

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

Electricity distribution businesses and Wellington International Airport

[2022] NZCC 12

The Commission: S Begg
V McWha
E Welson
D Johnston

Date of publication: 3 May 2022

Associated documents

Publication date	Reference	Title
2 August 2021	ISSN 1178-2560	Cost of capital determination for disclosure year 2022 – For Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2021] NZCC 10
30 April 2021	ISSN 1178-2560	Cost of capital determination for disclosure year 2022 – Electricity distribution businesses and Wellington International Airport [2021] NZCC 4
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
13 May 2020	ISSN 1178-2560	Cost of capital determination for disclosure year 2021 – Electricity distribution businesses and Wellington International Airport [2020] NZCC 11
25 September 2019	ISSN 1178-2560	Cost of capital determination for electricity distribution businesses' 2020-2025 default price-quality paths and Transpower New Zealand Limited's 2020-2025 individual price-quality path [2019] NZCC 12
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
30 April 2019	ISSN 1178-2560	Cost of capital determination for disclosure year 2020 for information disclosure regulation. Electricity distribution businesses and Wellington International Airport [2019] NZCC 7
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 April 2018	ISSN 1178-2560	Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport [2018] NZCC 7
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
3 April 2018	ISSN 1178-2560	Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018)
20 December 2016	ISBN 978-1-869455-48-4	Input methodologies review decisions (Topic paper 4: Cost of capital issues)
20 December 2016	ISSN 1178-2560	Airport Services Input Methodologies Determination 2010 (Consolidated December 2016)

Commerce Commission
Wellington, New Zealand

WACC estimates for disclosure year 2023 for EDBs and Wellington Airport

1. This determination specifies weighted average cost of capital (WACC) estimates that will apply for disclosure year 2023 for electricity distribution businesses (EDBs) and Wellington International Airport (Wellington Airport) for information disclosure (ID) regulation.
2. The timing of our WACC determinations for ID regulation differs depending on the disclosure year of the regulated companies. EDBs and Wellington Airport have disclosure years of 1 April to 31 March with disclosure year 2023 being the year ending 31 March 2023. We determine an ID WACC for Auckland International Airport Limited and Christchurch International Airport (AIAL and CIAL) in July, their disclosure year is 1 July to 30 June.
3. Vanilla and post-tax WACC estimates for disclosure year 2023 for EDBs and Wellington Airport are summarised in Table 1 and Table 2 below, respectively.

Table 1: Summary of vanilla and post-tax WACC estimates for EDBs (%)

	Vanilla WACC	Post-tax WACC
Mid-point	5.39%	4.88%
25 th percentile	4.71%	4.20%
67 th percentile	5.84%	5.32%
75 th percentile	6.07%	5.56%

Table 2: Summary of vanilla and post-tax WACC estimates for Wellington Airport (%)

	Vanilla WACC	Post-tax WACC
Mid-point	6.54%	6.32%
Standard error	0.0146	0.0146

4. Further detail regarding the parameter values used to generate these WACC estimates is contained in paragraphs 6 to 18 below. The WACC estimates have been calculated as at 1 April 2022, which is the first day of disclosure year 2023.
5. This determination should be read together with our guidelines for WACC determinations under the cost of capital input methodologies.¹ These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:

¹ [Commerce Commission, Guidelines for WACC determinations under the cost of capital input methodologies, 27 May 2021.](#)

- 5.1 the formulas used (including for different WACC percentiles);
- 5.2 the values for WACC parameters which are fixed under the input methodologies; and
- 5.3 our methodology for determining the risk-free rate and average debt premium.

Further details regarding the WACC estimates

WACC parameter values for EDBs and Wellington Airport

- 6. The parameter values used to generate the mid-point WACC estimates for disclosure year 2023 for EDBs and Wellington Airport are summarised in Table 3 below.²

Table 3: Values used to calculate WACC estimates for EDBs and Wellington Airport

Parameter	EDBs	Wellington Airport
Risk-free rate	2.67%	2.67%
Average debt premium	1.51%	1.24%
Leverage	42%	19%
Asset beta	0.35	0.60
Equity beta	0.60	0.74
Tax adjusted market risk premium	7.0%	7.0%
Average corporate tax rate	28%	28%
Average investor tax rate	28%	28%
Debt issuance costs	0.20%	0.20%
Cost of debt	4.38%	4.11%
Cost of equity	6.13%	7.11%
Standard error of midpoint WACC estimate	0.0101	0.0146
Mid-point vanilla WACC	5.39%	6.54%
Mid-point post-tax WACC	4.88%	6.32%

*The numbers are rounded to two decimal points.

² All parameter values except the estimate of the risk-free rate and the average debt premium are set in the input methodologies.

Risk-free rate for EDBs and Wellington Airport

7. 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 (and five years for airports).
8. Our estimate of the five-year risk-free rate is based on data reported by Bloomberg for the three-month period ending March 2022 in respect of the May 2026 and April 2027 maturity bonds.
9. 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 2.67% interest rate on New Zealand government bonds with a five-year term to maturity, as estimated at 1 April 2022.³

Average debt premium for EDBs

10. The average debt premium for EDBs of 1.51% 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 4 below.
11. The DPRY for EDBs starts on 1 September and ends on 31 August.⁴ DPRY 2022 is the current DPRY for EDBs as it contains the start of disclosure year 2023 (1 April 2022). 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 4: Average debt premium for EDBs (%)

	DPRY 2018	DPRY 2019	DPRY 2020	DPRY 2021	DPRY 2022	Average
Debt premium	1.63	1.60	1.60	1.55	1.15	1.51

³ If we were estimating a five-year risk-free rate, for example, we interpolate between the two closest bonds surrounding a 5-year remaining term. This requires taking the yields of the bonds with a remaining term immediately before and after 5 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.

⁴ For example, DPRY 2022 for EDBs is 1 September 2021 to 31 August 2022.

12. The debt premium values are taken from the following sources:
- 12.1 The debt premium value for the 2018 DPRY was estimated in the *Cost of capital determination for disclosure year 2019 for Electricity distribution businesses and Wellington International Airport [2018]* NZCC 7 (30 April 2018).⁵
 - 12.2 The debt premium value for the 2019 DPRY was estimated in the *Cost of capital determination for disclosure year 2020 for information disclosure regulation for Electricity distribution businesses and Wellington International Airport [2019]* NZCC 7 (30 April 2019).⁶
 - 12.3 The debt premium value for the 2020 DPRY was estimated in the *Cost of capital determination for disclosure year 2021 for information disclosure regulation for Electricity distribution businesses and Wellington International Airport [2020]* NZCC 11 (13 May 2020).⁷
 - 12.4 The debt premium value for the 2021 DPRY was estimated in the *Cost of capital determination for disclosure year 2021 for information disclosure regulation for Electricity distribution businesses and Wellington International Airport [2021]* NZCC 4 (2 May 2021).⁸
13. We have estimated a debt premium of 1.15% for the 2022 DPRY based on the data in Table 5 below. We note that the DPRY 2022 estimation period used data from 1 September 2020 to 31 August 2021 which was impacted by the Covid-19 pandemic and which had an impact on debt and equity markets, in particular airports and travel-related securities.
- 13.1 We have had greatest regard to the category (b) bonds,⁹ which support a debt premium of approximately 1.15% or lower, as there are no applicable category (a) bonds. The Genesis (1.09%), Meridian (0.88%) and Mercury (1.03%) bonds match the target credit rating (BBB+) but Genesis and Meridian have a remaining term to maturity less than 5 years (suggesting a 5 year debt premium on these bonds would be higher than 1.09% or 0.88%). Mercury has a remaining time to maturity 6.5 years, suggesting a 5 year debt premium on this bond would be lower than 1.03%.

⁵ [Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport \[2018\] NZCC 7.](#)

⁶ [Cost of capital determination for disclosure year 2020 for information disclosure regulation. Electricity distribution businesses and Wellington International Airport \[2019\] NZCC 7.](#)

⁷ [Cost of capital determination for disclosure year 2021 for information disclosure regulation. Electricity distribution businesses and Wellington International Airport \[2020\] NZCC 11.](#)

⁸ [Cost of capital determination for disclosure year 2022 for information disclosure regulation. Electricity distribution businesses and Wellington International Airport \[2021\] NZCC 4.](#)

⁹ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clauses 2.4.4(7)(c) to (e).

- 13.2 The estimated debt premiums on other issuers in categories (c) to (e)¹⁰ are not inconsistent with a debt premium of approximately 1.15%, when consideration is given to the different credit ratings and terms to maturity. The NSS estimate of the debt premium of 1.20% supports our estimate of 1.15%.

Table 5: Debt premium estimate for EDB DPRY 2022¹¹

		Industry	Rating	Remaining term to maturity	Debt premium		
Determined debt premium		EDB	BBB+	5.0	1.15		
Category	Issuer	Note ref.	Industry	Rating	Remaining term to maturity	Debt premium	Comment
b	GENESIS ENERGY LTD	1	Other	BBB+	4.1	1.09	5 year debt premium would be higher
b	MERCURY NZ LTD	2	Other	BBB+	6.5	1.03	5 year debt premium would be lower
b	MERIDIAN ENERGY LIMITE	3	Other	BBB+	4.3	0.88	5 year debt premium would be higher
c	VECTOR LTD	4	EDB/GPB	BBB	5.6	1.29	BBB+ debt premium would be lower; 5 year debt premium would be higher
d	AUCKLAND INTL AIRPORT	5	Airport	A-	3.6	0.98	BBB+ debt premium would be higher; 5 year debt premium would be lower
d	CHORUS LTD	6	Fibre	BBB	6.6	1.06	BBB+ debt premium would be higher; 5 year debt premium would be lower
d	CONTACT ENERGY LTD	7	Other	BBB	3.5	0.90	BBB+ debt premium would be higher; 5 year debt premium would be higher
d	FONTERRA COOPERATIVE G	8	Other	A-	4.7	0.95	BBB+ debt premium would be higher; 5 year debt premium would be higher
d	SPARK FINANCE LTD	9	Telco	A-	5.0	0.70	BBB+ debt premium would be higher
d	WELLINGTON INTL AIRPOR	10	Airport	BBB	4.3	1.66	BBB+ debt premium would be lower; 5 year debt premium would be higher
e	CHRISTCHURCH INTL AIRP	11	Airport	BBB+	5.0	1.67	Credit rating and term are an exact match
e	TRANSPOWER NEW ZEALAND	12	Other	AA	5.0	0.63	BBB+ debt premium would be higher
Nelson-Siegel Svensson estimate					5.0	1.20	

Notes on bonds analysed

- 1 GENEPO 5 04/03/25
- 2 MCYNZ 1.56 09/14/27
- 3 MERINZ 4.21 06/27/25
- 4 VCTNZ 1.575 10/06/26
- 5 AIANZ 3.51 10/10/24
- 6 CNUNZ 1.98 12/02/27
- 7 CENNZ 3.55 08/15/24
- 8 FCGNZ 4.15 11/14/25
- 9 SPKNZ 3.37 03/07/24; SPKNZ 3.94 09/07/26
- 10 WIANZ 5 06/16/25
- 11 CHRINT 4.13 05/24/24; CHRINT 5.53 04/05/27
- 12 TPNZ 1.735 09/04/25; TPNZ 3.823 03/06/25; TPNZ 5.893 03/15/28

WACC range and 67th percentile estimate for EDBs

14. In addition to the mid-point estimate, we are also required to determine a WACC range and 67th percentile estimate for each EDB disclosure year.

¹⁰ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clauses 2.4.4(7)(c) to (e).

¹¹ To estimate the debt premium values for a DPRY we use bond data from the 12 months preceding the start of the DPRY. We therefore used bond data from the period 1 September 2020 to 31 August 2021 to estimate the debt premium for the DPRY 2022.

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 EDB IM.¹²

Average debt premium for Wellington Airport

16. The average debt premium for Wellington Airport of 1.24% is the average of the debt premium values for the current DPRY and the four previous DPRYs, as shown in Table 6 below. DPRY 2022 is the current reference year for Wellington Airport.¹³
17. The debt premium values for the 2018 to 2022 DPRYs are the same debt premium values that we determined for AIAL and CIAL. The debt premiums for DPRY 2018 and 2019 were determined in July 2017 and 2018, respectively.¹⁴ The debt premium of 1.30% for DPRY 2020 was determined in July 2019.¹⁵ The debt premium of 1.30% for DPRY 2021 was determined in July 2020.¹⁶ The debt premium of 1.10% for DPRY 2022 was determined in July 2021.¹⁷

Table 6: Average debt premium for Wellington Airport (%)

	DPRY 2018	DPRY 2019	DPRY 2020	DPRY 2021	DPRY 2022	Average
Debt premium	1.35	1.15	1.30	1.30	1.10	1.24

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

18. The cost of capital input methodologies for regulated services (including for EDBs and Wellington Airport) reflect that both the risk-free rate and the debt premium on bonds change over time. Figure 1 shows, as at 1 April 2022, changes over time in:

18.1 The five year risk-free rate;

¹² 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 Wellington Airport's disclosure year 2023 starts on 1 April 2022. In this case, the current debt premium reference year is DPRY 2022. (The debt premium for DPRY 2022 for airports is calculated using data from 1 July 2020 to 30 June 2021).

¹⁴ [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 \(31 July 2018\).](#)
[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 7 \(31 July 2017\).](#)

¹⁵ [Cost of capital determination for disclosure year 2019 for Transpower, gas pipeline businesses and suppliers of specified airport services \(with a June year-end\) \[2019\] NZCC 8 \(31 July 2019\).](#)

¹⁶ [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 \(31 July 2020\).](#)

¹⁷ [Cost of capital determination for disclosure year 2022 for Transpower, gas pipeline businesses and suppliers of specified airport services \(with a June year-end\) \[2021\] NZCC 10 \(31 July 2021\).](#)

- 18.2 The debt premium on bonds rated BBB+ with a remaining term to maturity of five years;
- 18.3 The debt premium on bonds rated A- with a remaining term to maturity of five years.

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

