

**Cost of capital determination for customised price-quality  
path proposals made by Vector Limited and GasNet Limited  
for gas distribution and gas transmission services [2014]  
NZCC 41**

**The Commission:** P Duignan  
Dr S Gale  
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**Date of determination:** 19 December 2014

## Executive summary

1. This determination sets vanilla weighted average cost of capital (WACC) estimates that will apply to customised price-quality path (CPP) proposals made by:<sup>1</sup>
  - 1.1 Vector Limited (Vector), for the supply of gas distribution services or gas transmission services; or
  - 1.2 GasNet Limited (GasNet), for the supply of gas distribution services.
2. The WACC estimates in this determination apply to any CPP proposals made by Vector or GasNet before the next CPP WACC determination for Vector and GasNet is made in December 2015.
3. Vanilla WACC estimates for CPP proposals made by Vector and GasNet are summarised in Table 1 below. The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity.

**Table 1: Vanilla WACC estimates for Vector and GasNet CPP proposals (%)**

	Mid-point	67 <sup>th</sup> percentile
Vanilla WACC (3 years)	7.11	7.64
Vanilla WACC (4 years)	7.14	7.67
Vanilla WACC (5 years)	7.22	7.75

4. 67<sup>th</sup> percentile estimates of vanilla WACC are used for CPPs. The WACCs are estimated as at 1 December 2014.<sup>2</sup>

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

<sup>2</sup> Following our recent review of the WACC percentile for electricity lines and gas pipeline businesses, 67<sup>th</sup> percentile estimates of vanilla WACC are used for GPBs subject to a CPP. See clauses 6.3 and 6.4 of Electricity Lines Services and Gas Pipeline Services Input Methodologies Determination Amendment (WACC percentile for price-quality regulation) 2014 [2014] NZCC 27.

## Introduction

5. This determination sets vanilla WACC estimates that will apply to CPP proposals made by:<sup>3</sup>
  - 5.1 Vector, for the supply of gas distribution services or gas transmission services; or
  - 5.2 GasNet, for the supply of gas distribution services.
6. The WACC estimates in this determination apply to any CPP proposals made by Vector or GasNet before the next CPP WACC determination for Vector and GasNet is made in December 2015.
7. Vanilla WACCs for CPP proposals made by Vector and GasNet are set under:
  - 7.1 clauses 5.3.22 to 5.3.29 of the Gas Distribution Services Input Methodologies Determination 2012 (the GDS IM Determination);<sup>4</sup> and
  - 7.2 clauses 5.3.18 to 5.3.25 of the Gas Transmission Services Input Methodologies Determination 2012 (GTS IM Determination).<sup>5</sup>
8. 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.
9. 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.

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<sup>3</sup> The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the post-tax cost of equity. The vanilla WACC estimates for CPP proposals in this determination do not apply to Powerco Limited or Maui Development Limited, as their disclosure years do not end on 30 June. Powerco Limited's disclosure year ends on 30 September and Maui Development Limited's disclosure year ends on 31 December.

<sup>4</sup> Commerce Commission "Gas Distribution Services Input Methodologies Determination 2012" (16 December 2013).

<sup>5</sup> Commerce Commission "Gas Transmission Services Input Methodologies Determination 2012" (25 February 2013).

## Background

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

10. The cost of capital input methodologies for regulated services reflect that both the risk-free rate and the debt premium on bonds change over time.<sup>6</sup>
11. Changes in the risk-free rate and debt premium on bonds are illustrated below. Figure 1 shows, as at 1 December 2014, changes over time in the:
- 11.1 five year risk-free rate; and
- 11.2 debt premium on bonds rated BBB+ with a term of five years.

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



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

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

12. Differences in the WACCs estimated under the various cost of capital input methodologies reflect differences in the:
  - 12.1 date of estimation for the WACCs, which results in different estimates of the risk-free rate and debt premium;
  - 12.2 periods in which the WACCs will apply;
  - 12.3 context in which the WACCs will be used (67th 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);
  - 12.4 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
  - 12.5 value of leverage for airports (17%) and for EDBs, GPBs, and Transpower (44%).

### **WACC for CPP proposals made by Vector and GasNet**

13. Under clause 5.3.28 of the GDS IM Determination and clause 5.3.24 of the GTS IM Determination, we have determined 67<sup>th</sup> percentile estimates of vanilla WACC for inclusion in CPP proposals made by Vector or GasNet. The WACC estimates in this determination apply to any CPP proposals made by Vector or GasNet before the next CPP WACC determination for Vector and GasNet is made in December 2015.
14. The 67<sup>th</sup> percentile estimate of vanilla WACC for a CPP period of three years is 7.64%, four years is 7.67% and five years is 7.75%. The corresponding mid-point vanilla WACCs are 7.11%, 7.14% and 7.22% for periods of three, four and five years, respectively. These WACCs are estimated as at 1 December 2014.

### **Parameters used to estimate the WACC**

15. The above 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*

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

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

<b>Parameter</b>	<b>Estimate (3 years)</b>	<b>Estimate (4 years)</b>	<b>Estimate (5 years)</b>
<b>Risk-free rate</b>	3.75%	3.81%	3.90%
<b>Debt premium</b>	1.35%	1.45%	1.55%
<b>Leverage</b>	44%	44%	44%
<b>Equity beta</b>	0.79	0.79	0.79
<b>Tax adjusted market risk premium</b>	7.0%	7.0%	7.0%
<b>Average corporate tax rate</b>	28%	28%	28%
<b>Average investor tax rate</b>	28%	28%	28%
<b>Debt issuance costs</b>	0.58%	0.44%	0.35%
<b>Cost of debt</b>	5.68%	5.70%	5.80%
<b>Cost of equity</b>	8.23%	8.27%	8.34%
<b>Standard error of debt premium</b>	0.0015	0.0015	0.0015
<b>Standard error of WACC</b>	0.012	0.012	0.012
<b>Mid-point vanilla WACC</b>	7.11%	7.14%	7.22%

**Note:** The cost of debt is calculated as the risk-free rate + debt premium + debt issuance costs. The cost of equity is calculated as the risk-free rate  $\times$  (1 - investor tax rate) + the equity beta  $\times$  the tax adjustment market risk premium. The mid-point vanilla WACC is calculated as the cost of equity  $\times$  (1 - leverage) + the cost of debt  $\times$  leverage.

### *Risk-free rate*

- 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 2014 in respect of the April 2015, December 2017, March 2019 and April 2020 maturity bonds. The April 2015, December 2017, March 2019 and April 2020 bonds have simple average annualised bid yields to maturity of 3.58%, 3.75%, 3.83% and 3.93% respectively.

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 3.90% interest rate on a NZ government bond with a five year term to maturity as at 1 December 2014. For terms to maturity of four years and three years, the risk-free rates are 3.81% and 3.75%, respectively.

*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 GDS and GTS IM Determinations, and is shown to three decimal places only in Table 2 above.

*Debt premium*

21. 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.
22. 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:
- 22.1 is issued by a GPB or an EDB that is neither majority owned by the Crown or a local authority;<sup>7</sup>
  - 22.2 is publicly traded;
  - 22.3 has a qualifying rating of grade BBB+; and
  - 22.4 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).
23. 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:
- 23.1 bonds issued by a GPB or an 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+;

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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".

- 23.3 bonds issued by a GPB or an 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+; and
  - 23.5 bonds issued by government-owned entities.
- 24. 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.
  - 25. Table 3, Table 4 and Table 5 below show the debt premiums for terms of three, four and five years respectively, determined as at 1 December 2014. These tables include a summary of information on the investment grade rated bonds we considered in determining the debt premium, for remaining terms of five years, four years, and three years.
  - 26. A spreadsheet showing the calculations for the debt premium (and the risk-free rate) is published on our website.<sup>8</sup>

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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 2014.

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

	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment		
<b>Determined Debt Premium</b>	EDB/GPB	BBB+	5.0	1.55	Regard to results 4(b), 4(c) and 4(d) Generally consistent with 4(e)		
Subclause	Issuer	Note ref.	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	-	-	-	-	-	-	No data on applicable bonds
4(b)	WIAL	1	Other	BBB+	5.5	1.56	5 year debt premium would be slightly lower
4(c)	Powerco	2	EDB/GPB	BBB	4.1	1.67	5 year debt premium would be higher BBB+ debt premium would be lower
4(d)	Spark	3	Other	A-	4.9	1.24	BBB+ debt premium would be higher
	AIAL	4	Other	A-	5.0	1.01	BBB+ debt premium would be higher
	Telstra	5	Other	A	2.6	1.01	BBB+ and 5 year debt premium would be significantly higher
	Contact	6	Other	BBB	5.0	1.47	BBB+ debt premium would be lower
	Fonterra	7	Other	A	5.0	1.00	BBB+ debt premium would be significantly higher
4(e)	Meridian	8	Other	BBB+	2.3	1.06	
	Genesis Energy	9	Other	BBB+	5.0	1.52	
	MRP	10	Other	BBB+	5.0	1.51	
	CIAL	11	Other	BBB+	5.0	1.41	
	Transpower	12	Other	AA-	5.0	0.93	

#### Notes on bonds analysed:

- 1 WIAL 5.27% bond maturing 11/06/2020.
- 2 Powerco 6.31% bond maturing 20/12/2018.
- 3 Spark 5.25% bond maturing 25/10/2019.
- 4 AIAL 5.47% bond maturing 17/10/2017; 4.73% bond maturing 13/12/2019.
- 5 Telstra 7.515% bond maturing 11/07/2017.
- 6 Contact Energy 5.8% bond maturing 15/5/2019; 5.277% bond maturing 27/5/2020.
- 7 Fonterra 4.6% bond maturing 24/10/2017; 5.52% bond maturing 25/02/2020.
- 8 Meridian 7.55% bond maturing 16/03/2017.
- 9 Genesis Energy 5.205% bond maturing 1/11/2019; 8.3% bond maturing 23/06/2020
- 10 MRP 5.029% bond maturing 6/03/2019; 8.21% bond maturing 11/02/2020.
- 11 CIAL 5.15% bond maturing 6/12/2019.
- 12 Transpower 7.19% bond maturing 12/11/2019; bond maturing 6.95% 10/06/2020.

<sup>9</sup> The five-year debt premiums on the Auckland International Airport Limited (AIAL), Contact Energy, Fonterra, Genesis Energy, Mighty River Power (MRP) and Transpower bonds are calculated by linear interpolation with respect to maturity.

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 estimated debt premium on Wellington International Airport Limited's (WIAL's) June 2020 bond. This bond is issued by an entity other than an EDB/GPB, is publicly traded and has a rating of BBB+. The June 2020 bond has a term to maturity of 5.5 years, which is only slightly more than the five years specified in clause 5.3.25(3)(d) of the GDS IM Determination and clause 5.3.21(3)(d) of the GTS IM Determination.
29. As at 1 December 2014, the debt premium on the WIAL bond with a remaining term to maturity of 5.5 years was estimated at 1.56%. This implies the debt premium on a bond with a term of five years of approximately 1.55%.
30. The debt premium on Powerco's December 2018 bond is 1.67%. This bond has a term to maturity of 4.1 years, which is less than the five years specified in clause 5.3.25(3)(d) of the GDS IM Determination and clause 5.3.21(3)(d) of the GTS IM Determination, and implies that an estimate for five year term would be above 1.67%. However, Powerco's bonds are rated BBB which is less than the BBB+ specified in clause 5.3.25(3)(d) of the GDS IM Determination and clause 5.3.21(3)(d) of the GTS IM Determination. A BBB+ rated bond would likely have a lower debt premium than the 1.67% observed for Powerco. These considerations tend to offset, and the observed Powerco estimate does not alter our view that 1.55% is an appropriate estimate for a five year premium on BBB+ rated bonds.
31. We also had regard to the estimated debt premium on bonds from a range of other issuers including Contact Energy (1.47%, 5 years, rated BBB), Spark (1.24%, 4.9 years, rated A-), Auckland international Airport Limited (AIAL) (1.01%, 5 years, rated A-), Telstra (1.01%, 2.6 years, rated A) and Fonterra (1.0%, 5 years, rated A). Consistent with clauses 5.3.25(5)(a) of the GDS IM Determination and 5.3.21(5)(a) of the GTS IM Determination these debt premiums 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 Energy bonds (1.52%, 5 years, rated BBB+), the Mighty River Power (MRP) bonds (1.51%, 5 years, rated BBB+), the Meridian bond (1.06%, 2.3 years, rated BBB+), the Christchurch International Airport Limited (CIAL) bond (1.41%, 5.0 years, rated BBB+), and Transpower bonds (0.93%, 5 years, rated AA-) were given least weight. We note that the premium on the MRP and Genesis bonds support the view that the estimate of the debt premium we use should be at or above 1.50%.
33. Placing primary weight on the estimated debt premium on the WIAL bond, which has a term slightly longer than our benchmark term, but having regard to the debt premium on a range of other bonds, we have determined the debt premium on a publicly traded, EDB/GPB-issued bond, rated BBB+ with a remaining term of five years to be 1.55% as at 1 December 2014.

### 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 2014.

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

	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment		
<b>Determined Debt Premium</b>	EDB/GPB	BBB+	4.0	1.45	Regard to results 4(b), 4(c) and 4(d) Generally consistent with 4(e)		
Subclause	Issuer	Note ref.	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	-	-	-	-	-	-	No data on applicable bonds
4(b)	WIAL	1	Other	BBB+	5.5	1.56	4 year debt premium would be lower
4(c)	Powerco	2	EDB/GPB	BBB	4.0	1.66	BBB+ debt premium would be lower
4(d)	Spark	3	Other	A-	4.0	1.12	BBB+ debt premium would be higher
	AIAL	4	Other	A-	4.0	0.92	BBB+ debt premium would be higher
	Telstra	5	Other	A	2.6	1.01	BBB+ and 4 year debt premium would be significantly higher
	Contact	6	Other	BBB	4.0	1.52	BBB+ debt premium would be lower
	Fonterra	7	Other	A	4.0	0.89	BBB+ debt premium would be significantly higher
4(e)	Meridian	8	Other	BBB+	2.3	1.06	
	Genesis Energy	9	Other	BBB+	4.0	1.40	
	MRP	10	Other	BBB+	4.0	1.40	
	CIAL	11	Other	BBB+	5.0	1.41	
	Transpower	12	Other	AA-	4.0	0.78	

#### Notes on bonds analysed:

- 1 WIAL 5.27% bond maturing 11/06/2020.
- 2 Powerco bond 6.74% maturing 28/9/2017; 6.31% bond maturing 20/12/2018.
- 3 Spark 7.04% bond maturing 22/03/2016; 5.25% bond maturing 25/10/2019.
- 4 AIAL 5.47% bond maturing 17/10/2016; 4.73% bond maturing 13/12/2019
- 5 Telstra 7.515% bond maturing 11/07/2017.
- 6 Contact Energy 4.8% bond maturing 24/05/2018; 5.8% bond maturing 15/5/2019.
- 7 Fonterra 4.6% bond maturing 24/10/2017; 5.52% bond maturing 25/02/2020.
- 8 Meridian 7.55% bond maturing 16/03/2017.
- 9 Genesis Energy 7.185% bond maturing 15/09/2016; 5.205% bond maturing 1/11/2019.
- 10 MRP 7.55% bond maturing 12/10/2016; 5.029% bond maturing 6/03/2019.
- 11 CIAL 5.15% bond maturing 6/12/2019.
- 12 Transpower 5.14% bond maturing 30/11/2018; 4.65% bond maturing 9/06/2019.

<sup>10</sup> The four-year debt premiums on the Powerco, Spark, Auckland International Airport Limited (AIAL), Contact Energy, Fonterra, Genesis Energy, Mighty River Power (MRP) and Transpower bonds are calculated by linear interpolation with respect to maturity.

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 WIAL's June 2020 bond. This bond is issued by an entity other than an EDB/GPB, is publicly traded and has a rating of BBB+. The June 2020 bond has a term to maturity of 5.5 years, which is more than the four years specified in the IMs determinations.
36. As at 1 December 2014, the debt premium on the WIAL bond with a remaining term to maturity of 5.5 years was estimated at 1.56%. This is indicative of the upper bound of the debt premium for a bond rated BBB+ with a term of four years. A four year debt premium would likely be lower, perhaps around 1.45%.
37. The interpolated four year debt premium on Powerco's bonds is 1.66%. Powerco's bonds are rated BBB, implying that the four year debt premium on bonds rated BBB+ would be less than 1.66%.
38. We also had regard to the estimated debt premium on bonds from a range of other issuers including Contact Energy (1.52%, 4 years, rated BBB), Spark (1.12%, 4 years, rated A-), AIAL (0.92%, 4 years, rated A-), Telstra (1.01%, 2.6 years, rated A) and Fonterra (0.89%, 4.0 years, rated A). Consistent with clauses 5.3.25(5)(a) of the GDS IM Determination and 5.3.21(5)(a) of the GTS IM Determination these debt premiums 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 Energy bonds (1.40%, 4 years, rated BBB+), the MRP bonds (1.40%, 4 years, rated BBB+), the Meridian bond (1.06%, 2.3 years, rated BBB+), the CIAL bond (1.41%, 5.0 years, rated BBB+), and Transpower bonds (0.78%, 4 years, rated AA-) were given less weight as these issuers are either majority owned by the Crown or a local authority. A debt premium estimate of 1.45% is slightly above the estimates of the debt premium on the Genesis and MRP bonds.
40. Starting with the estimated debt premium on the WIAL bond, but having regard to the debt premium on a range of other bonds, we have determined the debt premium on a publicly traded, EDB/GPB-issued bond, rated BBB+ with a remaining term of four years to be 1.45% as at 1 December 2014.

### 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 2014.

**Table 5: Three-year debt premium on a GPB/EDB-issued bond rated BBB+<sup>11</sup>**

	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
<b>Determined Debt Premium</b>	EDB/GPB	BBB+	3.0	1.35	Regard to results 4(b), 4(c) and 4(d) Generally consistent with 4(e)

  

Subclause	Issuer	Note ref.	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	-	-	-	-	-	-	No data on applicable bonds
4(b)	WIAL	1	Other	BBB+	5.5	1.56	3 year debt premium would be lower
4(c)	Powerco	2	EDB/GPB	BBB	3.0	1.48	BBB+ debt premium would be lower
4(d)	Spark	3	Other	A-	3.0	0.99	BBB+ debt premium would be higher
	AIAL	4	Other	A-	3.0	0.82	BBB+ debt premium would be higher
	Telstra	5	Other	A	2.6	1.01	BBB+ and 3 year debt premium would be higher
	Contact	6	Other	BBB	3.0	1.54	BBB+ debt premium would be lower
	Fonterra	7	Other	A	3.0	0.78	BBB+ debt premium would be significantly higher
4(e)	Meridian	8	Other	BBB+	2.3	1.06	
	Genesis Energy	9	Other	BBB+	3.0	1.26	
	MRP	10	Other	BBB+	3.0	1.24	
	CIAL	11	Other	BBB+	5.0	1.41	
	Transpower	12	Other	AA-	3.0	0.69	

#### Notes on bonds analysed:

- 1 WIAL 5.27% bond maturing 11/06/2020.
- 2 Powerco bond 6.74% maturing 28/9/2017; 6.31% bond maturing 20/12/2018.
- 3 Spark 7.04% bond maturing 22/03/2016; 5.25% bond maturing 25/10/2019.
- 4 AIAL 5.47% bond maturing 17/10/2016; 4.73% bond maturing 13/12/2019
- 5 Telstra 7.515% bond maturing 11/07/2017.
- 6 Contact 7.855% bond maturing 13/04/2017; 4.8% bond maturing 24/05/2018
- 7 Fonterra 4.6% bond maturing 24/10/2017; 5.52% bond maturing 25/02/2020.
- 8 Meridian 7.55% bond maturing 16/03/2017.
- 9 Genesis Energy 7.185% bond maturing 15/09/2016; 5.205% bond maturing 1/11/2019.
- 10 MRP 7.55% bond maturing 12/10/2016; 5.029% bond maturing 6/03/2019.
- 11 CIAL 5.15% bond maturing 6/12/2019.
- 12 Transpower 6.595% bond maturing 15/02/2017; 5.14% bond maturing 30/11/2018.

<sup>11</sup> The three-year debt premiums on the Powerco, Spark, Auckland International Airport Limited (AIAL), Contact Energy, Fonterra, Genesis Energy, Mighty River Power (MRP) and Transpower bonds are calculated by linear interpolation with respect to maturity.

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 WIAL's June 2020 bond. This bond is issued by an entity other than an EDB/GPB, is publicly traded and has a rating of BBB+. The June 2020 bond has a term to maturity of 5.5 years, which is more than the three years specified in the IMs determinations.
43. As at 1 December 2014, the debt premium on the WIAL bond with a remaining term to maturity of 5.5 years was estimated at 1.56%. This is indicative of the upper bound of the debt premium for a bond rated BBB+ with a term of three years. A three year debt premium would likely be lower, perhaps around 1.35%.
44. The interpolated three year debt premium on Powerco's bonds is 1.48%. Powerco's bonds are rated BBB, implying that the three year debt premium on bonds rated BBB+ would be less than 1.48%.
45. We also had regard to the estimated debt premium on bonds from a range of other issuers including Contact Energy (1.54%, 3 years, rated BBB), Spark (0.99%, 3 years, rated A-), AIAL (0.82%, 3 years, rated A-), Telstra (1.01%, 2.6 years, rated A) and Fonterra (0.78%, 3 years, rated A). Consistent with clauses 5.3.25(5)(a) of the GDS IM Determination and 5.3.21(5)(a) of the GTS IM Determination these debt premiums 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 Energy bonds (1.26%, 3 years, rated BBB+), the MRP bonds (1.24%, 3 years, rated BBB+), the Meridian bond (1.06%, 2.3 years, rated BBB+), the CIAL bond (1.41%, 5.0 years, rated BBB+), and Transpower bond (0.69%, 3 years, rated AA-) were given less weight as these issuers are either majority owned by the Crown or a local authority. A debt premium of 1.35% exceeds the estimates, for a remaining term of three years, implied by the yields on the Genesis and MRP bonds.
47. Starting with the estimated debt premium on the WIAL bond, but having regard to the debt premium on a range of other bonds, we have determined the debt premium on a publicly traded, EDB/GPB-issued bond, rated BBB+ with a remaining term of three years to be 1.35% as at 1 December 2014.