

# **Cost of capital determination for disclosure year 2021 for information disclosure regulation**

**Electricity distribution businesses and Wellington International Airport**

**[2020] NZCC 11**

**The Commission:** S Begg  
J Crawford  
Dr S Gale  
E Welson

**Date of determination:** 13 May 2020

## 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

Commerce Commission  
Wellington, New Zealand

## WACC estimates for disclosure year 2021 for EDBs and Wellington Airport

1. This determination specifies weighted average cost of capital (WACC) estimates that will apply for disclosure year 2021 for electricity distribution businesses (EDBs) and Wellington International Airport (Wellington Airport) for information disclosure 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 2021 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	4.05%	3.72%
25 <sup>th</sup> percentile	3.37%	3.04%
67 <sup>th</sup> percentile	4.49%	4.16%
75 <sup>th</sup> percentile	4.73%	4.40%

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

	Vanilla WACC	Post-tax WACC
Mid-point	5.26%	5.13%
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 2020, which is the first day of disclosure year 2021.
5. This determination should be read together with our guidelines for WACC determinations under the cost of capital input methodologies.<sup>1</sup> These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:

<sup>1</sup> 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). Available online: [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)

- 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 2021 for EDBs and Wellington Airport are summarised in Table 3 below.

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

Parameter	EDBs	Wellington Airport
Risk-free rate	1.02%	1.02%
Average debt premium	1.60%	1.25%
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	2.82%	2.47%
Cost of equity	4.94%	5.92%
Standard error of midpoint WACC estimate	0.0101	0.0146
<b>Mid-point vanilla WACC</b>	<b>4.05%</b>	<b>5.26%</b>
<b>Mid-point post-tax WACC</b>	<b>3.72%</b>	<b>5.13%</b>

\*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 2020 in respect of the April 2023 and April 2025 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 1.02% interest rate on New Zealand government bonds with a five year term maturity, as estimated at 1 April 2020.

### Average debt premium for EDBs

9. The average debt premium for EDBs of 1.60% 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 2020 is the current reference year for EDBs.<sup>2</sup>

**Table 4: Average debt premium for EDBs (%)**

	DPRY 2016	DPRY 2017	DPRY 2018	DPRY 2019	DPRY 2020	Average
Debt premium	1.59	1.59	1.63	1.60	1.60	1.60

10. The debt premium values for the 2016 to 2017 DPRYs are set out in clause 2.4.4(4) of the Electricity Distribution Services Input Methodologies Determination 2012 (EDB IM).<sup>3</sup> The debt premium values for the 2018 and 2019 DPRYs are set out in the WACC determinations for the 2019 and 2020 EDB disclosure years.<sup>4</sup> We determined a debt premium of 1.60% for DPRY 2020 in our WACC determination in September 2019 as part of Electricity distribution businesses' 2020-2025 default price-quality

<sup>2</sup> 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 2021 starts on 1 April 2020. In this case, the current debt premium reference year is DPRY 2020 (1 September 2019 to 31 August 2020).

<sup>3</sup> Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clause 2.4.4(7)(b).

<sup>4</sup> Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport [2018] NZCC 7. Available online: [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0027/91188/2018-NZCC-7-Cost-of-capital-determination-EDBs-and-Airports-WIAL-ID-30-April-2018.PDF](https://comcom.govt.nz/__data/assets/pdf_file/0027/91188/2018-NZCC-7-Cost-of-capital-determination-EDBs-and-Airports-WIAL-ID-30-April-2018.PDF);  
Cost of capital determination for disclosure year 2020 for information disclosure regulation. Electricity distribution businesses and Wellington International Airport [2018] NZCC 7. Available online: [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0027/142659/2019-NZCC-7-Cost-of-capital-determination-EDBs-and-Airports-ID-30-April-2019.pdf](https://comcom.govt.nz/__data/assets/pdf_file/0027/142659/2019-NZCC-7-Cost-of-capital-determination-EDBs-and-Airports-ID-30-April-2019.pdf)

paths and Transpower New Zealand Limited's 2020-2025 individual price-quality.<sup>5</sup> Therefore, we do not need to estimate another debt premium for DPRO 2020 as part of the April determination.

11. In September 2019, we have estimated the debt premium for EDB DPRO 2020 of 1.60%, based on judgement informed by the data in Table 5 below.
  - 11.1 We have had greatest regard to the category (b) bonds<sup>6</sup>, which support a debt premium of approximately 1.48% to 1.70% as there are no applicable category (a) bonds. The Genesis (1.70%), Meridian (1.48%) and Wellington Airport (1.56%) bonds both match the target credit rating (BBB+) and remaining term to maturity (5 years), Mercury (1.57%) bond matches the target credit rating (BBB+), but has a remaining term to maturity of 4 years (suggesting a 5 year debt premium on this bond would be higher than 1.57%).
  - 11.2 The estimated debt premiums on other issuers in categories (c) to (e)<sup>7</sup> are generally consistent with a debt premium in the range from 1.04% to 1.90%, when consideration is given to different credit ratings and terms to maturity. The Nelson-Siegel-Svensson estimate of the debt premium of 1.59% also supports a debt premium in this range.
  - 11.3 We have determined a debt premium of 1.60% for DPRO 2020, which is within the range from 1.04% to 1.90% and is also supported by The Nelson-Siegel-Svensson estimate of the debt premium.

---

<sup>5</sup> 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 available at: [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0022/177034/2019-NZCC-12-Cost-of-capital-determination-EDBs-and-Transpower-25-September-2019.PDF](https://comcom.govt.nz/__data/assets/pdf_file/0022/177034/2019-NZCC-12-Cost-of-capital-determination-EDBs-and-Transpower-25-September-2019.PDF)

<sup>6</sup> Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clause 2.4.4(7)(b).

<sup>7</sup> 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 2020**

	Industry	Rating	Remaining term to maturity	Debt premium
Determined debt premium	EDB	BBB+	5.0	1.60

  

Category	Issuer	Note ref.	Industry	Rating	Remaining term to maturity	Debt premium	Comment
b	GENESIS ENERGY LTD	1	Other	BBB+	5.0	1.70	Credit rating and term are an exact match
b	MERCURY NZ LTD	2	Other	BBB+	4.0	1.57	5 year debt premium would be higher
b	MERIDIAN ENERGY LIMITED	3	Other	BBB+	5.0	1.48	Credit rating and term are an exact match
b	WELLINGTON INTL AIRPORT	4	Airport	BBB+	5.0	1.56	Credit rating and term are an exact match
c	VECTOR LTD	5	EDB/GPB	BBB	5.0	1.90	BBB+ debt premium would be lower
d	AUCKLAND INTL AIRPORT	6	Airport	A-	5.0	1.16	BBB+ debt premium would be higher
d	CHORUS LTD	7	Other	BBB	2.2	1.62	BBB+ debt premium would be lower; 5 year debt premium would be higher
d	CONTACT ENERGY LTD	8	Other	BBB	5.2	1.60	BBB+ debt premium would be lower; 5 year debt premium would be lower
d	FONTERRA COOPERATIVE G	9	Other	A-	5.0	1.51	BBB+ debt premium would be higher
d	SPARK FINANCE LTD	10	Other	A-	5.0	1.27	BBB+ debt premium would be higher
e	CHRISTCHURCH INTL AIRPORT	11	Airport	A-	5.0	1.34	BBB+ debt premium would be higher
e	TRANSPower NEW ZEALAND	12	Other	AA-	5.0	1.04	BBB+ debt premium would be higher
Nelson-Siegel Svensson estimate					5.0	1.59	

**Notes on bonds analysed**

- 1 GENEPO 5.81 03/08/23; GENEPO 5 04/03/25
- 2 MCYNZ 5.793 03/06/23
- 3 MERINZ 4.88 03/20/24; MERINZ 4.53 03/14/23; MERINZ 4.21 06/27/25
- 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; AIANZ 3.64 04/17/23; AIANZ 3.51 10/10/24
- 7 CNUNZ 4.12 05/06/21
- 8 CENNZ 3.55 08/15/24
- 9 FCGNZ 4.42 03/07/23; FCGNZ 5.08 06/19/25
- 10 SPKNZ 3.37 03/07/24; SPKNZ 4.51 03/10/23; SPKNZ 3.94 09/07/26
- 11 CHRINT 4.13 05/24/24; CHRINT 6 1/4 10/04/21; CHRINT 5.53 04/05/27
- 12 TPNZ 5.448 03/15/23; TPNZ 3.823 03/06/25

**WACC range and 67<sup>th</sup> 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 percentile estimates is set out in clause 2.4.5 of the EDB IM.<sup>8</sup>

**Average debt premium for Wellington Airport**

14. The average debt premium for Wellington Airport of 1.25% is the average of the debt premium values for the current DPRY and the four previous DPRYs, as shown in Table 6 below. DPRY 2020 is the current reference year for Wellington Airport.<sup>9</sup>
15. The debt premium values for the 2015 to 2017 DPRYs are set out in clause 5.4(4) of the Airport Services Input Methodologies Determination. For the 2018 to 2020 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,

<sup>8</sup> 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.

<sup>9</sup> Wellington Airport's disclosure year 2021 starts on 1 April 2020. In this case, the current debt premium reference year is DPRY 2020 (1 July 2019 to 30 June 2020).

respectively.<sup>10</sup> The debt premium of 1.30% for DPRY 2020 was determined in July 2019.<sup>11</sup>

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

	DPRY 2016	DPRY 2017	DPRY 2018	DPRY 2019	DPRY 2020	Average
Debt premium	1.05	1.38	1.35	1.15	1.30	1.25

### 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 2020, changes over time in the:
- 16.1 five year risk-free rate;
  - 16.2 debt premium on bonds rated BBB+ with a term of five years;
  - 16.3 debt premium on bonds rated A- with a term of five years.

<sup>10</sup> 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), Table 8, p 9; 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), Table 9, p 26.

<sup>11</sup> 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). Available online: [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)

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

