

Re Maui cost of capital determination for the 2013 information disclosure year [2012] NZCC 1

The Commission: S Begg
P Duignan
Dr S Gale

Date of determination: 31 January 2012

Executive summary

1. This determination specifies Weighted Average Cost of Capital (WACC) estimates to apply for the information disclosure year 2013 for Maui Development Limited (Maui).
2. The Commission has determined:
 - A mid-point estimate of vanilla WACC¹ of 6.91% for the five year period commencing on the first day of disclosure year 2013 (ie 1 January 2012). The Commission has also determined a vanilla WACC range from 6.10% to 7.72%, where the endpoints are the 25th and 75th percentile estimates respectively.
 - A mid-point estimate of post-tax WACC² of 6.21% for the five year period commencing on the first day of disclosure year 2013 (ie 1 January 2012). The Commission has also determined a post-tax WACC range from 5.40% to 7.02%, where the endpoints are the 25th and 75th percentile estimates respectively.
3. The WACCs are estimated as at 1 January 2012.

¹ The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity.

² The post-tax WACC is the weighted average of the post-corporate tax cost of debt and the cost of equity.

Introduction

4. This determination specifies WACC estimates to apply for the information disclosure year 2013 (that is, the 12 months to 31 December 2012) for Maui. The WACC estimates are set pursuant to clauses 2.4.1 to 2.4.7 of the *Commerce Act (Gas Transmission Services Input Methodologies) Determination 2010* (the GTS IM Determination).
5. The Commission has estimated both vanilla and post-tax WACCs. The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity. The post-tax WACC is a weighted average of the post-corporate tax cost of debt and the cost of equity.
6. The parameter values, estimates, and information sources used for each estimate of the WACC are set out in this determination. The determination also provides additional commentary on the estimation of the risk-free rate and the debt premium. For example, it identifies the issuers and bonds that were analysed (including the credit rating and remaining term to maturity) to estimate the debt premium. The commentary also explains:
 - which debt premium estimates were given greater weight than other estimates
 - that some estimates of the debt premium were given little or no weight because the debt premium estimates were out of line with the debt premium estimated for other issuers (recognising differences such as credit ratings and term to maturity). These differences appear to reflect company specific factors which affect the debt premium for bonds from individual issuers (for example, Telecom).

Proposed change in information disclosure period

7. Currently, WACCs for information disclosure correspond to each supplier's financial year. Maui currently has a 31 December balance date. However, all other gas pipelines businesses (GPBs) have a 30 June balance date.
8. Information disclosure requirements for electricity distribution businesses and GPBs are expected to be published in May 2012. The Commission has proposed changing the information disclosure year-end to September for all GPBs, including Maui, to commence in respect of the 12 months to September 2012.³
9. The information disclosure draft reasons paper (Draft ID Reasons Paper) identified the need to amend the Input Methodologies to address the proposed change in

³ See Commerce Commission, *Information Disclosure Requirements for Electricity Distribution Businesses and Gas Pipeline Businesses Draft Reasons Paper*, 16 January 2012 (the Draft ID Reasons Paper), at paragraphs 6.43-6.45.

disclosure year for GPBs.⁴ Separate consultation on this is discussed in paragraph 1.3 of the Draft ID Reasons Paper.

10. If the proposed amendment to the information disclosure period is included in the final information disclosure determination, future WACC determinations will apply in respect of a September year-end for all GPBs.

Background

Changes in the risk-free rate and debt premium over time

11. The input methodologies for the regulated services reflect that both the risk-free rate⁵ and the debt premium on bonds⁶ change over time.
12. Changes in the risk-free rate and debt premium on bonds are illustrated below. Figure 1 shows both:

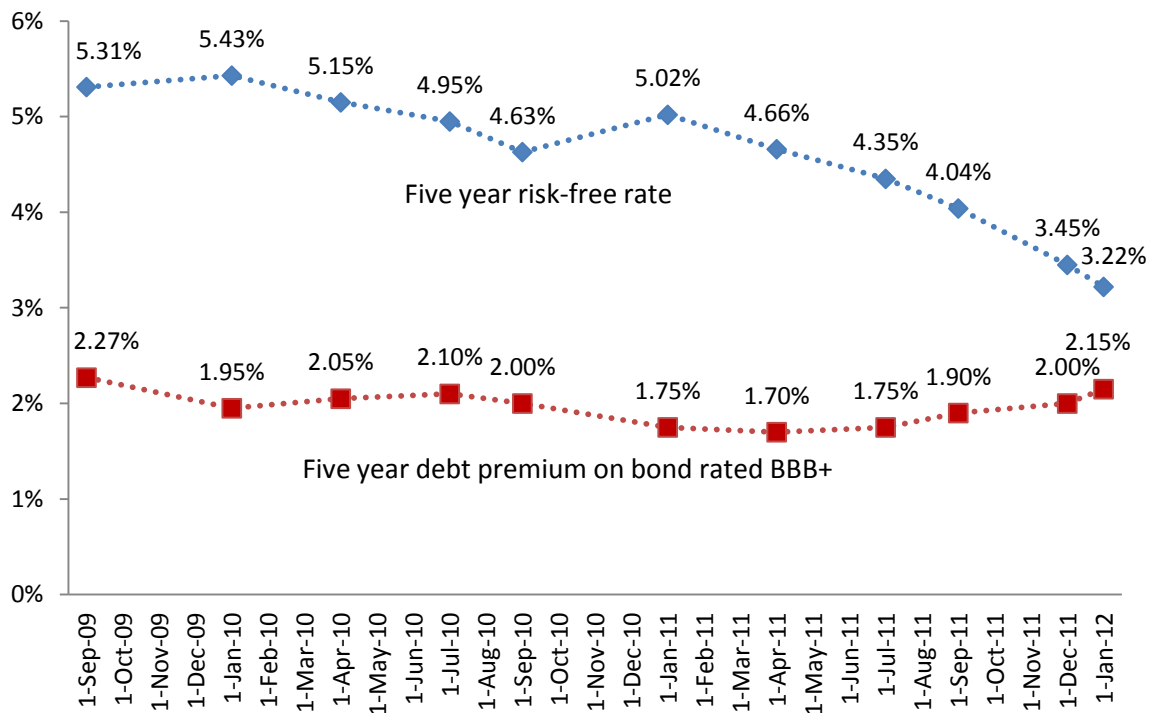
- the five year risk-free rate, and
- the debt premium on bonds rated BBB+ with a five year term

as at the dates when we have estimated the cost of capital using the input methodologies.

⁴ Commerce Commission, *Information Disclosure Requirements for Electricity Distribution Businesses and Gas Pipeline Businesses: Draft Reasons Paper*, 16 January 2012.

⁵ The risk-free rate is estimated based on an interpolation of bid yields on New Zealand government stock to a term to maturity of five years.

⁶ The debt premium is estimated on publicly traded corporate bonds according to the methodology specified in the input methodology determinations.

Figure 1: Changes in the risk-free rate and debt premium

Reasons for differences in WACC under input methodologies determinations

13. Differences in the WACCs estimated under input methodologies reflect differences in:
- the date of estimation for these WACCs (which results in different estimates of the risk-free rate and debt premium)
 - the periods to which they will apply
 - the context in which the WACCs will be used (75th percentile estimates of the WACC are used when considering default and customised price-quality paths)
 - the assessed risk of the various regulated services (EDBs and Transpower have an asset beta of 0.34, Gas Pipeline Businesses (GPBs) have an asset beta of 0.44, and Airports have an asset beta of 0.60)
 - the level of leverage for airports (17%) and for EDBs, GPBs, and Transpower (44%).

WACC for Maui information disclosure year 2013

14. Under clause 2.4.1 of the GTS IM Determination, the Commission has determined:
- A mid-point estimate of vanilla WACC of 6.91% for the five year period commencing on the first day of Maui's disclosure year 2013 (ie 1 January 2012). Under clause 2.4.7, the Commission has also determined a vanilla WACC range

from 6.10% to 7.72%, where the endpoints are the 25th and 75th percentile estimates respectively.

- A mid-point estimate of post-tax WACC of 6.21% for the five year period commencing on the first day of Maui's disclosure year 2013 (ie 1 January 2012). Under clause 2.4.7, the Commission has also determined a post-tax WACC range from 5.40% to 7.02%, where the endpoints are the 25th and 75th percentile estimates respectively.

Parameters used to estimate the WACC

15. These estimates of vanilla and post-tax WACC reflect the parameters specified in the GTS IM Determination. The risk-free rate and debt premium are also estimated in accordance with the GTS IM Determination.

Summary of parameters

16. The parameters used to estimate the vanilla and post-tax WACCs are summarised in Table 1 below.

Table 1: Parameters used to calculate WACC

Risk-free rate (5 yrs)	3.22%	Debt premium (5 yrs)	2.15%
Equity beta	0.79	TAMRP	7.0%
Average corporate tax rate	28%	Average investor tax rate	28%
Debt issuance costs	0.35%	Leverage	44%
Standard error of debt premium	0.0015	Standard error of WACC	0.012
Cost of debt (pre-corporate tax)	5.72%	Cost of equity	7.85%
Vanilla WACC (midpoint)	$5.72\% \times 0.44 + 7.85\% \times (1-0.44) = 6.91\%$		
Post-tax WACC (midpoint)	$5.72\% \times 0.44 \times (1-0.28) + 7.85\% \times (1-0.44) = 6.21\%$		

Risk-free rate

17. The risk-free rate reflects the linearly-interpolated, annualised, bid yield to maturity on New Zealand government bonds with a term to maturity of five years. The estimates use data reported by Bloomberg for the month of December 2011 in respect of the April 2015 and December 2017 maturity bonds.
18. The daily data reported by Bloomberg is annualised (to reflect the 6 monthly payment of interest), averaged to give a monthly average, and linearly interpolated to produce the estimate of a 3.22% interest rate on a NZ government bond with a five year term to maturity as at 1 January 2012.

Tax rates

19. The average corporate tax rate is the corporate tax rate of 28% for all years. The average investor tax rate is the investor tax rate of 28% for all years.

Standard error of the WACC

20. The standard error of the WACC is determined in accordance with the formula in the GTS IM Determination, and is shown to three decimal places only in the table above.

Debt premium

21. The methodology for determining the debt premium is set out in clause 2.4.4 of the GTS IM Determination.
22. Clause 2.4.4(3)(d) requires the Commission to estimate the debt premium that would reasonably be expected to apply to a vanilla NZ\$ denominated bond that:
 - 22.1 is issued by a GPB or an EDB that is neither majority owned by the Crown nor a local authority
 - 22.2 is publicly traded
 - 22.3 has a qualifying rating of grade BBB+
 - 22.4 has a remaining term to maturity of five years.
23. In estimating the debt premium, clause 2.4.4(4) of the GTS IM Determination provides that the Commission will have regard to:
 - 23.1 bonds issued by a GPB or EDB (that is not government-owned) with a rating of BBB+
 - 23.2 bonds issued by another entity (that is not government-owned) with a rating of BBB+
 - 23.3 bonds issued by a GPB or EDB (that is not government-owned) with a rating other than BBB+
 - 23.4 bonds issued by another entity (that is not government-owned) with a rating other than BBB+
 - 23.5 bonds issued by government-owned entities.
24. Clause 2.4.4(5)(a) provides that progressively lesser regard will ordinarily be given to the debt premium estimates in the order that the bonds are identified in clauses 2.4.4(4)(a) to (e).
25. Table 2 below shows the debt premium determined by the Commission as at 1 January 2012. This table includes a summary of information on the investment grade rated bonds the Commission considered in determining the debt premium.

26. A spreadsheet showing the calculations for the debt premium (and the risk-free rate) is published on our website.⁷

Table 2: Five-year debt premium⁸

<u>Determined debt premium on an EDB/GPB -issued bond rated BBB+ with a remaining term of 5 years as at 1 January 2012</u>						
	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment	
Determined Debt Premium	EDB / GPB	BBB+	5.0	2.15	Vector premium provides floor. Regard to results of 4(c) & 4(d). Not inconsistent with 4(e).	
Subclause	Issuer	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	Vector ¹	EDB/GPB	BBB+	2.8	1.94	Minimum per subclause 5(b).
4(b)						No data on an applicable bond.
4(c)	Powerco ²	EDB/GPB	BBB	5.0	2.44	BBB+ would be less than this.
4(d)	Contact ³	Other	BBB	5.0	2.53	BBB+ would be less than this.
	AIAL ⁴	Other	A-	5.0	1.84	BBB+ would be more than this.
	Telecom ⁵	Other	A-	-	-	Anomalous, due to significant corporate action.
	Telstra ⁶	Other	A	5.5	1.74	5 year debt premium would be lower, and a BBB+ debt premium would be more than this.
4(e)	Genesis ⁷	Other	BBB+	5.0	1.75	
	MRP ⁸	Other	BBB+	5.0	1.98	
	Transpower	Other	AA-	7.9	1.66	

Notes on bonds analysed:

- 1 Vector 7.8% bond maturing 15/10/2014.
- 2 Powerco 6.53% bond maturing 29/06/2015; 6.74% bond maturing 28/09/2017.
- 3 Contact Energy 8% bond maturing 15/05/2014; 7.855% bond maturing 13/04/2017.
- 4 AIAL 8% bond maturing 15/11/2016; 5.47% bond maturing 17/10/2017.
- 5 Telecom 7.04% maturing 22/03/2016.
- 6 Telstra 7.515% maturing 11/07/2017.
- 7 Genesis 7.185% bond maturing 15/09/2016; 8.3% bond maturing 23/06/2020.
- 8 Mighty River Power 7.55% bond maturing 12/10/2016; 8.21% bond maturing 11/02/2020.
- 9 Transpower 7.19% bond maturing 12/11/2019.

27. Consistent with clauses 2.4.4(4) and 2.4.4(5)(a) of the GTS IM Determination, greatest regard has been given to the estimated debt premium on Vector's October 2014 bond. This bond is issued by an EDB/GPB, is publicly traded and has a rating of BBB+. However, the October 2014 Vector bond has a remaining term to maturity of 2.8 years, which is significantly less than five years specified in clause 2.4.4(3)(d).
28. As at 1 January 2012, the debt premium on the Vector bond was estimated at 1.94%. Consistent with clause 2.4.4(5)(b), this estimated debt premium is treated as the minimum debt premium for a bond rated BBB+ with a term of five years.

⁷ See www.comcom.govt.nz/cost-of-capital

⁸ The five-year debt premiums on the Powerco, Contact Energy, AIAL, Genesis and Mighty River Power bonds are calculated by linear interpolation with respect to maturity.

29. The interpolated five year debt premium on Powerco's bonds is 2.44%. Powerco's bonds are rated BBB, implying the five year debt premium on bonds rated BBB+ would be less than 2.44%.
30. The Commission has also had regard to the estimated debt premium on bonds from a range of other issuers including Auckland International Airport Limited (AIAL) (1.84%, 5 years, rated A-), Contact Energy (2.53%, 5 years, rated BBB) and Telstra (1.74%, 5.5 years, rated A). Consistent with clause 2.4.4(5)(a) these were given less weight as the issuers are not EDBs or GPBs, and the debt issues had different credit ratings than the BBB+ rating specified in clause 2.4.4(3)(d).
31. The estimated debt premium on the Genesis and Mighty River Power bonds (rated BBB+, and for a five year term to maturity) were 1.75% and 1.98% respectively.
32. Starting with the estimated debt premium on the Vector bond, but having regard to the debt premium on a range of other bonds, the Commission has determined the debt premium on a publicly traded, EDB/GPB-issued bond, rated BBB+ with a remaining term of five years to be 2.15% as at 1 January 2012.
33. No weight has been placed on the estimated debt premium for Telecom (2.15%, 4.2 years, rated A-) due to significant corporate action currently affecting that company.