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## **Transpower Input Methodologies Amendments Determination 2019**

**[2019] NZCC 10**

**The Commission:**

Sue Begg  
Dr Stephen Gale  
Elisabeth Welson  
John Crawford

**Date of decision:**

28 August 2019

A handwritten signature in blue ink, appearing to read 'Sf Begg'.

Sue Begg, Commissioner

Dated at Wellington this 28<sup>th</sup> day of August 2019

COMMERCE COMMISSION

Wellington, New Zealand

<b>Determination history</b>		
<b>Determination date</b>	<b>Decision number</b>	<b>Determination name</b>
29 June 2012	[2012] NZCC 17	Commerce Act (Transpower Input Methodologies) Determination 2010 ('principal determination')*
28 August 2014	[2014] NZCC 22	Transpower Input Methodologies Amendments Determination 2014
26 September 2014	[2014] NZCC 24	Electricity Lines Services Input Methodologies Determination Amendment 2014
29 October 2014	[2014] NZCC 27	Electricity Lines Services and Gas Pipeline Services Input Methodologies Determination Amendment (WACC percentile for price-quality regulation) 2014
27 November 2014	[2014] NZCC 32	Incremental Rolling Incentive Scheme Input Methodology Amendments Determination 2014
27 November 2014	[2014] NZCC 34	Transpower Input Methodologies Amendments Determination 2014 (No. 2)
11 December 2014	[2014] NZCC 38	Electricity Lines Services and Gas Pipeline Services Input Methodologies Determination Amendment (WACC percentile for information disclosure regulation) 2014
5 February 2015	[2015] NZCC 3	Transpower Input Methodologies Amendment Determination 2015
21 October 2015	[2015] NZCC 27	Transpower Input Methodologies Amendment Determination 2015 (No. 2)
20 December 2016	[2016] NZCC 27	Transpower Input Methodologies Amendments Determination 2016
29 June 2017	[2017] NZCC 17	Transpower Input Methodologies Amendment Determination 2017
28 August 2019	[2019] NZCC 10	Transpower Input Methodologies Amendments Determination 2019

\* The principal determination re-determined the input methodologies contained in the *Commerce Act (Transpower Input Methodologies) Determination 2010* (Commerce Commission Decision No.713, 22 December 2010), as amended by the *Commerce Act (Transpower Input Methodologies) Amendment Determination (No. 1) 2011* (Commerce Commission Decision 736, 1 November 2011). A complete history of determinations relevant to the input methodologies applicable to Transpower is available on the Commission's website here: <https://comcom.govt.nz/regulated-industries/input-methodologies/transpower-ims/other-past-amendments-and-clarifications4>.

# **TRANSPower INPUT METHODOLOGIES AMENDMENTS DETERMINATION 2019**

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Pursuant to s 52X of the Commerce Act 1986, the Commerce Commission makes the following determination:

**1. TITLE**

This determination is the Transpower Input Methodologies Amendments Determination 2019.

**2. INTERPRETATION**

2.1. In this determination (excluding Attachments A and B), the words or phrases in bold type bear the following meanings:

- (a) **Act** has the same meaning as in the **principal determination**;
- (b) **Commission** has the same meaning as in the **principal determination**;
- (c) **disclosure year** has the same meaning as in the **principal determination**;
- (d) **IPP** has the same meaning as in the **principal determination**;
- (e) **IPP determination** has the same meaning as in the **principal determination**; and
- (f) **principal determination** means the Commerce Act (Transpower Input Methodologies) Determination 2010 [2012] NZCC 17.

**3. DETERMINATION AMENDED**

3.1. This determination amends the Commerce Act (Transpower Input Methodologies) Determination 2010 [2012] NZCC 17.

**4. COMMENCEMENT AND APPLICATION**

4.1. This determination comes into force on the day on which notice of it is given in the New Zealand Gazette under section 52W of the **Act**.

4.2. Amendments in this determination to the **principal determination**:

- (a) in respect of the definition of 'operating cost' and 'pecuniary penalties' in Attachment B apply in relation to information disclosure regulation from the **disclosure year** commencing 1 July 2020; and
- (b) in Part 3 of Attachment B, including any amended definitions in clause 1.1.4(2) of Attachment B, apply for an **IPP determination** in force, or which will be in force, from 1 April 2020.

4.3. For the avoidance of doubt, if the **Commission** determines that any forecast values are required to be calculated consistent with Part 3 of Attachment B for the determination of an **IPP** that is to come into force from 1 April 2020, the provisions in Part 3 of the Attachment B and any applicable definitions in clause 1.1.4(2) of Attachment B will apply as amended by this determination to the setting of those forecast values.

**5. PRINCIPAL DETERMINATION AMENDMENTS**

- 5.1. Replace the contents page of the **principal determination** with the contents page in Attachment A.
- 5.2. The amendments to the body of the **principal determination** are the deletions, substitutions and additions to the attached copy of the **principal determination** that are tracked in red in Attachment B.

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Pursuant to Part 4 of the Commerce Act 1986 the Commerce Commission makes the following determination:

## **ATTACHMENT B:**

## PART 1 GENERAL PROVISIONS

### 1.1.1 Title

This determination is the Transpower Input Methodologies Determination 2010.

### 1.1.2 Application

- (1) The **input methodologies** in this determination apply to **electricity transmission services**.
- (2) The **input methodologies** in-
  - (a) Part 2 of this determination apply in relation to information disclosure regulation under Part 4 Subpart 4 of the **Act**; and
  - (b) Part 3 of this determination apply in relation to individual price-quality regulation under Part 4 Subpart 7 of the **Act**.

### 1.1.3 Commencement Date

This determination comes into force on the day after the date on which notice of it is given in the New Zealand Gazette under section 52W of the **Act**.

### 1.1.4 Interpretation

- (1) In this determination-
  - (a) unless stated otherwise, references to Parts and Subparts are to named and numbered parts and subparts of the determination;
  - (b) references to Subparts are to subparts within the same part in which the reference is made;
  - (c) unless the context otherwise requires, a word which denotes the singular also denotes the plural and vice versa; and
  - (d) unless stated otherwise, any reference to an allowance, amount, cost, sum or value is a reference to an allowance, amount, cost, sum or value calculated in relation to **Transpower** in respect of a **disclosure year**.
- (2) In this determination, including in the schedule, the words or phrases in bold type bear the following meanings:

**67th percentile estimate of WACC**

means, for the purpose of-

- (a) Part 2, the 67th percentile estimate for the post-tax **mid-point estimate of WACC**, determined in accordance with clause 2.4.5(4);
- (b) Part 3, in determining the price path for the **IPP**, the 67th percentile for the vanilla **mid-point estimate of WACC**, determined in accordance with clause 3.5.5(1); and



- (c) Part 3, in reconciling the opening and closing balances of the **EV account**, the 67<sup>th</sup> percentile for the post-tax **mid-point estimate of WACC**, determined in accordance with clause 3.5.5(2);

**2011 thresholds regulatory asset base**

means the regulatory asset base as defined in the **thresholds notice** as of 30 June 2011;

## A

**Act**

means the Commerce Act 1986;

**actual opex**

has the meaning specified in clause 3.6.3(8);

**adjustment to the opex incentive**

means the amount calculated in accordance with clause 3.6.4(1);

**amount carried forward**

means, for any given **disclosure year**, the amount determined in accordance with clause 3.6.3;

**auditor**

means-

- (a) whilst **Transpower** is a public entity (as defined in s 4 of the Public Audit Act 2001), the Auditor-General; and
- (b) where paragraph (a) does not apply, a **person** who is-
  - (i) qualified for appointment as an auditor of a company under the Companies Act 1993; and
  - (ii) **independent**;

**average debt premium**

has the meaning specified in, and is the amount determined in accordance with-

- (a) Part 2, clause 2.4.4(2); and
- (b) Part 3, clause 3.5.4(2);

## B

**base capex**

has the same meaning as defined in the **Capex IM**;

**base capex allowances**

has the same meaning as defined in the **Capex IM**;

<b>business day</b>	means any day on which statistics relating to trading in New Zealand government bonds are published by a financial information service such as Bloomberg or Reuters;
<b>C</b>	
<b>cap</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>Capex IM</b>	means the <i>Transpower Capital Expenditure Input Methodology Determination [2012] NZCC 2</i> , as amended;
<b>capital expenditure</b>	means costs that- <ul style="list-style-type: none"> <li>(a) have been incurred in the acquisition or development of an asset that is, or is intended to be, <b>commissioned</b>; and</li> <li>(b) are intended to be included in the <b>value of commissioned asset</b>;</li> </ul>
<b>catastrophic event</b>	has the meaning specified in clause 3.7.1;
<b>change event</b>	has the meaning specified in clause 3.7.2;
<b>closing RAB value</b>	means the value determined in accordance with, for the purpose of- <ul style="list-style-type: none"> <li>(a) Part 2, clause 2.2.3(4); and</li> <li>(b) Part 3, clause 2.2.3(4) as modified <del>pursuant to</del> <u>under</u> clause 3.3.1;</li> </ul>
<b><u>code</u></b>	<u>has the same meaning as defined in s 5 of the Electricity Industry Act 2010;</u>
<b>collar</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>Commission</b>	has the same meaning as defined in s 2 of the <b>Act</b> ;
<b>commissioned</b>	means used by <b>Transpower</b> to provide <b>electricity transmission services</b> , save that in relation to- <ul style="list-style-type: none"> <li>(a) <b>land</b> that is not <b>easement land</b>;</li> <li>or</li> </ul>

- (b) an **easement**,  
'commissioned' means acquired by **Transpower** where –
- (c) the **land** or **easement** is **base capex**, or
- (d) the acquisition was approved by the–
  - (i) **Electricity Commission** under Part F of the Electricity Governance Rules 2003;
  - (ii) **Commission** under s 54R(3)(b) of the **Act**; or
  - (iii) **Commission** in accordance with an input methodology determined pursuant to s 54S of the **Act**,

and 'commission' shall be construed accordingly;

commissioning has the same meaning as defined in the code;

**commissioning date** means the date that an asset is first **commissioned**;

consumer has the same meaning as defined in s 52C of the Act;

**corporate tax rate** means the rate of income taxation applying to companies as specified in the **tax rules**;

**cost of debt** means the amount specified for  $r_d$  in clause 2.4.1(3);

customer means any generator, EDB, consumer, or other entity in New Zealand that is connected, or applies to be connected, to the grid;

## D

**debt issuance costs** means costs associated with the issuance of debt by a supplier (including, but not limited to, arrangement fees, legal fees, brokerage, advertising, credit rating fees, registry costs, listing fees, syndicate fees, trustee fees, facility fees,

	line fees, roadshow and marketing costs, paying agency fees and any fee or premium incurred in entering into an interest rate or cross-currency derivative);
<b>debt premium</b>	for the purpose of Part 2 or Part 3, has the meaning specified in, and is the amount determined in accordance with, clause 2.4.4(5);
<b>debt premium reference year</b>	means a 12 month period ending on 31 August; <i>Example: 'debt premium reference year 2016' means the twelve month period ending 31 August 2016;</i>
<b>depreciation</b>	in relation to a <b>disclosure year</b> , means the allowance for that <b>disclosure year</b> to account for the diminution in an asset's remaining service life potential in the <b>disclosure year</b> in question determined in accordance with clause 2.2.4(2);
<b>decommissioning</b>	<u>has the same meaning as defined in the code;</u>
<b>disclosure year</b>	means 12 month period ending on 30 June; <i>Example: 'disclosure year 2012' means 12 month period ending on 30 June 2012;</i>
<b>disposed asset</b>	means an asset that, in the <b>disclosure year</b> in question, has been sold or transferred, or has been irrecoverably removed from <b>Transpower's</b> possession without consent, but is not a <b>lost asset</b> ;
<b>document</b>	has the same meaning as defined in s 2 of the <b>Act</b> ;
<b>E</b>	
<b>easement</b>	means a right to use but not possess <b>land</b> belonging to another person or a right to prevent certain uses of another person's <b>land</b> ;
<b>easement land</b>	means <b>land</b> acquired with the intention of-

	(a) creating an <b>easement</b> in respect of it; and
	(b) disposing of the <b>land</b> thereafter;
<b>EDB</b>	has the same meaning as defined in the Electricity Distribution Input Methodologies Determination 2012;
<b><u>E &amp; D base capex project</u></b>	<u>has the same meaning as defined in the Capex IM;</u>
<b>Electricity Authority</b>	means the <del>A</del> authority established under s 12 of the Electricity Industry Act 2010;
<b>Electricity Commission</b>	means the same body as the Electricity Governance Board established under s 172M of the Electricity Act 1992 as in force immediately before its substitution by s 14 of the Electricity Amendment Act 2004;
<b>electricity transmission services</b>	<u>has the same meaning as defined in the Capex IM</u> <del>means electricity lines services (as 'electricity lines services' is defined in s 54C of the Act)</del> supplied by <b>Transpower</b> ;
<b>engineer</b>	means an individual who is- <ul style="list-style-type: none"> <li>(a) a chartered professional engineer as defined in s 6 of the Chartered Professional Engineers of New Zealand Act 2002;</li> <li>(b) acting in that professional capacity; and</li> <li>(c) <b>independent</b>;</li> </ul>
<b><u>Enhancement and Development Projects</u></b>	<u>has the meaning specified in clause 3.7.3B(1);</u>
<b>error event</b>	has the meaning specified in clause 3.7.3(1);
<b><u>EV account</u></b>	<u>means a memorandum account maintained by <b>Transpower</b> on an after-tax basis to record each <b>EV account entry</b> not yet returned to or recovered from <b>Transpower's customers</b>, and to record interest calculated on the balance of that account for each <b>disclosure year</b> using the post-tax</u>

	<u>estimate corresponding to <b>WACC</b> in accordance with clause 3.5.5(2);</u>
<u><b>EV account entry</b></u>	<u>has the meaning as defined in an <b>IPP determination</b>;</u>
<u><b>EV adjustment</b></u>	<u>has the meaning as defined in an <b>IPP determination</b>;</u>
<b>excluded asset</b>	means an asset that is- <ul style="list-style-type: none"> <li>(a) not used to <b>supply electricity transmission services</b> as on the last day of the <b>disclosure year</b> 2011; or</li> <li>(b) <b>easement land</b>;</li> </ul>

## F

<b>false or misleading information</b>	has the meaning specified in clause 3.7.4(3);
<b>finance lease</b>	has the same meaning as under <b>GAAP</b> ;
<b>fixed life easement</b>	means an <b>easement</b> that- <ul style="list-style-type: none"> <li>(a) is of fixed duration; or</li> <li>(b) whilst of indefinite duration, is to be held for a fixed period;</li> </ul>
<u><b>Foreseeable Enhancement and Development Project</b></u>	<u>has the meaning specified in clause 3.7.3B(3);</u>
<u><b>forecast EV adjustment</b></u>	<u>means an input to the <b>forecast MAR</b> calculation specified in an <b>IPP determination</b>, for the purpose of <u>returning to or recovering from customers</u> the balance of the <b>EV account</b> applying to those <b>customers</b> which is available to draw down, where this input is calculated in accordance with the formula in clause 3.1.1(5);</u>
<b>forecast MAR</b>	<u>means, for each <b>pricing year</b> in the <b>regulatory period</b>, the unsmoothed forecast maximum allowable revenue as determined by the <b>Commission</b> in an <b>IPP determination</b>, as amended from time to time in accordance with clause 3.7.5;</u>
<u><b>forecast SMAR</b></u>	<u>means, for each <b>pricing year</b> in the <b>regulatory period</b>, the <b>forecast MAR</b> converted to a smoothed price path as</u>

determined by the Commission using the methodology in clause 3.1.1(3)(b)-(d) and as determined in an IPP determination, or as amended from time to time in accordance with an IPP determination;

**forecast opex**

has the meaning specified in clause 3.6.3(7);

**found asset**

has the meaning specified in clause 2.2.8(1);

## G

**GAAP**

means generally accepted accounting practice in New Zealand, save that, where the cost of an asset is being determined in accordance with this determination, only the cost model of recognition is applied, insofar as an election may be made between the cost model of recognition and the fair value model of recognition;

**GPB**

means GDB or GTB, as-

- (a) 'GDB' is defined in the Gas Distribution Input Methodologies Determination 2012; and
- (b) 'GTB' is defined in the Gas Transmission Input Methodologies Determination 2012;

**grid**

has the same meaning as defined in the Capex IM;

**grid output**

has the same meaning as defined in the **Capex IM;**

**grid output incentive rate**

has the same meaning as defined in the **Capex IM;**

**grid reliability standards**

has the same meaning as defined in the Capex IM;

## I

**ID determination**

means an information disclosure determination in relation to **Transpower**

	made by the <b>Commission</b> under s 52P of the <b>Act</b> ;
<b>identifiable non-monetary asset</b>	has the same meaning as under <b>GAAP</b> save that goodwill is excluded;
<b>incremental adjustment term</b>	means, for the <b>disclosure year</b> 2016, the amount determined in accordance with this determination before its amendment by the <i>Transpower Input Methodologies Amendments Determination 2016</i> ;
<b>incremental change</b>	means, for a <b>disclosure year</b> of <b>RCP1</b> , the amount determined for the <b>disclosure year</b> in accordance with this determination before its amendment by the <i>Transpower Input Methodologies Amendments Determination 2016</i> ;
<b>independent</b>	means neither in a relationship with, nor having an interest in, <b>Transpower</b> that is likely to involve him, her or it in a conflict of interest between his, her or its duties to <b>Transpower</b> and his, her or its duties to the <b>Commission</b> ;
<b>inflation rate</b>	has the meaning that was specified in this determination immediately before its amendment by the <i>Transpower Input Methodologies Amendments Determination 2016</i> ;
<b>initial RAB</b>	has the meaning specified in clause 2.2.1;
<b>initial RAB value</b>	means value of an asset in the <b>initial RAB</b> determined in accordance with clause 2.2.2;
<b>input methodology</b>	has the same meaning as defined in s 52C of the <b>Act</b> ;
<b>investment grade credit rated</b>	means endorsed with a credit rating by an established credit rating agency (such as Standard and Poor's) of "investment grade" on that agency's credit rating scale applicable to long-term investments;
<b>IPP</b>	means <b>Transpower's</b> individual price-quality path;



**IPP determination** means ~~the~~an individual price-quality determination applying to **Transpower** made by the **Commission** under s 52P of the **Act**;

**IPP revenue growth rate** means, for each **pricing year** in the **regulatory period**, the annual percentage growth in **forecast SMAR**, as determined in an **IPP determination**;

## L

**land** excludes-

- (a) buildings; and
- (b) **easements**;

**large buildup in EV account balance** has the meaning specified in clause 3.7.3A;

**leverage** means the ratio of debt capital to total capital and, for the purpose of-

- (a) Part 2, is the amount specified in clause 2.4.2(1); and
- (b) Part 3, is the amount specified in clause 3.5.2(1);

**levy** means a tax, charge or fee directly imposed by or under legislation-

- (a) on-
  - (i) **Transpower** alone; or
  - (ii) a class of persons (other than the general public or businesses in general) that includes **Transpower**; or
- (b) in relation to **electricity transmission services**;

**listed project** has the same meaning as defined in the **Capex IM**;

**local authority** has the same meaning as defined in s 5(1) of the Local Government Act 2002;

**lost asset** means an asset-

- (a) not included in the **initial RAB**; and

- (b) having, in relation to the **disclosure year** in question, an **unallocated opening RAB value**, but determined by **Transpower** in that **disclosure year** never to have been used to provide **electricity transmission services**;

## M

<b>major capex</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>major capex allowance</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>major capex project</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>mid-point estimate of WACC</b>	means, for the purpose of- <ul style="list-style-type: none"> <li>(a) Part 2, the mid-point estimate of- <ul style="list-style-type: none"> <li>(i) vanilla <b>WACC</b>; or</li> <li>(ii) post-tax <b>WACC</b>,</li> </ul> as the case may be, as each is estimated in accordance with clause 2.4.1; and </li> <li>(b) Part 3, the mid-point estimate of- <ul style="list-style-type: none"> <li>(i) vanilla <b>WACC</b>; or</li> <li>(ii) post-tax <b>WACC</b>,</li> </ul> as the case may be, as each is estimated in accordance with clause 3.5.1;</li> </ul>
<b>multi-rate PIE</b>	has the same meaning as defined in s YA 1 of the Income Tax Act 2007;

## N

<b>Nelson-Siegel-Svensson approach</b>	has the meaning specified in clause 2.4.4(9);
<b>network spare</b>	means an asset that is held by <b>Transpower</b> to replace any other asset it holds should that other asset be withdrawn from use owing to failure or damage;
<b>new investment contract</b>	means a contract for the provision of new <b>electricity transmission services</b>

between **Transpower** and another person in respect of which-

- (a) the other person has agreed in writing (whether in the same contract or not) that the terms and conditions of the contact-
  - (i) are reasonable; or
  - (ii) reflect workable or effective competition for the provision of the **electricity transmission services**; or
- (b) **Transpower** demonstrates beyond a reasonable doubt that the terms and conditions of the contract were determined following a process that provided opportunities for-
  - (i) **Transpower's** affected customers to make or approve reasonable price-quality trade-offs; and
  - (ii) the competitive provision of new **electricity transmission services** by parties other than **Transpower**;

## O

### opening RAB value

means the value determined in accordance with, for the purpose of-

- (a) Part 2, clause 2.2.3(3); and
- (b) Part 3, clause 2.2.3(3) as modified ~~pursuant to~~under clause 3.3.1;

### operating cost

means a cost incurred by **Transpower** relating to the **supply of electricity transmission services**, and excludes-

- (a) a cost that is treated as a cost of an asset by **GAAP**;
- (b) amounts that are depreciation, tax, subvention payments, revaluations or an interest

	expense, in accordance with their meanings under <b>GAAP</b> ; and
	(c) <b>debt issuance costs</b> ;
	(d) <b>pass-through costs</b> ; <del>and</del>
	<u>(e) recoverable costs; and</u>
	<u>(e)(f) pecuniary penalties;</u>
<b>operating expenditure</b>	means <b>operating costs</b> after applying <del>clause 3.2.1(1)</del> clause 3.2.1(1);
<b>opex incentive amount</b>	means the amount determined in accordance with clause 3.6.2(1);
<b>P</b>	
<b>pass-through cost</b>	has the meaning specified in clause 3.1.2(1);
<u><b>pecuniary penalties</b></u>	<u>means fines or penalties imposed-</u> <u>(a) by a court; or</u> <u>(b) by any other body with a statutory power to impose such fines or penalties;</u>
<b>person</b>	has the same meaning as defined in s 2 of the <b>Act</b> ;
<b>physical asset life</b>	has the meaning specified in clause 2.2.6(1);
<b>prescribed investor rate</b>	has the same meaning as defined in the Income Tax Act 2007 or any subsequent legislation that supplements or replaces the provisions relating to prescribed investor rate in the Income Tax Act 2007;
<u><b>pricing year</b></u>	<u>means a 12 month period ending on 31 March;</u>
<b>programme</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>project</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>Q</b>	
<b>qualifying debt</b>	has the meaning specified in clause 2.4.7;
<b>qualifying issuer</b>	means a New Zealand resident limited liability company-

- (a) that-
  - (i) undertakes the majority of its business activities in Australia and New Zealand; or
  - (ii) is part of a corporate group that undertakes the majority of its business activities in Australia and New Zealand;
- (b) that-
  - (i) does not operate predominantly in the banking or finance industries; or
  - (ii) is part of a corporate group that does not operate predominantly in the banking or finance industries; and
- (c) that issues **vanilla NZ\$ denominated bonds** that are publicly traded;

**qualifying rating**

means-

- (a) a Standard and Poor's long-term credit rating of the specified grade; or
- (b) an equivalent long-term credit rating of another internationally recognised rating agency;

**R**

**RCP1**

means the **regulatory period** commencing on 1 April 2011 and ending on 31 March 2015;

**RCP1 psuedo asset**

means the asset calculated in accordance with clause 2.2.9(2);

**recoverable cost**

has the meaning specified in clause 3.1.3;

**regulated goods or services**

has the same meaning as defined in s 52C of the **Act**;

<b>regulated supplier</b>	means a supplier of <b>regulated goods or services</b> ;
<b>regulatory period</b>	means the period to which an <b>IPP determination</b> relates;
<b>regulatory tax allowance</b>	has the meaning specified in clause 2.3.1(1);
<b>regulatory tax asset value</b>	has the meaning specified in clause 2.3.2(1);
<b>related party</b>	means- <ul style="list-style-type: none"> <li>(a) a <b>person</b> that, in accordance with <b>GAAP</b>, is related to <b>Transpower</b>, other than as a result of <b>Transpower</b> being a crown-owned entity; or</li> <li>(b) any part of <b>Transpower</b> that does not <b>supply electricity transmission services</b>;</li> </ul>
<b>remaining asset life</b>	means <u>the</u> term remaining of an asset's <b>physical asset life</b> , for the purposes of: <ul style="list-style-type: none"> <li>(a) clauses 2.2.4(1)(a) and 2.2.4(2)(a), at the commencement of the <b>disclosure year</b> in question; <u>and</u></li> <li>(b) clauses 2.2.4(1)(b) and 2.2.4(2)(b), at the asset's <b>commissioning date</b>;</li> </ul>
<b>revenue-linked grid output measure</b>	has the same meaning as defined in the <b>Capex IM</b> ;
<b>S</b>	
<b>services</b>	has the same meaning as defined in s 2 of the <b>Act</b> ;
<b>standard error</b>	means estimated standard deviation;
<b>standard physical asset life</b>	means life for an asset as specified in Schedule A;
<b>supply</b>	has the same meaning as defined in s 2 of the <b>Act</b> , and <b>supplied</b> must be construed accordingly;
<b>system operator</b>	has the same meaning as defined in s 5 of the Electricity Industry Act 2010;

**T**

<b>tax rules</b>	means the rules applicable to <b>Transpower</b> for determining income tax payable in the Income Tax Act 2007 (as amended from time to time, and any equivalent preceding legislation, or any subsequent legislation that supplements or replaces that Act);
<b>term credit spread difference</b>	means the amount determined in accordance with clause 2.4.8(1);
<b>term credit spread differential</b>	means the amount determined in accordance with, for the purpose of- <ul style="list-style-type: none"> <li>(a) Part 2, clause 2.4.9(3); and</li> <li>(b) Part 3, clause 3.5.8(3);</li> </ul>
<b>term credit spread differential allowance</b>	means the sum of <b>term credit spread differentials</b> ;
<b>thresholds notice</b>	means the Commerce Act (Transpower Thresholds) Notice 2008;
<b><u>TPM</u></b>	<u>means the transmission pricing methodology applicable to a pricing year in a regulatory period, as specified in the code, as amended from time to time;</u>
<b>Transpower</b>	has the same meaning as defined in s 54B of the <b>Act</b> ;
<b>U</b>	
<b>unallocated closing RAB value</b>	means the value determined in accordance with clause 2.2.3(2);
<b>unallocated depreciation</b>	means an allowance to account for the diminution in an asset's remaining service life potential in the <b>disclosure year</b> in question determined in accordance with clause 2.2.4(1);
<b>unallocated initial RAB value</b>	means value of an asset in the <b>initial RAB</b> determined in accordance with clause 2.2.2(1);
<b>unallocated opening RAB value</b>	means the value determined in accordance with clause 2.2.3(1);
<b><u>Unforeseeable Enhancement and Development Project</u></b>	<u>has the meaning specified in clause 3.7.3B(2);</u>

## V

**value of commissioned asset**

means the value determined in accordance with clause 2.2.7(1);

**value of found asset**

means the value determined in accordance with clause 2.2.8(2);

**valuer**

means an individual who-

- (a) is registered as a valuer under the Valuers Act 1948;
- (b) holds a current practising certificate issued by-
  - (i) the Property Institute of New Zealand; or
  - (ii) the New Zealand Institute of Valuers;
- (c) has been engaged to act in his or her professional capacity as a valuer; and
- (d) is **independent**;

**vanilla NZ\$ denominated bonds**

means senior unsecured nominal debt obligations denominated in New Zealand dollars without callable, puttable, conversion, profit participation, credit enhancement or collateral features;

## W

**WACC**

means weighted average cost of capital;

**working day**

**has the same meaning as defined in s 2 of the Act; and**

**works under construction**

means an asset, or a collection of assets that-

- (a) has been or is being constructed by, or on behalf of, **Transpower**;
- (b) has not been **commissioned**; and
- (c) **Transpower** intends to **commission**.



## PART 2 INPUT METHODOLOGIES FOR INFORMATION DISCLOSURE

### SUBPART 1 Cost allocation

#### 2.1.1 Cost allocation process

- (1) For the purpose of any requirement in an **ID determination** to disclose-
  - (a) asset values;
  - (b) **capital expenditure**; or
  - (c) **operating costs**,

amounts or values thereof allocated to activities undertaken by **Transpower** to **supply electricity transmission services** other than **system operator** services must be net of amounts implicitly or explicitly recoverable by **Transpower** in respect of its **supply** of **system operator** services ~~pursuant to~~ **under** any agreement in respect of such services between **Transpower** and the **Electricity Authority**.

- (2) In this clause, 'asset value' means, in respect of an asset used by **Transpower** in the **supply** of **electricity transmission services**, in-
  - (a) the **disclosure year** 2011, its **unallocated initial RAB value**; and
  - (b) all other **disclosure years**, its **unallocated closing RAB value**.

### SUBPART 2 Asset valuation

#### 2.2.1 Composition of initial RAB

Initial RAB means assets included in the **2011 thresholds regulatory asset base**, less-

- (a) **excluded assets**;
- (b) intangible assets, unless they are-
  - (i) **finance leases**; or
  - (ii) **identifiable non-monetary assets**; and
- (c) **works under construction**.

#### 2.2.2 Initial RAB values for assets

- (1) Subject to subclause (2), the unallocated initial RAB value of an asset is its value determined as of 30 June 2011 in accordance with the **thresholds notice**.
- (2) For the purpose of subclause (1), where an asset is used by **Transpower** in the **supply** of **system operator** services, the unallocated initial RAB value is the value of the asset had no allocation of asset value relevant to the **thresholds notice** been undertaken.
- (3) The initial RAB value of an asset is determined as the value allocated to **electricity transmission services** as a result of-
  - (a) adopting its **unallocated initial RAB value**; and
  - (b) applying clause 2.1.1(1) to it.

### 2.2.3 RAB roll forward

- (1) Unallocated opening RAB value in respect of an asset in relation to-
  - (a) the **disclosure year 2012**, is its **unallocated initial RAB value**; and
  - (b) a **disclosure year** thereafter, is its **unallocated closing RAB value** in the preceding **disclosure year**.
- (2) Unallocated closing RAB value means, in the case of-
  - (a) a **found asset**, its **value of found asset**;
  - (b) a **disposed asset**, nil;
  - (c) a **lost asset**, nil;
  - (d) any other asset with an **unallocated opening RAB value**, the value determined in accordance with the formula-  
**unallocated opening RAB value - unallocated depreciation**;
  - (e) an asset to which clause 2.2.7(4)(b)(i) applies, the result of the formula in paragraph (d), increased by the amount of expenditure described in clause 2.2.7(4)(b)(i) in the **disclosure year** in question; and
  - (f) any other asset having a **commissioning date** in the **disclosure year** in question, the value determined in accordance with the formula-  
**value of commissioned asset – unallocated depreciation**.
- (3) Opening RAB value in respect of an asset, is, for-
  - (a) the **disclosure year 2012**, its **initial RAB value**; and
  - (b) a **disclosure year** thereafter, its **closing RAB value** in the preceding **disclosure year**.
- (4) Closing RAB value, in respect of an asset, is determined as the value allocated to **electricity transmission services** by-
  - (a) adopting its **unallocated closing RAB value**; and
  - (b) applying 2.1.1(1) to it.

### 2.2.4 Depreciation

- (1) Unallocated depreciation is determined, subject to subclause (3) and clause 2.2.5, in accordance with the formula, in the case of –
  - (a) an asset with an unallocated opening RAB value –  
 $[1 \div \text{remaining asset life}] \times \text{unallocated opening RAB value}$ ; and
  - (b) an asset having a **commissioning date** in the **disclosure year** in question –  
 $[1 \div \text{remaining asset life}] \times \text{unallocated opening RAB value} \times \text{the fraction of the disclosure year from the commissioning date to the last day of the disclosure year}$ .
- (2) Depreciation is determined, subject to subclause (3)(a), in accordance with the formula, in the case of-
  - (a) an asset with an unallocated opening RAB value –  
 $[1 \div \text{remaining asset life}] \times \text{opening RAB value}$ ; and

- (b) an asset having a **commissioning date** in the **disclosure year** in question

—  
[1 ÷ **remaining asset life**]

×

*value allocated to **electricity transmission services** by adopting the **value of commissioned asset** and applying clause 2.1.1(1) to it as if it were an asset value*

×

*the fraction of the **disclosure year** from the **commissioning date** to the last day of the **disclosure year**.*

- (3) For the purposes of subclauses (1) and (2)-
- (a) unallocated depreciation and depreciation are nil in the case of-
- (i) **land**;
  - (ii) an **easement** other than a **fixed life easement**; and
  - (iii) a **network spare** in respect of the period before which depreciation for the **network spare** in question commences under **GAAP**; and
- (b) in all other cases, where an asset's **physical asset life** at the end of the **disclosure year** is nil-
- (i) unallocated depreciation is the asset's **unallocated opening RAB value**; and
  - (ii) depreciation is the asset's **opening RAB value**.

#### 2.2.5 Unallocated depreciation constraint

- (1) For the purpose of clause 2.2.4, and subject to subclause (2), the sum of **unallocated depreciation** of an asset calculated over its **physical asset life** may not exceed, in the case of an asset-
- (a) in the **initial RAB**, its **unallocated initial RAB value**; or
  - (b) not in the **initial RAB**, its **value of commissioned asset** or **value of found asset**.
- (2) For the purpose of subclause (1), the sum of increases to which clause 2.2.3(2)(e) refers for all **disclosure years** is treated as an increase in the **value of commissioned asset** of the asset in question.

#### 2.2.6 Physical asset life

- (1) Physical asset life means a finite period relating to an asset, being, in the case of-
- (a) a **fixed life easement**, the fixed duration or fixed period (as the case may be) referred to in the definition of **fixed life easement**;
  - (b) a dedicated asset which is not expected to be used by **Transpower** to provide **electricity transmission services** beyond the term of the fixed term agreement relating to the asset between **Transpower** and the customer, at **Transpower's** election, the term of that agreement;
  - (c) an extended life asset or a refurbished asset, its physical service life potential as determined by **Transpower**;

- (d) a stranded asset, the service life potential specified by the **Commission**;
  - (e) a reduced life asset, its physical service life potential determined by an **engineer**, subject to subclause (2);
  - (f) a **found asset** for which a similar asset exists as described in subclause 2.2.8(2)(b)(i), the asset life applying to the similar asset;
  - (g) the HVAC lines pseudo asset described in Schedule 1, clause 3(4)(d) of the **thresholds notice**, five years from 1 July 2011;
  - (h) a non-network asset, its asset life as determined under **GAAP**;
  - (i) an asset acquired or transferred from a **regulated supplier**, the asset life that the vendor would have assigned to the asset at the end of its **disclosure year** had the asset not been transferred;
  - (j) an asset acquired or transferred from an entity other than a **regulated supplier**:
    - (i) where a similar asset exists, the asset life assigned to the similar asset;- or
    - (ii) where a similar asset does not exist, the physical service life potential determined by an **engineer**, subject to subclause (2);
  - (k) an asset not referred to in paragraphs (a) to (h)-
    - (i) having a **standard physical asset life**, its **standard physical asset life**;
    - (ii) not having a **standard physical asset life**, if there is a similar physical asset in terms of asset type with an **unallocated opening RAB value**, the physical asset life of that similar physical asset; and
    - (iii) in all other cases, its physical service life potential determined by an **engineer**, subject to subclause (2);
  - (l) a composite asset, the average asset life of the assets comprising it determined in accordance with paragraphs (a) to (i), with the modification that each such asset life must be weighted with respect to the proportion of its respective **opening RAB value** to the sum of the **opening RAB values** of the components in the earliest **disclosure year** in which all component assets were held by **Transpower**; and
  - (m) the **RCP1 psuedo asset**, 31 years.
- (2) For the purpose of subclauses (1)(e) and (1)(k)(iii), a determination of physical service life potential made by an **engineer**-
- (a) in relation to an asset with an **unallocated opening RAB value** is deemed applicable to all assets of similar asset type for which there is a requirement in this clause for an **engineer's** determination of physical service life potential; and
  - (b) must be evidenced by a report written by that **engineer** that includes an acknowledgement that the report may be publicly disclosed by **Transpower** pursuant to an **ID determination**.
- (3) In this clause-
- (a) 'dedicated asset' means an asset operated for the benefit of a particular customer pursuant to a fixed term agreement for the **supply** of

- electricity transmission services** between **Transpower** and that customer;
- (b) 'extended life asset' means an asset whose physical service life potential is greater than its **standard physical asset life**;
  - (c) 'refurbished asset' means an asset on which work (other than maintenance) has been carried out resulting in an extension to its physical service life potential;
  - (d) 'reduced life asset' means an asset determined by **Transpower** to have a physical service life potential shorter than its **standard physical asset life**;
  - (e) 'stranded asset' means an asset-
    - (i) that has an **opening RAB value**; and
    - (ii) in respect of which, on application by **Transpower** and in accordance with any process for the purpose specified in an **IPP determination**, the **Commission** has determined a service life potential shorter than its **standard physical asset life**; and
  - (f) 'composite asset' means a configuration of two or more assets that is not capable of operation in the absence of any of those assets.

#### 2.2.7 Value of commissioned assets

- (1) Value of commissioned asset, in relation to an asset, is the cost of the asset to **Transpower** determined by applying **GAAP** to the asset as on its **commissioning date**, except that the cost of-
  - (a) an intangible asset, unless it is-
    - (i) a **finance lease**; or
    - (ii) an **identifiable non-monetary asset**,
 is nil;
  - (b) an **easement** created by **Transpower** in respect of **easement land**, is limited to the sum of-
    - (i) legal and administrative costs incurred by **Transpower** in relation to the **easement's** creation;
    - (ii) compensation, determined by a **valuer**, for any amount that would otherwise have been paid by **Transpower** on arm's-length terms to a third party owner of **easement land** as compensation for the permanent and material reduction in the value of the **land** or disruption, on account of the **easement's** creation; and
    - (iii) the cost of financing the purchase of the **easement land**, determined in respect of the period on and from the date of acquisition until the **easement's** creation,
 where any gain or loss made by **Transpower** on the sale or disposal of the **easement land** is ignored;
  - (c) **easement land**, is nil;
  - (d) an asset used in providing **electricity transmission services** pursuant to a **new investment contract**, is nil;

- (e) a **network spare** whose cost is not treated wholly as or part of the cost of an asset under **GAAP**, is nil;
- (f) an asset-
  - (i) acquired from another **regulated supplier**; and
  - (ii) used by that **regulated supplier** in the **supply of regulated goods or services**,

is limited to the unallocated closing RAB value of the asset that would have applied for the other **regulated supplier**, had the asset not been acquired by **Transpower** in the **disclosure year** of the **regulated supplier** when the asset was transferred (as 'unallocated closing RAB value' is defined in the **input methodologies** applying to the **supply of regulated goods or services** by the other **regulated supplier**);

- (g) an asset that was previously used by **Transpower** in its **supply of other regulated goods or services** is limited to the unallocated opening RAB value of the asset in relation to those **other regulated goods or services** as on the day before the **commissioning date** (as 'unallocated opening RAB value' is defined in the **input methodologies** applying to the **regulated goods or services supplied** by **Transpower**); and
- (h) an asset acquired from a **related party** other than an asset to which paragraphs (f) or (g) apply is-
  - (i) its depreciated historic cost in respect of the **related party** determined by applying **GAAP** as on the day before the acquisition by the **Transpower**; or
  - (ii) where sufficient records do not exist to establish this cost, its market value as at its **commissioning date** as determined by a **valuer**.

- (2) When applying **GAAP for the purpose of under** subclause (1), the cost of financing-
  - (a) is applicable only in respect of the period commencing on the date the asset becomes a **works under construction** and terminating on its **commissioning date**; and
  - (b) calculated using a rate not greater than **Transpower's** weighted average of borrowing costs for each applicable **disclosure year**.
- (3) For the purposes of subclause (2)(b), the 'weighted average of borrowing costs' is calculated for a **disclosure year** using principles set out in **GAAP**, where:
  - (a) the cost of financing rate is the weighted average of the costs applicable to borrowings in respect of **capital expenditure** that are outstanding during the **disclosure year**;
  - (b) the total costs applicable to borrowings outstanding, as used in calculating the weighted average, must include costs of borrowings made specifically for the purpose of any particular –
    - (i) **capital expenditure projects**; or
    - (ii) **capital expenditure programmes**; and

- (c) the amount of borrowing costs capitalised during the **disclosure year** must not exceed the amount of borrowing costs incurred during the **disclosure year**.
- (4) For the avoidance of doubt-
  - (a) revenue derived in relation to **works under construction** that is not included in regulatory income under an **ID determination** or preceding regulatory information disclosure requirements reduces the cost of an asset by the amount of the revenue where such reduction is not otherwise made under **GAAP**;
  - (b) where expenditure on an asset which forms part of the cost of that asset under **GAAP** is incurred by **Transpower** after the asset was first **commissioned**, such expenditure may be treated, at **Transpower's** election, as relating to-
    - (i) that asset; or
    - (ii) a separate asset.

#### 2.2.8 Value of found assets

- (1) Found asset means, in relation to a **disclosure year**, an asset-
  - (a) other than **easement land**;
  - (b) other than an intangible asset, unless it is-
    - (i) a **finance lease**; or
    - (ii) an **identifiable non-monetary asset**; and
  - (c) not having a **commissioning date** in the **disclosure year** in question;
  - (d) the value of which-
    - (i) is not included as an **unallocated opening RAB value** in the **disclosure year** in question nor was so included in any prior **disclosure year** in accordance with clause 2.2.3(1); and
    - (ii) was not included in an **unallocated closing RAB value** in any prior **disclosure year** in accordance with clause 2.2.3(2); and
  - (e) first determined by **Transpower** in the **disclosure year** in question to have a **commissioning date** after the **disclosure year** 2011.
- (2) The value of found asset for a **found asset** is-
  - (a) its cost calculated consistently with **GAAP**; or
  - (b) where sufficient records do not exist to establish its cost for the purposes of **GAAP**,
    - (i) where an asset with an **unallocated opening RAB value** for that **disclosure year** is similar (in terms of asset type and age) to the **found asset**, the **unallocated opening RAB value** of the similar asset; and
    - (ii) in all other cases, its market value as determined by a **valuer** as at the date that the asset was first determined by **Transpower** to have

been **commissioned** in a prior **disclosure year** after the **disclosure year 2011**.

#### 2.2.9 Adjustment to asset values and establishment of RCP1 pseudo asset

- (1) Each asset with a **commissioning date** in the period commencing
  - (a) on the first day of **disclosure year 2012**; and
  - (b) ending on the last day of the **disclosure year 2015**shall have its values calculated ~~pursuant to~~under-
  - (c) clause 2.2.3(1); and
  - (d) clause 2.2.3(3),for the **disclosure year 2016** adjusted by the amounts necessary to produce the value for each asset as if **depreciation** had applied for the **disclosure year** in which the asset's **commissioning date** occurred.
- (2) The 'RCP1 psuedo asset' is an asset established as of the first day of the **disclosure year 2016** with-
  - (a) an **unallocated opening RAB value** equal to the sum of adjustments for all assets made under subclause (1) in respect of clause 2.2.3(1); and
  - (b) an **opening RAB value** equal to the sum of all adjustments for all assets made under subclause (1) in respect of clause 2.2.3(3).

### SUBPART 3 **Treatment of taxation**

#### 2.3.1 Regulatory tax allowance

- (1) Regulatory tax allowance is determined by applying the **tax rules** and the **corporate tax rate** to the regulatory profit / (loss) before tax.
- (2) For the purpose of subclause (1), 'regulatory profit / (loss) before tax' means the amount of 'regulatory profit / (loss) before tax', as determined in accordance with an **ID determination**.
- (3) For the purpose of subclause (1), in applying the **tax rules** in respect of particular items of income and expenses included in 'regulatory profit / (loss) before tax'-
  - (a) a tax deduction for interest incurred in relation to debt must be substituted with a tax deduction for notional deductible interest;
  - (b) any tax deduction for depreciation in respect of an asset must be calculated by applying the **tax rules** to the **regulatory tax asset value**; and
  - (c) the effect of any-
    - (i) tax losses (other than those produced from the **supply of electricity transmission services**); and
    - (ii) subvention payment,made by **Transpower** must be ignored.
- (4) For the purpose of subclause (3)(a), 'notional deductible interest' means the amount determined in accordance with the formula-



**(sum of opening RAB values × leverage × cost of debt) + term credit spread differential allowance.**

### 2.3.2 Regulatory tax asset value

- (1) Regulatory tax asset value, in relation to an asset, means the value determined in accordance with the formula-

*tax asset value × result of asset allocation ratio.*

- (2) For the purpose of subclause (1), 'tax asset value' means, in respect of-

- (a) an asset-

- (i) acquired from a **regulated supplier** who used it to **supply regulated goods or services**; or  
(ii) acquired or transferred from a **related party**,

the value of the asset determined by applying the tax depreciation rules to its notional tax asset value; and

- (b) any other asset, its adjusted tax value.

- (3) In this clause-

- (a) 'tax depreciation rules' means the **tax rules** that relate to the determination of depreciation allowances for tax purposes;

- (b) 'adjusted tax value' has the same meaning as in the tax depreciation rules.

- (4) 'Notional tax asset value' means, for the purpose of-

- (a) subclause (2)(a)(i), the value after applying the tax depreciation rules to the tax asset value (as 'tax asset value' is defined in the **input methodologies** applying to the **regulated goods or services** in question) in respect of the **disclosure year** in which the asset was acquired; and

- (b) subclause (2)(a)(ii), the value in respect of the **disclosure year** in which the asset was acquired or transferred that is-

- (i) consistent with the **tax rules**; and  
(ii) limited to its **value of commissioned asset**.

- (5) For the purpose of subclause (1), 'result of asset allocation ratio' means, where an asset or group of assets maintained under the **tax rules**-

- (a) has a matching asset or group of assets maintained for the purpose of Subpart 2, the value obtained in accordance with the formula-

**opening RAB value or sum of opening RAB values, as the case may be**

÷

**unallocated opening RAB value or sum of unallocated opening RAB values, as the case may be,**

applying the formula in respect of the asset or smallest group of assets maintained for the purpose of Subpart 2 that has a matching asset or group of assets maintained under the **tax rules**; and

- (b) does not have a matching asset or group of assets maintained for the purpose of Subpart 2, the value of the asset allocated to the **supply of electricity transmission services** were clause 2.1.1(1) to apply to the asset or group of assets.

## SUBPART 4 **Cost of capital**

### 2.4.1 Methodology for estimating weighted average cost of capital

- (1) The **Commission** will determine a mid-point estimate of vanilla **WACC** for each **disclosure year**-
  - (a) in respect of the 5 years commencing on the first day of the **disclosure year** in question;
  - (b) within 1 month of the start of the **disclosure year** in question; and
  - (c) in accordance with the formula-

$$r_d L + r_e(1 - L).$$

- (2) The **Commission** will determine a mid-point estimate of post-tax **WACC** for each **disclosure year** -
  - (a) in respect of the 5 years commencing on the first day of the **disclosure year** in question;
  - (b) within 1 month of the start of the **disclosure year** in question; and
  - (c) in accordance with the formula-

$$r_d (1 - T_c)L + r_e (1 - L).$$

- (3) In this clause-

$L$  is **leverage**;

$r_d$  is the cost of debt and is estimated in accordance with the formula:

$$r_f + \rho + d;$$

$r_e$  is the cost of equity and is estimated in accordance with the formula:

$$r_f(1 - T_i) + \beta_e TAMRP;$$

$T_c$  is the average corporate tax rate;

$r_f$  is the risk-free rate;

$\rho$  is the **average debt premium**;

$d$  is the debt issuance costs;  $T_i$  is the average investor tax rate;

$\beta_e$  is the equity beta; and

$TAMRP$  is the tax-adjusted market risk premium.

- (4) For the purpose of this clause-

- (a) the average investor tax rate, the equity beta, the debt issuance costs, the average corporate tax rate and the tax-adjusted market risk premium are the values specified in or determined in accordance with clause 2.4.2; and
- (b) the risk-free rate must be estimated in accordance with clause 2.4.3.

#### 2.4.2 Fixed WACC parameters

- (1) Leverage is 42%.
- (2) 'Average investor tax rate' is the average of the investor tax rates that, as at the date that the estimation is made, will apply to each of the **disclosure years** in the 5 year period commencing on the first day of the **disclosure year** in question.
- (3) For the purpose of subclause (2), 'investor tax rate' is, for each **disclosure year**, the maximum **prescribed investor rate** applicable at the start of that **disclosure year** to an individual who is-
  - (a) resident in New Zealand; and
  - (b) an investor in a **multi-rate PIE**.
- (4) The 'average corporate tax rate' is the average of the **corporate tax rates** that, as at the date that the estimation is made, will apply during the 5-year period commencing on the first day of the **disclosure year** in question.
- (5) 'Equity beta' is 0.60.
- (6) 'Debt issuance costs' are 0.2%.
- (7) 'Tax-adjusted market risk premium' is, for a 5-year period commencing on the first day of a **disclosure year**, 7.0%.

#### 2.4.3 Methodology for estimating risk-free rate

The **Commission** will estimate a risk-free rate-

- (a) for each **disclosure year**; and
- (b) within 1 month of the start of the **disclosure year** in question,

by-

- (c) obtaining, for notional benchmark New Zealand government New Zealand dollar denominated nominal bonds the wholesale market linearly-interpolated bid yield to maturity, for a residual period to maturity equal to 5 years on each **business day** in the 3 months preceding the start of the **disclosure year**;
- (d) calculating the annualised interpolated bid yield to maturity for each **business day**; and
- (e) calculating the unweighted arithmetic average of the daily annualised interpolated bid yields to maturity.

#### 2.4.4 Methodology for estimating average debt premium

- (1) The **Commission** will determine an estimate of an amount for the **average debt premium**-
  - (a) for each **disclosure year**; and
  - (b) within 1 month of each **disclosure year**.

- (2) For the purpose of subclause (1), ‘average debt premium’ means the simple arithmetic average of the five **debt premium** values estimated in accordance with subclauses (4), (5) and (6) for:
- (a) the current **debt premium reference year**; and
  - (b) the four previous **debt premium reference years**.
- (3) For the purpose of subclause (2)(a), ‘current debt premium reference year’ refers to the **debt premium reference year** that contains the start of the **disclosure year**.
- (4) For the **debt premium reference year** 2017 or earlier, the following **debt premium** values apply-
- (a) 2013 = 2.24%;
  - (b) 2014 = 2.04%;
  - (c) 2015 = 1.76%;
  - (d) 2016 = 1.59%; and
  - (e) 2017 = 1.59%.
- (5) Debt premium means the spread between-
- (a) the bid yield to maturity on **vanilla NZ\$ denominated bonds** that-
    - (i) are issued by an **EDB** or a **GPB**;
    - (ii) are publicly traded;
    - (iii) have a **qualifying rating** of grade BBB+; and
    - (iv) have a remaining term to maturity of 5 years; and
  - (b) the contemporaneous interpolated bid yield to maturity of benchmark New Zealand government New Zealand dollar denominated nominal bonds having a remaining term to maturity of 5 years.
- (6) For the purpose of subclause (2), the amount of the debt premium will be estimated by-
- (a) identifying publicly traded **vanilla NZ\$ denominated bonds** issued by a **qualifying issuer** that are-
    - (i) **investment grade credit rated**; and
    - (ii) of a type described in the paragraphs of subclause (7);
  - (b) in respect of each bond identified in accordance with paragraph (a)-
    - (i) obtaining its wholesale market annualised bid yield to maturity;
    - (ii) calculating by linear interpolation with respect to maturity, the contemporaneous wholesale market annualised bid yield to maturity for a notional benchmark New Zealand government New Zealand dollar denominated nominal bond with the same remaining term to maturity; and
    - (iii) calculating its contemporaneous interpolated bid to bid spread over notional benchmark New Zealand government New Zealand dollar denominated nominal bonds with the same remaining term to

maturity, by deducting the yield calculated in accordance with subparagraph (ii) from the yield obtained in accordance with subparagraph (i),

for each **business day** in the 12 months immediately preceding the start of the **debt premium reference year**;

- (c) calculating, for each bond identified in accordance with paragraph (a), the unweighted arithmetic average of the daily spreads identified in accordance with paragraph (b)(iii); and
  - (d) subject to subclause (7), estimating, by taking account of the average spreads identified in accordance with paragraph (c), and having regard to the debt premium estimated from applying the **Nelson-Siegel-Svensson approach**, the average spread that would reasonably be expected to apply to a **vanilla NZ\$ denominated bond** that-
    - (i) is issued by an **EDB** or a **GPB** that is neither 100% owned by the Crown nor a **local authority**;
    - (ii) is publicly traded;
    - (iii) has a **qualifying rating** of grade BBB+; and
    - (iv) has a remaining term to maturity of 5 years.
- (7) For the purpose of subclauses (6)(a) and (6)(d), the **Commission** will have regard, subject to subclause (8), to the spreads observed on the following types of **vanilla NZ\$ denominated bonds** issued by a **qualifying issuer**:
- (a) those that-
    - (i) have a **qualifying rating** of grade BBB+; and
    - (ii) are issued by an **EDB** or a **GPB** that is neither 100% owned by the Crown nor a **local authority**;
  - (b) those that-
    - (i) have a **qualifying rating** of grade BBB+; and
    - (ii) are issued by an entity other than an **EDB** or a **GPB** that is neither 100% owned by the Crown nor a **local authority**;
  - (c) those that-
    - (i) have a **qualifying rating** of a grade different to BBB+; and
    - (ii) are issued by an **EDB** or a **GPB** that is neither 100% owned by the Crown nor a **local authority**;
  - (d) those that-
    - (i) have a **qualifying rating** of a grade different to BBB+; and
    - (ii) are issued by an entity other than an **EDB** or a **GPB** that is neither 100% owned by the Crown nor a **local authority**; and
  - (e) those that are-
    - (i) **investment grade credit rated**; and
    - (ii) issued by an entity that is 100% owned by the Crown or a **local authority**.

- (8) For the purpose of subclause (7) -
  - (a) progressively lesser regard will ordinarily be given to the spreads observed on the bond types in accordance with the order in which the bond types are described in subclause (7);
  - (b) the spread on any bond of the type described in subclause (7) that has a remaining term to maturity of less than 5 years will ordinarily be considered to be the minimum spread that would reasonably be expected to apply on an equivalently credit-rated bond issued by the same entity with a remaining term to maturity of 5 years; and
  - (c) the **Commission** will adjust spreads observed on bonds described under subclauses (7)(b) to (7)(e) to approximate the spread that is likely to have been observed had the bonds in question been of the type described in subclause (7)(a).
- (9) For the purposes of subclause (6)(d), the 'Nelson-Siegel-Svensson approach' means a method for modelling yield curves and term structures of interest rates which establishes a relationship between term to maturity and the **debt premium**, and where a curve is generated by changing the parameters of a yield curve functional form to minimise the squared deviation between estimated and observed values.

#### 2.4.5 Methodology for estimating the WACC range and the 67th percentile of WACC

- (1) The **Commission** will determine a WACC range for each **mid-point estimate of WACC**-
  - (a) for each **disclosure year**; and
  - (b) within 1 month of the start of the disclosure year in question.
- (2) For the purpose of subclause (1), 'WACC range' means the values falling between the 25th percentile and 75th percentile, inclusive, of the **mid-point estimate of WACC**.
- (3) For the purpose of subclause (2)-
  - (a) the **mid-point estimate of WACC** must be treated as the 50th percentile; and
  - (b) the
    - (i) 75th percentile must be determined in accordance with the formula-  
**mid-point estimate of WACC + 0.674 x standard error**; and
    - (ii) 25th percentile must be determined in accordance with the formula-  
**mid-point estimate of WACC - 0.674 x standard error**,
 where the **standard error** of the relevant **mid-point estimate of WACC** is 0.0101.
- (4) The **Commission** will determine a 67th percentile estimate of vanilla **WACC** and post-tax **WACC** –
  - (a) for each **disclosure year**; and

- (b) within 1 month of the start of the **disclosure year** in question.
- (5) For the purpose of subclause (4)-
  - (a) the **mid-point estimate of WACC** must be treated as the 50th percentile; and
  - (b) the 67th percentile must be determined in accordance with the formula-  

$$\text{mid-point estimate of WACC} + 0.440 \times \text{standard error},$$
 where the **standard error** of the relevant **mid-point estimate of WACC** is 0.0101.

#### 2.4.6 Publication of estimates relating to cost of capital

The **Commission** will publish all determinations and estimates that it is required to make ~~by~~under this Subpart-

- (a) on ~~its~~the Commission's website; and
- (b) no later than 1 month after having made them.

#### 2.4.7 Qualifying debt

- (1) Qualifying debt means a line of debt-
  - (a) with an original tenor greater than 5 years; and
  - (b) issued by **Transpower**.

#### 2.4.8 Term credit spread difference

- (1) Term credit spread difference is determined in accordance with the formula-  

$$T \times U,$$
 where-
  - (a) 'T' is the amount determined in accordance with the formula-  

$$0.00075 \times (\text{original tenor of the } \mathbf{qualifying\ debt} - 5)$$
  - (b) 'U' is the book value in New Zealand dollars of the **qualifying debt** at its date of issue.
- (2) For the purpose of this clause, where the **qualifying debt** is issued to a **related party**, 'original tenor of the **qualifying debt**' means the-
  - (a) tenor of the **qualifying debt**; or
  - (b) period from the **qualifying debt's** date of issue to the earliest date on which its repayment is or may be required,
 whichever is the shorter.

#### 2.4.9 Methodology for estimating term credit spread differential

- (1) This clause applies to the determination of the amount of any **term credit spread differential** in respect of a **qualifying debt** for the purpose of disclosure ~~pursuant to~~under an **ID determination** of a-
  - (a) **term credit spread differential allowance**; or
  - (b) **term credit spread differential**.

- (2) Disclosure to which this clause applies may only be made by **Transpower** if its debt portfolio, as at the date of its most recently published audited financial statements, has a weighted average original tenor greater than 5 years.
- (3) Term credit spread differential is the amount determined in accordance with the formula-

$$(A \div B) \times C \times D,$$

where-

- (a) 'A' is the sum of the **term credit spread difference** and debt issuance cost re-adjustment;
- (b) 'B' is the book value of **Transpower's** total interest-bearing debt as at **Transpower's** balance date in its audited financial statements published in the **disclosure year**;
- (c) 'C' is **leverage**; and
- (d) 'D' is the average of-
- (i) the sum of **opening RAB values**; and
  - (ii) the sum of **closing RAB values**.
- (4) For the purpose of subclause (3)(a), the 'debt issuance cost re-adjustment' is the amount determined in accordance with the formula-

$$(0.01 \div \textit{original tenor of the qualifying debt} - 0.002) \times \textit{book value in New Zealand dollars of the qualifying debt at its date of issue},$$

which amount, for the avoidance of doubt, will be a negative number.



## PART 3 INPUT METHODOLOGIES APPLYING TO INDIVIDUAL PRICE-QUALITY PATH

### SUBPART 1 Specification of price

#### 3.1.1 Price

~~For the purpose of s 53M(1)(a) of the Act, the maximum revenues that may be recovered by Transpower will be specified in a s 52P determination as a total revenue cap, net of-~~

- ~~(a) the sum of **pass-through costs**; and~~
- ~~(b) the sum of **recoverable costs**.~~

(1) For the purpose of s 53M(1)(a) of the Act, the maximum revenues that may be recovered by Transpower for **electricity transmission services** will be specified in an **IPP determination** as a revenue cap.

(2) To comply with the revenue cap, the forecast revenue that Transpower uses for setting transmission charges under the TPM for each **pricing year** must not exceed the **forecast SMAR** for that **pricing year** of the **regulatory period**.

(3) For the purpose of setting the 'forecast SMAR':

- (a) the **Commission** must determine in an **IPP determination** for each **pricing year** of the **regulatory period**:
  - (i) the **forecast MAR**; and
  - (ii) the **IPP revenue growth rate**;
- (b) the present value of the aggregated **forecast SMAR** values for the **regulatory period** must equal the present value of the aggregated **forecast MAR** values for the **regulatory period**;
- (c) the **IPP revenue growth rate** must be applied when calculating the **forecast SMAR** for each **pricing year** of the **regulatory period** after the **first pricing year**; and
- (d) the respective present values in (b) must be calculated using the **WACC**.

(4) For the purpose of subclause (3)(a), inputs to the calculation of the **forecast MAR** for each **pricing year** in a **regulatory period** must include, but are not limited to:

- (a) the **WACC**;
- (b) **forecast EV adjustments**;
- (c) forecast **pass-through costs**; and
- (d) forecast **recoverable costs**.

(5) For the purposes of subclause (4)(b), the **forecast EV adjustment** is calculated in accordance with the formula-

$$\text{_____} = -x \frac{WACC}{\left(1 - \frac{1}{(1+WACC)^y}\right)}$$

where-

$x$  is the forecast closing post-tax EV account balance for the final disclosure year of  $RCP_{t-1}$  converted to a pre-tax revenue value by the addition of a tax gross-up amount, as specified in an IPP determination;

$y$  is the number of years in  $RCP_t$ ;

$RCP_{t-1}$  is the regulatory period immediately before the regulatory period for which the forecast MAR is being calculated; and

$RCP_t$  is the regulatory period to which the forecast MAR relates.

### 3.1.2 Pass-through cost requirements

- (1) A pass-through cost is a cost that-
  - (a) is listed in subclause (2); or
  - (b) is a **levy**, other than one listed in subclause (2), that meets the criteria specified in subclause (3).
- (2) For the purpose of subclause (1)(a), the costs are-
  - (a) rates on system fixed assets paid or payable by **Transpower** to a **local authority** under the Local Government (Rating) Act 2002; and
  - (b) **levies** payable ~~under regulations made under~~
    - (i) under regulations made under s 53ZE of the **Act**; ~~or~~
    - (ii) under regulations made under the Electricity Industry Act 2010; ~~or~~
    - (iii) by all members of the approved scheme under Schedule 4 of the Electricity Industry Act 2010.
- (3) For the purpose of subclause (1)(b), the criteria are that the **levy**-
  - (a) is-
    - (i) associated with the provision of **electricity transmission services**;
    - (ii) outside the control of **Transpower**;
    - (iii) not a **recoverable cost**;
    - (iv) appropriate to be passed through to **Transpower's** customers; and
    - (v) one in respect of which provision for its partial or full recovery is not made explicitly or implicitly in the **IPP**;
  - (b) was reasonably unforeseen at the time the **IPP determination** was made; and
  - (c) comes into effect during any **disclosure year** commencing in a **regulatory period**.

~~(4) In this clause, 'levy' means a tax, charge or fee directly imposed by or under legislation-~~

~~(a) on-~~

~~(i) **Transpower** alone; or~~

~~(ii) a class of persons (other than the general public or businesses in general) that includes **Transpower**; or~~

~~(b) in relation to **electricity transmission services**.~~

### 3.1.3 Recoverable costs

- (1) A recoverable cost is a cost that is-
  - (a) any amount that is-
    - (i) an **opex incentive amount**; or
    - (ii) a positive net balance determined in accordance with clause 3.6.6(2), provided that any requirements ~~pursuant to~~ under an **ID determination** regarding **auditor** certification of any value determined in accordance with that clause have been met;
  - (b) subject to subclause (2), an instantaneous reserves availability charge, being a charge allocated to **Transpower** under-
    - (i) clause 8.59 of the ~~Electricity Industry Participation cCode~~; or
    - (ii) any Act or regulations that replace that ~~rule~~ clause,  
net of any rebate received by **Transpower** in accordance with clause 8.65 of the ~~Electricity Industry Participation cCode~~;
  - (c) a transmission alternative operating cost, subject to the requirements in subclause (3), not to exceed the-
    - (i) actual transmission alternative operating cost incurred by **Transpower**; or
    - (ii) upper limit of transmission alternative operating costs approved in accordance with subclause (3),  
whichever is lower;
  - (d) in relation to a **major capex project** that has been approved by the **Commission** under the **Capex IM**, and subject to the requirements in subclause (3), any operating costs –
    - (i) incurred after the date of approval of the **major capex project** and in relation to the **major capex project**;
    - (ii) are not otherwise able to be recovered as part of the **major capex allowance** on the basis that the costs are not **capital expenditure**; and
    - (iii) where the sum of the operating costs and the **major capex** approved by the **Commission** in relation to the **major capex project** does not exceed the **major capex allowance**; ~~and~~
  - (e) an amount determined by the **Commission** and specified in the **IPP determination** following a reconsideration and amendment of the **IPP** under clauses 3.7.4(1)(a)(i) and 3.7.5(1) for the prudent net additional operating costs, in excess of those provided in the **IPP determination**, incurred in responding to a **catastrophic event**; and
  - ~~(e)~~ (f) any levy payable to Fire and Emergency New Zealand under the Fire and Emergency New Zealand Act 2017.
- (2) For the purpose of subclause (1)(b), an instantaneous reserves availability charge excludes-
  - (a) any 'event charges' payable by **Transpower**, as defined under-

- (i) ~~rule clause~~ 8.64 of the ~~Electricity Industry Participation Code~~, or
  - (ii) any Act or regulations that replace that ~~rule clause~~;
- (b) 50% of any such charge incurred by **Transpower**, except one incurred as a direct result of decommissioning of Pole 1 of the HVDC link, in relation to an asset remaining out of service after an initial period of 14 consecutive days out of service, insofar as the cumulative amount so incurred is less than or equal to 1% of **Transpower's forecast MAR** for the **disclosure year** in which the event causing the asset to be out of service commences, as specified in the **IPP determination**;
  - (c) any such charge treated as **capital expenditure** (in accordance with **GAAP**) by **Transpower** in relation to the control systems integration of Pole 2 and the commissioning of Pole 3 of the HVDC link; and
  - (d) any such charge that is treated as having been inefficiently incurred under **GAAP**.
- (3) For the purpose of subclause (1)(c) and subclause (1)(d), the requirements are that the cost must-
- (a) be **operating expenditure**;
  - (b) be incremental to the **operating expenditure** allowance specified by the **Commission** in the **IPP determination**; and
  - (c) have been approved by the-
    - (i) **Electricity Commission** under Part F of the Electricity Governance Rules 2003;
    - (ii) **Commission** in accordance with s 54R(3)(b) of the **Act**; or
    - (iii) **Commission** in accordance with any input methodology determined pursuant to s 54S of the **Act**.

~~(4)~~—In this clause,-

~~(5)(4)~~ 'Act' and 'Regulations' have the same meanings as defined in s 29 of the Interpretation Act 1999; ~~and.~~

~~(a)~~—'Electricity Industry Participation Code' has the same meaning as 'code' is defined in the **Electricity Industry Act 2010**.

## SUBPART 2 **Cost allocation**

### 3.2.1 Cost allocation

- (1) For the purpose of making an **IP-P determination**, information provided to the **Commission** by **Transpower** regarding **Transpower's operating costs** and **capital expenditure**, whether actual or forecast, must be provided in accordance with clause 2.1.1 with necessary modifications.
- (2) For the avoidance of doubt, in applying subclause (1), any reference to 'any requirement in an **ID determination**' in Subpart 1 of Part 2 means 'any requirement specified by the **Commission**'.

## SUBPART 3 **Asset valuation**

### 3.3.1 Asset valuation

For the purpose of making an **IPP determination**-

- (a) the value of an asset; and
- (b) any allowance for depreciation,

must be determined in accordance with the **input methodologies** specified in Subpart 2 of Part 2, with necessary modifications to allow-

- (c) such values or allowances to be calculated on a forecast basis where required; and
- (d) for the purposes of determining **forecast MAR** and associated annual wash-ups, the determination of the **value of commissioned asset** by reference to approved amounts of **capital expenditure**.

## SUBPART 4 **Treatment of taxation**

### 3.4.1 Treatment of taxation

- (1) For the purpose of making an **IPP determination**, **Transpower's regulatory tax allowance** whether on an actual or forecast basis, must be determined in accordance with the **input methodologies** specified in Subpart 3 of Part 2 with necessary modifications.
- (2) For the avoidance of doubt, in applying subclause (1), 'as determined in accordance with an **ID determination**' in clause 2.3.1(2) ~~shall~~must be construed as 'as specified by the **Commission**'.

## SUBPART 5 **Cost of capital**

### 3.5.1 Methodology for estimating weighted average cost of capital

- (1) The **Commission** will determine a mid-point estimate of vanilla **WACC**-
  - (a) as of the first **business day** of the month 7 months prior to the start of each **regulatory period**;
  - (b) in respect of a 5--year period;
  - (c) no later than 6 months prior to the start of each **regulatory period**; and
  - (d) in accordance with the formula-
$$r_d L + r_e(1 - L).$$
- (2) The **Commission** will determine a mid-point estimate of post-tax **WACC**-
  - (a) as of the first **business day** of the month 7 months prior to the start of each **regulatory period**;
  - (b) in respect of a 5--year period;
  - (c) no later than 6 months prior to the start of each **regulatory period**; and
  - (d) in accordance with the formula-
$$r_d (1 - T_c)L + r_e (1 - L).$$
- (3) In this clause-

$L$  is **leverage**;

$r_d$  is the cost of debt and is estimated in accordance with the formula:

$$r_f + p + d;$$

$r_e$  is the cost of equity and is estimated in accordance with the formula:

$$r_f(1 - T_i) + \beta_e TAMRP;$$

$T_c$  is the average corporate tax rate;

$r_f$  is the risk-free rate;

$p$  is the **average debt premium**;

$d$  is the debt issuance costs;

$T_i$  is the average investor tax rate;

$\beta_e$  is the equity beta; and

$TAMRP$  is the tax-adjusted market risk premium.

- (4) For the purpose of this clause-
  - (a) the fixed WACC parameters comprising average investor tax rate, equity beta, the debt issuance costs and tax-adjusted market risk premium are the values specified in or determined in accordance with clause 3.5.2;
  - (b) the risk-free rate must be estimated for the first **business day** of the month 7 months preceding the start of the **regulatory period** in accordance with clause 3.5.3; and
  - (c) the amount of the average debt premium must be estimated for the first **business day** of the month 7 months preceding the start of the **regulatory period** in accordance with clause 3.5.4.

### 3.5.2 Fixed WACC parameters

- (1) Leverage is 42%.
- (2) 'Average investor tax rate' is the average of the investor tax rates that, as at the date that the estimation is made, will apply to each of the **disclosure years** in the 5 year period commencing on the first day of the **regulatory period** in question.
- (3) For the purpose of subclause (2), 'investor tax rate' is, for each **disclosure year**, the maximum **prescribed investor rate** that, as at the date that the estimation is made, will apply at the start of the **regulatory period** to an individual who is-
  - (a) resident in New Zealand; and
  - (b) an investor in a **multi-rate PIE**.
- (4) 'Equity beta' is 0.60.
- (5) 'Debt issuance costs' are 0.2%.
- (6) 'Tax-adjusted market risk premium' is, for a 5-year period commencing on the first day of the **regulatory period**, 7.0%.

### 3.5.3 Methodology for estimating risk-free rate

The **Commission** will estimate a risk-free rate-

- (a) as of the first **business day** of the month 7 months prior to the start of each **regulatory period**;
- (b) in respect of a 5--year period; and
- (c) no later than 6 months prior to the start of each **regulatory period**,

by-

- (d) obtaining, for notional benchmark New Zealand government New Zealand dollar denominated nominal bonds the wholesale market linearly-interpolated bid yield to maturity, for a residual period to maturity equal to 5 years on each **business day** in the 3 month period of 8 to 10 months prior to the start of each **regulatory period**;
- (e) calculating the annualised interpolated bid yield to maturity for each **business day**; and
- (f) calculating the unweighted arithmetic average of the daily annualised interpolated bid yields to maturity.

#### 3.5.4 Methodology for estimating average debt premium

- (1) The **Commission** will determine an estimate of an amount for the **average debt premium**-
  - (a) for each **regulatory period**; and
  - (b) no later than 6 months prior to the start of each **regulatory period**.
- (2) For the purpose of subclause (1), 'average debt premium' means the simple arithmetic average of the five **debt premium** values estimated in accordance with clause 2.4.4(6) for-
  - (a) the current **debt premium reference year**; and
  - (b) the four previous **debt premium reference years**.
- (3) For the **debt premium reference year** 2017 or earlier, the following **debt premium** values apply-
  - (a) 2013 = 2.24%;
  - (b) 2014 = 2.04%;
  - (c) 2015 = 1.76%;
  - (d) 2016 = 1.59%; and
  - (e) 2017 = 1.59%.

#### 3.5.5 Methodology for estimating 67th percentile of vanilla and post-tax WACC

- (1) The **Commission** will determine a 67th percentile estimate of vanilla **WACC**-
  - (a) for each **regulatory period**; and
  - (b) no later than 6 months prior to the start of each **regulatory period**.
- (2) The **Commission** will determine a 67<sup>th</sup> percentile estimate of post-tax **WACC**-
  - (a) for each **regulatory period**; and
  - (b) no later than 6 months prior to the start of each **regulatory period**.
- (3) For the purposes of subclause (1) or (2), the 67th percentile must be determined in accordance with the formula-

**mid-point estimate of WACC** + 0.440 × *standard error*,

where the **standard error** of the **mid-point estimate of WACC** is 0.0101.

### 3.5.6 Publication of estimates

The **Commission** will publish all determinations and estimates that it is required to make by this subpart-

- (a) on its website; and
- (b) no later than 1 month after having made them.

### 3.5.7 Use of published estimates of WACC

For the purpose of setting a price path in an **IPP determination**, the **WACC** published ~~in accordance with~~under clause 3.5.6 most recently prior to the start of the **regulatory period** in question must be applied in respect of each **disclosure year** commencing in the **regulatory period**.

### 3.5.8 Methodology for estimating term credit spread differential

- (1) This clause applies to the determination of the amount of any **term credit spread differential** in respect of a **qualifying debt** for the purpose of determining a **term credit spread differential allowance** in an **IPP determination**.
- (2) The **Commission** will only determine a **term credit spread differential allowance** if **Transpower's** debt portfolio, as at the date of its most recently published audited financial statements, has a weighted average original tenor greater than 5 years.
- (3) Term credit spread differential is the amount determined in accordance with the formula-

$$(A \div B) \times C \times D,$$

where-

- (a) 'A' is the sum of the **term credit spread difference** and debt issuance cost re-adjustment;
- (b) 'B' is the book value of **Transpower's** total interest-bearing debt as at the balance date of **Transpower's** financial statements audited and published most recently before the **IPP determination** is made;
- (c) 'C' is **leverage**; and
- (d) 'D' is the average of-
  - (i) the sum of **opening RAB values**; and
  - (ii) the sum of **closing RAB values**.

- (4) For the purpose of subclause (3)(a), the 'debt issuance cost re-adjustment' is determined in accordance with the formula-

$$(0.01 \div \textit{original tenor of the qualifying debt} - 0.002) \times \textit{book value in New Zealand dollars of the qualifying debt at its date of issue},$$

which amount, for the avoidance of doubt, will be a negative number.



## SUBPART 6 Incremental rolling incentive scheme

### SECTION 1 Annual IRIS incentive amounts for operating expenditure

#### 3.6.1 Calculation of annual IRIS incentives for operating expenditure as recoverable costs

- (1) **Transpower** must calculate an **opex incentive amount** for each **disclosure year** of each **regulatory period**, subject to subclause (2).
- (2) **Transpower** shall not calculate an **opex incentive amount** for any **disclosure year** commencing prior to 1 April 2020.

#### 3.6.2 How to calculate opex incentive amounts

- (1) The 'opex incentive amount' for a **disclosure year** is an amount equal to the sum of—
  - (a) all **amounts carried forward** into that **disclosure year** from a **disclosure year** in a preceding **regulatory period**; and
  - (b) where an **adjustment to the opex incentive** is applicable under clause 3.6.4(1), the amount calculated in accordance with the following formula for a disclosure year in the regulatory period-  
~~the amount calculated in accordance with the following formula for a disclosure year in the regulatory period-~~

$$\left( \frac{\text{Adjustment to the opex incentive}}{l-1} \right) \times (1+r)^{y+0.5}$$

$$\left( \frac{\text{Adjustment to the opex incentive}}{l-1} \right) \times (1+r)^{y-1}$$

where—

- l* is the number of **disclosure years** in the **regulatory period**;
- r* is the **cost of debt** applying to the **IPP** in question; and
- y* is the number of **disclosure years** preceding the **disclosure year** in question in the **regulatory period**.~~;~~~~or~~

~~(i) where subclause (2) applies, nil.~~

~~(2) For the purpose of subclause 3.6.2(1)(b)(ii), 'nil' applies for-~~

- ~~(a) the first **disclosure year** of the **regulatory period**; or~~
- ~~(b) a **disclosure year** in a **regulatory period** commencing prior to 1 April 2020.~~

#### 3.6.3 How to calculate the amount carried forward to subsequent disclosure years

- (1) An 'amount carried forward' must be calculated for each **disclosure year** of a **regulatory period**, subject to subclause (5).
- (2) The 'amount carried forward' for the first **disclosure year** of a **regulatory period** is calculated in accordance with the formula—

**forecast opex<sub>t</sub> – actual opex<sub>t</sub>**

where—

$t$  means the **disclosure year** in question.

- (3) The ‘amount carried forward’ for a **disclosure year** that is not the first or last **disclosure year** of a **regulatory period** is calculated in accordance with the formula–

$$(\text{forecast opex}_t - \text{actual opex}_t) - (\text{forecast opex}_{t-1} - \text{actual opex}_{t-1})$$

where–

$t$  means the **disclosure year** in question; and

$t-1$  means the **disclosure year** preceding the **disclosure year** in question.

- (4) The ‘amount carried forward’ for the last **disclosure year** of a **regulatory period** is nil.
- (5) **Transpower** shall not calculate an **amount carried forward** for any **disclosure year** commencing prior to 27 November 2014.
- (6) Each **amount carried forward** is notionally carried forward from the **disclosure year** in respect of which it is calculated into each of the subsequent 5 **disclosure years**.
- (7) ‘Forecast opex’, subject to clause 3.6.5, is, for a **disclosure year**, the amount of forecast **operating expenditure** specified by the **Commission** for the relevant **disclosure year** in an **IPP determination** for the purpose of calculating an **opex incentive amount**.
- (8) ‘Actual opex’ is the amount of **operating costs** allocated to **electricity transmission services** for the relevant **disclosure year** calculated in accordance with Part 2.

#### 3.6.4 How to calculate the adjustment to the opex incentive in the second year of a regulatory period

- (1) An **adjustment to the opex incentive** must be calculated for the second **disclosure year** of the **regulatory period** in accordance with the formula–

*base year adjustment term + baseline adjustment term.*

- (2) The ‘base year adjustment term’ is calculated in accordance with the formula–

$$-\left(\frac{(\text{forecast opex}_{t-1} - \text{actual opex}_{t-1}) - (\text{forecast opex}_{t-2} - \text{actual opex}_{t-2})}{(1 + WACC)^4}\right)$$

where–

**WACC** means the **67<sup>th</sup> percentile estimate of WACC** as determined by the **Commission** and as applied by the **Commission** in determining the price path for **Transpower’s** current **IPP**;

$t-1$  means the **disclosure year** immediately prior to the current **regulatory period**; and

$t-2$  means the **disclosure year** commencing two years prior to the current **regulatory period**.

- (3) The ‘baseline adjustment term’ is calculated in accordance with the formula–

*differences in penultimate year*

$$\times$$

$$((1-(1+WACC)^{-6})/WACC)$$

$$\times$$

$$(1+WACC)^2$$

where—

*differences in penultimate year* means the amount calculated in accordance with subclause (4); and

*WACC* means the **WACC** as determined by the **Commission** and applicable to **Transpower's** current **regulatory period**.

- (4) 'Differences in penultimate year' is an amount determined by the **Commission**, having regard to the views of interested persons, that is the difference between **forecast opex** and **actual opex** in the penultimate year of the preceding **regulatory period**, minus any amount resulting from savings that occurred in the preceding years of the **regulatory period**. For the purpose of this definition, savings can be both negative and positive. The amount so determined is to be notified to **Transpower**.

## SECTION 2 Price-quality path amendments and other events

### 3.6.5 Calculating incentive adjustments for IPP amendments and other events

- (1) Where an **IPP** is amended following—
- a **catastrophic event**;
  - a **change event**;
  - an **error event**; or
  - the provision of **false or misleading information**,
- the **forecast opex** required to be used by **Transpower** to calculate the **amount carried forward** for the **disclosure year** in which the event occurred and each subsequent **disclosure year** prior to the effective date of the amendment to the **IPP**, is the amount specified by the **Commission** in the amended **IPP**.
- (2) Where—an alteration to Part 2 or an **ID determination** requirements affecting the quantification of **operating costs** allocated to **electricity transmission services** occurs in a **disclosure year** and—
- the **Commission** considers; or
  - Transpower** satisfies the **Commission** upon application, that the alteration has, or is likely to have, a material effect on the calculation of the **opex incentive amount** that would otherwise have been calculated by **Transpower**, then the **forecast opex** required to be used by **Transpower** to calculate the **amount carried forward** for that **disclosure year** and each subsequent **disclosure year** in the **regulatory period** may be determined by the **Commission**, and notified to **Transpower**, in order to preserve, to the extent appropriate—
  - the correct outcomes for expenditure efficiencies achieved before the event; and
  - the relevant incentive properties after the event.

## SECTION 3 Transitional provisions

### 3.6.6 Determination of amount to be taken into account as a recoverable cost

- (1) Each **incremental change** and **incremental adjustment term** is carried forward from the **disclosure year** in respect of which it was determined into each of the subsequent 5 **disclosure years** by applying the **inflation rate**.
- (2) In each of the **disclosure years** into which an amount has been carried ~~pursuant to~~under subclause (1), a net balance must be determined by addition of-
  - (a) any **incremental changes** carried forward into that **disclosure year**; and
  - (b) any **incremental adjustment term** carried into that **disclosure year**.

## SUBPART 7 Reconsideration of an individual price-quality path

### 3.7.1 Catastrophic event

Catastrophic event means an event-

- (a) beyond the reasonable control of **Transpower**;
- (b) that could not have been reasonably foreseen by **Transpower** at the time the most recent **IPP determination** was made; and
- (c) in respect of which-
  - (i) action required to rectify its adverse consequences cannot be delayed until a future **regulatory period** without the **grid outputs** associated with the **revenue-linked grid output measures** being outside the range specified by the relevant **cap** and **collar** in the remaining **disclosure years** of the **regulatory period**;
  - (ii) remediation requires either or both of **capital expenditure** or **operating expenditure** during the **regulatory period**;
  - (iii) the full costs of remediation are not provided for in that **IPP determination**; and
  - (iv) the cost of remediation net of any insurance or compensatory entitlements has had or will have an impact on the price path over the **disclosure years** of the **IPP** remaining on and after the first date at which a remediation cost is proposed to be or has been incurred, by an amount at least equivalent to 1% of the aggregated **forecast MARs** for the **disclosure years** of the **IPP** in which the cost was or will be incurred.

### 3.7.2 Change event

Change event means-

- (a) change in a; or
- (b) a new,

legislative or regulatory requirement applying to **Transpower** the effect of which-

- (c) must take place during the current **regulatory period**;
- (d) is not explicitly or implicitly provided for in the **IPP**; and

either-

- (e) necessitates incurring additional reasonable costs in responding to the change or new requirement that has had or will have an impact on the price path of the **disclosure years** of the **regulatory period** in which the change or new requirement applies of at least 1% of the aggregate amount of the **forecast MARs** for the **disclosure years** in which the net costs are or will be incurred; or
- (f) causes an **input methodology** to become incapable of being applied.

### 3.7.3 Error event

- (1) 'Error event' means, subject to subclause (2), a clearly unintended circumstance identified by the **Commission** where the **IPP** was determined or amended based on an error, including where:
  - (a) incorrect data was used in setting the price path, revenue-linked grid output measure or a quality standard; or
  - (b) data was incorrectly applied in setting the price path, revenue-linked grid output measure or a quality standard.
- (2) For the purposes of subclause (1), an error relating to-
  - (a) the price path will not constitute an **error event** unless the error has an impact on the price path of an amount equivalent to at least 1% of the aggregate **forecast MAR** for the affected **disclosure years** of the **IPP**; and
  - (b) the metrics by which quality standards or grid output measures are specified in the **IPP** will not constitute an **error event** unless it is an error in the value of the metric.

#### 3.7.3A Large buildup in EV account balance

'Large buildup in EV account balance' means a situation where the **EV account balance** would be, as of the last day of a **regulatory period**, when divided by the number of years in that **regulatory period**, greater than 10% of the **forecast SMAR** for the final **pricing year** in that **regulatory period**.

#### 3.7.3B Enhancement and Development Projects

- (1) 'Enhancement and Development Projects' means either an **Unforeseeable Enhancement and Development Project** as specified in subclause (2) or a **Foreseeable Enhancement and Development Project** as specified in subclause (3).
- (2) 'Unforeseeable Enhancement and Development Project' means an **E & D base capex project** where, in relation to a **regulatory period**:
  - (a) at the time the **IPP determination** was made for that **regulatory period**, an allowance for that **E & D base capex project** was not included in the **base capex allowances** for that **regulatory period** because:

- (i) the **E & D base capex project** was not forecast to commence in that **regulatory period**; and
    - (ii) it was reasonably unforeseeable that the **E & D base capex project** was likely to commence during that **regulatory period**;
  - (b) **Transpower** can demonstrate that the **E & D base capex project** has become reasonably likely to commence in that **regulatory period**; and
  - (c) drivers of the **E & D base capex project** include one or more of the following:
    - (i) a step change in demand that necessitates a capacity upgrade in the **grid**;
    - (ii) a generation **commissioning** or generation **decommissioning**;
    - (iii) meeting **grid reliability standards** or reliability service levels agreed between **Transpower** and its **customer**;
    - (iv) ensuring power quality complies with regulatory or legislative requirements;
    - (v) managing the power system dynamic voltage response to disturbances; or
    - (vi) any other development caused by a party outside the control of **Transpower** that requires a transmission network enhancement or transmission network development.
- (3) ‘Foreseeable Enhancement and Development Project’ means an **E & D base capex project** where, in relation to a **regulatory period**:
  - (a) at the time the **IPP determination** was made for that **regulatory period**, an allowance for that **E & D base capex project** was not included in the **base capex allowances** for that **regulatory period**, and it would have been unreasonable to expect **Transpower** to have accurately forecast the **capital expenditure**, or timing of, the **E & D base capex project** at the time the **IPP determination** was made;
  - (b) **Transpower** can demonstrate that the **E & D base capex project** has become reasonably likely to commence in that **regulatory period**; and
  - (c) drivers of the **E & D base capex project** include one or more of the following:
    - (i) a step change in demand that necessitates a capacity upgrade in the **grid**;
    - (ii) a generation **commissioning** or generation **decommissioning**;
    - (iii) meeting **grid reliability standards** or reliability service levels agreed between **Transpower** and its **customer**;
    - (iv) ensuring power quality complies with regulatory or legislative requirements;
    - (v) managing the power system dynamic voltage response to disturbances; or
    - (vi) any other development caused by a party outside the control of **Transpower** that requires a transmission network enhancement or transmission network development.

### 3.7.4 When price-quality paths may be reconsidered

- (1) **Transpower's IPP** may be reconsidered by the **Commission** if-
  - (a) the **Commission** considers, or **Transpower** applies to the **Commission** and satisfies the **Commission**, that-
    - (i) subject to subclause (2), a **catastrophic event** has occurred;
    - (ii) there has been an **error event**;
    - (iii) a **change event** has occurred; ~~or~~
    - (iv) false or misleading information has been provided;
    - (v) subject to subclause (5), a large buildup in EV account balance is likely to occur; or
    - (iv)(vi) subject to subclauses (6) and (7), two or more Enhancement and Development Projects have become reasonably likely to commence in the regulatory period.
  - (2) For the purpose of subclause (1)(a)(i), where the costs to rectify the adverse consequences of a **catastrophic event** are fully covered by-
    - (a) the **IPP** (e.g. through an **operating expenditure** allowance for self-insurance); or
    - (b) commercial insurance held by **Transpower**,the **Commission** will only reconsider the **grid output targets, caps, collars, and grid output incentive rates** associated with **revenue-linked grid output measures**.
  - (3) For the purpose of subclause (1)(a)(iv), 'false or misleading information' means-
    - (a) false or misleading information relating to the making or amending of an **IPP determination** has been knowingly-
      - (i) provided by **Transpower** or any of its agents to the **Commission**; or
      - (ii) disclosed pursuant to an **ID determination** or information disclosure requirements under Subpart 3 of Part 4A of the **Act**, as continued in force by s 54W of the **Act**; and
    - (b) the **Commission** relied on that information in making an **IPP determination**.
  - (4) The **Commission** ~~must will~~ reconsider, in each **disclosure year** commencing in a **regulatory period**, save the last **disclosure year**, the **IPP** in respect of the remaining **disclosure years** commencing in the **regulatory period** to take account of-
    - (a) the revenue impact of **major capex** approved by the **Commission**; and
    - ~~(b) the revenue impact of any base capex approved by the Commission for a listed project; and~~
    - ~~(c)(b) an EV adjustment,~~on the forecast SMAR.

- (5) For the purpose of subclause (1)(a)(v), **Transpower** may only apply for reconsideration of an **IPP** on the basis of a **large buildup in EV account balance** if a forecast that a **large buildup in EV account balance** is likely to occur is made prior to the commencement of a **pricing year** in a **regulatory period**, and that application must:
- (a) relate to remaining complete **pricing years** in a **regulatory period**;
  - (b) include a proposed amendment to the **forecast SMAR** in respect of the remaining complete **pricing years** in a **regulatory period**; and
  - (c) be made to the Commission within the period of 80 **working days** after the end of –
    - (i) the first or second **disclosure year** commencing in that **regulatory period**, in respect of remaining complete **pricing years** of that **regulatory period**; or
    - (ii) the third **disclosure year** commencing in that **regulatory period**, in respect of the final **pricing year** of that **regulatory period**, where the **regulatory period** is more than 4 years.
- (6) For the purposes of subclause (1)(a)(vi), **Transpower** may only apply once during a **regulatory period** for reconsideration of an **IPP** in respect of **Enhancement and Development Projects**, and that application must:
- (a) be made to the **Commission** no later than the end of the second **disclosure year** commencing in that **regulatory period**; and
  - (b) include:
    - (i) an explanation of why the **Enhancement and Development Projects** have become reasonably likely to commence in that **regulatory period**;
    - (ii) an explanation of the drivers of the **E & D base capex project** in accordance with either or both clauses 3.7.3B(2)(c) and 3.7.3B(3)(c); and
    - (iii) supporting analysis for the explanations described in subclauses (6)(b)(i) and (ii),  
that is commensurate with the estimated **capital expenditure** and complexity of each **Enhancement and Development Project** that is the subject of the application.
- (7) For the purposes of subclause (1)(a)(vi), the total forecast value of the **Enhancement and Development Projects** must, in aggregate, amount to at least \$20 million, where the two or more **Enhancement and Development Projects** may comprise either or both ‘Unforeseeable Enhancement and Development Projects’ in accordance with clause 3.7.3B(2) or ‘Foreseeable Enhancement and Development Projects’ in accordance with clause 3.7.3B(3).

### 3.7.5 Amending price-quality path after reconsideration

- (1) Where, after reconsidering an **IPP**, the **Commission** determines that the **IPP determination** should be amended, the **Commission** may amend either or



both of the price path, or the **grid output targets, caps, collars and grid output incentive rates** associated with **revenue-linked grid output measures**, subject to subclauses (2), ~~and (3)~~ and (4).

- (2) Where, after reconsidering an IPP, the Commission determines that the IPP determination should be amended on the basis of any of clause 3.7.4(1)(a)(i)-(iv), (vi) or clause 3.7.4(4), ~~The Commission must not amend the-~~
- (a) price path; or
  - (b) grid output targets, caps, collars and grid output incentive rates associated with revenue-linked grid output measures,  
more than is reasonably necessary to take account of the change in costs net of any insurance or compensatory entitlements, arising from: the change in costs net of any insurance or compensatory entitlements; and  
~~grid output targets, caps, collars and grid output incentive rates associated with revenue-linked grid output measures~~ to mitigate the effect of:
    - ~~(b)~~(c) the **catastrophic event**;
    - ~~(c)~~(d) the **change event**;
    - ~~(d)~~(e) the **error event**;
    - ~~(e)~~(f) the provision of **false or misleading information**; ~~or~~
    - ~~(f)~~(g) the amendment required to **forecast SMAR** ~~to account for~~ in respect of:
      - (i) the revenue impact of **major capex** approved by the **Commission**; or
      - (ii) the revenue impact of any **base capex** approved by the **Commission** for a **listed project**; or
      - ~~(iii) a large buildup in EV account balance~~
  - (h) Enhancement and Development Projects,

as the case may be.

- (3) Where, after reconsidering an IPP, the Commission determines that the IPP determination should be amended on the basis of clause 3.7.4(1)(a)(v), the Commission must not amend the price path more than is reasonably necessary to take account of the change in forecast EV adjustment on the basis of a large buildup in EV account balance.
- ~~(3)~~(4) Where the **Commission's** reconsideration of the IPP was triggered by a **catastrophic event**, in determining the extent of the amendment required, the **Commission** will consider the extent to which **Transpower** has demonstrated that it has reviewed its **capital expenditure** and **operating expenditure** plans for the remainder of the **regulatory period** and made such substitutions as ~~is~~ are possible without adversely affecting its ability to meet the **grid output targets** associated with **revenue-linked grid output measures**.

## SCHEDULE A      **STANDARD PHYSICAL ASSET LIVES**

### Standard Physical Asset Lives for Transpower

ASSET DESCRIPTION	STANDARD <b>PHYSICAL</b> ASSET LIFE (YEARS)
Substations	55
Transformers	55
Oil Containment	45
Switchgear	45
Reactive Power Plant:	
220/110/66 kV Two Zone Bus Protection	15
22/11 kV Neutral Earthing Resistor	45
Transmission Lines	55