

Cost of capital determination for disclosure year 2024 for information disclosure regulation

For First Gas' gas pipeline businesses and Powerco's gas distribution business

[2023] NZCC 28

The Commission: Vhari McWha
 Sue Begg
 Bryan Chapple
 Derek Johnston

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Associated documents

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17 January 2023	ISBN 978-1-869457-90-7	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 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
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 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
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
28 September 2012	ISSN 1178-2560	Gas Transmission Services Input Methodologies Determination 2012 (consolidated September 2022)
28 September 2012	ISSN 1178-2560	Gas Distribution Services Input Methodologies Determination 2012 (consolidated September 2022)

Commerce Commission
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WACC estimates for disclosure year 2024 for First Gas’ gas distribution business and gas transmission business and Powerco’s gas distribution business

1. This cost of capital determination has been made under the Cost of Capital Input Methodologies (IMs).^{1 2}
2. This determination specifies the weighted average cost of capital (WACC) estimates that will apply for disclosure year 2024 for First Gas Limited’s (First Gas) gas distribution business (GDB) and gas transmission business (GTB) and Powerco Limited’s (Powerco) GDB for information disclosure (ID) regulation.³
3. The timing of our WACC determinations for ID regulation differs depending on the disclosure year of the regulated companies. Vector and GasNet’s GDBs have disclosure years of 1 July to 30 June with disclosure year 2024 being the year ending 30 June 2024. First Gas and Powerco’s GPBs have disclosure years of 1 October to 30 September, with disclosure year 2024 being the year ending 30 September 2024. We determine an ID WACC for Vector and GasNet’s GDBs in July due to their different disclosure years.
4. Vanilla and post-tax WACC estimates for disclosure year 2024 for First Gas and Powerco’s GPBs are summarised in Table 1.

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

	Vanilla WACC	Post-tax WACC
Mid-point	7.91%	7.13%
25 th percentile	7.21%	6.42%
67 th percentile	8.38%	7.59%
75 th percentile	8.62%	7.84%

5. Further detail regarding the parameter values used to generate these WACC estimates is contained in the paragraphs below. The WACC estimates have been calculated as at 1 October 2023, which is the first day of disclosure year 2024.

¹ Gas Distribution Services Input Methodologies Determination 2012 [2012] NZCC 27 (as amended). An unofficial consolidated version incorporating amendments to the determination [is available on the Commission’s website](#).

² Gas Transmission Services Input Methodologies Determination 2012 [2012] NZCC 28 (as amended). An unofficial consolidated version incorporating amendments to the determination is [available on the Commission’s website](#).

³ Unless appears otherwise from the context, we have used the phrase “gas pipeline business” (GPB) in this determination to refer to First Gas’ GDB and GTB and Powerco’s GDB.

6. This determination should be read together with our guidelines for WACC determinations under the cost of capital input methodologies.⁴ These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:
- 6.1 the formulas used (including for different WACC percentiles);
 - 6.2 the values for WACC parameters which are fixed under the input methodologies; and
 - 6.3 our methodology for determining the risk-free rate and average debt premium.

Further details regarding the WACC estimates

WACC parameter values for First Gas and Powerco's GPBs

7. The parameter values used to generate the mid-point WACC estimates for disclosure year 2024 for First Gas and Powerco's GPBs are summarised in Table 2 below.⁵

Table 2: Values used to calculate WACC estimates for First Gas and Powerco's GPBs

Parameter	Estimate
Risk-free rate	5.04%
Average debt premium	1.40%
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	6.69%
Cost of equity	8.80%
Standard error of mid-point WACC	0.0105
Mid-point vanilla WACC	7.91%
Mid-point post-tax WACC	7.13%

*The numbers are rounded to two decimal points, except for the tax adjusted market risk premium and standard error of the mid-point WACC estimate.

⁴ Commerce Commission, [Guidelines for WACC determinations under the cost of capital input methodologies](#) (17 January 2023).

⁵ All parameter values except the estimate of the risk-free rate and the average debt premium are set in the IMs.

Risk-free rate

8. The risk-free rate reflects the estimated bid yield to maturity on New Zealand government bonds with a term to maturity equal to the length of the regulatory period.
9. Our estimate of the risk-free rate is based on data reported by Bloomberg for the three-month period ending 30 September 2023 in respect of the April 2027 and May 2028 maturity bonds.
10. 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 5.04% interest rate on New Zealand government bonds with a four-year term to maturity, as estimated at 1 October 2023.⁶

Average debt premium

11. The average debt premium for GPBs of 1.40 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.
12. The DPRY for First Gas and Powerco's GPBs starts on 1 March and ends on 28 February. DPRY 2024 is the current DPRY for First Gas and Powerco's GPBs as it contains the start of disclosure year 2024 (1 October 2023). The IMs state that the calculation of the debt premium for a DPRY is estimated for each business day in the 12 months preceding the start of the DPRY.

Table 3: Average debt premium for First Gas and Powerco's GPBs

	DPRY 2020	DPRY 2021	DPRY 2022	DPRY 2023	DPRY 2024	Average
Debt premium	1.65	1.45	1.35	1.10	1.45	1.40

13. The debt premium values are taken from the following sources:
 - 13.1 The debt premium value for DPRY 2020 was estimated in the *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 July 2020).⁷

⁶ 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 target 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.

⁷ [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.](#)

- 13.2 The debt premium value for DPRY 2021 was estimated in the *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 (2 August 2021).⁸
- 13.3 The debt premium value for DPRY 2022 was estimated in the *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 (2 August 2022).⁹
- 13.4 The debt premium value for DPRY 2023 was estimated in the *Cost of capital determination for gas pipeline businesses' 2022-2026/2022-2027 default price quality path [2022]* NZCC 10 (1 April 2022).¹⁰
- 13.5 The debt premium value for DPRY 2024 was estimated in the *Cost of capital determination for disclosure year 2024 for information disclosure regulation for Transpower, gas distribution businesses and suppliers of specified airport services (with a June year-end) [2023]* NZCC 20 (1 August 2023).¹¹

WACC range and 67th percentile estimate for First Gas and Powerco's GPBs

14. In addition to the mid-point estimate, we are also required to determine a WACC range and 67th percentile estimate for each GPB.
15. The WACC range means the values falling between the 25th percentile and 75th percentile, inclusive of the mid-point estimate of WACC. The methodology for estimating different WACC percentiles is set out in clause 2.4.5 of the Gas Distribution Services IMs and the Gas Transmission Services IMs.^{12 13}

⁸ [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.](#)

⁹ [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.](#)

¹⁰ [Cost of capital determination for gas pipeline businesses' 2022-2026/2022-2027 default price-quality path \[2022\] NZCC 10.](#)

¹¹ [Cost of capital determination for disclosure year 2024 for information disclosure regulation for Transpower, gas distribution businesses and suppliers of specified airport services \(with a June year-end\) \[2023\] NZCC 20.](#)

¹² Gas Distribution Services Input Methodologies Determination 2012 [2012] NZCC 27 (as amended). An unofficial consolidated version incorporating amendments to the determination [is available on the Commission's website](#). The same methodology applies to both vanilla and post-tax WACC estimates. The mid-point estimate of WACC is treated as the 50th percentile. The required estimates are set out in Table 1.

¹³ Gas Transmission Services Input Methodologies Determination 2012 [2012] NZCC 28 (as amended). An unofficial consolidated version incorporating amendments to the determination is [available on the Commission's website](#).

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

16. The cost of capital input methodologies for regulated services (including for GDBs and GTBs) reflect that both the risk-free rate and the debt premium on bonds change over time. Figure 1 shows, as at 1 October 2023, changes over time in:
 - 16.1 The four-year risk free rate;
 - 16.2 The five-year risk-free rate; and
 - 16.3 The estimated debt premium on bonds rated BBB+ with a remaining term to maturity of five years.

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

