

## **Cost of capital determination for disclosure year 2020**

**First Gas and Powerco gas pipeline businesses**

**[2019] NZCC 14**

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## Associated documents

Publication date	Reference	Title
20 December 2016	ISBN 978-1-869455-48-4	Input methodologies review decisions (Topic paper 4: Cost of capital issues)
28 February 2017	ISSN 1178-2560	Gas Transmission Services Input Methodologies Determination 2012 (Consolidated February 2017)
24 May 2017	ISSN 1178-2560	Revised cost of capital determination for gas distribution and gas transmission businesses' default price-quality paths
31 July 2017	ISSN 1178-2560	Cost of capital determination for disclosure year 2018 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)
3 April 2018	ISSN 1178-2560	Gas Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018)
30 April 2018	ISSN 1178-2560	Guidelines for WACC determinations under the cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986
31 July 2018	ISSN 1178-2560	Cost of capital determination for disclosure year 2019 – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)
30 October 2018	ISSN 1178-2560	Cost of capital determination for information disclosure – First Gas and Powerco gas pipeline businesses disclosure year 2019
30 April 2019	ISSN 1178-2560	Cost of capital determination for disclosure year 2020 – Electricity distribution businesses and Wellington International Airport
31 July 2019	ISSN 1178-2560	Cost of capital determination for disclosure year 2020 – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)

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## WACC estimates for gas disclosure year 2019 (Powerco and First Gas)

1. This determination specifies weighted average cost of capital (WACC) estimates that will apply to gas distribution businesses (Powerco Limited and First Gas Limited) and gas transmission businesses (First Gas Limited) for information disclosure regulation in disclosure year 2020,<sup>1</sup> as required by our input methodologies.<sup>2</sup>
2. Vanilla and post-tax WACC estimates for disclosure year 2020 are summarised in Table 1 below.

**Table 1: Vanilla and post-tax WACC estimates (%)**

	Mid-point	25 <sup>th</sup> percentile	67 <sup>th</sup> percentile	75 <sup>th</sup> percentile
Vanilla WACC	4.40	3.70	4.87	5.11
Post-tax WACC	4.07	3.36	4.53	4.78

3. This determination should be read in conjunction with our guidelines for WACC determinations under the cost of capital input methodologies.<sup>3</sup> These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:<sup>4</sup>
  - 3.1 the formulas used (including four different WACC percentiles);
  - 3.2 the values for WACC parameters which are fixed under the input methodologies; and
  - 3.3 our methodology for determining the risk-free rate and average debt premium.

<sup>1</sup> Disclosure year 2020 for these businesses began on 1 October 2019 and ends on 30 September 2020. This determination uses the debt premium estimated as of July 1<sup>st</sup> 2019 and the risk-free rate as of October 1<sup>st</sup> 2019 for the calculation of the WACC estimates. For further details see: Commerce Commission “Fast track amendments to information disclosure determinations for First Gas gas pipeline services: Companion paper” (14 June 2017) and “[FAST TRACK] Gas Distribution Information Disclosure Amendments Determination (No.1) 2017”, available online at <http://www.comcom.govt.nz/regulated-industries/electricity/information-disclosure-requirements-for-distributors/amendments-to-information-disclosure-requirements-2017/>.

<sup>2</sup> The Commission is required to make this determination by clause 2.4.1 of the *Gas Transmission Services Input Methodologies Determination 2012* (consolidated April 2018) and clause 2.4.1 of the *Gas Distribution Services Input Methodologies Determination 2012* (consolidated April 2018), available online at <https://comcom.govt.nz/regulated-industries/input-methodologies/gas-pipelines-ims>.

<sup>3</sup> Commerce Commission “Guidelines for WACC determinations under cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986” (30 April 2018), available online at [https://comcom.govt.nz/data/assets/pdf\\_file/0021/91191/Guidelines-for-WACC-determinations-under-the-cost-of-capital-input-methodologies-30-April-2018.PDF](https://comcom.govt.nz/data/assets/pdf_file/0021/91191/Guidelines-for-WACC-determinations-under-the-cost-of-capital-input-methodologies-30-April-2018.PDF)

<sup>4</sup> Table 1 of the guidelines contains links to the relevant input methodologies.

## Further details regarding the WACC estimates

### *WACC parameter values for Powerco and First Gas*

4. The parameter values used to generate the mid-point WACC estimates for disclosure year 2020 are set out in Table 2 below.

**Table 2: Values used to calculate WACC estimates**

<b>Parameter</b>	<b>Estimate</b>
Risk-free rate	1.00%
Average debt premium (BBB+)	1.62%
Leverage	42%
Asset beta	0.40
Equity beta	0.69
Tax-adjusted market risk premium	7.0%
Average corporate tax rate	28%
Average investor tax rate	28%
Debt issuance costs	0.20%
Cost of debt	2.82%
Cost of equity	5.55%
Standard error of WACC	0.0105
<b>Mid-point vanilla WACC</b>	<b>4.40%</b>
<b>Mid-point post-tax WACC</b>	<b>4.07%</b>

### *Risk-free rate*

5. 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. Our estimate of the risk-free rate is based on data reported by Bloomberg for the three month period ending 30 September 2019 in respect of the April 2023 and April 2025 maturity bonds.
6. The daily data reported by Bloomberg is linearly interpolated, annualised (to reflect the six monthly payment of interest), and averaged to produce the estimate of a 1.00% interest rate on New Zealand Government bonds with a five year term to maturity as at 1 October 2019.

### Average debt premium

7. The average debt premium of 1.62% is the average of the debt premium values for the current debt premium reference year (DPRY) and the four previous DPRYs, as shown in Table 3 below. DPRY 2020 is the current reference year for gas distribution businesses and gas transmission businesses, together referred to as gas pipeline businesses (GPBs).<sup>5</sup>

**Table 3: Average debt premium for GPBs (%)**

	DPRY 2016	DPRY 2017	DPRY 2018	DPRY 2019	DPRY 2020	Average
Debt premium	1.66	1.54	1.65	1.60	1.65	1.62

8. The debt premium values are taken from the following sources:
- 8.1 The debt premium values for the 2016 and 2017 DPRYs are set out in clause 2.4.4(4) of the *Gas Transmission Services Input Methodologies Determination 2012* (consolidated April 2018) and clause 2.4.4(4) of the *Gas Distribution Services Input Methodologies Determination 2012* (consolidated April 2018).<sup>6</sup>
- 8.2 The debt premium value for the 2018 DPRY is set out at Table 2 of the *Cost of capital determination for disclosure year 2018 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)* [2017] NZCC 19 (31 July 2017).<sup>7</sup>
- 8.3 The debt premium value for the 2019 DPRY is set out at Table 7 of the *Cost of capital determination for disclosure year 2019 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)* [2018] NZCC 11 (31 July 2018).<sup>8</sup>
- 8.4 The debt premium value for the 2020 DPRY is set out at Table 7 of the *Cost of capital determination for disclosure year 2020 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end)* [2019] NZCC 8 (31 July 2019).<sup>9</sup>

<sup>5</sup> The 'current debt premium reference year' refers to the debt premium reference year (DPRY) that contains the start of the relevant disclosure year. The GPBs' DPRY 2020 starts on 1 March 2019.

<sup>6</sup> Available online at <https://comcom.govt.nz/regulated-industries/input-methodologies/gas-pipelines-ims>.

<sup>7</sup> Available online at [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0028/60868/2017-NZCC-19-Cost-of-capital-determination-Transpower-GPBs-and-Airports-ID-31-July-2017.PDF](https://comcom.govt.nz/_data/assets/pdf_file/0028/60868/2017-NZCC-19-Cost-of-capital-determination-Transpower-GPBs-and-Airports-ID-31-July-2017.PDF).

<sup>8</sup> Available online at [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0028/91189/2018-NZCC-11-Cost-of-capital-determination-Transpower,-GPBs-and-Airports-ID-31-July-2018.PDF](https://comcom.govt.nz/_data/assets/pdf_file/0028/91189/2018-NZCC-11-Cost-of-capital-determination-Transpower,-GPBs-and-Airports-ID-31-July-2018.PDF).

<sup>9</sup> Available online at [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0016/163213/2019-NZCC-8-Cost-of-capital-determination-Transpower,-GPBs-and-Airports-ID-31-July-2019.PDF](https://comcom.govt.nz/_data/assets/pdf_file/0016/163213/2019-NZCC-8-Cost-of-capital-determination-Transpower,-GPBs-and-Airports-ID-31-July-2019.PDF).

9. In July 2019 we estimated a debt premium of 1.65% for the 2020 DPRO based on the data in Table 4 below.

9.1 We have had greatest regard to the category (b) bonds, which support a debt premium of approximately 1.65%. The Genesis (1.76%) and Wellington Airport (1.59%) bonds all match the target credit rating (BBB+) and remaining term to maturity (5 years). Although the Mercury (1.65%) and Meridian bond (1.54%) are rated BBB+, both have a remaining term to maturity of 4.5 years so we would expect GPBs to have higher debt premium, which supports an estimate of 1.65%.

9.2 The estimated debt premiums for other issuers in bond categories (c) to (e) are consistent with a debt premium of approximately 1.65%, when consideration is given to the different credit ratings and terms to maturity.

9.3 The Nelson-Siegel-Svensson estimate of a debt premium of 1.58% for the 2020 DPRO also lends support to our estimate of 1.65%.<sup>10</sup>

**Table 4: Debt premium estimate for GPB DPRO 2020**

	Industry	Rating	Remaining term to maturity	Debt premium
Determined debt premium	GPB	BBB+	5.0	1.65

Category	Issuer	Note ref.	Industry	Rating	Remaining term to maturity	Debt premium	Comment
(b)	GENESIS ENERGY LTD	1	Other	BBB+	5.0	1.76	Credit rating and term are an exact match
	MERCURY NZ LTD	2	Other	BBB+	4.5	1.65	5 year debt premium would be higher
	MERIDIAN ENERGY LIMITE	3	Other	BBB+	4.5	1.54	5 year debt premium would be higher
	WELLINGTON INTL AIRPOR	4	Airport	BBB+	5.0	1.59	Credit rating and term are an exact match
(c)	VECTOR LTD	5	EDB/GPB	BBB	5.5	1.95	5 year debt premium would be lower BBB+ debt premium would be higher;
(d)	AUCKLAND INTL AIRPORT	6	Airport	A-	5.2	1.19	5 year debt premium would be lower BBB+ debt premium would be higher;
	CHORUS LTD	7	Other	BBB	2.7	1.65	5 year debt premium would be higher BBB+ debt premium would be lower;
	CONTACT ENERGY LTD	8	Other	BBB	4.2	1.51	5 year debt premium would be higher
	FONTERRA COOPERATIVE G	9	Other	A-	5.0	1.39	BBB+ debt premium would be higher
	SPARK FINANCE LTD	10	Other	A-	5.0	1.27	BBB+ debt premium would be higher
(e)	CHRISTCHURCH INTL AIRP	11	Airport	A-	5.0	1.49	BBB+ debt premium would be higher
	TRANSPOWER NEW ZEALAND	12	Other	AA-	5.0	1.10	BBB+ debt premium would be higher
Nelson-Siegel Svensson estimate					5.0	1.58	

**Notes on bonds analysed**

- 1 GENEPO 5.81 03/08/23; GENEPO 4.14 03/18/22; GENEPO 5.04/03/25
- 2 MCYNZ 5.793 03/06/23
- 3 MERINZ 4.53 03/14/23
- 4 WIANZ 5.27 06/11/20; WIANZ 5.06/16/25
- 5 VCTNZ 4.996 03/14/24
- 6 AIANZ 3.97 11/02/23
- 7 CNUNZ 4.12 05/06/21
- 8 CENNZ 4.63 11/15/22
- 9 FCGNZ 4.42 03/07/23; FCGNZ 5.9 02/25/22; FCGNZ 5.08 06/19/25
- 10 SPKNZ 4.51 03/10/23; SPKNZ 4.1/2 03/25/22; SPKNZ 3.94 09/07/26
- 11 CHRINT 6.1/4 10/04/21; CHRINT 4.13 05/24/24; CHRINT 5.53 04/05/27
- 12 TPNZ 5.448 03/15/23; TPNZ 4.069 09/16/22; TPNZ 3.823 03/06/25

<sup>10</sup> The Nelson-Siegel-Svensson estimate of the debt premium was estimated in July 2019.

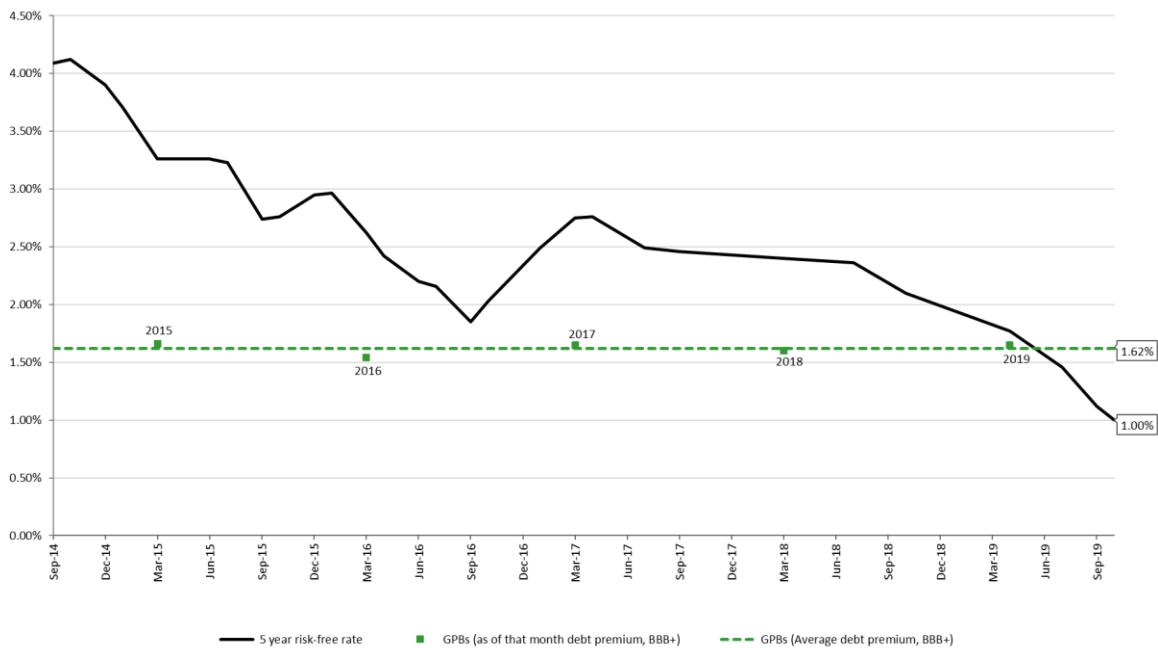
### WACC range and 67<sup>th</sup> percentile estimate for GPBs

10. In addition to the mid-point estimate, we are also required to determine a WACC range and 67<sup>th</sup> percentile estimate for each GPB disclosure year.
11. The WACC range means the values falling between the 25<sup>th</sup> percentile and 75<sup>th</sup> percentile, inclusive of the mid-point estimate. The methodology for estimating different WACC percentile estimates is set out in clause 2.4.5 of the *Gas Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018)*.<sup>11</sup>

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

12. Changes in the risk-free rate and debt premium on relevant bonds are illustrated below. Figure 1 shows, as at 1 October 2019, changes over time in the:
  - 12.1 five year risk-free rate; and
  - 12.2 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**



<sup>11</sup> Available online at [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0029/59717/Gas-distribution-services-input-methodologies-determination-2012-consolidated-April-2018-3-April-2018.pdf](https://comcom.govt.nz/_data/assets/pdf_file/0029/59717/Gas-distribution-services-input-methodologies-determination-2012-consolidated-April-2018-3-April-2018.pdf). The same methodology applies to both vanilla and post-tax WACC estimates. The mid-point estimate of WACC is treated as the 50<sup>th</sup> percentile.