

# **Transpower Individual Price-Quality Path Determination 2020**

**[2019] NZCC 19**

**The Commission**

Sue Begg  
Dr Stephen Gale  
Elisabeth Welson  
John Crawford

**Date of decision**

14 November 2019



Elisabeth Welson  
**Commissioner**

<b>Document version history</b>		
<b>Publication date</b>	<b>Decision number</b>	<b>Determination name</b>
14 November 2019	[2019] NZCC 19	Transpower Individual Price-Quality Path Determination 2020

## CONTENTS

<b>PART 1: GENERAL PROVISIONS .....</b>	<b>4</b>
<b>PART 2: DEFINED TERMS .....</b>	<b>5</b>
<b>PART 3: PRICE PATH .....</b>	<b>21</b>
<b>PART 4: QUALITY STANDARDS AND PERFORMANCE MEASURES .....</b>	<b>22</b>
<b>PART 5: COMPLIANCE AND INFORMATION REPORTING .....</b>	<b>35</b>
<b>SCHEDULE A: SUMMARY OF FORECAST MAR AND FORECAST SMAR .....</b>	<b>54</b>
<b>SCHEDULE B: EV ACCOUNT SUMMARY .....</b>	<b>55</b>
<b>SCHEDULE C1: APPROVED LOW INCENTIVE RATE BASE CAPEX SUMMARY – COMMISSIONED BASIS.....</b>	<b>56</b>
<b>SCHEDULE C2: APPROVED STANDARD INCENTIVE RATE BASE CAPEX SUMMARY – COMMISSIONED BASIS.....</b>	<b>57</b>
<b>SCHEDULE C3: APPROVED LOW INCENTIVE RATE BASE CAPEX SUMMARY – EXPENDITURE BASIS.....</b>	<b>58</b>
<b>SCHEDULE C4: APPROVED STANDARD INCENTIVE RATE BASE CAPEX SUMMARY - EXPENDITURE BASIS.....</b>	<b>59</b>
<b>SCHEDULE D: FORECAST MAR BUILDING BLOCKS CALCULATION .....</b>	<b>60</b>
<b>SCHEDULE E: WASH-UP BUILDING BLOCKS CALCULATION .....</b>	<b>64</b>
<b>SCHEDULE F: POINT OF SERVICE SUB-CATEGORIES – MEASURES OF GRID PERFORMANCE GP1 AND GP2 POINTS OF SERVICE .....</b>	<b>69</b>
<b>SCHEDULE G: QUALITY STANDARDS - HVAC ASSETS FOR ASSET PERFORMANCE MEASURE AP2 ...</b>	<b>77</b>
<b>SCHEDULE H: SUMMARY OF ACTUAL PASS-THROUGH COSTS AND RECOVERABLE COSTS .....</b>	<b>79</b>
<b>SCHEDULE I: LISTED PROJECTS .....</b>	<b>80</b>
<b>SCHEDULE J: DIRECTORS’ CERTIFICATE – PRICING COMPLIANCE STATEMENT .....</b>	<b>81</b>
<b>SCHEDULE K: DIRECTORS’ CERTIFICATE – ANNUAL COMPLIANCE STATEMENT.....</b>	<b>82</b>
<b>SCHEDULE L: DIRECTORS’ CERTIFICATE – PROPOSAL TO UPDATE FORECAST MAR AND FORECAST SMAR.....</b>	<b>83</b>
<b>EXPLANATORY NOTE.....</b>	<b>84</b>

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

## **Part 1: General provisions**

1. Title
  - 1.1 This determination is the Transpower Individual Price-Quality Path Determination 2020.
2. Commencement
  - 2.1 This determination takes effect on 1 April 2020.
3. Application
  - 3.1 This determination applies to **Transpower** in relation to the supply of **electricity lines services** for **RCP3**.
4. Interpretation
  - 4.1 Unless the context otherwise requires—
    - 4.1.1 terms appearing in bold type (except for headings) in this determination are defined terms;
    - 4.1.2 terms used in this determination that are defined in the **IMs**, but not in this determination, have the meaning given in the **IMs**;
    - 4.1.3 terms used in this determination that are defined in the **Act**, but not in this determination, or in the **IMs**, have the meaning given in the **Act**;
    - 4.1.4 any reference to a period of time is interpreted in accordance with section 35 of the Interpretation Act 1999;
    - 4.1.5 for the avoidance of doubt, references to terms from legislation in this determination have the meaning given in the applicable legislation at the time they are applied;
    - 4.1.6 financial items must be measured and disclosed in accordance with **GAAP** at the time it is applied, unless otherwise required by this determination or the **IMs**;
    - 4.1.7 non-financial items must be measured and disclosed in accordance with standard industry practice unless otherwise required in this determination, or the **IMs**;
    - 4.1.8 an obligation to do something is deemed to include an obligation to cause that thing to be done; and
    - 4.1.9 a word which denotes the singular also denotes the plural and vice versa.

4.2 If there is any inconsistency between the main body of this determination and any attachment or schedule to this determination, the main body of this determination prevails.

5. Individual price-quality path and information disclosures

5.1 **Transpower** must comply with the individual price-quality path, which consists of:

5.1.1 the price path in Part 3; and

5.1.2 the quality standards in clauses 14.1-14.5, 16.1-16.5, 17.1, 18.1 and 21.1.

5.2 **Transpower** must comply with the requirements to provide compliance statements and information disclosures in Parts 3, 4 and 5.

6. Applicable input methodologies

6.1 **Transpower** must apply the requirements set out in the following **IMs** where applicable when complying with this determination:

6.1.1 the **Transpower IM**; and

6.1.2 the **Capex IM**.

## Part 2: Defined terms

7. In this determination, unless the context otherwise requires:

### A

<b>Act</b>	means the Commerce Act 1986;
<b>actual opex</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>actual transmission revenue</b>	means the revenue received by <b>Transpower</b> in a <b>pricing year</b> for <b>electricity transmission services</b> ;
<b>AHI</b>	means <b>Transpower's</b> asset health assessment index for the relative health of an asset in the range between 1 and 10, where an index of 1 denotes best condition and an index of 10 denotes worst condition;
<b>annual compliance statement</b>	means a written statement made by <b>Transpower</b> under clause 23 and associated information;

<b>asset health measure</b>	means the percentage of assets in an <b>asset health measure asset class</b> with an <b>AHI</b> of 8 or more;
<b>asset health measure asset class</b>	means an asset class that is subject to the asset health quality standards and is one of the following: <ul style="list-style-type: none"> <li>power transformers;</li> <li>outdoor circuit breakers;</li> </ul>
<b>asset performance measure</b>	has the meaning given in the <b>Capex IM</b> and, for the purposes of this determination, means: <ul style="list-style-type: none"> <li>(a) the <b>revenue-linked grid output measures</b> specified in clause 11.3; and</li> <li>(b) the non-revenue linked <b>grid output measures</b> described in clauses 25.1.1 to 25.1.3;</li> </ul>
<b>assurance auditor</b>	means a person who: <ul style="list-style-type: none"> <li>(a) is qualified for appointment as auditor of a company under the Companies Act 1993;</li> <li>(b) complies with Professional and Ethical Standard 1 (PES 1) issued by the New Zealand Auditing and Assurance Standards Board of the External Reporting Board in December 2018, under s 12(b) of the Financial Reporting Act 2013; and</li> <li>(c) for the avoidance of doubt: <ul style="list-style-type: none"> <li>(i) has no input into either <b>Transpower's</b> proposed updated <b>forecast MAR</b> and <b>forecast SMAR</b> calculations for a <b>pricing year</b> of <b>RCP3</b> or an <b>annual compliance statement</b> for a <b>disclosure year</b> of <b>RCP3</b> (other than in relation to <b>independent assurance reports</b>); and</li> <li>(ii) is not associated with or directed by any person who has provided any such input;</li> </ul> </li> </ul>

**B**

<b>base capex</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex allowance</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex expenditure adjustment</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex incentive rates</b>	means the <b>base capex low incentive rate</b> and <b>base capex standard incentive rate</b> ;
<b>base capex low incentive rate</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex programme</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex project</b>	has the meaning given in the <b>Capex IM</b> ;
<b>base capex standard incentive rate</b>	has the meaning given in the <b>Capex IM</b> ;

**C**

<b>cap</b>	has the meaning given in the <b>Capex IM</b> and, for the purposes of this determination, values are specified in Tables 4.1 and 4.2;
<b>Capex IM</b>	means the <i>Transpower Capital Expenditure Input Methodology Determination</i> [2012] NZCC 2, including, for the avoidance of doubt, any amendment applicable to <b>RCP3</b> ;
<b>capital expenditure or capex</b>	has the meaning given in the <b>Capex IM</b> ;
<b>catastrophic event</b>	has the meaning specified in clause 3.7.1 of the <b>Transpower IM</b> ;
<b>civil commotion</b>	means riots or similar civil disturbance;
<b>code</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>collar</b>	has the meaning given in the <b>Capex IM</b> and, for the purposes of this determination, values are specified in Tables 4.1 and 4.2;
<b>Commission</b>	has the meaning given in the <b>Act</b> ;

<b>commissioned</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>commodity instrument that is not an effective hedge</b>	means an instrument acquired by or entered into by <b>Transpower</b> in accordance with its policy on <b>capital expenditure</b> hedging in respect of an exposure to commodity prices, and the instrument does not qualify for hedge accounting in accordance with <b>GAAP</b> at the date of being entered into or acquired and that results in a gain or loss being incorporated into its Statement of Comprehensive Income or equivalent audited statement of income and expenses for financial accounting purposes;
<b>contamination</b>	means radioactive contamination, toxic contamination, dangerous biological contamination or chemical contamination;
<b>corporate tax rate</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>CPI</b>	has the meaning given in the <b>Capex IM</b> ;
<b>customer</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>customer service measure</b>	means a reporting measure for disclosure of the timeliness of communications and information provided to affected <b>customers</b> after an <b>interruption</b> event;
<b>D</b>	
<b>depreciation</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>director</b>	has the meaning given in the <b>Capex IM</b> ;
<b>disclosure year</b>	has the meaning given in the <b>Transpower IM</b> and, in relation to a <b>pricing year</b> , is the year commencing 1 July immediately following the start of that <b>pricing year</b> ;
<b>disposed asset</b>	has the meaning given in the <b>Transpower IM</b> ;



**duration** means the elapsed time of an **unplanned interruption** (in minutes, rounded to the nearest whole minute) from the start of that **unplanned interruption** until the earlier of:

- (a) **restoration**; or
- (b) seven days after that **unplanned interruption** commenced;

## E

**Electricity Authority** has the meaning given in the **Transpower IM**;

**electricity lines services** has the meaning given in section 54C of the **Act**;

**electricity transmission services** has the meaning given in the **Capex IM**;

**EV account** has the meaning given in the **Transpower IM**;

**EV account entry** means, for a **disclosure year**, a memorandum entry to record for that **disclosure year**:

- (a) an **ex-post economic gain or loss**;
- (b) an after-tax **gain or loss on capital expenditure commitments**;
- (c) an after-tax economic gain or loss calculated for a **base capex expenditure adjustment, grid output adjustment, or major capex expenditure and output adjustment**;
- (d) an after-tax economic gain or loss calculated for a **major capex sunk costs adjustment**;
- (e) an **ex-post economic gain or loss** calculated in accordance with clause 31.1.3(a); or
- (f) an after-tax gain or loss calculated in accordance with clauses 31.1.3(b) and 31.1.3(c);

**ex-post economic gain or loss** means, for a **disclosure year**, the after tax difference (expressed as a positive or negative amount) between the capital charge and the net operating profit/(loss) after tax for that **disclosure year**, as calculated in accordance with clause 29.1;

## F

**forecast CPI** has the meaning given in the **Capex IM**;

**forecast EV adjustment** has the meaning given in the **Transpower IM** and, where the **Commission** reconsiders and determines that **Transpower's IPP** should be amended in accordance with clause 3.7.5(3) of the **Transpower IM**, is the amount calculated for each **pricing year** determined in accordance with clause 8.6;

**forecast FX rate** has the meaning given in the **Capex IM**;

**forecast MAR** has the meaning given in the **Transpower IM** and for each **pricing year**, is:

- (a) the amount set out in Column 8 in Schedule A; or
- (b) where the **Commission** reconsiders and determines that **Transpower's IPP** should be amended in accordance with the **Transpower IM**, the amount as determined in accordance with clause 8.6;

**forecast opex** has the meaning given in the **Transpower IM**;

**forecast SMAR** has the meaning given in the **Transpower IM** and, for each **pricing year**, is:

- (a) the amount set out in Column 9 in Schedule A; or
- (b) where the **Commission** reconsiders and determines that **Transpower's IPP** should be amended in accordance with the **Transpower IM**, the amount as determined in accordance with clause 8.6;

**found asset** has the meaning given in the **Transpower IM**;

**G**

<b>GAAP</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>gain or loss on capital expenditure commitments</b>	means a gain or loss required under <b>GAAP</b> to be recognised in profit or loss in <b>Transpower's</b> Statement of Comprehensive Income in respect of: <ul style="list-style-type: none"> <li>(a) foreign currency <b>capital expenditure</b> commitments and associated designated hedges; and</li> <li>(b) commodity hedge instruments;</li> </ul>
<b>good electricity industry practice</b>	has the meaning given in Part 1 of the <b>code</b> ;
<b>grid</b>	has the meaning given in the <b>Capex IM</b> ;
<b>grid output</b>	has the meaning given in the <b>Capex IM</b> ;
<b>grid output adjustment</b>	has the meaning given in the <b>Capex IM</b> ;
<b>grid output incentive rate</b>	has the meaning given in the <b>Capex IM</b> and, for the purposes of this determination, the rates for <b>revenue-linked grid output measures</b> are specified in Tables 4.1 and 4.2;
<b>grid output measure</b>	has the meaning given in the <b>Capex IM</b> ;
<b>grid output target</b>	has the meaning given in the <b>Capex IM</b> and, for the purposes of this determination, the targets for <b>revenue-linked grid output measures</b> are specified in Tables 4.1 and 4.2;
<b>H</b>	
<b>HVAC</b>	means high voltage alternating current;
<b>HVAC transmission revenue</b>	means revenue (net of rebates) received by <b>Transpower</b> from <b>customers</b> in respect of the use by <b>Transpower</b> of <b>Transpower's HVAC</b> transmission system for the purpose of providing <b>electricity transmission services to customers</b> ;
<b>HVDC</b>	means high voltage direct current;

<b>HVDC pole</b>	means an <b>HVDC</b> system circuit between Benmore and Haywards comprising the converter stations at Benmore and Haywards and the <b>HVDC</b> transmission circuit between them, carried on <b>HVDC</b> overhead line and undersea cable, connecting the converter stations;
<b>HVDC transmission revenue</b>	means revenue (net of rebates) received by <b>Transpower</b> from <b>customers</b> in respect of the use by <b>Transpower</b> of <b>Transpower's HVDC</b> transmission system for the purpose of providing <b>electricity transmission services to customers</b> ;
	<b>I</b>
<b>ID determination</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>IMs</b>	means the <b>Transpower IM</b> and the <b>Capex IM</b> taken together;
<b>Incremental rolling incentive scheme (or IRIS)</b>	means the incentive scheme specified in Part 3, subpart 6 of the <b>Transpower IM</b> ;
<b>independent assurance report</b>	means a report issued by an <b>assurance auditor</b> on an <b>annual compliance statement</b> in accordance with clause 34;
<b>instrument that ceases to be an effective hedge</b>	means a financial instrument entered into or acquired by <b>Transpower</b> in accordance with its policy on <b>capital expenditure</b> hedging that qualifies as an effective hedge at the date of entering into or acquiring the instrument, but that ceases during the <b>disclosure year</b> to qualify for hedge accounting in accordance with <b>GAAP</b> , and such ceasing to qualify results in a gain or loss being incorporated into its Statement of Comprehensive Income or equivalent audited statement of income and expenses for financial accounting purposes;
<b>interruption</b>	means the cessation of conveyance of electricity between <b>grid</b> assets owned by <b>Transpower</b> and the assets owned or operated by a <b>customer</b> at a <b>point of service</b> to the <b>grid</b> ;
<b>IPP</b>	has the meaning given in the <b>Transpower IM</b> ;

**IPP revenue growth rate** means the maximum allowable annual percentage growth in **forecast SMAR** for each **pricing year** as set out in clause 8.5;

#### L

**large buildup in EV account balance** has the meaning given in clause 3.7.3A of the **Transpower IM**;

**listed project** has the meaning given in the **Capex IM**;

**lost asset** has the meaning given in the **Transpower IM**;

**low incentive rate base capex allowance** has the meaning given in the **Capex IM**;

#### M

**major capex** has the meaning given in the **Capex IM**;

**major capex expenditure and output adjustment** has the meaning given in the **Capex IM**;

**major capex incentive rate** has the meaning given in the **Capex IM**;

**major capex project** has the meaning given in the **Capex IM**;

**major capex proposal** has the meaning given in the **Capex IM**;

**major capex sunk costs adjustment** has the meaning given in the **Capex IM**;

**measure of grid performance** has the meaning given in the **Capex IM** and, for the purposes of this determination, the measures for **revenue-linked grid output measures** are specified in clause 11.2;

**momentary interruption** means an **interruption** that is not planned, which has a duration of less than one minute;

#### N

**natural disaster** means an event caused by forces beyond human control, including without limitation:

- (a) earthquakes;

- (b) landslips;
- (c) floods;
- (d) severe weather events, including lightning, storms, wind and rain;
- (e) tsunamis; and
- (f) volcanic and hydrothermal activity;

<b>new investment contract</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>normalisation event</b>	has the meaning specified in clause 20.2;
<b>O</b>	
<b>opening RAB value</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>operating cost</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>operating expenditure</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>opex allowance</b>	means, for each <b>disclosure year</b> , the amount of <b>operating expenditure</b> specified by the <b>Commission</b> for the purposes of: <ul style="list-style-type: none"> <li>(a) calculating the <b>forecast MAR</b>; or</li> <li>(b) calculating the <b>ex-post economic gain or loss</b>;</li> </ul>
<b>opex incentive amount</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>other regulated income</b>	means income associated with the supply of <b>electricity transmission services</b> , excluding <b>actual transmission revenue</b> and investment-related income;
<b>outage</b>	has the meaning set out in clause 12.130 of the <b>code</b> , as amended from time to time, other than as specified in <b>code</b> subclauses 12.130(2)(c) and 12.130(2)(d), and excludes those that are: <ul style="list-style-type: none"> <li>(a) of less than one minute in duration;</li> <li>(b) at the request of, or caused by, a <b>customer</b>; and</li> </ul>

- (c) due to correct operation of **Transpower's** assets, caused by events in a **customer's** assets;

**P**

**pass-through costs**

has the meaning given in the **Transpower IM**;

**point of service**

has the meaning set out in Part 1, clause 1.1(1) of the **code**;

**point of service sub-category**

means a group of **points of service** identified by reference to a characteristic of service, as set out in Table 4.1 and Schedule F, and is one of the following:

- (a) in relation to **measure of grid performance GP1**:
- (i) GP1A: "N-1 security high economic consequence";
  - (ii) GP1B: "N-1 security material economic consequence";
  - (iii) GP1C: "N security high economic consequence";
  - (iv) GP1D: "N security material economic consequence";
  - (v) GP1E: "N-1 security generator";  
and
  - (vi) GP1F: "N security generator";
- (b) in relation to **measure of grid performance GP2**:
- (i) GP2A: "N-1 security high economic consequence";
  - (ii) GP2B: "N-1 security material economic consequence";
  - (iii) GP2C: "N security high economic consequence";

	(iv) GP2D: “N security material economic consequence”;
	(v) GP2E: “N-1 security generator”; and
	(vi) GP2F: “N security generator”;
<b>Pole 2</b>	means one of <b>Transpower’s HVDC poles</b> (other than <b>Pole 3</b> );
<b>Pole 3</b>	means one of <b>Transpower’s HVDC poles</b> (other than <b>Pole 2</b> );
<b>pricing compliance statement</b>	means a written statement made by <b>Transpower</b> under clause 22;
<b>pricing year</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>programme</b>	has the meaning given in the <b>Capex IM</b> ;
<b>project</b>	has the meaning given in the <b>Capex IM</b> ;
<b>Project k</b>	means the <b>Pole 2</b> life-extension project planned by <b>Transpower</b> in <b>RCP3</b> ;
<b>publicly disclose (or public disclosure)</b>	means to make available to the public on <b>Transpower’s</b> website and to notify the <b>Commission</b> that it has been made available;
<b>R</b>	
<b>RCP2</b>	means the <b>regulatory period</b> prior to <b>RCP3</b> , being the period from 1 April 2015 to 31 March 2020, provided that references to the final <b>disclosure year</b> in <b>RCP2</b> means the <b>disclosure year</b> ending on 30 June 2020;
<b>RCP3</b>	means the <b>regulatory period</b> from 1 April 2020 to 31 March 2025, provided that references to the final <b>disclosure year</b> in <b>RCP3</b> means the <b>disclosure year</b> ending on 30 June 2025;
<b>recoverable cost</b>	has the meaning given in the <b>Transpower IM</b> ;



<b>regulatory period</b>	means a period determined by the <b>Commission</b> under the <b>Act</b> , during which a particular individual price-quality path determination applies to <b>Transpower</b> , including but not limited to <b>RCP2</b> or <b>RCP3</b> ;
<b>regulatory tax allowance</b>	means the tax allowance determined in accordance with clause 3.4.1 of the <b>Transpower IM</b> ;
<b>related party</b>	has the meaning given in the <b>Transpower IM</b> ;
<b>relevant pricing year</b>	in relation to a <b>disclosure year</b> , means the <b>pricing year</b> commencing on 1 April immediately before the start of that <b>disclosure year</b> ;
<b>restoration</b>	to a <b>customer</b> , means the earliest of: <ul style="list-style-type: none"> <li>(a) for generators: <ul style="list-style-type: none"> <li>(i) when the generator circuit breaker is closed; or</li> <li>(ii) the generator is notified that <b>Transpower equipment</b> has been returned to service and is available for generation to be reconnected; or</li> <li>(iii) operational control for connecting the <b>Transpower</b> assets is returned to the generator; and</li> </ul> </li> <li>(b) for <b>customers</b> other than generators: <ul style="list-style-type: none"> <li>(i) when the first feeder is closed, if feeder circuit breakers have been opened; or</li> <li>(ii) when the supply bus is relivened, if feeder circuit breakers have remained closed after the <b>interruption</b>; or</li> <li>(iii) when 75% of the load is returned to service by way of a backfeed within the <b>customer's</b> system or by generators; or</li> </ul> </li> </ul>

- (iv) when **Transpower** has readied all of its **Transpower equipment** and has made reasonable efforts to advise the **customer** that the **Transpower equipment** can be returned to service;

**revenue-linked grid output measure**

has the meaning given in the **Capex IM**;

## S

**standard incentive rate base capex allowance**

has the meaning given in the **Capex IM**;

**system operator**

has the meaning given in the **Transpower IM**;

## T

**tax rules**

has the meaning given in the **Transpower IM**;

**term credit spread differential allowance**

has the meaning given in the **Transpower IM**;

**terrorist act**

has the meaning given in section 5 of the Terrorism Suppression Act 2002;

**third party**

means not a **related party** and excludes, for the avoidance of doubt, an employee or party:

- (a) contracted by **Transpower** to provide **electricity lines services**;  
or
- (b) contracted by a **related party** to provide **electricity lines services** for **Transpower**;

**TPM**

has the meaning given in the **Transpower IM**;

**Transpower**

has the meaning given in the **Act**;

**Transpower equipment** means equipment that **Transpower** owns, leases, borrows or hires for the purposes of maintaining supply of **electricity transmission services**, where **Transpower** has performed technical due diligence on that equipment to ensure it was fit for its intended purpose;

**Transpower IM** means the *Transpower Input Methodologies Determination* [2012] NZCC 17, including, for the avoidance of doubt, any amendment applicable to **RCP3**;

## U

**unplanned interruption** means any **interruption** for a period of one minute or longer in respect of which less than 24 hours' notice, or no notice, was given, either to the public or to **customers** affected by the **interruption** and excludes:

- (a) any unplanned **interruptions** originating on another party's system and where the **Transpower grid** operated correctly;
- (b) any unplanned **interruptions** to the auxiliary load used by electricity generator assets; and
- (c) for all **point of service sub-categories** other than GP1E, GP1F, GP2E, and GP2F:
  - a. load restrictions achieved completely by the use of controllable load, interruptible load or demand-response;
  - b. automatic under-frequency load-shedding; and
  - c. unplanned interruptions for which all load is supplied by a backfeed or by embedded generation;

**V**

**value of commissioned asset** has the meaning given in the **Transpower IM**;

**value of found asset** has the meaning given in the **Transpower IM**;

**W**

**WACC** means, for the purpose of calculating-

- (a) a **forecast MAR**, an update of a **forecast MAR** or an **ex-post economic gain or loss**, the 67<sup>th</sup> percentile estimate of vanilla weighted average cost of capital determined by the **Commission** in accordance with clause 3.5.5(1) of the **Transpower IM**; and
- (b) a **forecast SMAR**, or an update of a **forecast SMAR**, the 67<sup>th</sup> percentile estimate of post-tax weighted average cost of capital determined by the **Commission** in accordance with clause 3.5.5(2) of the **Transpower IM**;

**work stoppage** means a temporary cessation of work as a form of protest, including without limitation a strike or lockout;

**working day** has the meaning given in the **Act**; and

**works under construction** has the meaning given in the **Transpower IM**.

### Part 3: Price path

#### 8. Maximum revenues

- 8.1 The maximum revenue that **Transpower** may recover for **electricity transmission services** for each **pricing year** is the **forecast SMAR** for that **pricing year**.
- 8.2 The forecast revenue for **electricity transmission services**, including forecast **pass-through costs** and forecast **recoverable costs** passed on to any **customer**, that **Transpower** uses for setting transmission charges under the **TPM** for each **pricing year** must not exceed the **forecast SMAR** for that **pricing year**.
- 8.3 Where:
- 8.3.1 **Transpower** has applied to the **Commission** to reconsider **Transpower's IPP** for the purposes of clauses 3.7.4(1) of the **Transpower IM**; or
- 8.3.2 the **Commission** advises **Transpower** that it is reconsidering **Transpower's IPP** for the purpose of clause 3.7.4(1) or clause 3.7.4(4) of the **Transpower IM**,

#### **Transpower** must:

- 8.3.3 provide to the **Commission** and **publicly disclose**, no later than 80 **working days** after the end of the prior complete **disclosure year**, for each of the remaining complete **pricing years** of **RCP3**:
- (a) a proposed updated **forecast MAR** calculated in accordance with clause 30;
  - (b) a proposed updated **forecast SMAR** calculated in accordance with clause 30; and
  - (c) where applicable, the updated **forecast EV adjustment** amounts calculated in accordance with clauses 32.2 and 32.3 and Schedule D, Formula I (Forecast EV adjustment).
- 8.4 For the purposes of clause 8.3:
- 8.4.1 **Transpower** must apply the calculations required in clause 30 and Schedule D, and must include supporting information for its calculations; and
- 8.4.2 the reference in clause 8.3.3 to 'prior complete **disclosure year**' refers to the **disclosure year** prior to the first **pricing year** to which the updated **forecast SMAR** applies.
- 8.5 The **IPP revenue growth rate** for each **pricing year** of **RCP3** is 1.26%.
- 8.6 If the **Commission** reconsiders and determines that **Transpower's IPP** should be amended, it will determine updated amounts for **forecast MAR**, **forecast SMAR** and, where applicable, **forecast EV adjustment**, after considering **Transpower's** proposed

amounts for updated **forecast MAR**, updated **forecast SMAR**, and, if applicable, updated **forecast EV adjustment** provided to the **Commission** in accordance with clauses 8.3 and 8.4.

9. Wash-up calculation

9.1 For each **disclosure year**, **Transpower** must calculate an **ex-post economic gain or loss** in accordance with clause 29.

9.2 For the purposes of calculating an **ex-post economic gain or loss**, **Transpower** must convert the **actual transmission revenue** from a **pricing year** value to a **disclosure year** value in Schedule E, Formula H by applying the cash flow timing factor applicable for Schedule E, Formula H as specified in 'Column 4' of Schedule E.

10. Listed projects

10.1 The **projects** or **programmes** identified as **listed projects** for **RCP3** are set out in Schedule I.

10.2 If at any time during **RCP3** a **project** or **programme** identified in Schedule I ceases to be a **base capex project** or **base capex programme**, it is no longer a **listed project** for **RCP3**.

## Part 4: Quality standards and performance measures

11. Revenue-linked performance measures

11.1 Subject to clause 20, for the purposes of calculating the **grid output adjustment** under clause 19 and the measures specified in Table 4.1 and Table 4.2, the **revenue-linked grid output measures** are:

11.1.1 **measures of grid performance** specified in clause 11.2; and

11.1.2 **asset performance measures** specified in clause 11.3.

11.2 The **measures of grid performance** are:

11.2.1 GP1, which measures the total number of **unplanned interruptions** for each **point of service sub-category** during a **disclosure year**; and

11.2.2 GP2, which measures the average **duration** of **unplanned interruptions** for each **point of service sub-category** during a **disclosure year**.

11.3 The **asset performance measures** are:

11.3.1 AP1, which measures **HVDC** energy availability of **Pole 2** and **Pole 3** as a percentage of annual capacity during a **disclosure year**, as set out in Table 4.2 and as described in clauses 17.1 to 17.2; and

11.3.2 AP2, which measures percentage of time that the **HVAC** assets listed in Schedule G are available during a **disclosure year**, as set out in Table 4.2 and as described in clauses 18.1 to 18.2.

12. Quality standards for revenue-linked grid output measures

- 12.1 The quality standards for **measure of grid performance** GP1 are specified in clause 14. For the avoidance of doubt, there is no GP1 quality standard for **the disclosure year** from 1 July 2020 to 30 June 2021.
- 12.2 The quality standards for **measure of grid performance** GP2 are specified in clause 16. For the avoidance of doubt, there is no GP2 quality standard for the **disclosure year** from 1 July 2020 to 30 June 2021.
- 12.3 The quality standard for **asset performance measure** AP1 is specified in clause 17.1.
- 12.4 The quality standard for **asset performance measure** AP2 is specified in clause 18.1.

13. Requirement to calculate GP1 assessed values for first disclosure year of RCP3

- 13.1 For the **disclosure year** from 1 July 2020 to 30 June 2021, **Transpower** must calculate assessed values for each **measure of grid performance** GP1 **point of service sub-category** in Table 4.1 in accordance with clauses 14.6 to 14.11.

14. GP1 quality standard for remaining disclosure years of RCP3

- 14.1 To comply with the GP1 quality standard for the **disclosure year** from 1 July 2021 to 30 June 2022, **Transpower** must either:
- 14.1.1 comply with the **measure of grid performance** GP1 assessment specified in clause 14.5; or
- 14.1.2 have assessed values for four or more of the GP1 **point of service sub-categories** for the **disclosure year** from 1 July 2020 to 30 June 2021 which did not exceed the **point of service sub-category** limit specified for each of those **measure of grid performance** GP1 **point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 14.6 to 14.11.
- 14.2 To comply with the GP1 quality standard for the **disclosure year** from 1 July 2022 to 30 June 2023, **Transpower** must either:
- 14.2.1 comply with the **measure of grid performance** GP1 assessment specified in clause 14.5; or
- 14.2.2 have:
- (a) complied with the **measure of grid performance** GP1 assessment specified in clause 14.5 for the **disclosure year** from 1 July 2021 to 30 June 2022; and

- (b) assessed values for four or more of the **GP1 point of service sub-categories** for the **disclosure year** from 1 July 2020 to 30 June 2021 which did not exceed the **point of service sub-category** limit specified for each of those **measure of grid performance GP1 point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 14.6 to 14.11.
- 14.3 To comply with the GP1 quality standard for the **disclosure year** from 1 July 2023 to 30 June 2024, **Transpower** must either:
- 14.3.1 comply with the **measure of grid performance** GP1 assessment specified in clause 14.5; or
- 14.3.2 have complied with the **measure of grid performance** GP1 assessment specified in clause 14.5 in each of the two preceding **disclosure years** of **RCP3**.
- 14.4 To comply with the GP1 quality standard for the **disclosure year** from 1 July 2024 to 30 June 2025, **Transpower** must either:
- 14.4.1 comply with the **measure of grid performance** GP1 assessment specified in clause 14.5; or
- 14.4.2 have complied with the **measure of grid performance** GP1 assessment specified in clause 14.5 in each of the two preceding **disclosure years** of **RCP3**.
- 14.5 For the purposes of clauses 14.1 to 14.4, to comply with the **measure of grid performance** GP1 assessment, **Transpower's** assessed value for four or more of the **point of service sub-categories** for the **disclosure year** must not exceed the **point of service sub-category** limit specified for the **disclosure year** for each of those **measure of grid performance GP1 point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 14.6 to 14.11.
- 14.6 Subject to clause 20, for the purposes of clause 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1A for a **disclosure year** is calculated in accordance with the formula:
- GP1A assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1A commencing within the **disclosure year**.
- 14.7 Subject to clause 20, for the purposes of clauses 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1B for a **disclosure year** is calculated in accordance with the formula:
- GP1B assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1B commencing within the **disclosure year**.
- 14.8 Subject to clause 20, for the purposes of clause 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1C for a **disclosure year** is calculated in accordance with the formula:



GP1C assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1C commencing within the **disclosure year**.

- 14.9 Subject to clause 20, for the purposes of clause 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1D for a **disclosure year** is calculated in accordance with the formula:

GP1D assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1D commencing within the **disclosure year**.

- 14.10 Subject to clause 20, for the purposes of clause 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1E for a **disclosure year** is calculated in accordance with the formula:

GP1E assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1E commencing within the **disclosure year**.

- 14.11 Subject to clause 20, for the purposes of clause 13 and 14.5, **Transpower's** assessed value for **point of service sub-category** GP1F for a **disclosure year** is calculated in accordance with the formula:

GP1F assessed value = the sum of **unplanned interruptions** for the **point of service sub-category** GP1F commencing within the **disclosure year**.

15. Requirement to calculate GP2 assessed values for first disclosure year of RCP3

- 15.1 For the **disclosure year** from 1 July 2020 to 30 June 2021, **Transpower** must calculate assessed values for each **measure of grid performance** GP2 **point of service sub-category** in Table 4.1 in accordance with clauses 16.6 to 16.11.

16. GP2 quality standard for remaining disclosure years of RCP3

- 16.1 To comply with the GP2 quality standard for the **disclosure year** from 1 July 2021 to 30 June 2022, **Transpower** must either:

16.1.1 comply with the **measure of grid performance** GP2 assessment specified in clause 16.5; or

16.1.2 have assessed values for four or more of the GP2 **point of service sub-categories** for the **disclosure year** from 1 July 2020 to 30 June 2021 which did not exceed the **point of service sub-category** limit specified for each of those **measure of grid performance** GP2 **point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 16.6 to 16.11.

- 16.2 To comply with the GP2 quality standard for the **disclosure year** from 1 July 2022 to 30 June 2023, **Transpower** must either:

16.2.1 comply with the **measure of grid performance** GP2 assessment specified in clause 16.5; or

16.2.2 have:

- (a) complied with the **measure of grid performance** GP2 assessment specified in clause 16.5 for the **disclosure year** from 1 July 2021 to 30 June 2022; and
  - (b) assessed values for four or more of the GP2 **point of service sub-categories** for the **disclosure year** from 1 July 2020 to 30 June 2021 which did not exceed the **point of service sub-category** limit specified for each of those **measures of grid performance** GP2 **point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 16.6 to 16.11.
- 16.3 To comply with the GP2 quality standard for the **disclosure year** from 1 July 2023 to 30 June 2024, **Transpower** must either:
- 16.3.1 comply with the **measure of grid performance** GP2 assessment specified in clause 16.5; or
  - 16.3.2 have complied with the **measure of grid performance** GP2 assessment specified in clause 16.5 in each of the two preceding **disclosure years** of **RCP3**.
- 16.4 To comply with the GP2 quality standard for the **disclosure year** from 1 July 2024 to 30 June 2025, **Transpower** must either:
- 16.4.1 comply with the **measure of grid performance** GP2 assessment specified in clause 16.5; or
  - 16.4.2 have complied with the **measure of grid performance** GP2 assessment specified in clause 16.5 in each of the two preceding **disclosure years** of **RCP3**.
- 16.5 For the purposes of clause 16.1 to 16.4, to comply with the **measure of grid performance** GP2 assessment, **Transpower's** assessed value for four or more of the **point of service sub-categories** for the **disclosure year** must not exceed the **point of service sub-category** limit specified for each of those **measure of grid performance** GP2 **point of service sub-categories** in Table 4.1, as calculated in accordance with clauses 16.6 to 16.11.
- 16.6 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2A for a **disclosure year** is calculated in accordance with the formula:
- GP2A assessed value = the sum of the **duration** of all **unplanned interruptions** for the **point of service sub-category** GP2A commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2A commencing within the **disclosure year**.
- 16.7 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2B for a **disclosure year** is calculated in accordance with the formula:

GP2B assessed value = the sum of the **duration** of all **unplanned interruptions** for the **point of service sub-category** GP2B commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2B commencing within the **disclosure year**.

- 16.8 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2C for a **disclosure year** is calculated in accordance with the formula:

GP2C assessed value = the sum of the **duration** of all **unplanned interruptions** for the **point of service sub-category** GP2C commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2C commencing within the **disclosure year**.

- 16.9 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2D for a **disclosure year** is calculated in accordance with the formula:

GP2D assessed value = the sum of the **duration** of all **unplanned interruptions** for **point of service sub-category** GP2D commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2D commencing within the **disclosure year**.

- 16.10 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2E for a **disclosure year** is calculated in accordance with the formula:

GP2E assessed value = the sum of the **duration** of all **unplanned interruptions** for the **point of service sub-category** GP2E commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2E commencing within the **disclosure year**.

- 16.11 Subject to clause 20, for the purposes of clauses 15 and 16.5, **Transpower's** assessed value for **point of service sub-category** GP2F for a **disclosure year** is calculated in accordance with the formula:

GP2F assessed value = the sum of the **duration** of all **unplanned interruptions** for the **point of service sub-category** GP2F commencing within the **disclosure year** divided by the total number of **unplanned interruptions** for the **point of service sub-category** GP2F commencing within the **disclosure year**.

17. AP1 quality standard for each disclosure year of RCP3

- 17.1 To comply with the **asset performance measure** AP1 quality standard for a **disclosure year**, the **HVDC** energy availability for **Pole 2** and **Pole 3** for that **disclosure year**, as calculated in accordance with clause 17.2, must be higher than the AP1 quality standard value in Table 4.2.

- 17.2 For the purposes of clause 17.1, subject to clause 17.3 and clause 20, the **HVDC** energy availability for **Pole 2** and **Pole 3** for the **disclosure year** is calculated as a percentage term in accordance with the formula:

$$100 - \frac{100 \sum_{j=1}^N (\text{reduction in capacity due to } \mathbf{outage } j) (\text{duration of } \mathbf{outage } j \text{ in hours})}{(\text{maximum capacity of } \mathbf{HVDC poles})(\text{total number of hours in the } \mathbf{disclosure year})} \%$$

where:

$j$  is the **outage** that reduced capacity of the **HVDC pole(s)** in the **disclosure year**

$N$  is the total number of **outages** associated with the **HVDC poles**

- 17.3 For the purposes of clause 17.1 and subject to clause 20, for a maximum of three **disclosure years** of **RCP3** during the life of **Project k**, the **Project k** adjustment may be added to the **HVDC** energy availability for **Pole 2** and **Pole 3** calculated in accordance with clause 17.2, where the **Project k** adjustment for each **disclosure year** is calculated in accordance with the formula:

**Project k** adjustment = the lesser of (0.7 or  $p$ )

where:

$$p = \frac{(\text{reduction in capacity due to } \mathbf{Project k related outages})(\text{duration of } \mathbf{Project k outage hours})}{(\text{maximum capacity of } \mathbf{HVDC poles})(\text{total number of hours in the } \mathbf{disclosure year})} \times 100\%$$

18. AP2 quality standard for each disclosure year of RCP3

- 18.1 To comply with the **asset performance measure** AP2 quality standard for a **disclosure year**, the percentage of the time that the **HVAC** assets listed in Schedule G are available during that **disclosure year**, as calculated in accordance with clause 18.2, must be higher than the AP2 quality standard value in Table 4.2.
- 18.2 For the purposes of clause 18.1, subject to clause 20, the percentage of the time that the **HVAC** assets are available during the **disclosure year** is calculated as a percentage term in accordance with the formula:

$$\left(100 - \frac{100 (\text{total duration (in hours) of all } \mathbf{outages on the HVAC assets listed in Schedule G})}{(\text{number of } \mathbf{HVAC assets listed in Schedule G})(\text{total number of hours in the } \mathbf{disclosure year})}\right) \%$$

**Table 4.1: Measures of grid performance for grid output targets, caps, collars, point of service sub-category limits and grid output incentive rates for revenue-linked grid output measures**

Point of service sub-category	Cap	Grid output target	Collar	Point of service sub-category limit	Grid output Incentive rate (amount that Transpower may recover or must bear)
<b>GP1: number of interruptions (per annum)</b>					<b>\$ per interruption</b>
GP1A: N-1 security high economic consequence	0	7	14	14	335,714
GP1B: N-1 security material economic consequence	7	24	41	41	40,294
GP1C: N security high economic consequence	4	6	8	8	250,000
GP1D: N security material economic consequence	9	23	37	37	41,786
GP1E: N-1 security generator	5	9	13	13	62,500
GP1F: N security generator	6	12	18	18	41,667
<b>GP2: average duration of interruption (min)</b>					<b>\$ per minute</b>
GP2A: N-1 security high economic consequence	30	92	154	154	37,903
GP2B: N-1 security material economic consequence	36	61	86	86	27,400
GP2C: N security high economic consequence	0	103	206	206	4,854
GP2D: N security material economic consequence	0	140	280	280	4,179
GP2E: N-1 security generator	50	174	298	298	2,016
GP2F: N security generator	11	93	175	175	3,049

**Table 4.2: Asset performance measures grid output targets, caps, collars, quality standards and grid output incentive rates for revenue-linked grid output measures**

Asset performance measure	Cap	Grid output target	Collar	Quality standard	Grid output Incentive rate (amount that Transpower may recover or must bear)
<b>AP1: HVDC availability (%)</b>					\$ per 1%
<b>HVDC availability</b>	99.75	98.75	97.75	96.75	500,000
<b>AP2: HVAC availability (%)</b>					\$ per 1%
<b>HVAC availability (71 selected assets)</b>	99.2	99.0	98.8	98.6	5,000,000

19. The grid output adjustment

- 19.1 **Transpower** must calculate the **grid output adjustment** for each **disclosure year** for the **revenue-linked grid output measures**.
- 19.2 For **measures of grid performance** GP1 and GP2 and **asset performance measures** AP1 and AP2, the **grid output target, cap, collar, and grid output incentive rate** in Table 4.1 and Table 4.2 apply.
- 19.3 For the purposes of calculating the **grid output adjustment**, the output achieved is:
- 19.3.1 for each of the **point of service sub-categories** GP1A, GP1B, GP1C, GP1D, GP1E and GP1F, subject to clause 20, the total number of all **unplanned interruptions** commencing within the **disclosure year**;
- 19.3.2 for each of the **point of service sub-categories** GP2A, GP2B, GP2C, GP2D, GP2E and GP2F, subject to clause 20, the sum of the **durations** of all **unplanned interruptions** in the **disclosure year** divided by the total number of **unplanned interruptions** commencing within the **disclosure year**;

19.3.3 for **asset performance measure** AP1, subject to clause 19.419.3.4 and clause 20, the **HVDC** energy availability for **Pole 2** and **Pole 3** is calculated as a percentage term in the following manner:

$$\left(100 - \frac{100 \sum_{j=1}^N (\text{reduction in capacity due to outage } j)(\text{duration of outage } j \text{ in hours})}{(\text{maximum capacity of HVDC poles})(\text{total number of hours in the disclosure year})}\right) \%$$

where:

*j* is the **outage** that reduced capacity of the **HVDC pole(s)** in the **disclosure year**

*N* is the total number of **outages** associated with the **HVDC poles**; and

19.3.4 for **asset performance measure** AP2, subject to clause 20, the percentage term calculated as:

$$\left(100 - \frac{100(\text{total duration (in hours) of all outages on the HVAC assets listed in Schedule G})}{(\text{number of HVAC assets listed in Schedule G})(\text{total number of hours in the disclosure year})}\right) \%$$

19.4 For the purposes of clause 19.3.3, subject to clause 20, for a maximum of 3 **disclosure years** of **RCP3** during the life of **Project k**, the **Project k** adjustment may be added to the **HVDC** energy availability for **Pole 2** and **Pole 3** calculated in accordance with clause 19.3.3, where the **Project k** adjustment for each **disclosure year** is calculated in accordance with the formula:

**Project k** adjustment = the lesser of (0.7 or *p*)

where:

$$p = \frac{(\text{reduction in capacity due to Project } k \text{ related outages})(\text{duration of Project } k \text{ outage hours})}{(\text{maximum capacity of HVDC poles})(\text{total number of hours in the disclosure year})} \times 100\%$$

20. Normalisation

- 20.1 Subject to clauses 20.2 to 20.4, an **interruption** or **outage** will be excluded from the calculations made under clauses 14.6-14.11, 16.6-16.11 and 19.3.1-19.3.2 of **measures of grid performance** or the calculations made under clauses 17.2-17.3, 18.2, 19.3.3-19.3.4 and 19.4 of **asset performance measures** where the **Commission** decides under clause 20.4 that a **normalisation event** in respect of that **interruption** or **outage** has occurred in a **disclosure year**.
- 20.2 A 'normalisation event' means an **interruption** or **outage** that the **Commission** has decided is a normalisation event in accordance with clause 20.4 that—
- 20.2.1 was beyond the reasonable control of **Transpower**;
- 20.2.2 **Transpower** did not cause, or materially contribute to, by any failure to exercise **good electricity industry practice**;
- 20.2.3 had a duration of 24 hours or more, in circumstances where that duration was —
- (a) beyond the reasonable control of **Transpower**; and
- (b) not caused, or materially contributed to, by any failure of **Transpower** to exercise **good electricity industry practice**; and
- 20.2.4 was the result of:
- (a) **natural disaster**;
- (b) fire not caused by **Transpower equipment** failure;
- (c) explosion not caused by **Transpower equipment** failure;
- (d) **civil commotion**;
- (e) a **terrorist act**;
- (f) malicious damage;
- (g) war (declared or undeclared);
- (h) revolution;
- (i) **contamination**;
- (j) action or inaction by a court or government agency (including denial, refusal or failure to grant any authorisation, despite timely best endeavour to obtain an authorisation);
- (k) a **work stoppage**;
- (l) a dispute between an employer and employees;



- (m) work bans; or
  - (n) acts or omissions (other than failure to pay money) of a **third party** that affect the ability of **Transpower** to prevent or minimise the **interruption** or **outage**.
- 20.3 Subject to clause 27, **Transpower** may make a written application to the **Commission** for each **interruption** or **outage** in that **disclosure year** that **Transpower** considers is a **normalisation event**, where that written application must:
- 20.3.1 be made no later than 42 **working days** after the end of the **disclosure year**;
  - 20.3.2 include reasons for why **Transpower** considers a **normalisation event** has occurred, including why it considers:
    - (a) the **interruption** or **outage** was beyond **Transpower's** reasonable control;
    - (b) the effect of the **interruption** or **outage** on the **grid**, including managing to a shorter duration than that which actually occurred, was beyond **Transpower's** reasonable control; and
    - (c) it exercised **good electricity industry practice** in relation to the cause and effects of the **interruption** or **outage**;
  - 20.3.3 include supporting evidence for the reasons provided in accordance with clause 20.3.2, including, without limitation, information on the relevant design standards of any **Transpower equipment** involved in the **interruption** or **outage**;
  - 20.3.4 include proposed reassessed values of any calculations made under clauses 14.6-14.11, 16.6-16.11 and 19.3.1-19.3.2 of **measures of grid performance** or calculations made under clauses 17.2-17.3, 18.2, 19.3.3-19.3.4 and 19.4 of **asset performance measures** that are relevant to **Transpower's** written application, reassessed as if the **interruption** or **outage** was excluded from those measures in accordance with clause 20.1; and
  - 20.3.5 include any other information that **Transpower** considers is relevant to its application.
- 20.4 Where the **Commission** receives a written application from **Transpower** in accordance with clause 20.3, the **Commission** must decide whether each **interruption** or **outage** that is the subject of that written application is a **normalisation event**, using the criteria in clauses 20.2.1-20.2.4 and:
- 20.4.1 publish its decision on the Commission's website, which describes:
    - (a) any **interruption** or **outage** that it has decided is a **normalisation event**;

- (b) reasons for why the **Commission** has reached that decision, based on the criteria in clauses 20.2.1-20.2.4; and
- (c) what calculations made under clauses 14.6-14.11, 16.6-16.11 and 19.3.1-19.3.2 of **measures of grid performance** or calculations made under clauses 17.2-17.3, 18.2, 19.3.3-19.3.4 and 19.4 of **asset performance measures** the **Commission** has decided are affected as a result of (a); and

20.4.2 give, or post notice of, its decision to **Transpower**.

21. Quality standards where grid output measures not linked to revenue

- 21.1 The quality standards for **asset health measure** AH are specified in clause 21.2.
- 21.2 To comply with the AH quality standards for each **disclosure year**, **Transpower's** assessed value for each **asset health measure asset class** for the **disclosure year** must not be higher than the level specified for that **asset health measure asset class** in Table 4.3.
- 21.3 For the purposes of clause 21.2, **Transpower's** assessed value for the power transformers **asset health measure asset class** for each **disclosure year** is calculated in accordance with the formula:

Power transformers assessed value =

$$\frac{\textit{the sum of all power transformer assets with an AHI of 8 or higher}}{\textit{the sum of all power transformer assets}} \times 100\%$$

- 21.4 For the purposes of clause 21.2, **Transpower's** assessed value for the outdoor circuit breakers **asset health measure asset class** for each **disclosure year** is calculated in accordance with the formula:

Outdoor circuit breakers assessed value =

$$\frac{\textit{the sum of all outdoor circuit breaker assets with an AHI of 8 or higher}}{\textit{the sum of all outdoor circuit breaker assets}} \times 100\%$$

Table 4.3: Levels for each asset health measure asset class by disclosure year

Asset health measure asset class	2020/2021 (%)	2021/2022 (%)	2022/2023 (%)	2023/2024 (%)	2024/2025 (%)
Power transformers	3.22	3.68	5.37	8.65	12.03
Outdoor circuit breakers	2.00	2.37	5.65	7.63	8.27

## Part 5: Compliance and information reporting

### 22. Pricing compliance statement

22.1 No later than five **working days** after **Transpower** announces, or amends, its forecast revenue for the purpose of setting or resetting charges under the **TPM** for a **pricing year**, **Transpower** must:

22.1.1 provide to the **Commission** a written statement (the **pricing compliance statement**); and

22.1.2 **publicly disclose** the **pricing compliance statement**.

22.2 The **pricing compliance statement** must:

22.2.1 state whether or not **Transpower** has complied with the price path in Part 3 for the **pricing year**;

22.2.2 include any information reasonably necessary to demonstrate whether **Transpower** has complied with the price path in Part 3 for the **pricing year**, including but not limited to a summary of forecast total revenues applied in the **TPM** for the **pricing year**;

22.2.3 if **Transpower** has not complied with the price path in Part 3 for the **pricing year**, disclose:

(a) each requirement in Part 3 that is not complied with; and

(b) the reasons for non-compliance in each case;

22.2.4 state the date on which the **pricing compliance statement** was prepared; and

22.2.5 include a certificate in the form set out in Schedule J signed by at least two **directors** of **Transpower**.

23. Annual compliance statement

23.1 Subject to clause 27, no later than 105 **working days** after the end of each **disclosure year**, **Transpower** must:

23.1.1 provide to the **Commission** a written statement (the **annual compliance statement**); and

23.1.2 **publicly disclose** the **annual compliance statement** and accompanying **independent assurance report**.

23.2 The **annual compliance statement** must:

23.2.1 state whether or not **Transpower** has:

(a) complied with the quality standards in clauses 14.1-14.4, 16.1-16.4, 17.1, 18.1 and 21.2;

(b) complied with the requirement to publicly disclose, in accordance with the **ID determination**, its annual **grid output adjustment** calculation for the **disclosure year**, including the values for 'm' calculated in accordance with Schedule B, clause B2(1) of the **Capex IM**;

(c) complied with requirements related to **grid output adjustment** calculations and **public disclosure**; and

(d) complied with requirements related to wash-up calculations and **public disclosure**;

23.2.2 provide the information reasonably necessary to demonstrate compliance with the quality standards in clauses 14.1-14.4, 16.1-16.4, 17.1, 18.1 and 21.2;

23.2.3 if **Transpower** has not complied with any quality standards in clauses 14.1-14.4, 16.1-16.4, 17.1, 18.1 and 21.2, disclose:

(a) each quality standard that has not been complied with; and

(b) the reasons for non-compliance in each case;

23.2.4 include the following performance information:

(a) for **measure of grid performance** GP1: assessed values for the **disclosure year** of each **point of service sub-category** against the **caps, grid output targets, collars** and **point of service sub-category** limits in Table 4.1 and the relevant quality standard in clause 14 for that **disclosure year**;

- (b) for **measure of grid performance** GP2: assessed values for the **disclosure year** of each **point of service sub-category** against the **caps, grid output targets, collars** and **point of service sub-category** limits in Table 4.1 and the relevant quality standard in clause 16 for that **disclosure year**;
- (c) for **asset performance measure** AP1: assessed values for the **disclosure year** against the **cap, grid output target** and **collar** in Table 4.2, and the quality standard in clause 17.1;
- (d) for **asset performance measure** AP2: assessed values for the **disclosure year** against the **cap, grid output target** and **collar** in Table 4.2, and the quality standard in clause 18.1; and
- (e) for **asset health measure** AH: assessed values for the **disclosure year** of each **asset health measure asset class** in Table 4.3 against the quality standard in clause 21.2;

23.2.5 state the date on which the **annual compliance statement** was prepared;

23.2.6 include a certificate in the form set out in Schedule K, signed by at least two **directors of Transpower**; and

23.2.7 be accompanied by an **independent assurance report** procured and prepared in accordance with clause 34.

#### 24. Annual compliance statement – information required

24.1 The **annual compliance statement** for a **disclosure year** must include:

24.1.1 the **ex-post economic gain or loss** for the **disclosure year**, calculated in accordance with clause 29.1 and Schedule E, including any supporting information;

24.1.2 the forecast revenue for **electricity transmission services**, including forecast **pass-through costs** and forecast **recoverable costs** passed on to any **customer**, that **Transpower** used for setting charges under the **TPM** for the **relevant pricing year**;

24.1.3 the **HVAC transmission revenue** for the **relevant pricing year**;

24.1.4 the **HVDC transmission revenue** for the **relevant pricing year**;

24.1.5 a description and explanation of any voluntary revenue reduction **Transpower** has made in calculating the **ex-post economic gain or loss** for the **disclosure year**;

24.1.6 an updated summary of the **EV account** as set out in Schedule B and an updated forecast **EV account** balance at the end of **RCP3**, where these are supported by the further information required in clause 31.1, and where the **EV account entries** are calculated in accordance with clause 31.2;

- 24.1.7 a summary of **pass-through costs** and **recoverable costs** for the **disclosure year** as set out in Schedule H, including:
- (a) a description and explanation of any **operating costs** incurred as part of a **major capex project**; and
  - (b) a summary of any prudent net additional **operating costs** incurred in responding to a **catastrophic event**, as determined by the **Commission**;
- 24.1.8 an explanation for the difference between the **forecast opex** and **actual opex**, including in each forecast amount and actual amount, the operating lease payments otherwise capitalised in accordance with the **Transpower IM**;
- 24.1.9 updated summaries of the approved **base capex** as set out in Schedules C1 to C4;
- 24.1.10 details of any changes to **Transpower's** policy of hedging **capital expenditure** during the **disclosure year**; and
- 24.1.11 where a **normalisation event** is excluded from a calculation made for a **revenue-linked grid output measure** in accordance with clause 20.1 for a **disclosure year**, a description of the adjustment to the **EV account** to reflect the effect on the **grid output adjustment** for that **disclosure year**.

25. Information to accompany the annual compliance statement

- 25.1 **Transpower** must **publicly disclose** the following additional information for each **disclosure year** at the same time as its **annual compliance statement** for the following performance measures:
- 25.1.1 for **asset performance measure** AP3, which measures the extent to which **Transpower** meets planned return to service times for planned **outages** of the **HVAC** assets set out in Schedule G, those assets in Schedule G that are returned to service two or more hours after **Transpower's** planned return to service time, including:
- (a) when this has occurred;
  - (b) the known or estimated impact on affected parties, if applicable; and
  - (c) the steps **Transpower** took to inform affected parties and the market;

25.1.2 for **asset performance measure** AP4, which measures the extent to which **Transpower** communicates delays to affected parties of planned **outage** return to service times of the **HVAC** assets set out in Schedule G, the percentage of **outages** that **Transpower** gives 1.5 hours or less notice to the market in the event assets are going to be returned to service later than:

- (a) the original planned return to service time; or
- (b) the extended return to service time;

25.1.3 for **asset performance measure** AP5, which measures the extent that **Transpower** has placed **customers** on a reduced level of supply security due to an **outage**, with that reduced level being N-security of supply, the occasions that **Transpower** has placed **customers** on N-security of supply, including:

- (a) when this has occurred;
- (b) how much notice **Transpower** provided to the **customers** before it occurred;
- (c) how long the **customers** were reduced to N-security of supply; and
- (d) the **points of service** affected by the reduced N-security of supply.

26. Periodic reporting for performance events

26.1 Subject to clause 27, for each **unplanned interruption** during a **disclosure year** which lasts 12 hours or more, **Transpower** must **publicly disclose** within 42 **working days** of the **unplanned interruption**:

- 26.1.1 the cause of the **unplanned interruption**;
- 26.1.2 the start date and time of the **unplanned interruption**;
- 26.1.3 the end date and time of the **unplanned interruption**;
- 26.1.4 the megawatts affected by the **unplanned interruption**;
- 26.1.5 the **grid** exit point(s) and **grid** injection point(s) affected by the **unplanned interruption**;
- 26.1.6 actions **Transpower** took to minimise the effect of the **unplanned interruption**; and
- 26.1.7 a description of steps that **Transpower** proposes to take to mitigate the risk of future **unplanned interruptions** of this type.

- 26.2 Subject to clause 27, for each **unplanned interruption** during a **disclosure year** over one system minute, **Transpower** must **publicly disclose** within 42 **working days** of the **unplanned interruption**:
- 26.2.1 the cause of the **unplanned interruption**;
  - 26.2.2 the start date and time of the **unplanned interruption**;
  - 26.2.3 the end date and time of the **unplanned interruption**;
  - 26.2.4 the megawatts affected by the **unplanned interruption**;
  - 26.2.5 the **grid** exit point(s) and **grid** injection point(s) affected by the **unplanned interruption**;
  - 26.2.6 actions **Transpower** took to minimise the effect of the **unplanned interruption**; and
  - 26.2.7 a description of steps that **Transpower** proposes to take to mitigate the risk of future **unplanned interruptions** of this type.
27. Extension of time limits
- 27.1 For the purposes of clauses 20.3, 23.1 and 26, the **Commission**, on application from **Transpower**, may grant an extension to the time limits set out in those clauses if –
    - 27.1.1 the **Commission** concludes that an extension is reasonably justified having regard to the circumstances; and
    - 27.1.2 the application for extension is made to the **Commission** no later than 15 **working days** before the time limit set out in those clauses is due to expire.
  - 27.2 For the purposes of clause 27.1:
    - 27.2.1 any extension given by the **Commission** must be effected by giving or posting notice of the extension to **Transpower**;
    - 27.2.2 the notice effecting the extension must specify the period of the extension and the reasons for the extension; and
    - 27.2.3 the notice will be published by the **Commission**.
28. Annual reporting for performance events
- 28.1 **Transpower** must **publicly disclose** at the same time as its **annual compliance statement** a summary of all reports **publicly disclosed** under clause 26.1 for the **disclosure year**.
  - 28.2 **Transpower** must **publicly disclose** at the same time as its **annual compliance statement** a summary of all reports **publicly disclosed** under clause 26.2 for the **disclosure year**.



- 28.3 **Transpower** must **publicly disclose** at the same time as its **annual compliance statement**, for **measure of grid performance GP-M**, which measures reliability through the number of **momentary interruptions**, the number of **momentary interruptions** for the **disclosure year**;
- 28.4 **Transpower** must **publicly disclose** at the same time as its **annual compliance statement**:
- 28.4.1 the cause of each **momentary interruption**, which may include 'unknown causes', for the **disclosure year**;
  - 28.4.2 the date and time of each **momentary interruption** for the **disclosure year**;
  - 28.4.3 the **grid** exit point(s) and **grid** injection point(s) affected by each **momentary interruption** for the **disclosure year**; and
  - 28.4.4 an explanation of any general trends in **momentary interruptions**.
- 28.5 Where **asset performance measure AP1**, as calculated in accordance with clause 19.3.3, is outside of the **collar** value specified in Table 4.2, **Transpower** must **publicly disclose** at the same time as its **annual compliance statement**:
- 28.5.1 reasons, including whether the reasons are unknown, for **asset performance measure AP1** going outside of the **collar**, and including any significant impact on the market (for example, the effect on market price or grid congestion);
  - 28.5.2 actions **Transpower** has taken to minimise the effect of the events described in clause 28.5.1; and
  - 28.5.3 a description of steps that **Transpower** proposes to take to mitigate the risk of going outside of the **collar** in the future.
- 28.6 Where **asset performance measure AP2**, as calculated in accordance with clause 19.3.4, is outside of the **collar** value specified in Table 4.2, **Transpower** must **publicly disclose** at the same time as its **annual compliance statement**:
- 28.6.1 the events that caused **asset performance measure AP2** to go below the **collar**;
  - 28.6.2 reasons, including whether the reasons are unknown, for **asset performance measure AP2** going below the **collar**;
  - 28.6.3 actions **Transpower** has taken to minimise the effect of the events described in clause 28.6.1; and
  - 28.6.4 a description of steps that **Transpower** proposes to take to mitigate the risk of going below the **collar** in the future.

28.7 Where **Transpower** has not complied with the **asset health measure** AH quality standard for an **asset health measure asset class**, as specified in clause 21.2, it must **publicly disclose** at the same time as its **annual compliance statement**:

28.7.1 reasons for not meeting the quality standard, and supporting evidence for those reasons; and

28.7.2 steps that have been put in place by **Transpower** to prevent future non-compliance with the quality standard.

29. Wash-up building blocks calculation

29.1 For the purposes of annually calculating the **ex-post economic gain or loss**, **Transpower** must use:

29.1.1 the approach and formulae specified in Schedule E;

29.1.2 the **opening RAB value**;

29.1.3 the actual amounts by month of **commissioning** in the **disclosure year** for **value of commissioned asset** of approved **base capex** and **major capex**;

29.1.4 the **WACC**;

29.1.5 **depreciation**, including any capitalised interest **depreciation** adjustments required to align **Transpower's** cost of financing on its **works under construction** with the requirements of clause 2.2.7(2) of the **Transpower IM**;

29.1.6 the **opex allowance**, excluding operating lease payments capitalised in accordance with the **Transpower IM**, being:

(a) for the **disclosure year** from 1 July 2020 to 30 June 2021, \$271.5 million;

(b) for the **disclosure year** from 1 July 2021 to 30 June 2022, \$276.0 million;

(c) for the **disclosure year** from 1 July 2022 to 30 June 2023, \$286.0 million;

(d) for the **disclosure year** from 1 July 2023 to 30 June 2024, \$295.5 million; and

(e) for the **disclosure year** from 1 July 2024 to 30 June 2025, \$295.9 million;

29.1.7 the **corporate tax rate**;

29.1.8 the **regulatory tax allowance** calculated:

- (a) by applying the **tax rules** and **corporate tax rate** to the regulatory profit/(loss) before tax in accordance with Part 2, Subpart 3 of the **Transpower IM**;
- (b) using the **term credit spread differential allowance** calculated in accordance with Part 2, Subpart 4 of the **Transpower IM**; and
- (c) using as the amount of regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:
  - (i) the regulatory profit/(loss) before tax disclosed by **Transpower** for the **disclosure year** in accordance with the **ID determination**; and
  - (ii) the **term credit spread differential allowance** calculated in subclause (b);

29.1.9 the **term credit spread differential allowance**;

29.1.10 for actual revenues received by **Transpower**:

- (a) the **actual transmission revenue** received in the **pricing year**, as converted to a **disclosure year** value in accordance with clause 9.2; and
- (b) the sum of **other regulated income** received in the **disclosure year**;

29.1.11 the amount of the **forecast EV adjustment** included in the **forecast MAR**;

29.1.12 the actual **pass-through costs** and **recoverable costs** calculated in accordance with Schedule H; and

29.1.13 any voluntary reduction in **actual transmission revenue** made by **Transpower** for the **pricing year**.

29.2 For the purposes of any disparity adjustments for calculating the **ex-post economic gain or loss** in clause 29.1, and for any disparity adjustments for calculating the **opex incentive amount** in clause 33.1-33.2, the **forecast CPI** that applied when the **opex allowance** and **forecast opex** were determined is:

29.2.1 for the **disclosure year** from 1 July 2020 to 30 June 2021, 1.90%;

29.2.2 for the **disclosure year** from 1 July 2021 to 30 June 2022, 2.10%;

29.2.3 for the **disclosure year** from 1 July 2022 to 30 June 2023, 2.00%;

29.2.4 for the **disclosure year** from 1 July 2023 to 30 June 2024, 2.00%; and

29.2.5 for the **disclosure year** from 1 July 2024 to 30 June 2025, 2.00%.

30. Transpower to propose update of forecast SMAR

30.1 **Transpower** must provide the following information when proposing an update of a **forecast MAR** and **forecast SMAR** for the purposes of clause 8.3 and 8.4:

30.1.1 an update of a **forecast MAR** and **forecast SMAR** for each remaining complete **pricing year** in **RCP3**, calculated in a manner consistent with the approach for calculating the **forecast SMAR** for the full period of **RCP3**, including, where applicable, to take account of the incremental revenue effect of:

- (a) forecast **major capex** approved by the **Commission** in the most recently completed **disclosure year**;
- (b) **base capex** approved by the **Commission** in the most recently completed **disclosure year** relating to one or more of the **listed projects** in Schedule I; and
- (c) an updated **forecast EV adjustment** calculated for the **forecast MAR** in accordance with clause 32;

30.1.2 a description and explanation of any voluntary revenue reductions that **Transpower** seeks to apply when setting charges under the **TPM** for any future **pricing year**;

30.1.3 where applicable, a proposed updated summary of the **forecast MAR** and the **forecast SMAR** as set out in Schedule A;

30.1.4 a certificate accompanying the proposal in the form set out in Schedule L, signed by at least two **directors** of **Transpower**; and

30.1.5 an **independent assurance report** procured and prepared in accordance with clause 34.

30.2 For the purposes of clause 30.1.1, the calculation of the update of a **forecast MAR** used in calculating the update of the **forecast SMAR** must, where applicable, use:

- (a) the approach and formulae specified in Schedule D;
- (b) the forecast **opening RAB value**;
- (c) the forecast amounts by month of **commissioning** in the **disclosure year** for **value of commissioned asset** of approved **base capex** and **major capex**;
- (d) the **low incentive rate base capex allowance** in accordance with Schedule C1, Column 7;
- (e) the **standard incentive rate base capex allowance** in accordance with Schedule C2, Column 7;

- (f) the **WACC**;
- (g) forecast **depreciation**, including a forecast of any capitalised interest **depreciation** adjustment required to align **Transpower's** cost of financing on its **works under construction** with the requirements of clause 2.2.7(2) of the **Transpower IM**;
- (h) the forecast **regulatory tax allowance** calculated:
  - (i) by applying the **tax rules** and **corporate tax rate** to the forecast regulatory profit/(loss) before tax in accordance with Part 2, Subpart 3 of the **Transpower IM**;
  - (ii) using the **term credit spread differential allowance** calculated in accordance with Part 3, Subpart 5 of the **Transpower IM**; and
  - (iii) using as the amount of forecast regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:
    - (A) the forecast of the regulatory profit/(loss) before tax calculated using the calculation basis required for disclosure under the **ID determination**; and
    - (B) the forecast of the **term credit spread differential allowance** calculated in accordance with Part 3, Subpart 5 of the **Transpower IM**;
- (i) the **forecast EV adjustment** amounts specified in clauses 32.1.1 to 32.1.5, adjusted, where applicable, in accordance with clauses 32.2 and 32.3;
- (j) the forecast **pass-through costs**, being:
  - (i) for the **disclosure year** from 1 July 2020 to 30 June 2021, \$18.1 million;
  - (ii) for the **disclosure year** from 1 July 2021 to 30 June 2022, \$18.5 million;
  - (iii) for the **disclosure year** from 1 July 2022 to 30 June 2023, \$18.9 million;
  - (iv) for the **disclosure year** from 1 July 2023 to 30 June 2024, \$19.3 million; and
  - (v) for the **disclosure year** from 1 July 2024 to 30 June 2025, \$19.8 million;

- (k) the forecast **recoverable costs**, being:
  - (i) for the **disclosure year** from 1 July 2020 to 30 June 2021, \$29.1 million;
  - (ii) for the **disclosure year** from 1 July 2021 to 30 June 2022, \$7.5 million;
  - (iii) for the **disclosure year** from 1 July 2022 to 30 June 2023, -\$2.3 million;
  - (iv) for the **disclosure year** from 1 July 2023 to 30 June 2024, \$3.0 million; and
  - (v) for the **disclosure year** from 1 July 2024 to 30 June 2025, \$2.8 million; and
- (l) the **opex allowance** set out in clause 29.1.6.

30.3 The calculation of an update of the **forecast SMAR**, must, where applicable, use:

30.3.1 the update of the **forecast MAR** calculated in accordance with clauses 30.1 and 30.2;

30.3.2 the conversion of the updated **forecast MAR** for each remaining complete **pricing year** in **RCP3** to **forecast SMAR** calculated by –

- (a) inputting building block values for each **disclosure year** of the **regulatory period** into Schedule D;
- (b) converting the **forecast MAR** building blocks to **pricing year** values by applying the cash flow timing factors in 'Column 4' of Schedule D; and
- (c) converting the **forecast MAR** to the **forecast SMAR** for each **pricing year** using the methodology set out in clause 3.1.1(3)(b)-(d) of the **Transpower IM**;

30.3.3 for the purposes of clause 30.3.2, the updated present value of the **forecast SMAR** for the remaining complete **pricing years** in **RCP3** which must equal the present value of the updated **forecast MAR** for the remaining complete **pricing years** in **RCP3**, determined using the **WACC**, and the **forecast SMAR** follows a trend equivalent to the **IPP revenue growth rate**; and

30.3.4 the **IPP revenue growth rate** for each **pricing year** of **RCP3** as specified in clause 8.5.

30.4 For the purposes of determining the revenue impact of **major capex** approved by the **Commission** or of **base capex** approved by the **Commission** relating to **listed projects**, **Transpower** must:

30.4.1 identify each **major capex project** approved by the **Commission** in the **disclosure year** if **project** assets are forecast to be **commissioned** during the period from 1 July 2020 to 30 June 2025;

30.4.2 identify each **listed project** for which **base capex** is approved by the **Commission** in the **disclosure year** if **project** assets are forecast to be **commissioned** during the period from 1 July 2020 to 30 June 2025; and

30.4.3 for each **project** identified in accordance with clauses 30.4.1 and 30.4.2, separately detail:

- (a) the forecast date, or dates, that **project** assets are forecast to be **commissioned**; and
- (b) the incremental revenue impact of the forecast **commissioning** of **project** assets on each applicable future **forecast SMAR** and **forecast MAR**.

31. EV account summary

31.1 For the purposes of providing the information specified in clause 24.1.6 for the **disclosure year**, the updated summary of the **EV account** must show:

31.1.1 a reconciliation of the opening and closing balances of the **EV account** that takes into account:

- (a) the opening balance of the **EV account**;
- (b) the calculation of interest at the post-tax estimate corresponding to **WACC** on the opening balance of the **EV account**;
- (c) **Transpower's** allocation of **EV account entries** to the respective **HVAC** and **HVDC customers**; and
- (d) post-tax amounts included in calculating the **forecast EV adjustments** in respect of the closing **EV account** balance for the final **disclosure year** of **RCP2**;

31.1.2 the forecast **EV account** balance at the end of **RCP3**, taking into account **forecast EV adjustments** and interest at the post-tax estimate corresponding to **WACC** on the forecast opening **EV account** balance for each **disclosure year**;

- 31.1.3 the source of calculation of the **EV account entries** referred to in clause 31.1.1(c) for:
- (a) the **ex-post economic gain or loss** calculated for the final **disclosure year** of RCP2;
  - (b) the after-tax gain or loss in respect of an **instrument that ceases to be an effective hedge** for the final **disclosure year** of RCP2;
  - (c) the after-tax gain or loss in respect of a **commodity instrument that is not an effective hedge** for the final **disclosure year** of RCP2;
  - (d) the **ex-post economic gain or loss** for the **disclosure year**;
  - (e) the after-tax **gain or loss on capital expenditure commitments**;
  - (f) the after-tax economic gain or loss of a **grid output adjustment**, calculated in accordance with Schedule B, clause B2(1) of the **Capex IM**;
  - (g) the after-tax economic gain or loss of a **base capex expenditure adjustment**, calculated in accordance with Schedule B, clause B1(1) of the **Capex IM**;
  - (h) the after-tax economic gain or loss of a **major capex expenditure and output adjustment**, calculated in accordance with Schedule B, clause B3(1) of the **Capex IM**; and
  - (i) the after-tax amount of a **major capex sunk costs adjustment**, calculated in accordance with clause 3.3.7 of the **Capex IM**.

31.2 For the purposes of calculating **EV account entries**, **Transpower** must use:

- 31.2.1 the **major capex incentive rate**;
- 31.2.2 the **base capex standard incentive rate**;
- 31.2.3 the **base capex low incentive rate**;
- 31.2.4 the **low incentive rate base capex allowance** in accordance with Schedule C3, Column 7;
- 31.2.5 the **standard incentive rate base capex allowance** in accordance with Schedule C4, Column 7;
- 31.2.6 the **forecast CPI** used to determine the **low incentive rate base capex allowance** and the **standard incentive rate base capex allowance** in Schedule C3, Column 7 and Schedule C4, Column 7, being:
  - (a) for the **disclosure year** from 1 July 2020 to 30 June 2021, 1.90%;
  - (b) for the **disclosure year** from 1 July 2021 to 30 June 2022, 2.10%;



- (c) for the **disclosure year** from 1 July 2022 to 30 June 2023, 2.00%;
- (d) for the **disclosure year** from 1 July 2023 to 30 June 2024, 2.00%; and
- (e) for the **disclosure year** from 1 July 2024 to 30 June 2025, 2.00%;

31.2.7 the **forecast FX rate** used to determine the **low incentive rate base capex allowance** and the **standard incentive rate base capex allowance** in Schedule C3, Column 7 and Schedule C4, Column 7, for the conversion of US dollars to NZ dollars, being:

- (a) for the **disclosure year** from 1 July 2020 to 30 June 2021, 0.66;
- (b) for the **disclosure year** from 1 July 2021 to 30 June 2022, 0.66;
- (c) for the **disclosure year** from 1 July 2022 to 30 June 2023, 0.66;
- (d) for the **disclosure year** from 1 July 2023 to 30 June 2024, 0.66; and
- (e) for the **disclosure year** from 1 July 2024 to 30 June 2025, 0.66;

31.2.8 the **forecast FX rate** used to determine the **low incentive rate base capex allowance** and the **standard incentive rate base capex allowance** in Schedule C3, Column 7 and Schedule C4, Column 7 for the conversion of the following currencies to NZ dollars:

- (a) Euro: for each **disclosure year** in **RCP3**, 0.50;
- (b) British pound: for each **disclosure year** in **RCP3**, 0.47;
- (c) Australian dollar: for each **disclosure year** in **RCP3**, 0.91;
- (d) Japanese yen: for each **disclosure year** in **RCP3**, 73.40;
- (e) Swedish kronor: for each **disclosure year** in **RCP3**, 5.35; and
- (f) Canadian dollar: for each **disclosure year** in **RCP3**, 0.85; and

31.2.9 the amount of the **standard incentive rate base capex allowance** in Schedule C4, Column 7 to which the **forecast FX rate** applies, which is set out in Table 5.1:

**Table 5.1: Amount of the standard incentive rate base capex allowance (NZD million) to which the forecast FX rate applies**

Currency	2020/21	2021/22	2022/23	2023/24	2024/25
USD/NZD	16.1	14.7	9.0	7.0	6.1
EUR/NZD	3.9	3.4	3.9	3.4	3.0
GBP/NZD	-	-	-	-	-
AUD/NZD	0.7	0.2	0.2	0.3	0.1
JPY/NZD	0.0	0.0	0.1	0.0	0.0
SEK/NZD	0.7	0.7	0.8	0.9	1.2
CAD/NZD	-	-	-	-	-

### 32. Forecast EV adjustment

32.1 For the purposes of calculating an update of the **forecast MAR** for a **pricing year**, and subject to clause 32.2, the **forecast EV adjustment** amounts applied in calculating the initial **forecast MAR**, in respect of the closing **EV account** balance for the final **disclosure year** of **RCP2**, are:

32.1.1 for the **disclosure year** from 1 July 2020 to 30 June 2021, after-tax -\$18.0 million;

32.1.2 for the **disclosure year** from 1 July 2021 to 30 June 2022, after-tax -\$18.0 million;

32.1.3 for the **disclosure year** from 1 July 2022 to 30 June 2023, after-tax -\$18.0 million;

32.1.4 for the **disclosure year** from 1 July 2023 to 30 June 2024, after-tax -\$18.0 million;

32.1.5 for the **disclosure year** from 1 July 2024 to 30 June 2025, after tax -\$18.0 million; and

32.1.6 a tax gross-up amount calculated at the **corporate tax rate**, and applying the **tax rules** where applicable, in respect of all after-tax amounts calculated in clauses 32.1.1 to 32.1.5 in order to express the **forecast EV adjustment** amounts on a pre-tax basis in the **forecast MAR** building block inputs.

- 32.2 For the purpose of calculating an update of the **forecast MAR** after a reconsideration of the price path under clause 3.7.5(3) of the **Transpower IM** to account for a **large buildup in EV account balance**, the **forecast EV adjustment** amounts in clause 32.1 are to be adjusted for each remaining complete **pricing year** of **RCP3** so that, taking into account interest, if interest was accrued at the **RCP3 WACC** rate:
- 32.2.1 the amounts of each **forecast EV adjustment** for those remaining complete **pricing years** of **RCP3** are equal; and
- 32.2.2 where the same annual **forecast EV adjustment** amount as in clause 32.2.1 was applied for each of the five **pricing years** following the end of **RCP3**, the forecast balance of the **EV account** would be zero at the end of that period.
- 32.3 For the purposes of clause 32.2, where **forecast EV adjustments** are updated, a tax gross-up amount is calculated, consistent with clause 32.1.6.
33. Forecast opex for the Incremental rolling incentive scheme (IRIS)
- 33.1 For the calculation of the **opex incentive amount**, the amount of **forecast opex** specified by the **Commission** for **IRIS** calculations is specified in clause 33.2, as adjusted for any disparity between the **forecast CPI** that applied when the **forecast opex** was initially determined and the **CPI**.
- 33.2 For the purposes of the calculation of the **opex incentive amount**, the amount of **forecast opex**, including operating lease payments otherwise capitalised in accordance with the **Transpower IM**, specified by the **Commission** is, for a **disclosure year**, as follows:
- 33.2.1 for the **disclosure year** from 1 July 2020 to 30 June 2021, \$281.2 million;
- 33.2.2 for the **disclosure year** from 1 July 2021 to 30 June 2022, \$285.9 million;
- 33.2.3 for the **disclosure year** from 1 July 2022 to 30 June 2023, \$296.0 million;
- 33.2.4 for the **disclosure year** from 1 July 2023 to 30 June 2024, \$305.6 million; and
- 33.2.5 for the **disclosure year** from 1 July 2024 to 30 June 2025, \$306.2 million.
- 33.3 For the purposes of clause 33.1 and any disparity adjustments in calculating the **opex incentive amount**, the **forecast CPI** that applied when the **forecast opex** was determined is the same as that set out in clause 29.2.

34. Independent assurance report

34.1 **Transpower** must procure an **independent assurance report** by an **assurance auditor** in respect of the **annual compliance statement** or a proposal to update a **forecast MAR** and **forecast SMAR** that:

34.1.1 is prepared in accordance with Standard on Assurance Engagements 3100 – Compliance Engagements (SAE3100 (Revised)) and International Standard on Assurance Engagements 3000 (ISAE(NZ)3000 (Revised)) or their successor standards, signed by the **assurance auditor**, either in his or her own name or that of his or her firm; and

34.1.2 is addressed to the **directors** of **Transpower** as the intended user of the assurance report.

34.2 The **independent assurance report** must state:

34.2.1 that it has been prepared in accordance with Standard on Assurance Engagements 3100 – Assurance Engagements on Compliance (SAE 3100 (Revised)) and International Standard on Assurance Engagements (New Zealand) 3000 (ISAE (NZ) 3000 (Revised)) or their successor standards;

34.2.2 the work done by the **assurance auditor**;

34.2.3 the scope and limitations of the assurance engagement;

34.2.4 the existence of any relationship (other than that of auditor) which the **assurance auditor** has with, or any interests which the **assurance auditor** has in, **Transpower** or any of its subsidiaries;

34.2.5 whether the **assurance auditor** has obtained sufficient recorded information and explanations that it required and, if not, the information and explanations not obtained;

34.2.6 whether, in the **assurance auditor's** opinion, as far as appears from an examination of them, proper records to enable the complete and accurate compilation of the **annual compliance statement** or the proposal to update a **forecast MAR** and **forecast SMAR** have been kept by **Transpower** and, if not, the records not so kept;

34.2.7 whether in the **assurance auditor's** opinion, as far as appears from the examination, the information used in the preparation of the **annual compliance statement** or the proposal to update a **forecast MAR** and **forecast SMAR** has, where applicable, been properly extracted from **Transpower's** accounting and other records, sourced from its financial and non-financial systems; and

34.2.8 whether in the **assurance auditor's** opinion, **Transpower** has complied, in all material respects, with this determination in preparing the **annual compliance statement** or the proposal to update a **forecast MAR** and **forecast SMAR** and, if not, the respects in which it has not done so.

35. Exemptions

35.1 The **Commission** may at any time, by way of written notice to **Transpower**:

35.1.1 exempt **Transpower** from any of the requirements contained in clauses 23.2.1(b)-(d), 24, 25, 26, and 28.1 to 28.4 of this determination, for a period and on such terms and conditions as the **Commission** specifies in the notice; and

35.1.2 amend or revoke any such exemption.

### Schedule A: Summary of forecast MAR and forecast SMAR

Forecast MAR applied to pricing years in RCP3 ending	Forecast MAR is calculated based on building block values for the disclosure year ending	Initial determined value of forecast MAR for pricing year	Incremental update to forecast MAR determined in 2020	Incremental update to forecast MAR determined in 2021	Incremental update to forecast MAR determined in 2022	Incremental update to forecast MAR determined in 2023	Total forecast MAR applicable to the pricing year (sum of amounts in columns 3 to 7)	Forecast SMAR applicable to the pricing years in RCP3
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]	[Column 8]	[Column 9]
31 March 2021 (Year 1)	30 June 2021	\$810.6 million	N/A	N/A	N/A	N/A	\$810.6 million	\$788.7 million
31 March 2022 (Year 2)	30 June 2022	\$795.6 million	\$X.X million	N/A	N/A	N/A	\$795.6 million	\$798.8 million
31 March 2023 (Year 3)	30 June 2023	\$790.9 million	\$XX million	\$X.X million	N/A	N/A	\$790.9 million	\$809.0 million
31 March 2024 (Year 4)	30 June 2024	\$821.3 million	\$X.X million	\$X.X million	\$X.X million	N/A	\$821.3 million	\$819.0 million
31 March 2025 (Year 5)	30 June 2025	\$824.4 million	\$X.X million	\$X.X million	\$X.X million	\$X.X million	\$824.4 million	\$829.3 million

### Schedule B: EV account summary

Item	Formula	Description
[Column 1]	[Column 2]	[Column 3]
Opening <b>EV account</b> balance	A	Closing balance in the <b>EV account</b> for the previous <b>disclosure year</b>
Post-tax <b>WACC</b>	B	The post-tax estimate corresponding to <b>WACC</b>
Interest on opening <b>EV account</b> balance	<b>C = A x B</b>	Opening <b>EV account</b> balance multiplied by the post-tax estimate corresponding to <b>WACC</b>
<b>EV account entries</b>	D	The <b>EV account entries</b> calculated in accordance with clause 31.2
Post-tax amount included in calculating the <b>forecast EV adjustment</b> for the <b>disclosure year</b> in respect of the closing <b>EV account</b> balance for the final <b>disclosure year</b> of <b>RCP2</b>	E	Amount for the <b>disclosure year</b> in <b>RCP3</b> in respect of the forecast closing post-tax <b>EV account</b> balance for the final <b>disclosure year</b> of <b>RCP2</b> , as set out in clause 32.1
Closing <b>EV account</b> balance	<b>F = A + C + D - E</b>	Opening <b>EV account</b> balance plus interest on opening <b>EV account</b> balance, plus <b>EV account entries</b> , minus <b>forecast EV adjustment</b>

**Schedule C1: Approved low incentive rate base capex summary – commissioned basis  
(including capitalised operating leases)**

Disclosure year ending	Value of low incentive rate base capex allowances as determined 29 August 2019	Incremental approved low incentive rate listed project base capex determined in 2020	Incremental approved low incentive rate listed project base capex determined in 2021	Incremental approved low incentive rate listed project base capex determined in 2022	Incremental approved low incentive rate listed project base capex determined in 2023	Approved low incentive rate base capex allowances for purposes of forecast MAR in the disclosure year (sum of amounts in columns 2 to 6)
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]
30 June 2021	\$0 million	N/A	N/A	N/A	N/A	\$0 million
30 June 2022	\$0 million	\$XX.X million	N/A	N/A	N/A	\$0 million
30 June 2023	\$0 million	\$XX.X million	\$XX.X million	N/A	N/A	\$0 million
30 June 2024	\$0 million	\$XX.X million	\$XX.X million	\$XX.X million	N/A	\$0 million
30 June 2025	\$0 million	\$XX.X million	\$XX.X million	\$XX.X million	\$XX.X million	\$0 million



**Schedule C2: Approved standard incentive rate base capex summary – commissioned basis  
(including capitalised operating leases)**

Disclosure year ending	Value of standard incentive rate base capex allowance as determined 29 August 2019	Incremental approved standard incentive rate listed project base capex determined in 2020	Incremental approved standard incentive rate listed project base capex determined in 2021	Incremental approved standard incentive rate listed project base capex determined in 2022	Incremental approved standard incentive rate listed project base capex determined in 2023	Approved standard incentive rate base capex allowance for purposes of forecast MAR in the disclosure year (sum of amounts in columns 2 to 6)
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]
30 June 2021	\$206.7million	N/A	N/A	N/A	N/A	\$206.7million
30 June 2022	\$266.8million	\$XX.X million	N/A	N/A	N/A	\$266.8million
30 June 2023	\$303.3million	\$XX.X million	\$XX.X million	N/A	N/A	\$303.3million
30 June 2024	\$274.8million	\$XX.X million	\$XX.X million	\$XX.X million	N/A	\$274.8million
30 June 2025	\$347.2million	\$XX.X million	\$XX.X million	\$XX.X million	\$XX.X million	\$347.2million

**Schedule C3: Approved low incentive rate base capex summary – expenditure basis  
(excluding capitalised operating leases)**

<b>Disclosure year ending</b>	<b>Value of low incentive rate base capex allowances as determined 29 August 2019</b>	<b>Incremental approved low incentive rate listed project base capex determined in 2020</b>	<b>Incremental approved low incentive rate listed project base capex determined in 2021</b>	<b>Incremental approved low incentive rate listed project base capex determined in 2022</b>	<b>Incremental approved low incentive rate listed project base capex determined in 2023</b>	<b>Approved low incentive rate base capex allowance for purposes of base capex expenditure adjustments in the disclosure year (sum of amounts in columns 2 to 6)</b>
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]
30 June 2021	\$0 million	N/A	N/A	N/A	N/A	\$0 million
30 June 2022	\$0 million	\$XX.X million	N/A	N/A	N/A	\$0 million
30 June 2023	\$0 million	\$XX.X million	\$XX.X million	N/A	N/A	\$0 million
30 June 2024	\$0 million	\$XX.X million	\$XX.X million	\$XX.X million	N/A	\$0 million
30 June 2025	\$0 million	\$XX.X million	\$XX.X million	\$XX.X million	\$XX.X million	\$0 million

**Schedule C4: Approved standard incentive rate base capex summary - expenditure basis  
(excluding capitalised operating leases)**

Disclosure year ending	Value of standard incentive rate base capex allowance as determined 29 August 2019	Incremental approved listed project base capex determined in 2020	Incremental approved listed project base capex determined in 2021	Incremental approved listed project base capex determined in 2022	Incremental approved listed project base capex determined in 2023	Approved standard incentive rate base capex allowance for purposes of base capex expenditure adjustments in the disclosure year (sum of amounts in columns 2 to 6)
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]
30 June 2021	\$222.9million	N/A	N/A	N/A	N/A	\$222.9million
30 June 2022	\$277.3million	\$XX.X million	N/A	N/A	N/A	\$277.3million
30 June 2023	\$273.9million	\$XX.X million	\$XX.X million	N/A	N/A	\$273.9million
30 June 2024	\$280.0million	\$XX.X million	\$XX.X million	\$XX.X million	N/A	\$280.0million
30 June 2025	\$300.2million	\$XX.X million	\$XX.X million	\$XX.X million	\$XX.X million	\$300.2million

### Schedule D: Forecast MAR building blocks calculation

FORECAST MAR BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR FORECAST INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO FORECAST NOMINAL VALUE INPUT	FORECAST MAR BUILDING BLOCK VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC	<b>WACC</b>	A1	WACC = A1	
WACC return on forecast opening RAB value	Forecast sum of <b>opening RAB value</b> for the <b>disclosure year</b>	B	$A1 / (1 + A1)^{163/365}$	$B \times A1 / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>JUL</sub>	Forecast sum of <b>value of commissioned asset</b> for the month in the <b>disclosure year</b>	C1	$((1 + A1)^{349.5/365} - 1) / (1 + A1)^{163/365}$	$C1 \times ((1 + A1)^{349.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>AUG</sub>		C2	$((1 + A1)^{318.5/365} - 1) / (1 + A1)^{163/365}$	$C2 \times ((1 + A1)^{318.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>SEP</sub>		C3	$((1 + A1)^{288/365} - 1) / (1 + A1)^{163/365}$	$C3 \times ((1 + A1)^{288/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>OCT</sub>		C4	$((1 + A1)^{257.5/365} - 1) / (1 + A1)^{163/365}$	$C4 \times ((1 + A1)^{257.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>NOV</sub>		C5	$((1 + A1)^{227/365} - 1) / (1 + A1)^{163/365}$	$C5 \times ((1 + A1)^{227/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>DEC</sub>		C6	$((1 + A1)^{196.5/365} - 1) / (1 + A1)^{163/365}$	$C6 \times ((1 + A1)^{196.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA <sub>JAN</sub>		C7	$((1 + A1)^{165.5/365} - 1) / (1 + A1)^{163/365}$	$C7 \times ((1 + A1)^{165.5/365} - 1) / (1 + A1)^{163/365}$

FORECAST MAR BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR FORECAST INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO FORECAST NOMINAL VALUE INPUT	FORECAST MAR BUILDING BLOCK VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC return on forecast $VCA_{FEB}$	Forecast sum of <b>value of commissioned asset</b> for the month in the <b>disclosure year</b>	C8	$((1 + A1)^{136/365} - 1) / (1 + A1)^{163/365}$	$C8 \times ((1 + A1)^{136/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast $VCA_{MAR}$		C9	$((1 + A1)^{106.5/365} - 1) / (1 + A1)^{163/365}$	$C9 \times ((1 + A1)^{106.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast $VCA_{APL}$		C10	$((1 + A1)^{76/365} - 1) / (1 + A1)^{163/365}$	$C10 \times ((1 + A1)^{76/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast $VCA_{MAY}$		C11	$((1 + A1)^{45.5/365} - 1) / (1 + A1)^{163/365}$	$C11 \times ((1 + A1)^{45.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast $VCA_{JUN}$		C12	$((1 + A1)^{15/365} - 1) / (1 + A1)^{163/365}$	$C12 \times ((1 + A1)^{15/365} - 1) / (1 + A1)^{163/365}$
Total forecast capital charge	Sum of <b>forecast MAR</b> building block values for formulas B through C12			Sum D = Sum of <b>forecast MAR</b> building block values B to C12

FORECAST MAR BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR FORECAST INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO FORECAST NOMINAL VALUE INPUT	FORECAST MAR BUILDING BLOCK VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
Forecast depreciation	Forecast <b>depreciation</b>	E	$1 / (1 + A1)^{163/365}$	$E / (1 + A1)^{163/365}$
Operating expenditure	<b>Opex allowance</b> as specified in clause 29.1.6.	F	$(1 + A1)^{19/365}$	$F \times (1 + A1)^{19/365}$
Forecast tax	Forecast <b>regulatory tax allowance</b> , calculated in accordance with clause 30.2(h)	G	$(1 + A1)^{19/365}$	$G \times (1 + A1)^{19/365}$
Forecast TCSD	Forecast <b>term credit spread differential allowance</b> , calculated in accordance with Part 3, Subpart 5 of the <b>Transpower IM</b>	H	$(1 + A1)^{19/365}$	$H \times (1 + A1)^{19/365}$
Forecast EV adjustment	<b>Forecast EV adjustment</b> , as specified in clauses 32.1.1 to 32.3, including a tax gross up calculated at the <b>corporate tax rate</b>	I	$1 / (1 + A1)^{163/365}$	$I / (1 + A1)^{163/365}$

FORECAST MAR BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR FORECAST INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO FORECAST NOMINAL VALUE INPUT	FORECAST MAR BUILDING BLOCK VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
Forecast pass-through costs	Forecast <b>pass-through costs</b> in accordance with Part 3, Subpart 1 of the <b>Transpower IM</b> , as specified in clauses 30.2(j)	J	$(1 + A1)^{19/365}$	$J \times (1 + A1)^{19/365}$
Forecast recoverable costs	Forecast <b>recoverable costs</b> in accordance with Part 3, Subpart 1 of the <b>Transpower IM</b> , as specified in clauses 30.2(k)	K	$(1 + A1)^{19/365}$	$K \times (1 + A1)^{19/365}$
<b>TOTAL FORECAST MAR INCLUSIVE OF FORECAST PASS-THROUGH COSTS AND FORECAST RECOVERABLE COSTS</b>	Sum of <b>forecast MAR</b> building block values			Sum L = Sum D plus sum of <b>forecast MAR</b> building block values E to K

### Schedule E: Wash-up building blocks calculation

WASH-UP BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO NOMINAL VALUE INPUT	WASH-UP VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC	WACC	A1	WACC = A1	
WACC return on opening RAB value	Sum of <b>opening RAB value</b> for the <b>disclosure year</b>	B	A1	B x A1
WACC return on VCA <sub>JUL</sub>	Sum of <b>value of commissioned asset</b> for the month in the <b>disclosure year</b>	C1	$(1 + A1)^{349.5/365} - 1$	$C1 \times ((1 + A1)^{349.5/365} - 1)$
WACC return on VCA <sub>AUG</sub>		C2	$(1 + A1)^{318.5/365} - 1$	$C2 \times ((1 + A1)^{318.5/365} - 1)$
WACC return on VCA <sub>SEP</sub>		C3	$(1 + A1)^{288/365} - 1$	$C3 \times ((1 + A1)^{288/365} - 1)$
WACC return on VCA <sub>OCT</sub>		C4	$(1 + A1)^{257.5/365} - 1$	$C4 \times ((1 + A1)^{257.5/365} - 1)$
WACC return on VCA <sub>NOV</sub>		C5	$(1 + A1)^{227/365} - 1$	$C5 \times ((1 + A1)^{227/365} - 1)$
WACC return on VCA <sub>DEC</sub>		C6	$(1 + A1)^{196.5/365} - 1$	$C6 \times ((1 + A1)^{196.5/365} - 1)$
WACC return on VCA <sub>JAN</sub>		C7	$(1 + A1)^{165.5/365} - 1$	$C7 \times ((1 + A1)^{165.5/365} - 1)$
WACC return on VCA <sub>FEB</sub>		C8	$(1 + A1)^{136/365} - 1$	$C8 \times ((1 + A1)^{136/365} - 1)$



WASH-UP BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO NOMINAL VALUE INPUT	WASH-UP VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC return on $VCA_{MAR}$	Sum of <b>value of commissioned asset</b> for the month in the <b>disclosure year</b>	C9	$(1 + A1)^{106.5/365} - 1$	$C9 \times ((1 + A1)^{106.5/365} - 1)$
WACC return on $VCA_{APL}$		C10	$(1 + A1)^{76/365} - 1$	$C10 \times ((1 + A1)^{76/365} - 1)$
WACC return on $VCA_{MAY}$		C11	$(1 + A1)^{45.5/365} - 1$	$C11 \times ((1 + A1)^{45.5/365} - 1)$
WACC return on $VCA_{JUN}$		C12	$(1 + A1)^{15/365} - 1$	$C12 \times ((1 + A1)^{15/365} - 1)$
WACC return on lost assets	Sum of the <b>opening RAB value of lost assets</b> in the <b>disclosure year</b>	D	$1 - (1 + A1)^{182/365}$	$D \times (1 - (1 + A1)^{182/365})$
WACC return on found assets	Sum of the <b>value of found asset of found assets</b> in the <b>disclosure year</b>	E	$(1 + A1)^{182/365} - 1$	$E \times ((1 + A1)^{182/365} - 1)$
WACC return on disposed assets	Sum of <b>opening RAB value of disposed assets</b> in the <b>disclosure year</b>	F	$1 - (1 + A1)^{182/365}$	$F \times (1 - (1 + A1)^{182/365})$
Total capital charge	Sum of wash-up values for formulas B through F			Sum G = sum of wash-up values B to F

WASH-UP BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO NOMINAL VALUE INPUT	WASH-UP VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
Transmission revenues received	Sum of <b>actual transmission revenue</b> converted to a <b>disclosure year</b> value in accordance with clause 29.1.10(a)	H	$(1 + A1)^{163/365}$	$H \times (1 + A1)^{163/365}$
Transpower adjustment to recognise voluntarily foregone revenues	Amount of <b>electricity transmission revenue</b> permanently foregone by <b>Transpower</b>	J	$(1 + A1)^{163/365}$	$J \times (1 + A1)^{163/365}$
Other regulated income	Sum of <b>other regulated income</b> in accordance with clause 29.1.10(b)	K	$(1 + A1)^{182/365}$	$K \times (1 + A1)^{182/365}$
Gain/(loss) on disposal of assets	Sum of disposal proceeds less <b>opening RAB value for disposed assets</b>	L	$(1 + A1)^{182/365}$	$L \times (1 + A1)^{182/365}$
Total income	Sum of wash-up values for formulas H to L			Sum M = sum of wash-up values H, J, K and L

WASH-UP BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO NOMINAL VALUE INPUT	WASH-UP VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
Operating expenditure	<b>Opex allowance</b> as specified in clause 29.1.6, and as adjusted for any disparity between the <b>forecast CPI</b> specified in clause 29.2 and actual <b>CPI</b>	N	$(1 + A1)^{182/365}$	$N \times (1 + A1)^{182/365}$
Depreciation	<b>Depreciation</b> (excluding <b>depreciation on disposed assets</b> )	O		O
TCSD	The <b>term credit spread differential allowance</b> , calculated in accordance with Part 3, Subpart 5 of the <b>Transpower IM</b>	P	$(1 + A1)^{182/365}$	$P \times (1 + A1)^{182/365}$
Pass-through costs and recoverable costs	<b>Pass-through costs</b> and <b>recoverable costs</b> as set out in Schedule H, Formulae F and M.	Q	$(1 + A1)^{182/365}$	$Q \times (1 + A1)^{182/365}$
Net operating profit/(loss) before tax	Sum of wash-up values for Sum M and formulas N to P			Sum R = Sum M, less wash-up values N to Q
Tax	The <b>regulatory tax allowance</b> calculated in accordance with clause 29.1.8	S	$(1 + A1)^{182/365}$	$S \times (1 + A1)^{182/365}$
Net operating profit/(loss) after tax	Sum of wash-up values for Sum R and formula S			Sum T = Sum R, less wash-up value S

<b>AFTER-TAX EX-POST ECONOMIC GAIN OR LOSS</b>	Difference between the capital charge (Sum G) and the net operating profit/(loss) after tax (Sum T)			Difference U = Sum G less Sum T
Forecast EV adjustment included in forecast MAR	Adjustment to recognise the <b>forecast EV adjustment</b> for the <b>disclosure year</b> , before tax gross up, as applied in setting the <b>forecast MAR</b> for the <b>relevant pricing year</b>	V		V
<b>EV ACCOUNT ENTRY</b>	This is the <b>ex-post economic gain or loss</b> adjusted for the <b>forecast EV adjustment</b> applied in setting the <b>forecast MAR</b> for the <b>relevant pricing year</b> , and is an <b>EV account entry</b>			Difference W = Difference U plus value V

### Schedule F: Point of service sub-categories – Measures of grid performance GP1 and GP2 points of service

RCP3 Sub-Category	Measure reference	Point of service	Customer
N security material economic consequence	GP1D and GP2D	ABY011_S1	ALPE
N-1 security high economic consequence	GP1A and GP2A	ALB033_S1	VECT
N-1 security high economic consequence	GP1A and GP2A	ALB110_S1	VECT
N security material economic consequence	GP1D and GP2D	APS011_S1	ORON
N security generator	GP1F and GP2F	ARA220_I1	MRPL
N security generator	GP1F and GP2F	ARG110_I1	TRUS
N-1 security generator	GP1E and GP2E	ARI110_I1	MRPL
N-1 security material economic consequence	GP1B and GP2B	ASB033_S1	EASH
N-1 security high economic consequence	GP1A and GP2A	ASB066_S1_S2	EASH
N-1 security material economic consequence	GP1B and GP2B	ASY011_S1	MPOW
N-1 security generator	GP1E and GP2E	ATI220_I1	MRPL
N security material economic consequence	GP1D and GP2D	ATU110_S1	WPOW
N-1 security generator	GP1E and GP2E	AVI220_I1	MERI
N-1 security material economic consequence	GP1B and GP2B	BAL033_S1	OTNT
N-1 security material economic consequence	GP1B and GP2B	BDE011_S1	RAYN
N-1 security material economic consequence	GP1B and GP2B	BDE011_S2	SENZ
N-1 security generator	GP1E and GP2E	BEN220_I1	MERI
N-1 security high economic consequence	GP1A and GP2A	BLN033_S1	MARL
N-1 security material economic consequence	GP1B and GP2B	BOB033_S1	COUP
N-1 security high economic consequence	GP1A and GP2A	BOB110_S1	COUP
N security material economic consequence	GP1D and GP2D	BPD110_S1	ALPE
N-1 security high economic consequence	GP1A and GP2A	BPE033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	BPE055_S1_S2	TRNZ
N security material economic consequence	GP1D and GP2D	BPT110_S1	WATA
N-1 security high economic consequence	GP1A and GP2A	BRB033_S1	NPOW
N security material economic consequence	GP1D and GP2D	BRK033_S1	POCO
N-1 security high economic consequence	GP1A and GP2A	BRY066_S1_S2_S3	ORON

RCP3 Sub-Category	Measure reference	Point of service	Customer
N security generator	GP1F and GP2F	BWK110_I1	TRUS
N-1 security material economic consequence	GP1B and GP2B	CBG011_S1	WAIP
N security material economic consequence	GP1D and GP2D	CLH011_S1	ORON
N-1 security material economic consequence	GP1B and GP2B	CML033_S1	DUNE
N security material economic consequence	GP1D and GP2D	COL011_S1	ORON
N-1 security generator	GP1E and GP2E	COL066_I1	TRUS
N-1 security material economic consequence	GP1B and GP2B	CPK011_S1	WELL
N-1 security high economic consequence	GP1A and GP2A	CPK033_S1	WELL
N-1 security material economic consequence	GP1B and GP2B	CST033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	CUL033_S1	MPOW
N security material economic consequence	GP1D and GP2D	CUL066_S1	MPOW
N-1 security material economic consequence	GP1B and GP2B	CYD033_S1	DUNE
N-1 security generator	GP1E and GP2E	CYD220_I1	CTCT
N-1 security material economic consequence	GP1B and GP2B	DOB033_S1	WPOW
N-1 security material economic consequence	GP1B and GP2B	DVK011_S1	SCAN
N-1 security high economic consequence	GP1A and GP2A	EDG033_S1	HRZE
N-1 security material economic consequence	GP1B and GP2B	EDN033_S1	POWN
N-1 security material economic consequence	GP1B and GP2B	FHL033_S1	HAWK
N-1 security high economic consequence	GP1A and GP2A	FKN033_S1	DUNE
N-1 security high economic consequence	GP1A and GP2A	FKN033_S2	ESLL
N-1 security material economic consequence	GP1B and GP2B	GFD033_S1	WELL
N-1 security generator	GP1E and GP2E	GLN033_I1	NZST
N security high economic consequence	GP1C and GP2C	GLN033_S1_S2	NZST
N-1 security high economic consequence	GP1A and GP2A	GLN033_S3	COUP
N-1 security material economic consequence	GP1B and GP2B	GOR033_S1	POWN
N-1 security material economic consequence	GP1B and GP2B	GYM066_S1	WPOW
N-1 security material economic consequence	GP1B and GP2B	GYT033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	HAM011_S1	WELE
N-1 security high economic consequence	GP1A and GP2A	HAM033_S1	WELE

RCP3 Sub-Category	Measure reference	Point of service	Customer
N-1 security material economic consequence	GP1B and GP2B	HAM055_S1_S2	TRNZ
N-1 security material economic consequence	GP1B and GP2B	HAY011_S1	WELL
N-1 security material economic consequence	GP1B and GP2B	HAY033_S1	WELL
N-1 security high economic consequence	GP1A and GP2A	HEN033_S1	VECT
N-1 security high economic consequence	GP1A and GP2A	HEP033_S1	VECT
N security high economic consequence	GP1C and GP2C	HIN033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	HKK066_S1	WPOW
N-1 security material economic consequence	GP1B and GP2B	HLY033_S1_S2	WELE
N-1 security generator	GP1E and GP2E	HLY220_I1	GENE
N-1 security high economic consequence	GP1A and GP2A	HOB110_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	HOR033_S1	ORON
N-1 security material economic consequence	GP1B and GP2B	HOR066_S1	ORON
N-1 security material economic consequence	GP1B and GP2B	HTI033_S1	WTOM
N-1 security high economic consequence	GP1A and GP2A	HUI033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	HWA033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	HWA033_S2	KUPE
N-1 security generator	GP1E and GP2E	HWA110_I1	KIWI
N-1 security generator	GP1E and GP2E	HWA110_I2	TRUS
N-1 security high economic consequence	GP1A and GP2A	HWB033_S1	DUNE
N-1 security high economic consequence	GP1A and GP2A	HWB033_S2	OTNT
N-1 security material economic consequence	GP1B and GP2B	HWB110_S1	OTNT
N-1 security high economic consequence	GP1A and GP2A	INV033_S1	POWN
N-1 security high economic consequence	GP1A and GP2A	ISL033_S1	ORON
N-1 security high economic consequence	GP1A and GP2A	ISL066_S1	ORON
N-1 security material economic consequence	GP1B and GP2B	KAI011_S1	MPOW
N-1 security high economic consequence	GP1A and GP2A	KAW011_S1	HRZE
N-1 security high economic consequence	GP1A and GP2A	KAW011_S4_S5_S6_S7_S8_S9	TAPP
N-1 security generator	GP1E and GP2E	KAW110_I1	TAPP
N-1 security material economic consequence	GP1B and GP2B	KBY066_S1_S2	ORON

RCP3 Sub-Category	Measure reference	Point of service	Customer
N security material economic consequence	GP1D and GP2D	KIK011_S1	TASM
N-1 security generator	GP1E and GP2E	KIN011_I2	POCO
N-1 security material economic consequence	GP1B and GP2B	KIN011_S1_S2	POCO
N security material economic consequence	GP1D and GP2D	KIN033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	KMO033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	KOE110_S1	TOPE
N security generator	GP1F and GP2F	KPA110_I1	TBOP
N-1 security generator	GP1E and GP2E	KPO110_I1	MRPL
N-1 security material economic consequence	GP1B and GP2B	KPU066_S1	POCO
N-1 security generator	GP1E and GP2E	KUM066_I1	WPOW
N-1 security material economic consequence	GP1B and GP2B	KUM066_S1	WPOW
N-1 security material economic consequence	GP1B and GP2B	KWA011_S1	WELL
N-1 security material economic consequence	GP1B and GP2B	LFD110_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	LTN033_S1	POCO
N-1 security generator	GP1E and GP2E	MAN220_I1	MERI
N-1 security generator	GP1E and GP2E	MAT110_I1	SGGP
N-1 security generator	GP1E and GP2E	MAT110_I2	TRUS
N security material economic consequence	GP1D and GP2D	MCH011_S1	TASM
N-1 security material economic consequence	GP1B and GP2B	MGM033_S1	POCO
N-1 security generator	GP1E and GP2E	MHO033_I2	HORO
N-1 security material economic consequence	GP1B and GP2B	MHO033_S1	HORO
N security generator	GP1F and GP2F	MKE110_I1	TBOP
N-1 security material economic consequence	GP1B and GP2B	MLG011_S1	WELL
N-1 security material economic consequence	GP1B and GP2B	MLG033_S1	WELL
N-1 security high economic consequence	GP1A and GP2A	MNG033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	MNG110_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	MNI011_S1_S2	METH
N-1 security high economic consequence	GP1A and GP2A	MPE110_S1	NPOW
N-1 security material economic consequence	GP1B and GP2B	MST033_S1	POCO



RCP3 Sub-Category	Measure reference	Point of service	Customer
N-1 security generator	GP1E and GP2E	MTI220_I1	MRPL
N-1 security material economic consequence	GP1B and GP2B	MTM033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	MTN033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	MTO033_S1	NPOW
N security material economic consequence	GP1D and GP2D	MTR033_S1	POCO
N-1 security generator	GP1E and GP2E	NAP220_I1	NAPA
N-1 security generator	GP1E and GP2E	NAP220_I2	NTRG
N-1 security high economic consequence	GP1A and GP2A	NMA033_S1	POWN
N security material economic consequence	GP1D and GP2D	NPK033_S1	WTOM
N-1 security material economic consequence	GP1B and GP2B	NPL033_S1	PTNP
N-1 security material economic consequence	GP1B and GP2B	NPL033_S2	POCO
N-1 security high economic consequence	GP1A and GP2A	NSY033_S1	OTNT
N-1 security material economic consequence	GP1B and GP2B	OAM033_S1	WATA
N-1 security generator	GP1E and GP2E	OHA220_I1	MERI
N-1 security generator	GP1E and GP2E	OHB220_I1	MERI
N-1 security generator	GP1E and GP2E	OHC220_I1	MERI
N-1 security generator	GP1E and GP2E	OHK220_I1	MRPL
N-1 security generator	GP1E and GP2E	OKI220_I1	CTCT
N security high economic consequence	GP1C and GP2C	OKN011_S1	POCO
N security high economic consequence	GP1C and GP2C	OKN011_S2	WTOM
N security material economic consequence	GP1D and GP2D	ONG033_S1	WTOM
N-1 security material economic consequence	GP1B and GP2B	OPK033_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	ORO110_S1	BUEL
N-1 security high economic consequence	GP1A and GP2A	OTA022_S1	VECT
N security material economic consequence	GP1D and GP2D	OTI011_S1	WPOW
N-1 security material economic consequence	GP1B and GP2B	OWH011_S1	HAWK
N-1 security high economic consequence	GP1A and GP2A	PAK033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	PAO110_S1	POCO
N-1 security material economic consequence	GP1B and GP2B	PEN022_S1	VECT

RCP3 Sub-Category	Measure reference	Point of service	Customer
N security high economic consequence	GP1C and GP2C	PEN025_S1	TRNZ
N-1 security high economic consequence	GP1A and GP2A	PEN033_S1	VECT
N-1 security high economic consequence	GP1A and GP2A	PEN033_S2	SHPK
N-1 security high economic consequence	GP1A and GP2A	PEN110_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	PNI033_S1	WELL
N security generator	GP1F and GP2F	PPI220_I1	CTCT
N-1 security material economic consequence	GP1B and GP2B	PRM033_S1	HORO
N-1 security material economic consequence	GP1B and GP2B	RDF033_S1	HAWK
N-1 security material economic consequence	GP1B and GP2B	RFN110_S1_S2	WPOW
N-1 security high economic consequence	GP1A and GP2A	ROS022_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	ROS110_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	ROT011_S1	HAWK
N-1 security material economic consequence	GP1B and GP2B	ROT033_S1	HAWK
N-1 security generator	GP1E and GP2E	ROT110_I1	TRUS
N-1 security generator	GP1E and GP2E	ROX110_I1	CTCT
N-1 security generator	GP1E and GP2E	ROX220_I1	CTCT
N-1 security generator	GP1E and GP2E	RPO220_I1	GENE
N-1 security material economic consequence	GP1B and GP2B	SBK033_S1	MPOW
N-1 security material economic consequence	GP1B and GP2B	SBK066_S1	MPOW
N-1 security material economic consequence	GP1B and GP2B	SDN033_S1	DUNE
N-1 security material economic consequence	GP1B and GP2B	SFD033_S1	POCO
N-1 security generator	GP1E and GP2E	SFD220_I1	CTCT
N-1 security high economic consequence	GP1A and GP2A	STK033_S1	TASM
N-1 security high economic consequence	GP1A and GP2A	STK033_S2	NELS
N-1 security material economic consequence	GP1B and GP2B	STK066_S1	TASM
N-1 security material economic consequence	GP1B and GP2B	STU011_S1	ALPE
N-1 security high economic consequence	GP1A and GP2A	SVL033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	SWN025_S1	TRNZ
N-1 security generator	GP1E and GP2E	SWN220_I1	SCGL

RCP3 Sub-Category	Measure reference	Point of service	Customer
N-1 security high economic consequence	GP1A and GP2A	TAK033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	TGA011_S1	POCO
N-1 security high economic consequence	GP1A and GP2A	TGA033_S1	POCO
N-1 security generator	GP1E and GP2E	THI220_I1	CTCT
N-1 security high economic consequence	GP1A and GP2A	TIM011_S1	ALPE
N security generator	GP1F and GP2F	TKA011_I1	GENE
N security material economic consequence	GP1D and GP2D	TKA033_S1	ALPE
N-1 security generator	GP1E and GP2E	TKB220_I1	GENE
N-1 security high economic consequence	GP1A and GP2A	TKR033_S1	WELL
N-1 security material economic consequence	GP1B and GP2B	TKU033_S1	WTOM
N-1 security material economic consequence	GP1B and GP2B	TKU033_S2	GENE
N-1 security generator	GP1E and GP2E	TKU220_I1	GENE
N-1 security material economic consequence	GP1B and GP2B	TMI033_S1	POCO
N-1 security high economic consequence	GP1A and GP2A	TMK033_S1	ALPE
N-1 security material economic consequence	GP1B and GP2B	TMN055_S1_S2	TRNZ
N security high economic consequence	GP1C and GP2C	TMU011_S1_S2	WAIP
N-1 security material economic consequence	GP1B and GP2B	TNG011_S1	WNST
N-1 security material economic consequence	GP1B and GP2B	TNG055_S1_S2	TRNZ
N security material economic consequence	GP1D and GP2D	TRK011_S1	HAWK
N-1 security generator	GP1E and GP2E	TUI110_I1	GENE
N-1 security high economic consequence	GP1A and GP2A	TUI110_S2	EAST
N-1 security generator	GP1E and GP2E	TWC220_I1	WIND
N-1 security generator	GP1E and GP2E	TWH033_I2	WELE
N-1 security high economic consequence	GP1A and GP2A	TWH033_S1	WELE
N-1 security high economic consequence	GP1A and GP2A	TWI220_S1	NZAS
N security high economic consequence	GP1C and GP2C	TWZ033_S1	ALPE
N security high economic consequence	GP1C and GP2C	TWZ033_S2	MERI
N security high economic consequence	GP1C and GP2C	TWZ033_S3	WATA
N-1 security material economic consequence	GP1B and GP2B	UHT033_S1	WELL

RCP3 Sub-Category	Measure reference	Point of service	Customer
N security material economic consequence	GP1D and GP2D	WAI011_S1	HRZE
N-1 security material economic consequence	GP1B and GP2B	WDV011_S1	SCAN
N-1 security generator	GP1E and GP2E	WDV110_I1	MERI
N-1 security material economic consequence	GP1B and GP2B	WEL033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	WGN033_S1	POCO
N security high economic consequence	GP1C and GP2C	WHI011_S1_S2	PANP
N security high economic consequence	GP1C and GP2C	WHI011_S3	CTCT
N-1 security generator	GP1E and GP2E	WHI220_I1	CTCT
N-1 security material economic consequence	GP1B and GP2B	WHU033_S1	POCO
N-1 security generator	GP1E and GP2E	WIL033_I1	WELL
N-1 security material economic consequence	GP1B and GP2B	WIL033_S1	WELL
N-1 security high economic consequence	GP1A and GP2A	WIR033_S1	VECT
N-1 security generator	GP1E and GP2E	WKM220_I1	MRPL
N-1 security material economic consequence	GP1B and GP2B	WKO033_S1	POCO
N security generator	GP1F and GP2F	WPA220_I1	MRPL
N security material economic consequence	GP1D and GP2D	WPR033_S1	MPOW
N-1 security material economic consequence	GP1B and GP2B	WPR066_S1	MPOW
N security material economic consequence	GP1D and GP2D	WPW011_S1	CHBP
N-1 security material economic consequence	GP1B and GP2B	WPW033_S1	CHBP
N-1 security material economic consequence	GP1B and GP2B	WRD033_S1	VECT
N-1 security material economic consequence	GP1B and GP2B	WRK033_S1	HAWK
N-1 security generator	GP1E and GP2E	WRK220_I1	CTCT
N-1 security generator	GP1E and GP2E	WTK011_I1	MERI
N-1 security material economic consequence	GP1B and GP2B	WTK011_S2	WATA
N-1 security material economic consequence	GP1B and GP2B	WTK033_S1	WATA
N-1 security high economic consequence	GP1A and GP2A	WTU033_S1	HAWK
N security high economic consequence	GP1C and GP2C	WVY011_S1	POCO
N security generator	GP1F and GP2F	WWD110_I1	MELW

## Schedule G: Quality standards - HVAC assets for asset performance measure AP2

Asset name	Outage Block Description (circuit)
ARI_KIN_1	Arapuni–Kinleith Circuit 1
ARI_KIN_2	Arapuni–Kinleith Circuit 2
ASB_CB_292	Ashburton 220 kV Line Circuit Breaker 292
ASB_CB_492	Ashburton 220 kV Line Circuit Breaker 492
ASB_ISL_1	Ashburton–Islington 220 kV Circuit 1
ASB_TIM_TWZ_1	Ashburton–Timaru–Twizel 220 kV Circuit 1
ASB_TIM_TWZ_2	Ashburton–Timaru–Twizel 220 kV Circuit 2
ATI_WKM_1	Atiamuri–Whakamaru 220 kV Circuit 1
AVI_WTK_1	Aviemore–Waitaki 220 kV Circuit 1
BPE_BRK_1	Bunnythorpe–Brunswick 220 kV Circuit 1
BPE_BRK_2	Bunnythorpe–Brunswick 220 kV Circuit 2
BPE_TKU_1	Bunnythorpe–Tokaanu 220 kV Circuit 1
BPE_TKU_2	Bunnythorpe–Tokaanu 220 kV Circuit 2
CYD_CB_522	Clyde 220 kV Line Circuit Breaker 522
CYD_CB_542	Clyde 220 kV Line Circuit Breaker 542
CYD_CML_TWZ_1	Clyde–Cromwell Twizel 220 kV Circuit 1
CYD_CML_TWZ_2	Clyde–Cromwell Twizel 220 kV Circuit 2
CYD_ROX_1	Clyde–Roxburgh 220 kV Circuit 1
CYD_ROX_2	Clyde–Roxburgh 220 kV Circuit2
HAM_KPO_1	Hamilton–Karapiro 110 kV Circuit 1
HAM_KPO_2	Hamilton–Karapiro 110 kV Circuit 2
HAM_OHW_1	Hamilton–Ohinewai 220 kV Circuit 1
HAM_T6	Hamilton 220/110 kV Transformer T6
HAM_T9	Hamilton 220/110 kV Transformer T9
HAM_WKM_1	Hamilton–Whakamaru 220 kV Circuit 1
HAY_T1	Haywards 220/110/11 kV Transformer T1
HAY_T2	Haywards 220/110/11 kV Transformer T2
HAY_T5	Haywards 220/110/11 kV Transformer T5
HLY_SFD_1	Huntly–Stratford 220 kV Circuit 1
HLY_TWH_1	Huntly–Te Kowhai 220 kV Circuit 1
HWA_SFD_1	Hawera–Stratford 110 kV Circuit 1
ISL_KIK_1	Islington–Kikiwa 220 kV Circuit 1
ISL_LIV_1	Islington–Livingstone 220 kV Circuit 1
ISL_T3	Islington 220/66/11 kV Interconnecting Transformer T3
ISL_T6	Islington 220/66/11 kV Interconnecting Transformer T6
ISL_T7	Islington 220/66/11 kV Interconnecting Transformer T7
ISL_TKB_1	Islington–Tekapo B 220 kV Circuit 1
ISL_WPR_CUL_KIK_2	Islington–Waipara–Culverden Kikiwa 220 kV Circuit 2
ISL_WPR_CUL_KIK_3	Islington–Waipara–Culverden Kikiwa 220 kV Circuit 3
KAW_T12	Kawerau 220 /110 kV Interconnecting Transformer T12
KAW_T13	Kawerau 220 /110 kV Interconnecting Transformer T13
KIK_CB_322	Kikiwa 220 kV Line Circuit Breaker 322

<b>Asset name</b>	<b>Outage Block Description (circuit)</b>
KIK_CB_342	Kikiwa 220 kV Line Circuit Breaker 342
KIN_CB_352	Kinleith 110kV Circuit Breaker 352
KIN_CB_372	Kinleith 110kV Circuit Breaker 372
KIN_TRK_1	Kinleith–Taurakenga 110 kV Circuit 1
KIN_TRK_2	Kinleith–Taurakenga 110 kV Circuit 2
LIV_NSY_1	Livingstone–Naseby 220 kV Circuit 1
LIV_WTK_1	Livingstone–Waitaki 220 kV Circuit 1
MAN_220BS_A	Manapouri 220 kV Bus A
MAN_220BS_B	Manapouri 220 kV Bus B
MAN_220BS_C	Manapouri 220 kV Bus C
NPL_T8	New Plymouth 220/110 kV Interconnecting Transformer T8
NSY_ROX_1	Naseby–Roxburgh 220 kV Circuit 1
OHK_WRK_1	Ohakuri–Wairakei 220 kvVCircuit 1
OHW_WKM_1	Ohinewai–Whakamaru 220 kV Circuit 1
PAK_WKM_1	Pakuranga–Whakamaru 220 kV Circuit 1
PAK_WKM_2	Pakuranga–Whakamaru 220 kV Circuit 2
RDF_T3	Redclyffe 220/110 kV Interconnecting Transformer T3
RDF_T4	Redclyffe 220/110 kV Interconnecting Transformer T4
RPO_TNG_1	Rangip– Tangiwai 220 kV Circuit 1
RPO_WRK_1	Rangipo–Wairakei 220 kV Circuit 1
SFD_T10	Stratford 220 / 110 kV Interconnecting Transformer T10
SFD_TMN_1	Stratford–Taumarunui 220 kV Circuit 1
THI_WKM_1	Te Mihi–Whakamaru 220 kV Circuit 1
THI_WRK_1	Te Mihi–Wairakei 220 kV Circuit 1
TKB_TWZ_1	Tekapo B Twizel 220 kV Circuit 1
TKU_WKM_1	Tokaanu–Whakamaru 220 kV Circuit 1
TKU_WKM_2	Tokaanu–Whakamaru 220 kV Circuit 2
TMN_TWH_1	Taumarunui–Te Kowhai 220 kV Circuit 1
WKM_WRK_1	Whakamaru–Wairakei 220 kV Circuit 1

### Schedule H: Summary of actual pass-through costs and recoverable costs

Item	Formula	Description
[Column 1]	[Column 2]	[Column 3]
Local authority rates	A	Rates payable to a local authority on system fixed assets
Commerce Act levies	B	Levies payable in accordance with clause 3.1.2(2)(b)(i) of the <b>Transpower IM</b>
Electricity Authority levies	C	Levies payable in accordance with clause 3.1.2(2)(b)(ii) of the <b>Transpower IM</b>
Utilities Disputes Limited levies	D	Levies payable in accordance with clause 3.1.2(2)(b)(iii) of the <b>Transpower IM</b>
Other <b>pass-through costs</b> levies	E	Any other levies that are <b>pass-through costs</b> in accordance with clause 3.1.2(1)(b) of the <b>Transpower IM</b>
<b>Total pass-through costs</b>	<b>F = A + B+ C+D+E</b>	Sum of <b>pass-through costs</b> for the <b>disclosure year</b>
<b>Incremental rolling incentive scheme recoverable costs</b>	G	Sum of <b>recoverable costs</b> under the <b>incremental rolling incentive scheme</b> in accordance with clause 3.1.3(1)(a) of the <b>Transpower IM</b>
Instantaneous reserves availability charge	H	Instantaneous reserves availability charges in accordance with clause 3.1.3(1)(b) of the <b>Transpower IM</b>
Transmission alternative <b>operating costs</b>	I	Transmission alternative operating costs in accordance with clause 3.1.3(1)(c) of the <b>Transpower IM</b>
<b>Operating costs</b> incurred as part of a <b>major capex project</b>	J	The amount of any <b>operating costs</b> that are <b>recoverable costs</b> in accordance with clause 3.1.3(1)(d) of the <b>Transpower IM</b>
Net additional <b>operating costs</b> incurred in responding to a <b>catastrophic event</b>	K	The amount of <b>recoverable costs</b> in accordance with clause 3.1.3(1)(e) of the <b>Transpower IM</b>
Any levy payable to Fire and Emergency New Zealand under the Fire and Emergency New Zealand Act 2017	L	The amount of <b>recoverable costs</b> in accordance with clause 3.1.3(1)(f) of the <b>Transpower IM</b>
<b>Total recoverable costs</b>	<b>M = G + H + I + J + K + L</b>	Sum of <b>recoverable costs</b> for the <b>disclosure year</b>
<b>Total pass-through costs and recoverable costs</b>	<b>N = F + M</b>	Sum of total <b>pass-through costs</b> and <b>recoverable costs</b> for the <b>disclosure year</b>

**Schedule I: Listed projects**

Line Name (Section)	Project Estimated Cost
	<b>RCP3 (\$m)</b>
Brunswick - Stratford B reconductoring	52.8
Bunnythorpe - Wilton A reconductoring	21.2
Bombay - Otahuhu A reconductoring	49.5
Otahuhu - Whakamaru A and B reconductoring	33.0
Total estimated cost	156.5



## **Schedule J: Directors' certificate – pricing compliance statement**

We, [insert full name of first director] and [insert full name of second director], being directors of Transpower New Zealand Limited, certify that, having made all reasonable enquiries, to the best of our knowledge and belief, the attached summary of forecast total revenues applied in the Transpower transmission pricing methodology under the Electricity Industry Participation Code for the period [insert pricing year] complies with the requirements of the Transpower Individual Price-Quality Path Determination 2020 \*[except in the following respects].

\*[insert description of non-compliance if applicable]

[Signatures of directors]

[Date]

\*Delete if inapplicable.

**Schedule K: Directors' certificate – annual compliance statement**

We, [insert full name of first director] and [insert full name of second director], being directors of Transpower New Zealand Limited, certify that, having made all reasonable enquiries, to the best of our knowledge and belief, the Annual Compliance Statement (and any supporting documents) for the period [insert disclosure year] and dated [insert date] complies with the requirements of the Transpower Individual Price-Quality Path Determination 2020\*[except in the following respects].

\*[insert description of non-compliance if applicable]

[Signatures of directors]

[Date]

\*Delete if inapplicable.

**Schedule L: Directors' certificate – proposal to update forecast MAR and forecast SMAR**

We, [insert full name of first director] and [insert full name of second director], being directors of Transpower New Zealand Limited, certify that, having made all reasonable enquiries, to the best of our knowledge and belief, the proposed update of the forecast MAR and the forecast SMAR for the period [insert pricing year(s)] and dated [insert date] complies with the requirements of the Transpower Individual Price-Quality Path Determination 2020\*[except in the following respects].

\*[insert description of non-compliance if applicable]

[Signatures of directors]

[Date]

\*Delete if inapplicable.

## Explanatory note

The Transpower Individual Price-Quality Path Draft Determination 2020 [2019] NZCC 17 (the Transpower IPP) sets an individual price-quality path for Transpower New Zealand Limited (Transpower) for the period 1 April 2020 to 31 March 2025 (referred to as 'RCP3').

The Commission has made this determination pursuant to Part 4 of the Commerce Act 1986 (the Act). It succeeds the individual price-quality path that commenced on 1 April 2015 and that expires on 31 March 2020.

The Transpower IPP sets out Transpower's price path in terms of its annual maximum allowable revenue (being the forecast smoothed maximum allowable revenue) for each pricing year in RCP3. Key input values used to calculate Transpower's annual maximum allowable revenue were determined by the Commission on 29 August 2019 as required by the *Transpower Capital Expenditure Input Methodology Determination* [2012] NZCC 2.

The Transpower IPP also sets out the quality standards that Transpower must comply with for each disclosure year in RCP3. Transpower is incentivised to maintain or improve its quality of supply of electricity transmission services, as a range of quality standards are linked by formulae to Transpower's revenue.

For the purposes of monitoring compliance with Transpower's price-quality path, Transpower must provide the Commission with a pricing compliance statement for each pricing year and must provide an annual compliance statement (and supporting information) following each disclosure year ending 30 June. The Transpower IPP also requires Transpower to publicly disclose these and other information on its website. These additional information disclosure requirements are included within the Transpower IPP (rather than the *Transpower Information Disclosure Determination 2014* [2014] NZCC 5) because they give effect to an operational feature of the price-quality path, or are linked to Transpower's development plans for RCP3, rather than being enduring disclosures.

The Commission conducted a comprehensive process of consultation before determining this Transpower IPP. The determination and a reasons paper providing detailed background to, and analysis of, this Transpower IPP can be found on our website at:

[\[https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-transmission/transpowers-price-quality-path/setting-transpowers-price-quality-path-from-2020\]](https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-transmission/transpowers-price-quality-path/setting-transpowers-price-quality-path-from-2020)

Copies of this determination are also available for inspection free of charge at the Commission (during ordinary office hours), and they are available for purchase at a reasonable price at the Commission.