

**Cost of capital determination for default price-quality paths  
for suppliers of gas distribution and gas transmission  
services, and customised price-quality path proposals made  
by Vector Limited and GasNet Limited [2012] NZCC 38**

**The Commission:** S Begg  
P Duignan  
Dr S Gale

**Date of determination:** 20 December 2012

## Executive summary

1. This determination sets vanilla weighted average cost of capital (WACC) estimates that will apply to:
  - 1.1 default price-quality paths (DPPs) proposed to commence on 1 July 2013 for suppliers of gas distribution services (GDBs) and gas transmission services (GTBs), where the Commerce Commission (the Commission) takes into account the cost of capital in making a DPP determination; and
  - 1.2 any customised price-quality path (CPP) proposal made by Vector Limited (for the supply of gas distribution services or gas transmission services) or GasNet Limited (for the supply of gas distribution services) in the 12 months following the date of this decision.<sup>1</sup>
2. The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity. The vanilla WACC estimates are summarised in Table 1 below.

**Table 1: Vanilla WACC estimates**

Estimate and application	Mid-point	75 <sup>th</sup> percentile estimate
<i>Default price-quality path (WACC estimated as at 1 December 2012)</i>		
Vanilla WACC (5 years)	6.63%	7.44%
<i>Customised price-quality path (for CPP proposals - WACC estimated as at 1 December 2012)</i>		
Vanilla WACC (3 years)	6.39%	7.20%
Vanilla WACC (4 years)	6.50%	7.31%
Vanilla WACC (5 years)	6.63%	7.44%

3. 75<sup>th</sup> percentile estimates of vanilla WACC are used for DPPs and CPPs. The WACCs are estimated as at 1 December 2012.

<sup>1</sup> The vanilla WACC estimates for CPP proposals in this determination do not apply to Powerco Limited or MDL Limited, as their disclosure years do not end on 30 June (Powerco Limited's is 30 September and MDL Limited's is 31 December).

## Introduction

4. This determination sets vanilla WACC<sup>2</sup> estimates that will apply to:
  - 4.1 DPPs proposed to commence on 1 July 2013 for GDBs and GTBs, where the Commission takes into account the cost of capital in making a DPP determination;<sup>3</sup> and
  - 4.2 any CPP proposal made by Vector Limited (for the supply of gas distribution services or gas transmission services) or GasNet Limited (for the supply of gas distribution services) in the 12 months following the date of this decision.<sup>4</sup>
5. Vanilla WACCs for CPPs are set under clauses 5.3.22 to 5.3.28 of the Gas Distribution Services Input Methodologies Determination 2012 (the GDS IM Determination) and clauses 5.3.18 to 5.3.24 of the Gas Transmission Services Input Methodologies Determination 2012 (GTS IM Determination).
6. For DPPs, the vanilla WACC is set under clauses 4.4.1 to 4.4.7 of the GDS IM Determination and the GTS IM Determination.
7. The parameter values, estimates and information sources used to estimate WACC are set out in this determination. Additional commentary on the estimation of the risk-free rate and the debt premium is also provided.
8. For example, this determination identifies the issuers and bonds that were analysed (including the credit rating and remaining term to maturity) when estimating the debt premium. The commentary also explains which debt premium estimates were given greater weight than other estimates.

## Background

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

9. The cost of capital input methodologies for the regulated services reflect that both the risk-free rate<sup>5</sup> and the debt premium on bonds<sup>6</sup> change over time.
10. Changes in the risk-free rate and debt premium on bonds are illustrated below. Figure 1 shows the changes over time in:
  - 10.1 the five year risk-free rate; and

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<sup>2</sup> The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity.

<sup>3</sup> *Gas Transmission Services Input Methodologies Determination 2012*, clause 4.4.9(1);  
*Gas Distribution Services Input Methodologies Determination 2012*, clause 4.4.9(1).

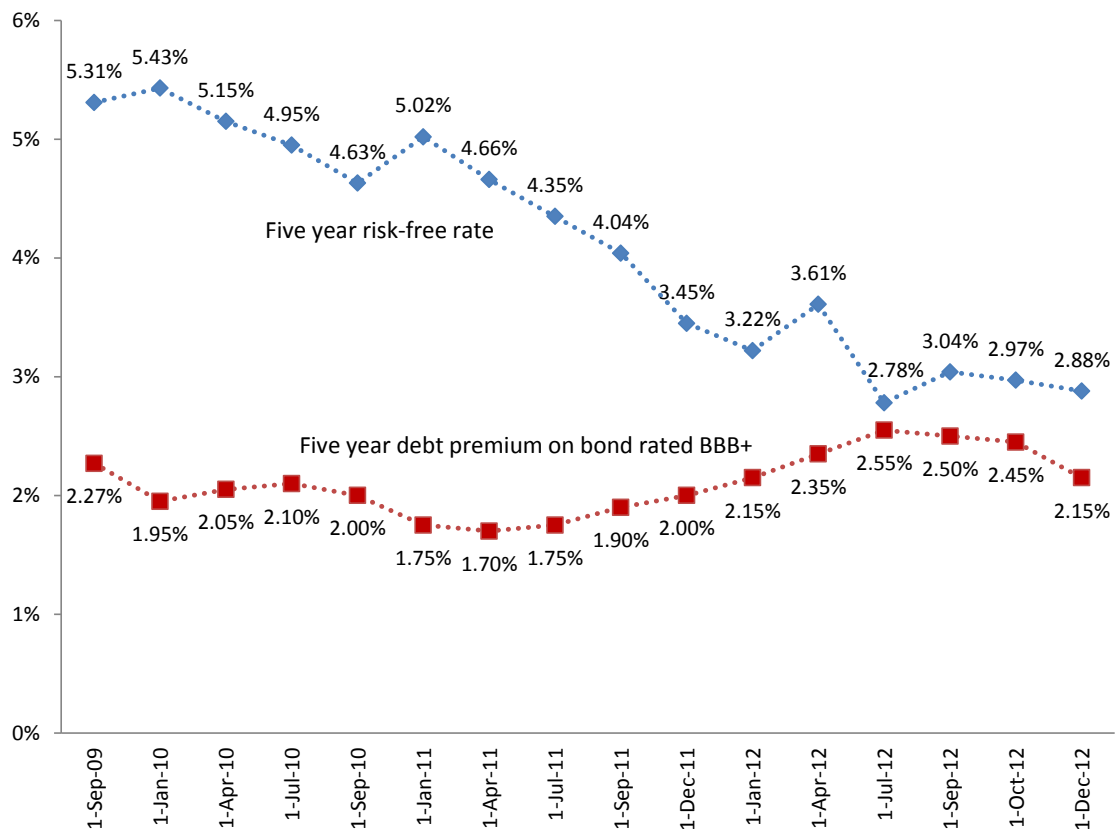
<sup>4</sup> The vanilla WACC estimates for CPP proposals in this determination do not apply to Powerco Limited or MDL Limited, as their disclosure years do not end on 30 June (Powerco Limited's is 30 September and MDL Limited's is 31 December).

<sup>5</sup> 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.

<sup>6</sup> The debt premium is estimated on publicly traded corporate bonds according to the methodology specified in the GDS IM Determination.

10.2 the debt premium on bonds rated BBB+ with a term of five years.

**Figure 1: Changes in the five year risk-free rate and debt premium over time**



### Reasons for differences in WACC under the various cost of capital input methodologies determinations

11. Differences in the WACCs estimated under the various cost of capital input methodologies reflect differences in:
  - 11.1 the date of estimation for the WACCs, which results in different estimates of the risk-free rate and debt premium;
  - 11.2 the periods in which the WACCs will apply;
  - 11.3 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, while a midpoint and range is determined for information disclosure);
  - 11.4 the assessed risk of the various regulated services (electricity distribution businesses (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); and
  - 11.5 the value of leverage for airports (17%) and for EDBs, GPBs, and Transpower (44%).

## WACC for customised price-quality path proposals made by Vector Limited and GasNet Limited

12. Under clause 5.3.28 of the GDS IM Determination and clause 5.3.24 of the GTS IM Determination, the Commission has determined 75<sup>th</sup> percentile estimates of vanilla WACC for inclusion in any CPP proposal made by Vector Limited or GasNet Limited in the 12 months following the date of this decision.
13. The 75<sup>th</sup> percentile estimate of vanilla WACC for a CPP period of three years is 7.20%, of four years is 7.31% and of five years is 7.44%. The corresponding mid-point vanilla WACCs are 6.39%, 6.50% and 6.63% for periods of three, four and five years, respectively. These WACCs are estimated as at 1 December 2012.

### Parameters used to estimate the WACC

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

### Summary of parameters

15. The parameters used to estimate the vanilla WACCs are summarised in Table 2 below.

**Table 2: Parameters used to calculate vanilla WACC**

Risk-free rate (3 years)	2.60%	Debt premium (3 years)	1.92%
Risk-free rate (4 years)	2.74%	Debt premium (4 years)	2.05%
Risk-free rate (5 years)	2.88%	Debt premium (5 years)	2.15%
Equity beta	0.79	TAMRP	7.0%
Average corporate tax rate	28%	Average investor tax rate	28%
Debt issuance costs (3 years)	0.58%	Debt issuance costs (4 years)	0.44%
Debt issuance costs (5 years)	0.35%	Leverage	44%
Standard error of debt premium	0.0015	Standard error of WACC	0.012
Cost of debt (3 years; pre-corporate tax)	5.10%	Cost of equity (3 years)	7.40%
Cost of debt (4 years; pre-corporate tax)	5.23%	Cost of equity (4 years)	7.50%
Cost of debt (5 years; pre-corporate tax)	5.38%	Cost of equity (5 years)	7.60%
Vanilla WACC (3 years, midpoint)	$5.10\% \times 0.44 + 7.40\% \times (1-0.44) = 6.39\%$		
Vanilla WACC (4 years, midpoint)	$5.23\% \times 0.44 + 7.50\% \times (1-0.44) = 6.50\%$		
Vanilla WACC (5 years, midpoint)	$5.38\% \times 0.44 + 7.60\% \times (1-0.44) = 6.63\%$		

*Risk-free rate*

16. 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 November 2012 in respect of the April 2015 and December 2017 maturity bonds. The April 2015 and December 2017 bonds have simple average annualised bid yields to maturity of 2.51% and 2.88% respectively.
17. 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 2.88% interest rate on a NZ government bond with a five year term to maturity as at 1 December 2012. For terms to maturity of four years and three years, the risk-free rates are 2.74% and 2.60%, respectively.

*Tax rates*

18. 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*

19. The standard error of the WACC is determined in accordance with the formula in the GDS and GTS IM Determinations, and is shown to three decimal places only in Table 2 above.

*Debt premium*

20. The methodology for determining the debt premium is set out in clause 5.3.25 of the GDS IM Determination and clause 5.3.21 of the GTS IM Determination.
21. Clause 5.3.25(3)(d) of the GDS IM Determination and clause 5.3.21(3)(d) of the GTS IM Determination require the Commission to estimate the debt premium that would reasonably be expected to apply to a vanilla NZ\$ denominated bond that:
  - 21.1 is issued by a GPB or an EDB that is neither majority owned by the Crown or a local authority<sup>7</sup>
  - 21.2 is publicly traded
  - 21.3 has a qualifying rating of grade BBB+
  - 21.4 has a remaining term to maturity of five years (or four or three years as applicable under clause 5.3.25(6) of the GDS IM Determination or clause 5.3.21(6) of the GTS IM Determination).

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<sup>7</sup> Clause 5.3.25(3)(d)(i) of the GDS IM Determination refers to a bond issued by a “GDB” rather than a “GPB or an EDB”. However, clauses 5.3.25(4)(a)-(e), which describe the bonds the Commission will have regard to for the purpose of subclause (3)(d), refer to bonds issued by “a GPB or an EDB”.

22. In estimating the debt premium, clause 5.3.25(4) of the GDS IM Determination and clause 5.3.21(4) of the GTS IM Determination provide that the Commission will have regard to:
- 22.1 bonds issued by a GPB or an EDB (that is not government-owned) with a rating of BBB+
  - 22.2 bonds issued by another entity (that is not government-owned) with a rating of BBB+
  - 22.3 bonds issued by a GPB or an EDB (that is not government-owned) with a rating other than BBB+
  - 22.4 bonds issued by another entity (that is not government-owned) with a rating other than BBB+
  - 22.5 bonds issued by government-owned entities.
23. Clause 5.3.25(5)(a) of the GDS IM Determination and clause 5.3.21(5)(a) of the GTS IM Determination provide that progressively lesser regard will ordinarily be given to the debt premium estimates in the order that the bonds are identified in clauses 5.3.25(4)(a) to (e) and clauses 5.3.21(4)(a) to (e), respectively.
24. Table 3, Table 4 and Table 5 below show the debt premiums for terms of three, four and five years respectively, determined by the Commission as at 1 December 2012. These tables include a summary of information on the investment grade rated bonds the Commission considered in determining the debt premium, for remaining terms of five years, four years, and three years.
25. A spreadsheet showing the calculations for the debt premium (and the risk-free rate) is published on our website.<sup>8</sup>
26. No weight has been placed on the estimated debt premium for Wellington International Airport Limited (WIAL) (2.26%, 1 year remaining term to maturity, rated BBB+). The estimated debt premium for WIAL is out of line with debt premiums for the other issuers, having regard to term to maturity and credit rating.

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<sup>8</sup> See [www.comcom.govt.nz/cost-of-capital/](http://www.comcom.govt.nz/cost-of-capital/)

### Five year debt premium

27. Table 3 below shows the five year debt premium on a GPB/EDB issued bond rated BBB+, as at 1 December 2012.

**Table 3: Five-year debt premium on a GPB/EDB-issued bond rated BBB+<sup>9</sup>**

Determined debt premium on an EDB/GPB-issued bond rated BBB+ with a remaining term of 5 years as at 1 December 2012						
	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) and 4(d). Not inconsistent with 4(e).	
Subclause	Issuer	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	Vector <sup>1</sup>	EDB/GPB	BBB+	1.9	1.56	Minimum per subclause 5(b).
4(b)	WIAL <sup>2</sup>	Other	BBB+	1.0	2.26	Anomalous, out of line with debt premiums for other issuers.
4(c)	Powerco <sup>3</sup>	EDB/GPB	BBB	4.8	2.20	5 year debt premium would be higher and a BBB+ debt premium would be less than this.
4(d)	Contact <sup>4</sup>	Other	BBB	4.4	2.19	5 year debt premium would be higher and a BBB+ debt premium would be less than this.
	AIAL <sup>5</sup>	Other	A-	4.9	1.71	5 year debt premium and BBB+ debt premium would be higher than this.
	Telecom <sup>6</sup>	Other	A-	5.0	1.98	BBB+ debt premium would be higher than this.
	Telstra <sup>7</sup>	Other	A	4.6	1.79	5 year debt premium and BBB+ debt premium would be higher than this.
	Fonterra <sup>8</sup>	Other	A+	3.3	1.44	5 year debt premium and BBB+ debt premium would be higher than this.
4(e)	Genesis <sup>9</sup>	Other	BBB+	5.0	1.78	
	MRP <sup>10</sup>	Other	BBB+	5.0	1.95	
	Transpower <sup>11</sup>	Other	AA-	5.0	1.44	
	Meridian <sup>12</sup>	Other	BBB+	4.3	1.87	

Notes on bonds analysed:

1 Vector 7.8% bond maturing 15/10/2014.

2 WIAL 7.5% maturing 15/11/2013.

3 Powerco 6.74% bond maturing 28/09/2017.

4 Contact Energy 7.855% bond maturing 13/04/2017.

5 AIAL 5.47% bond maturing 17/10/2017.

6 Telecom 7.04% bond maturing 22/03/2016; 5.25% bond maturing 25/10/2019.

7 Telstra 7.515% bond maturing 11/07/2017.

8 Fonterra 6.83% bond maturing 4/03/2016.

9 Genesis 7.185% bond maturing 15/09/2016; 5.25% bond maturing 1/11/2019.

10 Mighty River Power 7.55% bond maturing 12/10/2016; 8.21% bond maturing 11/02/2020.

11 Transpower 6.595% bond maturing 15/02/2017; 7.19% maturing 12/11/2019.

12 Meridian 7.55% bond maturing 16/03/2017.

28. Consistent with clause 5.3.25(4)-(5)(a) of the GDS IM Determination and clause 5.3.21(4)-(5)(a) of the GTS IM Determination, greatest regard has been given to the

<sup>9</sup> The five-year debt premiums on the Telecom, Genesis, Mighty River Power (MRP) and Transpower bonds are calculated by linear interpolation with respect to maturity.



estimated debt premium on Vector's October 2014 bond. This bond is issued by a GPB/EDB, is publicly traded and has a rating of BBB+. However, the October 2014 Vector bond has a remaining term to maturity of 1.9 years, which is significantly less than five years specified in clause 2.4.4(3)(d).

29. As at 1 December 2012, the debt premium on the Vector bond was estimated at 1.56%. Consistent with subclause (5)(b) of each determination, this estimated debt premium is treated as the minimum debt premium for a bond rated BBB+ with a term of five years.
30. The debt premium on Powerco's September 2017 bond is 2.20%. Powerco's bond is rated BBB and has a term to maturity of 4.8 years, implying that the five year debt premium on bonds rated BBB+ is likely to be slightly less than 2.20%.
31. 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) (1.71%, 4.9 years, rated A-), Contact Energy (2.19%, 4.4 years, rated BBB), Telecom (1.98%, 5 years, rated A-), Telstra (1.79%, 4.6 years, rated A) and Fonterra (1.44%, 3.3 years, rated A+). Consistent with subclause (5)(a) of each determination these were given less weight as the issuers are not GPBs or EDBs, and the debt issues had different credit ratings than the BBB+ rating specified in subclause (3)(d).
32. The estimated debt premium on the Genesis bonds (rated BBB+ with a 5 year term to maturity), the Mighty River Power bonds (rated BBB+ with a 5 year term to maturity), the Transpower bonds (rated AA- with a 5 year term to maturity) and the Meridian bond (rated BBB+ with a 4.3 year term to maturity) were 1.78%, 1.95%, 1.44% and 1.87% respectively.
33. 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, GPB/EDB-issued bond, rated BBB+ with a remaining term of five years to be 2.15% as at 1 December 2012.

### Four year debt premium

34. Table 4 below shows the four year debt premium on a GPB/EDB issued bond rated BBB+, as at 1 December 2012.

**Table 4: Four-year debt premium on a GPB/EDB-issued bond rated BBB+<sup>10</sup>**

Determined debt premium on an EDB/GPB-issued bond rated BBB+ with a remaining term of 4 years as at 1 December 2012						
	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment	
Determined Debt Premium	EDB / GPB	BBB+	4.0	2.05	Vector premium provides floor. Regard to results of 4(c) and 4(d). Not inconsistent with 4(e).	

Subclause	Issuer	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	Vector <sup>1</sup>	EDB/GPB	BBB+	1.9	1.56	Minimum per subclause 5(b).
4(b)	WIAL <sup>2</sup>	Other	BBB+	1.0	2.26	Anomalous, out of line with debt premiums for other issuers.
4(c)	Powerco <sup>3</sup>	EDB/GPB	BBB	4.0	2.14	BBB+ debt premium would be less than this.
4(d)	Contact <sup>4</sup>	Other	BBB	4.0	2.12	BBB+ debt premium would be less than this.
	AIAL <sup>5</sup>	Other	A-	4.0	1.67	BBB+ debt premium would be higher than this.
	Telecom <sup>6</sup>	Other	A-	4.0	1.90	BBB+ debt premium would be higher than this.
	Telstra <sup>7</sup>	Other	A	4.0	1.68	BBB+ debt premium would be higher than this.
	Fonterra <sup>8</sup>	Other	A+	3.3	1.44	4 year debt premium and BBB+ debt premium would be higher than this.
4(e)	Genesis <sup>9</sup>	Other	BBB+	4.0	1.78	
	MRP <sup>10</sup>	Other	BBB+	4.0	1.84	
	Transpower <sup>11</sup>	Other	AA-	4.2	1.37	
	Meridian <sup>12</sup>	Other	BBB+	4.0	1.82	

Notes on bonds analysed:

- 1 Vector 7.8% bond maturing 15/10/2014.
- 2 WIAL 7.5% maturing 15/11/2013.
- 3 Powerco 6.53% bond maturing 29/06/2015; 6.74% bond maturing 28/09/2017.
- 4 Contact Energy 8% bond maturing 15/05/2014; 7.855% bond maturing 13/04/2017.
- 5 AIAL 8% bond maturing 15/11/2016; 5.47% bond maturing 17/10/2017.
- 6 Telecom 7.04% bond maturing 22/03/2016; 5.25% bond maturing 25/10/2019.
- 7 Telstra 7.15% bond maturing 24/11/2014; 7.515% bond maturing 11/07/2017.
- 8 Fonterra 6.83% bond maturing 4/03/2016.
- 9 Genesis 7.185% bond maturing 15/09/2016; 5.25% bond maturing 1/11/2019.
- 10 Mighty River Power 7.55% bond maturing 12/10/2016; 8.21% bond maturing 11/02/2020.
- 11 Transpower 6.595% bond maturing 15/02/2017.
- 12 Meridian 7.15% bond maturing 16/03/2015; 7.55% bond maturing 16/03/2017.

35. Consistent with clause 5.3.25(4)-(5)(a) of the GDS IM Determination and clause 5.3.21(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 GPB/EDB, is publicly traded, has a rating of BBB+, and a term to maturity of 1.9 years.

<sup>10</sup> The four-year debt premiums on the Powerco, Contact Energy, AIAL, Telecom, Telstra, Genesis, MRP and Meridian bonds are calculated by linear interpolation with respect to maturity.

36. As at 1 December 2012, the debt premium on the Vector bond was estimated at 1.56%. Consistent with subclause (5)(b) of each determination this estimated debt premium is treated as the minimum debt premium for a bond rated BBB+ with a term of four years.
37. The interpolated four year debt premium on Powerco's bonds is 2.14%. Powerco's bonds are rated BBB, implying that the four year debt premium on bonds rated BBB+ would be less than 2.14%.
38. 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) (1.67%, 4 years, rated A-), Contact Energy (2.12%, 4 years, rated BBB), Telecom (1.90%, 4 years, rated A-), Telstra (1.68%, 4 years, rated A) and Fonterra (1.44%, 3.3 years, rated A+). Consistent with subclause (5)(a) of each determination these were given less weight as the issuers are not GPBs or EDBs, and the debt issues had different credit ratings than the BBB+ rating specified in subclause (3)(d).
39. The estimated debt premium on the Genesis bonds<sup>11</sup> (rated BBB+ with a 4 year term to maturity), the Mighty River Power bonds (rated BBB+ with a 4 year term to maturity), the Transpower bonds (rated AA- with a 4.2 year term to maturity) and the Meridian bonds (rated BBB+ with a 4 year term to maturity) were 1.78%, 1.84%, 1.37% and 1.82% respectively.
40. 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, GPB/EDB-issued bond, rated BBB+ with a remaining term of four years to be 2.05% as at 1 December 2012.

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<sup>11</sup> The observed yield on the September 2016 Genesis bond (1.776%, with 3.8 years remaining) is similar to the observed yield on the November 2019 Genesis bond (1.798%, with 6.9 years remaining). Given the narrow yield differential on these bonds, the interpolated estimates of the four and five year debt premiums on the Genesis bonds are very similar (1.777% and 1.784% respectively, rounded to two decimal places in Table 3 and Table 4 above).

### Three year debt premium

41. Table 5 below shows the three year debt premium on a GPB/EDB issued bond rated BBB+, as at 1 December 2012.

**Table 5: Three-year debt premium on a GPB/EDB-issued bond rated BBB+<sup>12</sup>**

Determined debt premium on an EDB/GPB-issued bond rated BBB+ with a remaining term of 3 years as at 1 December 2012						
	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment	
Determined Debt Premium	EDB / GPB	BBB+	3.0	1.92	Vector premium provides floor. Regard to results of 4(c) and 4(d). Not inconsistent with 4(e).	
Subclause	Issuer	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	Vector <sup>1</sup>	EDB/GPB	BBB+	1.9	1.56	Minimum per subclause 5(b).
4(b)	WIAL <sup>2</sup>	Other	BBB+	1.0	2.26	Anomalous, out of line with debt premiums for other issuers.
4(c)	Powerco <sup>3</sup>	EDB/GPB	BBB	3.0	2.06	BBB+ debt premium would be less than this.
4(d)	Contact <sup>4</sup>	Other	BBB	3.0	1.93	BBB+ debt premium would be less than this.
	AIAL <sup>5</sup>	Other	A-	3.0	1.54	BBB+ debt premium would be higher than this.
	Telecom <sup>6</sup>	Other	A-	3.0	1.90	BBB+ debt premium would be higher than this.
	Telstra <sup>7</sup>	Other	A	3.0	1.51	BBB+ debt premium would be higher than this.
	Fonterra <sup>8</sup>	Other	A+	3.0	1.42	BBB+ debt premium would be higher than this.
4(e)	Genesis <sup>9</sup>	Other	BBB+	3.0	1.61	
	MRP <sup>10</sup>	Other	BBB+	3.9	1.83	
	Transpower <sup>11</sup>	Other	AA-	4.2	1.37	
	Meridian <sup>12</sup>	Other	BBB+	3.0	1.64	

Notes on bonds analysed:

- 1 Vector 7.8% bond maturing 15/10/2014.
- 2 WIAL 7.5% maturing 15/11/2013.
- 3 Powerco 6.53% bond maturing 29/06/2015; 6.74% bond maturing 28/09/2017.
- 4 Contact Energy 8% bond maturing 15/05/2014; 7.855% bond maturing 13/04/2017.
- 5 AIAL 7.25% bond maturing 7/11/2015; 8% bond maturing 10/08/2016.
- 6 Telecom 8.65% bond maturing 15/06/2015; 7.04% bond maturing 22/03/2016.
- 7 Telstra 7.15% bond maturing 24/11/2014; 7.515% bond maturing 11/07/2017.
- 8 Fonterra 7.75% bond maturing 10/03/2015; 6.83% bond maturing 4/03/2016.
- 9 Genesis 7.25% bond maturing 15/03/2014; 7.65% bond maturing 15/03/2016.
- 10 Mighty River Power 7.55% bond maturing 12/10/2016.
- 11 Transpower 6.595% bond maturing 15/02/2017.
- 12 Meridian 7.15% bond maturing 16/03/2015; 7.55% bond maturing 16/03/2017.

42. Consistent with clause 5.3.25(4)-(5)(a) of the GDS IM Determination and clause 5.3.21(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 GPB/EDB, is publicly traded, has a rating of BBB+, and a term to maturity of 1.9 years.

<sup>12</sup> The three-year debt premiums on the Powerco, Contact Energy, AIAL, Telecom, Telstra, Fonterra, Genesis and Meridian bonds are calculated by linear interpolation with respect to maturity.

43. As at 1 December 2012, the debt premium on the Vector bond was estimated at 1.56%. Consistent with subclause (5)(b) of each determination this estimated debt premium is treated as the minimum debt premium for a bond rated BBB+ with a term of three years.
44. The interpolated three year debt premium on Powerco's bonds is 2.06%. Powerco's bonds are rated BBB, implying that the three year debt premium on bonds rated BBB+ would be less than 2.06%.
45. 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) (1.54%, 3 years, rated A-), Contact Energy (1.93%, 3 years, rated BBB), Telecom (1.90%, 3 years, rated A-), Telstra (1.51%, 3 years, rated A) and Fonterra (1.42%, 3 years, rated A+). Consistent with subclause (5)(a) of each determination these were given less weight as the issuers are not GPBs or EDBs, and the debt issues had different credit ratings than the BBB+ rating specified in subclause (3)(d).
46. The estimated debt premium on the Genesis bonds (rated BBB+ with a 3 year term to maturity), the Mighty River Power bonds (rated BBB+ with a 3.9 year term to maturity), the Transpower bonds (rated AA- with a 4.2 year term to maturity) and the Meridian bonds (rated BBB+ with a 3 year term to maturity) were 1.61%, 1.83%, 1.37% and 1.64% respectively.
47. 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, GPB/EDB-issued bond, rated BBB+ with a remaining term of three years to be 1.92% as at 1 December 2012.

### **WACC for default price-quality paths for GDBs and GTBs**

48. Under clause 4.4.7 of the GDS IM Determination and the GTS IM Determination, the Commission has determined 75<sup>th</sup> percentile estimates of vanilla WACC for the DPP regulatory period proposed to commence on 1 July 2013 for GDBs and GTBs.
49. The estimate of vanilla WACC for DPPs is the same as the five-year vanilla WACC for CPPs, as set out in paragraphs 12 to 33 above. The parameters used to calculate the five year vanilla WACC for CPPs remain the same under the DPPs for both GDBs and GTBs.
50. The 75<sup>th</sup> percentile estimate of vanilla WACC is 7.44%. The corresponding midpoint vanilla WACCs is 6.63%. The WACC is estimated as at 1 December 2012.