

# **Cost of capital determination for disclosure year 2023 for information disclosure regulation**

**First Gas and Powerco gas pipeline businesses**

**[2022] NZCC 34**

**The Commission:** S Begg  
B Chapple  
D Johnston  
V McWha

**Date of publication:** 1 November 2022

## 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)
3 April 2018	ISSN 1178-2560	Gas Transmission Services Input Methodologies Determination 2012 (Consolidated February 2018)
3 April 2018	ISSN 1178-2560	Gas Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018)
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) [2018] NZCC 11
30 October 2018	ISSN 1178-2560	Cost of capital determination for information disclosure – First Gas and Powerco gas pipeline businesses disclosure year 2019 [2018] NZCC 16
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) [2019] NZCC 8
31 October 2019	ISSN 1178-2560	Cost of capital determination for disclosure year 2020 – First Gas and Powerco gas pipeline businesses [2019] NZCC 14
31 July 2020	ISSN 1178-2560	Cost of capital determination for disclosure year 2021 – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2020] NZCC 15
31 October 2020	ISSN 1178-2560	Cost of capital determination for disclosure year 2021 – First Gas and Powerco gas pipeline businesses [2020] NZCC 22
27 May 2021	ISBN 978-1-869458-98-0	Guidelines for WACC determinations under the cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986 and Part 6 of the Telecommunications Act 2001
2 August 2021	ISSN 1178-2560	Cost of capital determination for disclosure year 2022 for information disclosure regulation – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2021] NZCC 10

## Associated documents

Publication date	Reference	Title
1 November 2021	ISSN 1178-2560	Cost of capital determination for disclosure year 2022 for information disclosure regulation – First Gas and Powerco gas pipeline businesses [2021] NZCC 20
25 March 2022	ISSN 1178-2560	Gas Distribution Services Input Methodologies Amendment Determination (No.1) 2022 [2022] NZCC 5
25 March 2022	ISSN 1178-2560	Gas Transmission Services Input Methodologies Amendment Determination (No.1) 2022 [2022] NZCC 6
1 April 2022	ISSN 1178-2560	Cost of capital determination for gas pipeline businesses' 2022-2026/2022-2027 default price-quality path [2022] NZCC 10
2 August 2022	ISSN 1178-2560	Cost of capital determination for disclosure year 2023 for information disclosure regulation – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2022] NZCC 28

Commerce Commission  
Wellington, New Zealand

## WACC estimates for disclosure year 2023 (Powerco and First Gas)<sup>1</sup>

1. This determination specifies the weighted average cost of capital (WACC) estimates that will apply for information disclosure (ID) regulation for disclosure year 2023 for gas distribution businesses (Powerco Limited and First Gas Limited),<sup>2</sup> and the gas transmission business (First Gas Limited), together gas pipeline businesses (GPBs).
2. The timing of our WACC determinations for ID regulation differs depending on the disclosure year of the regulated companies. Vector and GasNet have disclosure years of 1 July to 30 June with disclosure year 2023 being the year ending 30 June 2023. Powerco and First Gas have disclosure years of 1 October to 30 September, with disclosure year 2023 being the year ending 30 September 2023. We determine an ID WACC for Vector and GasNet in July due to their different disclosure years.
3. Vanilla and post-tax WACC estimates for Powerco and First Gas for disclosure year 2023 are summarised in Table 1.

**Table 1: Summary of vanilla and post-tax WACC estimates for Powerco and First Gas**

	Vanilla WACC	Post-tax WACC
Mid-point	6.82%	6.19%
25 <sup>th</sup> percentile	6.11%	5.48%
67 <sup>th</sup> percentile	7.28%	6.65%
75 <sup>th</sup> percentile	7.53%	6.90%

4. The WACC estimates have been calculated as at 1 October 2022, which is the first day of disclosure year 2023 for Powerco and First Gas.
5. The WACC estimates have been calculated using a four-year risk-free rate, as opposed to the five-year risk-free rate used in previous determinations.
6. On 1 October 2022, GPBs transitioned to a new default price path, with the length of the regulatory period being shortened to four years (from a default of five years). In accordance with the IMs, the length of the risk-free rate has been aligned with the length of the regulatory period.<sup>3</sup>

<sup>1</sup> Unless appears otherwise from the context, all references to GDBs in this determination mean Powerco Limited and First Gas Limited, and all references to a GTB in this determination mean First Gas Limited.

<sup>2</sup> As this determination covers suppliers of both gas distribution services and gas transmission services, this determination refers to the relevant clauses of the [Gas Distribution Services Input Methodologies Determination 2012 \(Consolidated April 2018\)](#), the [Gas Transmission Services Input Methodologies Determination 2012 \(Consolidated April 2018\)](#), the [Gas Distribution Services Input Methodologies Amendment Determination \(No.1\) 2022](#), and the [Gas Transmission Services Input Methodologies Amendment Determination \(No.1\) 2022](#).

<sup>3</sup> [Gas Distribution Services Input Methodologies Amendment Determination \(No.1\) 22](#), clause 2.4.3 (c); and [Gas Transmission Services Input Methodologies Amendment Determination \(No.1\) 2022](#), clause 2.4.3 (c).

7. This change in the length of the regulatory period has also resulted in debt issuance costs increasing from 0.2% to 0.25%.<sup>4</sup>
8. This determination should be read together with our guidelines for WACC determinations under the cost of capital input methodologies.<sup>5</sup> These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:
  - 8.1 the formulas used (including for different WACC percentiles);
  - 8.2 the values for WACC parameters which are fixed under the input methodologies; and
  - 8.3 our methodology for estimating the risk-free rate and average debt premium.

### **Further details regarding the WACC estimates**

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

9. The parameter values used to generate the mid-point WACC estimates for disclosure year 2023 (as at 1 October 2022) are summarised in Table 2 below.<sup>6</sup>

---

<sup>4</sup> [Gas Distribution Services Input Methodologies Amendment Determination \(No.1\) 22](#), clause 2.4.2 (6); and [Gas Transmission Services Input Methodologies Amendment Determination \(No.1\) 2022](#), clause 2.4.2 (6).

<sup>5</sup> Commerce Commission, Guidelines for WACC determinations under the cost of capital input methodologies - Regulation under Part 4 of the Commerce Act 1986 and Part 6 of the Telecommunications Act 2001, 27 May 2021.

<sup>6</sup> All parameter values except the estimate of the risk-free rate and the average debt premium are set in the input methodologies either by way of specific numbers or formulas using specified numbers and the estimates for the risk-free rate and average debt premium.

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

<b>Parameter</b>	<b>Estimate</b>
Risk-free rate	3.72%
Average debt premium	1.43%
Leverage	42%
Asset beta	0.40
Equity beta	0.69
Tax adjusted market risk premium	7.5%
Average corporate tax rate	28%
Average investor tax rate	28%
Debt issuance costs	0.25%
Cost of debt	5.40%
Cost of equity	7.85%
Standard error of midpoint WACC estimate	0.0105
<b>Mid-point vanilla WACC</b>	<b>6.82%</b>
<b>Mid-point post-tax WACC</b>	<b>6.19%</b>

\*The numbers are rounded to two decimal points.

### Risk-free rate

10. The risk-free rate reflects the unweighted arithmetic average of the daily annualised, linearly-interpolated, bid yield to maturity on New Zealand government bonds with a term to maturity equal to the length of the regulatory period.<sup>7</sup> Our estimate of the risk-free rate is based on data reported by Bloomberg for each business day in the three-month period ending 30 September 2022 in respect of the May 2026 and April 2027 maturity bonds.
11. 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 3.72% interest rate on New Zealand government bonds with a four-year term to maturity, as estimated at 1 October 2022.

<sup>7</sup> We interpolate between the two closest bonds surrounding a four-year remaining term. This requires taking the yields of the bonds with a remaining term immediately before and after four years term to maturity on that day. The term to maturity is constant but the bonds' remaining terms to maturity decrease over time so the bonds immediately before and after the target term may change over time.

## Average debt premium

12. The average debt premium for GPBs of 1.43% is the average of the debt premium values for the current DPRY and the four previous DPRYs, as shown in Table 3 below. DPRY 2023 is the current reference year for GPBs.<sup>8</sup> As explained in paragraph 14 below, this determination uses the debt premium estimated at 1 July 2022 for DPRY 2023.

**Table 3: Average debt premium for Powerco and First Gas (%)**

	DPRY 2019	DPRY 2020	DPRY 2021	DPRY 2022	DPRY 2023	Average
Debt premium	1.60	1.65	1.45	1.35	1.10	1.43

13. The historical debt premium values are taken from the following sources:
- 13.1 The debt premium value for DPRY 2019 was estimated in *the Cost of capital determination for disclosure year 2019 for Transpower, gas pipeline businesses and suppliers of specified airport services [2018]* NZCC 11 (31 July 2018).
- 13.2 The debt premium value for DPRY 2020 was estimated in the *Cost of capital determination for disclosure year 2020 for Transpower, gas pipeline businesses and suppliers of specified airport services [2019]* NZCC 8 (31 July 2019).
- 13.3 The debt premium value for DPRY 2021 was estimated in the *Cost of capital determination for disclosure year 2021 for Transpower, gas pipeline businesses and suppliers of specified airport services [2020]* NZCC 15 (31 July 2020).
- 13.4 The debt premium value for DPRY 2022 was estimated in the *Cost of capital determination for disclosure year 2022 for Transpower, gas pipeline businesses and suppliers of specified airport services [2021]* NZCC 10 (2 August 2021).
14. We estimated a debt premium of 1.10% for DPRY 2023, in the Cost of capital determination for gas pipeline businesses' 2022-2026/2022-2027 default price-quality path.<sup>9</sup> We note that the DPRY 23 estimation period used data from 1 March

<sup>8</sup> The 'current debt premium reference year' refers to the DPRY that contains the start of the relevant disclosure year. The disclosure year 2023 for Powerco and First Gas starts on 1 October 2022. In this case, the current DPRY is DPRY 2023 (1 March 2022 to 28 February 2023). The data we use is from 1 March 2021 to 28 February 2022.

<sup>9</sup> Cost of capital determination for gas pipeline businesses' 2022-2026/2022-2027 default price-quality path [2022] NZCC 10. In this determination we had two sets of WACC estimates – one reflecting a five-year period and the other reflecting a four-year period. We did this because we had not yet produced our final decision on the term of the regulatory period for the GPB default price path.

2021 to 28 February 2022 which coincided with the continuation of the Covid-19 pandemic and which had a significant impact on debt and equity markets.<sup>10</sup>

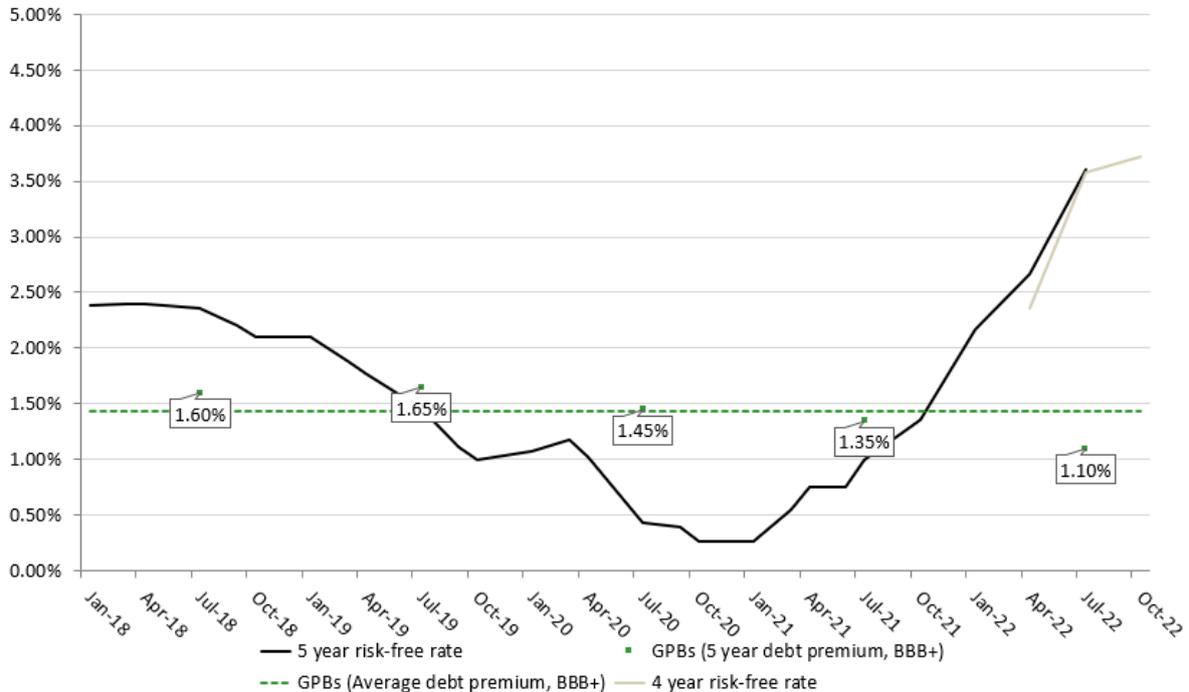
### WACC range and 67th percentile estimate for Powerco and First Gas

15. 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.
16. 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 IM Determination and the Gas Transmission Services IM Determination.<sup>11</sup>

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

17. The risk-free rate and the debt premium on bonds change over time. Figure 1 shows, as at 1 October 2022, changes over time in:
  - 17.1 the five-year risk-free rate;
  - 17.2 the four-year risk-free rate; and
  - 17.3 the debt premium on bonds rated BBB+ with a remaining term to maturity of five years.

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



<sup>10</sup> Note that bond observations that have a remaining term to maturity exactly equal to the target (i.e., five years), and include multiple bonds analysed, have been interpolated between multiple bonds from the issuer to give an exact match to the target term to maturity.

<sup>11</sup> 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.