the same flow patterns). The maximum capacity presented for an offtake point is the minimum result obtained from all modelled cases. (As a counter example, the maximum capacity for the Ngatimaru Road Delivery Point reaches extremely high numbers if the extra gas is assumed to come from the Ngatimaru Road Receipt Point.) This leads to the following key results.

1. For all offtake points south of the Mokau compressor station, the limiting intake point is Oaonui. In other words, if additional gas were taken from other intake points (which are closer by), the maximum offtake capacity would be higher than presented above. In all those cases, including the Methanex Scenario, the failure mechanism is a pressure drop below 42 bar at Bertrand Road.
2. For all offtake points north of Mokau, the intake point is irrelevant. In other words, results are the same for all intake points. In all those cases, the limiting constraint is the assessed maximum throughput of 330 TJ at the Mokau compressor station.

2. Constraints and planned investments

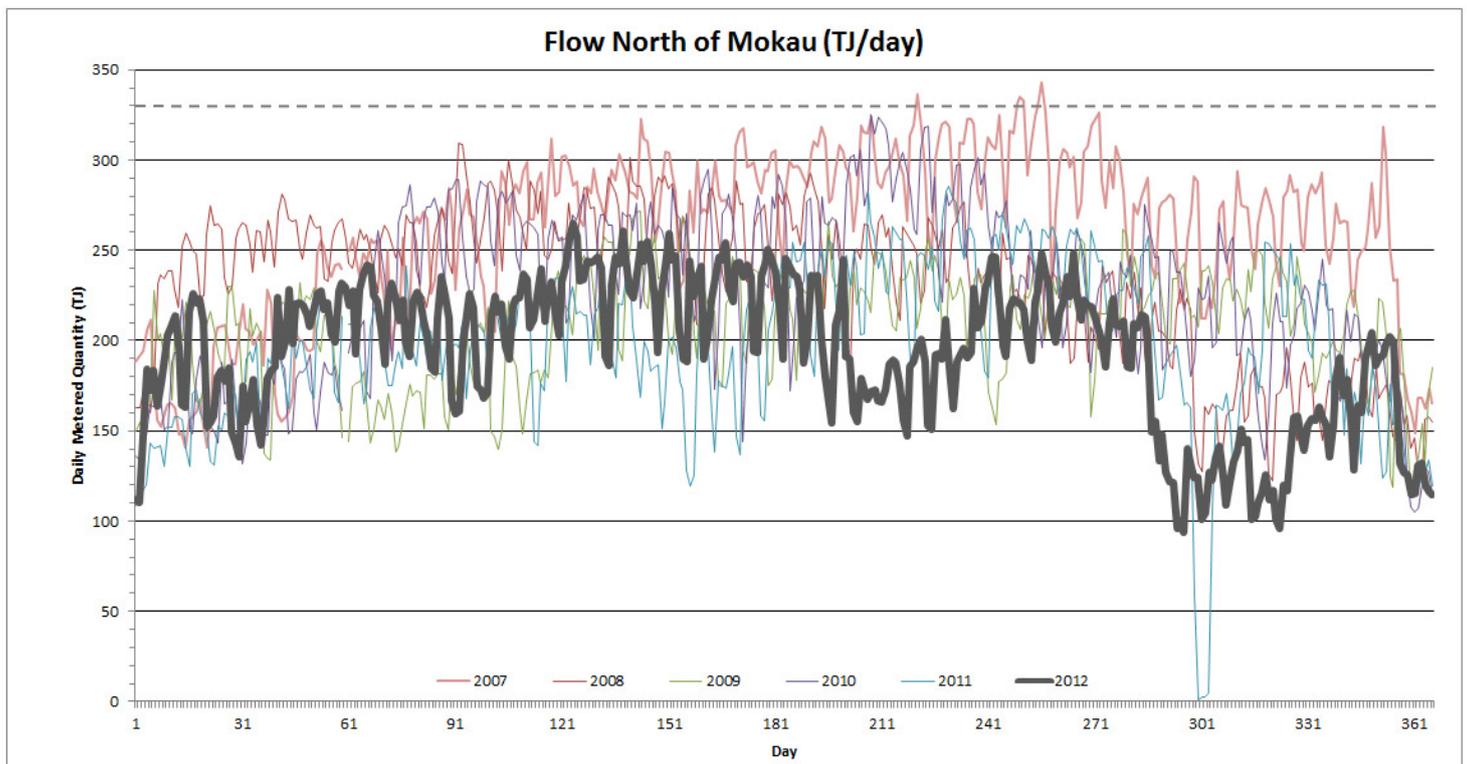
South of Mokau

Results of the modelling indicate that for expected receipt and delivery patterns the Maui Pipeline does not have any significant capacity constraints for offtake points south of the Mokau compressor station. Modelling results show that for gas coming from Oaonui, the pipeline could have delivered at least 236 TJ more on the day of the System Peak Flow Period (225 TJ in the Methanex Scenario). Maximum offtakes could even be several times larger for gas coming from intake points further North. For example, modelling results show that net offtakes at Frankley Road could have increased to at least 856 TJ (821 TJ in the Methanex Scenario) for gas from intake points other than Oaonui. Bertrand Road and the Ngatimaru Road Delivery Point could have supported even greater increases. Nevertheless caution needs to be exercised in interpreting modelling results for very large capacity increases.

We are not aware of any potential consumption patterns south of the Mokau compressor station that will reach such levels. As a result, we do not see any potential need for, and have not considered, capacity investments south of the Mokau compressor station.

North of Mokau

For more northern offtake points, the maximum throughput of the Mokau compressor station itself becomes the constraint on delivery capacity. A chart presenting aggregate offtakes north of Mokau is presented below.



The assessed capacity constraint of 330 TJ at Mokau was exceeded on 6 days in 2007. Flows north of Mokau have been lower since then and the assumed constraint has not been exceeded again in later years. The North of Mokau peak during 2012 was at 265 TJ on 3 May.

It is important to note that the assumed throughput limit of 330 TJ per day at Mokau is based on actual performance in 2007 and is a reasonable estimate of delivery capacity under normal pipeline conditions using only the Unit 2 compressor. This limit also assumes the provision of contingency volume to stay above the pressures that would activate the Critical Contingency Regulations as well as the flexibility line pack provided under the MPOC.

MDL does not have plans for capital investment to increase throughput capacity at Mokau.

3. Impact of constraints on consumers

We do not believe that transmission system constraints on the Maui Pipeline are impacting upon the quality of service provided to any existing consumer of MDL's gas transmission services.

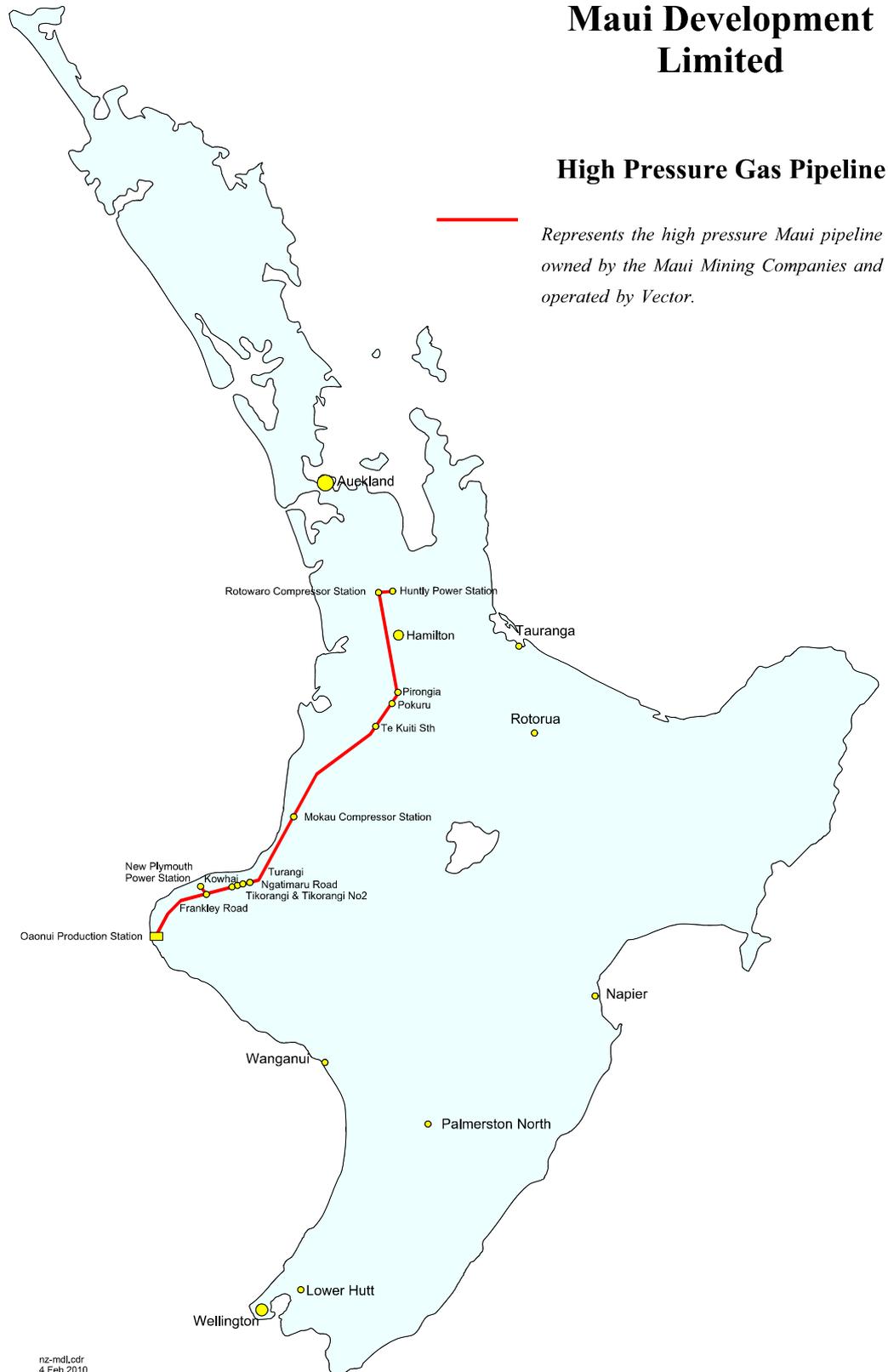
4. Certification

The required certification for this disclosure is attached.

Schedule A

Maui Pipeline Intake and Offtake Points

A map showing the location of the Maui pipeline is presented below.



Details of the intake and offtake points on the Maui Pipeline are presented below.

INTAKE POINT	OFFTAKE POINT	STATION NUMBER	LOCATION		NZMS 260 GRID REF.
Oaonui Frankley Rd Tikorangi Tikorangi #2 Kowhai Ngatimaru Rd (receipt) Turangi Mixing Station		4000000	S.H.45	Oaonui	P20 873199
		4000439	Frankley Rd	New Plymouth	P19 012304
		4000688	Ngatimaru Rd	Tikorangi	Q19 209393
		4000688	Ngatimaru Rd	Tikorangi	Q19 209393
		4000688	Ngatimaru Rd	Tikorangi	Q19 209393
		4000670	Ngatimaru Rd	Tikorangi	Q19 210393
		4000710	Tikorangi Rd East	Tikorangi	Q19 246411
		4000001	S.H.45	Oaonui	P20 804002
	Opunake	4000132	Parihaka Rd	Pungarehu	P20 848122
	Pungarehu	4000231	Oxford Rd	Okato	P19 877212
	Okato	4000351	Wairau Rd	Oakura	P19 934300
	Oakura	4000439	Frankley Rd	New Plymouth	P19 012304
	Frankley Rd	4000653	Bertrand Rd	Tikorangi	Q19 194390
	Bertrand Rd (Waitara Valley)	4000670	Ngatimaru Rd	Tikorangi	Q19 210393
	Ngatimaru Rd (delivery)	4001941	Mangatea Rd	Te Kuiti	S16 953161
	Te Kuiti South	4001975	Oparure Rd	Te Kuiti	S16 963192
	Te Kuiti North	4002135	Waitomo Valley Rd	Otorohanga	S16 021338
	Otorohanga	4002308	Candy Rd	Te Awamutu	S15 040487
	Pokuru	4002374	Pirongia Rd	Pirongia	S15 047551
	Pirongia	4002753	Hakarimata Rd	Ngaruawahia	S14 991911
	Ngaruawahia	4002906	Rotowaro Rd	Rotowaro	S13 928028
	Rotowaro	4030086	Rotowaro Rd	Huntly	S13 002041
	Huntly Town	4030087	Rotowaro Rd	Huntly	S13 002041
	Huntly Power Station				

Notes: In this table "Offtake Points" comprise physical offtakes from the MDL-owned pipeline only.

The offtake point for the former New Plymouth Power Station is treated as decommissioned.

Certification for Transitional Disclosures

Clause 2.9.4

We, Murray Eric Jackson and David John Alexander McGuire, being directors of Maui Development Limited certify that, having made all reasonable enquiry, to the best of our knowledge the information, prepared for the purposes of clause 2.12.2 of the Gas Transmission Information Disclosure Determination 2012 in all material respects complies with that determination.


MURRAY JACKSON.

D.J.A MCGUIRE.

15th.

May 2013