

Cost of capital determination for disclosure year 2022 for information disclosure regulation

Electricity distribution businesses and Wellington International Airport

[2021] NZCC 4

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Date of determination: 30 April 2021

Associated documents

Publication date	Reference	Title
20 December 2016	ISSN 1178-2560	Airport Services Input Methodologies Determination 2010 (Consolidated December 2016)
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	Electricity 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
30 April 2018	ISSN 1178-2560	Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport [2018] 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 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 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
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

13 May 2020	ISSN 1178-2560	Cost of capital determination for disclosure year 2021 – Electricity distribution businesses and Wellington International Airport [2020] NZCC 11
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

Commerce Commission
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WACC estimates for disclosure year 2022 for EDBs and Wellington Airport

1. This determination specifies weighted average cost of capital (WACC) estimates that will apply for disclosure year 2022 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. We determine an ID WACC for Auckland International Airport Limited and Christchurch International Airport (AIAL and CIAL) in July.
3. Vanilla and post-tax WACC estimates for disclosure year 2022 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	3.82%	3.52%
25 th percentile	3.14%	2.84%
67 th percentile	4.26%	3.96%
75 th percentile	4.50%	4.20%

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

	Vanilla WACC	Post-tax WACC
Mid-point	5.06%	4.94%
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 16 below. The WACC estimates have been calculated as at 1 April 2021, which is the first day of disclosure year 2022.
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:
 - 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

¹ [Commerce Commission “Guidelines for WACC determinations under the cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986” \(30 April 2018\).](#)

- 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 2022 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	0.75%	0.75%
Average debt premium	1.59%	1.30%
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	2.55%	2.25%
Cost of equity	4.74%	5.72%
Standard error of midpoint WACC estimate	0.0101	0.0146
Mid-point vanilla WACC	3.82%	5.06%
Mid-point post-tax WACC	3.52%	4.94%

*The numbers are rounded to two decimal points.

Risk-free rate for EDBs and Wellington Airport

7. 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 March 2021 in respect of the April 2025 and April 2027 maturity bonds.
8. 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 All parameter values except the estimate of the risk-free rate and the average debt premium are set in the input methodologies.

0.75% interest rate on New Zealand government bonds with a five year term to maturity, as estimated at 1 April 2021.

Average debt premium for EDBs

9. The average debt premium for EDBs of 1.59% 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. DPRY 2021 is the current reference year for EDBs.³

Table 4: Average debt premium for EDBs (%)

	DPRY 2017	DPRY 2018	DPRY 2019	DPRY 2020	DPRY 2021	Average
Debt premium	1.59	1.63	1.60	1.60	1.55	1.59

10. The debt premium values are taken from the following sources:
- 10.1 The debt premium value for the 2017 DPRY is set out in clause 2.4.4(4) of the *Electricity Distribution Services Input Methodologies Determination 2012* (EDB IM).⁴
- 10.2 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
- 10.3 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
- 10.4 The debt premium value for the 2020 DPRY was estimated in the *Cost of capital determination for disclosure year 2021 for information disclosure*

³ The 'current debt premium reference year' refers to the debt premium reference year that contains the start of the relevant disclosure year. EDB disclosure year 2022 starts on 1 April 2021. In this case, the current debt premium reference year is DPRY 2021 (1 September 2020 to 31 August 2021).

⁴ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clause 2.4.4(7)(b).

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 \[2018\] NZCC 7.](#)

regulation for Electricity distribution businesses and Wellington International Airport [2020] NZCC 11 (13 May 2020).⁷

11. In April 2021 we estimated a debt premium of 1.55% for the 2021 DPRY based on the data in Table 5 below. Even though the category (b) bonds⁸ may suggest a debt premium lower than 1.55%, we decided to exercise judgement and estimate the debt premium of 1.55% given the evidence from the Nelson-Siegel-Svensson (NSS), other category bonds and the debt premium estimates from previous years.
- 11.1 We have had greatest regard to the category (b) bonds, which support a debt premium of approximately 1.55% or lower, as there are no applicable category (a) bonds. The Genesis (1.54%), Meridian (1.37%) and Mercury (1.34%) bonds match the target credit rating (BBB+) but Genesis and Meridian have a remaining term to maturity greater than 5 years (suggesting a 5 year debt premium on these bonds would be lower than 1.54% or 1.37%). Mercury has a remaining time to maturity 3 years, suggesting a 5 year debt premium on this bond would be higher than 1.34%.
- 11.2 The estimated debt premiums on other issuers in categories (c) to (e)⁹ are not inconsistent with a debt premium of approximately 1.55%, when consideration is given to the different credit ratings and terms to maturity. The NSS estimate of the debt premium of 1.59% also lends support to our estimate of 1.55%.

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

⁸ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clause 2.4.4(7)(b).

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

Table 5: Debt premium estimate for EDB DPRY 2021¹⁰

	Industry	Rating	Remaining term to maturity	Debt premium
Determined debt premium	EDB	BBB+	5.0	1.55

Category	Issuer	Note ref.	Industry	Rating	Remaining term to maturity	Debt premium	Comment
b	GENESIS ENERGY LTD	1	Other	BBB+	5.1	1.54	5 year debt premium would be lower
b	MERCURY NZ LTD	2	Other	BBB+	3.0	1.34	5 year debt premium would be higher
b	MERIDIAN ENERGY LIMITE	3	Other	BBB+	5.3	1.37	5 year debt premium would be lower
c	VECTOR LTD	4	EDB/GPB	BBB	5.2	1.69	5 year debt premium would be lower
d	AUCKLAND INTL AIRPORT	5	Airport	A-	4.6	1.25	5 year debt premium would be higher
d	CHORUS LTD	6	Other	BBB	1.2	1.46	5 year debt premium would be higher
d	CONTACT ENERGY LTD	7	Other	BBB	4.5	1.42	5 year debt premium would be higher
d	FONTERRA COOPERATIVE G	8	Other	A-	5.0	1.53	BBB+ debt premium would be higher
d	SPARK FINANCE LTD	9	Other	A-	5.0	1.09	BBB+ debt premium would be higher
d	WELLINGTON INTL AIRPOR	10	Airport	BBB	5.3	2.07	5 year debt premium would be lower
e	CHRISTCHURCH INTL AIRP	11	Airport	BBB+	5.0	1.75	Credit rating and term are an exact match
e	TRANSPower NEW ZEALAND	12	Other	AA	5.0	0.83	BBB+ debt premium would be higher
Nelson-Siegel Svensson estimate						5.0	1.59

Notes on bonds analysed

- 1 GENEPO 5 04/03/25
- 2 MCYNZ 5.793 03/06/23
- 3 MERINZ 4.21 06/27/25
- 4 VCTNZ 3.45 05/27/25
- 5 AIANZ 3.51 10/10/24
- 6 CNUNZ 4.12 05/06/21
- 7 CENNZ 3.55 08/15/24
- 8 FCGNZ 5.08 06/19/25; FCGNZ 4.42 03/07/23; 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 3.823 03/06/25; TPNZ 2.73 03/14/24; TPNZ 1.735 09/04/25

WACC range and 67th percentile estimate for EDBs

12. 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.
13. 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.¹¹

Average debt premium for Wellington Airport

14. The average debt premium for Wellington Airport of 1.30% is the average of the debt premium values for the current DPRY and the four previous DPRYs, as shown in Table 6 below. DPRY 2021 is the current reference year for Wellington Airport.¹²

¹⁰ 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 2019 to 31 August 2020 to estimate the debt premium for the DPRY 2021.

¹¹ 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.

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

15. The debt premium value for the 2017 DPRY is set out in clause 5.4(4) of the Airport Services Input Methodologies Determination.¹³ For the 2018 to 2021 DPRYs we use 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

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

	DPRY 2017	DPRY 2018	DPRY 2019	DPRY 2020	DPRY 2021	Average
Debt premium	1.38	1.35	1.15	1.30	1.30	1.30

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

16. 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 2021, changes over time in:
- 16.1 The five year risk-free rate;
 - 16.2 The debt premium on bonds rated BBB+ with a remaining term to maturity of five years;
 - 16.3 The debt premium on bonds rated A- with a remaining term to maturity of five years.

¹³ Airport Services Input Methodologies Determination 2010 (Consolidated December 2016), ISSN 1178-2560, Clause 5.4(4).

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 \(31 July 2020\).](#)

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

