Project no. 14.11/14120

Public version

**Transpower Individual Price-Quality Path Draft Determination 2015**

**[2014] NZCC XX**

**The Commission:** S Begg

P Duignan

Dr S Gale

E Welson

**Date of draft determination:** 12 September 2014

ISSN: 0144-2726

**THIS DRAFT DETERMINATION IS FOR TECHNICAL CONSULTATION PURPOSES ONLY**

Regulation Branch, Commerce Commission

Wellington, NEW ZEALAND

12 September 2014

|  |  |  |
| --- | --- | --- |
| **Determination version history** | | |
| This determination supersedes the *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010* as it applies to Transpower. | | |
| **Determination date** | **Decision number** | **Determination name** |
| 30 May 2014 | NZCC XXX  ISSN: 0144-2726 | Transpower individual price- quality path determination (draft) |
| 12 September 2014 | [2014] NZCC XXX  ISSN: 0144-2726 | Transpower individual price- quality path draft determination 2015 |

contents

[Part 1: General provisions 4](#_Toc398125798)

[Part 2: Defined terms 6](#_Toc398125799)

[Part 3: Price path 14](#_Toc398125800)

[Part 4: Quality standards and grid output measures 18](#_Toc398125801)

[Part 5: Compliance and information reporting 26](#_Toc398125802)

[Schedule A: Forecast MAR summary 46](#_Toc398125803)

[Schedule B: EV account summary 47](#_Toc398125804)

[Schedule C: Approved base capex summary 48](#_Toc398125805)

[Schedule D: Forecast MAR building blocks calculation 49](#_Toc398125806)

[Schedule E: Wash-up building blocks calculation 55](#_Toc398125807)

[Schedule F: Quality standards - points of service, by category 60](#_Toc398125808)

[Schedule G: Quality standards - selected circuits for HVAC availability measure 65](#_Toc398125809)

[Schedule H: Pass-through costs and recoverable costs summary 66](#_Toc398125810)

[Schedule I: Listed projects 68](#_Toc398125811)

[Schedule J: Directors’ certificate – pricing compliance statement 69](#_Toc398125812)

[Schedule K: Directors’ certificate – annual compliance statement 70](#_Toc398125813)

[Schedule L: Explanatory note 71](#_Toc398125814)

[Appendix: Location of the defined terms used in this determination 73](#_Toc398125815)

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

# Part 1: General provisions

1. Title
   1. This determination is the Transpower Individual Price-Quality Path Determination 2015.
2. Commencement
   1. This determination takes effect on 1 April 2015.
3. Application
   1. This determination applies to **Transpower** in relation to the supply of **electricity lines services** for the **regulatory period** 1 April 2015 to 31 March 2020.
4. Interpretation
   1. Unless the context otherwise requires—
      1. words appearing in bold type (except for headings) in this determination are defined terms;
      2. terms used in this determination that are defined in the **IMs**, but not in this determination, have the meaning given in the **IMs**;
      3. terms used in this determination that are defined in the Commerce Act 1986, but not in this determination, or in the **IMs**, have the meaning given in the Commerce Act 1986;
      4. financial items must be measured and disclosed in accordance with **GAAP**, unless otherwise required by this determination or the **IMs**;
      5. non-financial items must be measured and disclosed in accordance with standard industry practice unless otherwise required in this determination, or the **IMs**;
      6. an obligation to do something is deemed to include an obligation to cause that thing to be done; and
      7. a word which denotes the singular also denotes the plural and vice versa.
   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
   1. **Transpower** must comply with the individual price-quality path, which consists of:
      1. the price-path in Part 3: Price path; and
      2. the quality standards in Part 4: Quality standards and grid output measures.
   2. **Transpower** must comply with the requirements to provide compliance statements and information disclosures in Part 5: Compliance and information reporting.
6. Applicable input methodologies
   1. **Transpower** must apply the requirements set out in the following **IMs** where applicable when complying with this determination:
      1. Part 3 of the **Transpower IM** – input methodologies applying to individual price quality path; and
      2. the **Capex IM** – capital expenditure.

# Part 2: Defined terms

1. In this determination—

A

**actual transmission revenue** is the sum of amounts received by **Transpower** in the **pricing year** for:

(a) **HVAC revenue**;

(b) **HVDC revenue**;

(c) recovered **pass-through costs**; and

(d) recovered **recoverable costs**

**annual compliance statement** means a written statement made by **Transpower** under clause 19 and associated information

**asset enhancement** means **capital expenditure** in **RCP1** on a **project** or **programme** that enhances an asset or sub-component of the asset, and that involves:

(a) replacing or adding to the asset; or

(b) materially improving the design attributes of the asset; or

(c) improving the original service potential of the asset; or

(d) work on existing assets or investment in new assets, but not including work on **information systems and technology assets**, where the main purpose is to:

(i) improve the performance of the asset so that it performs at a level above an appropriate standard of service and/or good industry practice; or

(ii) increase its capacity, reliability, or quality of supply, consistent with **customer** needs

**asset health models plan** means theinformation required to be provided under clauses 28.3 and 28.4

**auditor** means a person who-

(a) is qualified for appointment as auditor of a company under the Companies Act 1993;

(b) has no relationship with, or interest in, **Transpower** that is likely to involve a conflict of interest;

(c) has not assisted with the compilation of either **Transpower’s** proposed **forecast MAR** calculation or the **annual compliance statement**, or provided advice or opinions (other than in relation to **independent assurance reports**) on the methodologies or processes used in compiling either **Transpower’s** proposed **forecast MAR** calculation or the **annual compliance statement**; and

(d) is not associated with or directed by any person who has provided any such assistance, advice or opinion

B

base capex adjustments mean the monetary amounts of after-tax economic gain or loss calculated in respect of **base capex** comprising:

(a) the **base capex expenditure adjustment**, calculated in accordance with Schedule B, clause B1 of the **Capex IM**; and

(b) the **policies and processes adjustment**, calculated in accordance with Schedule B, clause B2 of the **Capex IM**

C

**Capex IM** means the *Transpower Capital Expenditure Input Methodology Determination* [2012] NZCC 2

**category** means a group of **points of service** identified by reference to a characteristic of service (high priority, important, standard, generator or N-security) as set out in Schedule F: Quality standards – points of service, by category, where the characteristic of service is described in column 1 and the associated group of **points of service** is described in column 3 of the same row

commodity instrument that is not an effective hedge, as it applied in RCP1, means an instrument acquired by or entered into by Transpower in accordance with its policy on capital expenditure hedging in respect of an exposure to commodity prices, and the instrument does not qualify for hedge accounting in accordance with GAAP 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

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

E

EV account means a memorandum account maintained by Transpower on an after-tax basis to record each **EV account entry** not yet returned to or recovered from Transpower's customers, and to record interest calculated on the balance of the EV **account** for each disclosure year using the **WACC**

EV account entry means, for any **disclosure year** of the **regulatory period** or for the **RCP1** **disclosure year** ending 30 June 2015, an entry into either of the HVAC or HVDC EV accounts to record:

(a) an after-tax 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 **grid output adjustment**, **major capex adjustments**, or **base capex adjustments**; or

(d) an after-tax economic gain or loss calculated in accordance with clauses 23.1.3(a), 23.1.3(b), 23.1.3(c), 23.1.3(e) and 23.1.3(f)

EV adjustment means, in relation to a disclosure year, an input to the forecast MAR, calculated in accordance with clause 24.1 for the purpose of returning to or recovering from customers a portion of the EV account balance applying to those customers

**ex-post economic gain or loss** means, for any disclosure year, the 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 21.1 and Schedule E: Wash-up building blocks calculation

F

forecast MAR means, for each **relevant** **pricing year** in the **regulatory period**, the forecast maximum allowable revenue for a disclosure year as determined by the Commission, and as amended in accordance with clause 3.7.5 of the Transpower IM and recorded in the list of **forecast MARs** in Schedule A: Forecast MAR summary

G

gain or loss on capital expenditure commitments means a gain or loss required under GAAP to be recognised in profit or loss in Transpower’s Statement of Comprehensive Income in respect of:

(a) foreign currency capital expenditure commitments and associated designated hedges; and

(b) commodity hedge instruments

H

HVAC means high voltage alternating current

HVAC revenue means, in relation to a disclosure year, the HVAC transmission revenue for the relevant pricing year excluding pass-through costs and recoverable costs passed on to any customer

HVAC transmission revenue means revenue (net of rebates) received by Transpower from customers in respect of the use by Transpower of Transpower’s HVAC transmission system for the purpose of providing transmission lines services to customers

HVDC means high voltage direct current

HVDC link has the same meaning as defined in the code, as amended from time to time

HVDC pole means an HVDC system circuit between Benmore and Haywards comprising the converter stations at Benmore and Haywards and the HVDC transmission circuit between them, carried on HVDC overhead line and undersea cable, connecting the converter stations

HVDC revenue means, in relation to a disclosure year, HVDC transmission revenue for the relevant pricing year excluding pass-through costs and recoverable costs passed on to any customer

HVDC transmission revenue means revenue (net of rebates) received by Transpower from customers in respect of the use by Transpower of Transpower’s HVDC transmission system for the purpose of providing transmission lines services to customers

I

**IMs** means the **Transpower IM** and the **Capex IM** taken together

independent assurance report means a report issued by an auditor on an **annual compliance statement** in accordance with clause 19.2.4

initiatives plan means the information required to be provided under clause 27

instrument that ceases to be an effective hedge, as it applied in RCP1, means a financial instrument entered into or acquired by Transpower in accordance with its policy on capital expenditure hedging that qualifies as an effective hedge at the date of entering into or acquiring the instrument, but that ceases during the disclosure year to qualify for hedge accounting in accordance with GAAP, 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

**interruption** means the cessation of conveyance of electricityfrom **grid** assets owned by **Transpower** to the assets owned or operated by a **customer** at a **point of service** to the **grid**

L

live model has the meaning set out in clause 28

M

**major capex adjustments** mean the monetary amounts of after-tax economic gain or loss calculated in respect of **major capex** comprising:

(a) the **major capex efficiency adjustment**, calculated in accordance with Schedule B, clause B7 of the **Capex IM**;

(b) the **major capex project output adjustment**, calculated in accordance with Schedule B, clause B5 of the **Capex IM**;

(c) the **major capex overspend adjustment**, calculated in accordance with Schedule B, clause B4 of the **Capex IM**; and

(d) the **major capex sunk costs adjustment**, calculated in accordance with Schedule B, clause B6 of the **Capex IM**

**minor capital expenditure** means **capital expenditure** in **RCP1** on:

(a) **asset replacement**; or

(b) **asset refurbishment**; or

(c) during the year ending 30 June 2012, **asset enhancement projects** forecast to cost less than $1.5 million, or **asset enhancement programmes** forecast to cost less than $5 million; or

(d) during the period from 1 July 2012 to 30 June 2015, **asset enhancement projects** forecast to cost less than $5 million, or **asset enhancement programmes** forecast to cost less than $5 million; or

(e) **information system and technology assets**; or

(f) **business support**

O

opening EV account balances means the balances recorded in the EV accounts as at 30 June 2015, including any interest accrued up to that time on those balances

opex allowance means, for each disclosure year, the level of operating expenditure approved by the Commission for the purposes of calculating the forecast MAR or the calculation of the ex-post economic gain or loss, as applicable

**other regulated income** means income associated with the supply of **transmission**  **lines services** supplied by **Transpower,** excluding **actual** **transmission revenue** and investment-related income

**outage** has the meaning set out in clause 12.130 of the **code**, as amended from time to time, other than as specified in sub clauses 12.130(2)(c) and 12.130(2)(d)**,** and excludes those that are:

(a) of less than one minute duration;

(b) at the request of, or caused by, a **customer**; and

(c) due to correct operation of **Transpower’s** assets caused by events in the **customer**’s assets

P

point of service has the same meaning as defined in the code, as amended from time to time

pricing compliance statement means a written statement made by Transpower under clause 18

pricing year means a 12 month period ending on 31 March

R

RCP1 means the regulatory period prior to RCP2, comprising the period 1 April 2011 to 31 March 2015, provided that references to the final disclosure year in RCP1 means the disclosure year ending on 30 June 2015

regulatory period, or RCP2,means the period 1 April 2015 to 31 March 2020, provided that references to the final **disclosure year** in the **regulatory period**,or **RCP2,** means the **disclosure year** ending on 30 June 2020

regulatory tax allowance means the regulatory tax allowance determined in accordance with clause 3.4.1 of the Transpower IM

relevant pricing year, in relation to a disclosure year, means the pricing year commencing on 1 April immediately before the start of that disclosure year

restoration, to a customer, means the earliest of:

(a) for generators:

(i) when the generator circuit breaker is closed; or

(ii) the generator is notified that **Transpower** equipment has been returned to service and is available for generation to be reconnected; or

(iii) operational control for connecting the **Transpower** assets is returned to the generator; and

(b) for **customers** other than generators:

(i) when the first feeder is closed, if feeder circuit breakers have been opened; or

(ii) when the supply bus is relivened, if feeder circuit breakers have remained closed after the **interruption**; or

(iii) when 75% of the load is returned to service by way of a backfeed within the **customer**’s system or by generators; or

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

T

**TPM** means the transmission pricing methodology specified in the **code**, as amended from time to time

**transmission lines services** means all **electricity lines services** supplied by **Transpower** excluding:

(a) **electricity lines services** performed by **Transpower** as **system operator**; and

(b) **new investment contracts**

**Transpower IM** means the *Transpower Input Methodologies Determination* [2012] NZCC 17

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**

unregulated services means any good or service that is not regulated under Part 4 of the Act

W

WACC means, for the purpose of calculating a forecast MAR or an ex-post economic gain or loss, the weighted average cost of capital for a disclosure year that is published by the Commission in accordance with the Transpower IM.

# Part 3: Price path

1. Maximum revenues
   1. The maximum revenue that **Transpower** may recover for each **pricing year** in the **regulatory period**, net of the sum of **pass-through costs** and the sum of **recoverable costs,** is the **forecast MAR**.
   2. The forecast **HVAC revenue** and forecast **HVDC revenue** that **Transpower** uses for setting charges under the **TPM** for the **pricing year** must not, in aggregate, exceed the **forecast MAR.**
   3. This clause 8.3 is provided for contextual information and does not form part of the price path. For the purposes of **Transpower** setting charges under the **TPM** for the **pricing year**:
      1. the ‘AC revenue’ as defined in Schedule 12.4 of the **code,** and which is further described in Appendix A of Schedule 12.4 of the **code,** does not exceed the sum of:
         1. the forecast **HVAC revenue**; plus
         2. the forecast **HVAC** **pass-through costs** for the **pricing year** to be recovered from **customers**; plus
         3. the adjustment amounts in respect of prior **pricing year** forecast **HVAC** **pass-through** **costs** for **customers**; plus
         4. the forecast **HVAC** **recoverable costs** for the **pricing year** to be recovered from **customers**; plus
         5. the adjustment amounts in respect of prior **pricing year** forecast **HVAC** **recoverable costs** for **customers**; and
      2. the ‘HVDC revenue’ as defined in Schedule 12.4 of the **code,** and which is further described in Appendix A of Schedule 12.4 of the **code,** does not exceed the sum of:
         1. the forecast **HVDC revenue**; plus
         2. the forecast **HVDC pass-through costs** for the **pricing year** to be recovered from **customers**; plus
         3. the adjustment amounts in respect of prior **pricing year** forecast **HVDC pass-through** **costs** for **customers**; plus
         4. the forecast **HVDC recoverable costs** for the **pricing year** to be recovered from **customers**; plus
         5. the adjustment amounts in respect of prior **pricing year** forecast **HVDC recoverable costs** for **customers**.
2. Transpower to provide proposed annual update of forecast MAR
   1. No later thanthe Friday of the third complete week of the month of October in each **disclosure year,** other than the final **disclosure year** of the **regulatory period**, **Transpower** must provide to the **Commission** a proposed update of a **forecast MAR** based on the calculations required in clause 22 and Schedule D: Forecast MAR building blocks calculation and must include any supporting information.
3. Forecast MAR
   1. The **forecast MAR** for each **pricing year** in the **regulatory period**, subject to any reconsideration and amendments determined by the **Commission** by the second Wednesday in the month of November in each year, is specified in Schedule A: Forecast MAR summary.
4. Calculation of annual incremental rolling incentive scheme recoverable costs
   1. For the purpose of calculating the **opex incentive adjustment**, the ‘forecast opex’ for each **disclosure year** is the amount set out below, as adjusted by the Commission for any disparity between the **forecast CPI** and actual **CPI**:
      1. for the **disclosure year** from 1 July 2015 to 30 June 2016, $276.6 million;
      2. for the **disclosure year** from 1 July 2016 to 30 June 2017, $284.6 million;
      3. for the **disclosure year** from 1 July 2017 to 30 June 2018, $292.5 million;
      4. for the **disclosure year** from 1 July 2018 to 30 June 2019, $294.0 million; and
      5. for the **disclosure year** from 1 July 2019 to 30 June 2020, $296.4 million.
5. Listed projects
   1. The **listed projects** for **RCP2** are those identified in Schedule I.

# Part 4: Quality standards and grid output measures

**Quality standards**

1. Quality standards

The quality standards are the **grid output targets** for each **revenue-linked grid output measure** as shown in Table 4.1.

**Revenue-linked grid output measures**

1. Revenue-linked grid output measures
   1. The **revenue-linked grid output measures** are the:
      1. annual **measures of grid performance** specified in clause 14.2;
      2. annual **asset performance measures** specified in clause 14.3;
      3. annual **asset health grid output measures** specified in clause 14.4; and
      4. periodic (five year) **asset health grid output measures** specified in clause 14.5.
   2. The annual **measures of grid performance** are:
      1. total number of **unplanned interruptions** across all **points of service** in a **category** during a **disclosure year** (where each of the five **categories** has a separate **measure of grid performance** and these are identified in Table 4.1 and clauses 16.3, 16.5 and 16.6 as GP1A, GP1B, GP1C, GP1D and GP1E);
      2. average duration (minutes) of **unplanned interruptions** at **points of service** in a **category** during a **disclosure year**, calculated in accordance with clause 16.3.2 (where each of the five categories has a separate **measure of grid performance** and these are identified in Table 4.1 and clauses 16.3, 16.5 and 16.6 as GP2A, GP2B, GP2C, GP2D and GP2E);
      3. duration (minutes) of the **unplanned interruption** that is at the 90th percentile during a **disclosure year,** calculated in accordance with clause 16.3.3 (where each of the five **categories** has a separate **measure of grid performance** and these are identified in Table 4.1 and clauses 16.3, 16.5 and 16.6 as GP3A, GP3B, GP3C, GP3D and GP3E).
   3. The annual **asset performance measures** are:
      1. **HVDC** energy availability of the **HVDC link** as a percentage of annual capacity during a **disclosure year**, calculated in accordance with clause 16.3.4 (and this **asset performance measure** is identified in Table 4.1 and clause 16.3 as AP1);
      2. average percentage of time that the **HVAC** circuits listed in Schedule G are available during a **disclosure year**, calculated in accordance with clause 16.3.5 (and this **asset performance measure** is identified in Table 4.1 and clause 16.3 as AP2).
   4. The annual **asset health grid output measures** are:
      1. total number of transmission towers refurbished or replaced within **Transpower**’s **asset replacement** and **asset refurbishment** programme during a **disclosure year** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH1);
      2. total number of grillages **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme during a **disclosure year** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH2);
      3. total number of insulators **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme during a **disclosure year** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH3).
   5. The periodic (five year) **asset health grid output measures** are:
      1. total number of outdoor circuit breakers **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme during the **regulatory period** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH4);
      2. total number of power transformers **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme during the **regulatory period** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH5);
      3. total number of outdoor to indoor substation conversions **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme during the **regulatory period** (and this **asset health grid output measure** is identified in Table 4.1 and clause 16.3 as AH6).
2. Grid output targets, caps, collars and grid output incentive rates
   1. For each of the **revenue-linked grid output measures** identified in clause 14, the **grid output target**, **cap**, **collar**, and **grid output incentive rate** identified in Table 4.1 apply.

Table 4.1: Grid output targets, caps, collars and grid output incentive rates for revenue-linked grid output measures

| **Description: grid output measure** | **Category / Circuits / Disclosure year** | **Measure reference** | **Grid output target** | **Cap** | **Collar** | **Grid output incentive rate ($000)** |
| --- | --- | --- | --- | --- | --- | --- |
| [Column 1] | [Column 2] | [Column 3] | [Column 4] | [Column 5] | [Column 6] | [Column 7] |
| **Measures of grid performance** | |  |  | | | |
| **Number of unplanned interruptions** | High Priority | GP1A | 2 | 0 | 4 | 606 |
| Important | GP1B | 9 | 4 | 14 | 242 |
| Standard | GP1C | 26 | 21 | 31 | 133 |
| Generator | GP1D | 11 | 6 | 16 | 133 |
| N-security | GP1E | 50 | 26 | 74 | 10 |
|  |  |  |  | | | |
| **Average duration (minutes) of unplanned interruptions** | High Priority | GP2A | 70 | 30 | 110 | 15 |
| Important | GP2B | 100 | 30 | 170 | 9 |
| Standard | GP2C | 65 | 0 | 130 | 5 |
| Generator | GP2D | 130 | 50 | 210 | 4 |
| N-security | GP2E | 80 | 45 | 115 | 3 |
|  |  |  |  | | | |
| **Duration (minutes) of P90 unplanned interruption** | High Priority | GP3A | 120 | 80 | 160 | 15 |
| Important | GP3B | 240 | 170 | 310 | 9 |
| Standard | GP3C | 130 | 60 | 200 | 5 |
| Generator | GP3D | 350 | 260 | 440 | 4 |
| N-security | GP3E | 215 | 170 | 260 | 3 |
| **Asset performance measures** | |  |  |  |  |  |
| **HVDC availability (%)** |  | AP1 | 98.5 | 99.5 | 97.5 | 1000 |
| **HVAC availability (%)** | key circuits | AP2 | 99.6 | 100 | 99.2 | 2500 |
|  | |  |  |  |  |  |
| **Asset health grid output measures** | |  |  |  |  |  |
| **Number of transmission towers refurbished or replaced** | 2015/16 | AH1 (15/16) | 451 | 489 | 413 | 29.7 |
| 2016/17 | AH1 (16/17) | 529 | 567 | 491 | 29.7 |
| 2017/18 | AH1 (17/18) | 531 | 569 | 493 | 29.7 |
| 2018/19 | AH1 (18/19) | 553 | 591 | 515 | 29.7 |
| 2019/20 | AH1 (19/20) | 564 | 602 | 526 | 29.7 |
|  |  |  |  |  |  |  |
| **Number of grillages commissioned** | 2015/16 | AH2 (15/16) | 408 | 438 | 378 | 10.2 |
| 2016/17 | AH2 (16/17) | 408 | 438 | 378 | 10.2 |
| 2017/18 | AH2 (17/18) | 408 | 438 | 378 | 10.2 |
| 2018/19 | AH2 (18/19) | 409 | 439 | 379 | 10.2 |
| 2019/20 | AH2 (19/20) | 409 | 439 | 379 | 10.2 |
|  |  |  |  |  |  |  |
| **Number of insulators commissioned** | 2015/16 | AH3 (15/16) | 1526 | 1630 | 1422 | 2.1 |
| 2016/17 | AH3 (16/17) | 1466 | 1570 | 1362 | 2.1 |
| 2017/18 | AH3 (17/18) | 1402 | 1506 | 1298 | 2.1 |
| 2018/19 | AH3 (18/19) | 1315 | 1419 | 1211 | 2.1 |
| 2019/20 | AH3 (19/20) | 1380 | 1484 | 1276 | 2.1 |
|  |  |  |  |  |  |  |
| **Number of outdoor circuit breakers commissioned** | 2019/20 | AH4 | 155 | 166 | 144 | 51.8 |
|  |  |  |  |  |  |  |
| **Number of power transformers commissioned** | 2019/20 | AH5 | 26 | 28 | 24 | 1,370 |
|  |  |  |  |  |  |  |
| **Number of outdoor to indoor conversions commissioned** | 2019/20 | AH6 | 16 | 17 | 15 | 2,710 |

1. The grid output adjustment applies to revenue-linked grid output measures
   1. **Transpower** must calculate the **grid output adjustment** for each **disclosure year** in the **regulatory period** in accordance with Schedule B, clause B3 of the **Capex IM.**
   2. The **revenue-linked grid output measures** to be used by **Transpower** to calculate the **grid output adjustment** for a **disclosure year** are:
      1. for the first four **disclosure years** in the **regulatory period**, each of the **revenue-linked grid output measures** in clauses 14.2, 14.3 and 14.4;
      2. for the final **disclosure year** in the **regulatory period**, each of the **revenue-linked grid output measures** in clauses 14.2, 14.3, 14.4 and 14.5.
   3. For the purposes of calculating the **grid output adjustment**, the output achieved in respect of the following **revenue-linked grid output measures** is:
      1. for GP1A, GP1B, GP1C, GP1D and GP1E, the total number of all **unplanned interruptions** in the relevant **disclosure year**;
      2. for GP2A, GP2B, GP2C, GP2D and GP2E, the sum of the durations (minutes) of all **unplanned interruptions** in the relevant **disclosure year** divided by the total number of **unplanned interruptions** in the relevant **disclosure year**;
      3. for GP3A, GP3B, GP3C, GP3D and GP3E, the duration (minutes) of the **unplanned interruption** that is at the 90th percentile when all **unplanned interruptions** across all **points of service** in a **category** are ranked by duration from shortest to longest;
      4. for AP1, the **HVDC** energy availability for the **HVDC link** comprising **HVDC poles** 2 and 3 is calculated as a percentage term in the following manner:

where:

*j* is the **outage** that reduced capacity of the **HVDC** **link** in the **disclosure year**

*N* is the total number of **outages** associated with the relevant **HVDC link**;

* + 1. for AP2, the percentage term calculated as:
    2. for AH1, the total number of transmission towers refurbished or replaced within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the relevant **disclosure year**;
    3. for AH2, the total number of grillages **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the relevant **disclosure year**;
    4. for AH3, the total number of insulators **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the relevant **disclosure year**.
    5. for AH4, the total number of outdoor circuit breakers **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the **regulatory period**;
    6. for AH5, the total number of power transformers **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the **regulatory period**;
    7. for AH6, the total number of outdoor to indoor substation conversions **commissioned** within **Transpower**’s **asset replacement** and **asset refurbishment** programme in the **regulatory period**.
  1. For the purposes of clauses 14.2.2, 14.2.3, 16.3.2 and 16.3.3, the duration of an **unplanned interruption** means the elapsed time (in minutes, rounded to the nearest whole minute) from the start of the **interruption** until the earlier of either:
     1. **restoration**; or
     2. seven days after the **interruption** started.
  2. For the purposes of **measures of grid performance** GP1D, GP2D and GP3D, **unplanned interruptions** excludes any:
     1. **unplanned interruptions** originating on another party’s system and where the **Transpower grid** operated correctly;
     2. **unplanned interruptions** to the auxiliary load used for internal purposes by electricity generators.
  3. For the purposes of all **measures of grid performance** other than GP1D, GP2D and GP3D, **unplanned interruptions** excludes any:
     1. load restrictions achieved completely by the use of controllable load, interruptible load or demand-response;
     2. automatic under-frequency load-shedding;
     3. **unplanned interruption** originating on another party’s system and where the **Transpower grid** operated correctly; and
     4. **unplanned interruption** for which all load is supplied by a backfeed or by embedded generation.

## Grid output measures that are not revenue-linked

1. Grid output measures to which the grid output mechanism will not apply
   1. The **grid output measures** to whichthe **grid output mechanism** will not apply are thepilot **asset health grid output measures** specified in clause 17.2.
   2. The pilot **asset health grid output measures** are:
      1. the difference in the average remaining life (years) of the tower coating of transmission towers within **Transpower**’s **asset replacement** and **asset refurbishment** programme between that which exists at the end of a **disclosure year**, and that which existed at the end of the preceding **disclosure year** (and thispilot **asset health grid output measure** isidentified in clause 28.1 as AH1RL);
      2. the difference in the average remaining life (years) of outdoor circuit breakers within **Transpower**’s **asset replacement** and **asset refurbishment** programme between that which exists at the end of a **disclosure year**, and that which existed at the end of the preceding **disclosure year** (and this pilot **asset health grid output measure** is identified in clause 28.1 asAH4RL);
      3. the difference in the average remaining life (years) of power transformers within **Transpower**’s **asset replacement** and **asset refurbishment** programme between that which exists at the end of a **disclosure year**, and that which existed at the end of the preceding **disclosure year** (and this pilot **asset health grid output measure** is identified in clause 28.1 asAH5RL)**.**
   3. **Transpower** must report performance against these pilot **asset health grid output measures** as required in clause 28.1.

# Part 5: Compliance and information reporting

1. Pricing compliance statement
   1. No later than five **working days** after **Transpower** announces, or amends, its forecast **HVAC revenue** or forecast **HVDC revenue** for the purpose of setting or resetting charges under the **TPM** for a **pricing year**, **Transpower** must:
      1. provide to the **Commission** a written statement (the **pricing compliance statement**); and
      2. publish the **pricing compliance statement** on its website.
   2. The **pricing compliance statement** must:
      1. state whether or not Transpower has complied with the price path in Part 3: Price path for the pricing year;
      2. include any information reasonably necessary to demonstrate whether Transpower has complied with the price path in Part 3: Price path for the pricing year, including but not limited to a summary of forecast total revenues applied in the **TPM** for the **pricing year**;
      3. state the date on which the pricing compliance statement was prepared; and
      4. include a certificate in the form set out in Schedule J: Directors’ certificate – pricing compliance statement signed by at least two directors of Transpower.
2. Annual compliance statement
   1. No later than the Friday of the third complete week of October after the end of each **disclosure year**, **Transpower** must:
      1. provide to the **Commission** a written statement(the **annual compliance statement**); and
      2. publish the **annual compliance statement** and accompanying **independent** **assurance report** on its website.
   2. The **annual compliance statement** must:
      1. state whether or not **Transpower** has:
         1. complied with the price path in Part 3: Price path for the **disclosure year**; and
         2. 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*;
      2. state the date on which the **annual compliance statement** was prepared;
      3. include a certificate in the form set out in Schedule K: Directors’ certificate – annual compliance statement signed by at least two **directors** of **Transpower**; and
      4. be accompanied by an **independent assurance report** procured and prepared in accordance withclause 26.
3. Annual compliance statement – information required
   1. The **annual compliance statement** for a **disclosure year** must include:
      1. if **Transpower** has not complied with the price path, the reasons for non-compliance;
      2. reasons why the output achieved for any **revenue-linked grid output measure**:
         1. exceeds (ie, over-achieves relative to) the **cap**; or
         2. fails to meet (ie, under-achieves relative to) the **collar**;
      3. the **ex-post economic gain or loss** (including for each of **HVAC** and **HVDC**)for the **disclosure year**, calculatedin accordance with clause 21.1 and Schedule E: Wash-up building blocks calculation, including any supporting information;
      4. the **forecast MAR** used for the **relevant** **pricing year**;
      5. the **HVAC revenue** for the **relevant pricing year**;
      6. the **HVDC revenue** for the  **relevant pricing year**;
      7. 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**;
      8. information about **Transpower**’s performance against the **grid output** **measures** to which the **grid output mechanism** does not apply, as specified in clause 28.1;
      9. the proposed update of any **forecast MAR** that is calculated in accordance with clause 22 and Schedule D: Forecast MAR building blocks calculation, including any supporting information;
      10. a description and explanation of the calculation method and key assumptions applied by **Transpower** when calculating the proposed update of any **forecast MAR**, including any variations from the calculation method and key assumptions used for the purposes of proposed updates of any **forecast MAR** in the previous **disclosure year**;
      11. 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**;
      12. an updated summary of the **forecast MAR** that provides the information set out in Schedule A: Forecast MAR summary;
      13. an updated summary of the **EV account** that provides the information set out in Schedule B: EV account summary, and is supported by the further information required in clause23.1, where the **EV account entries** are calculated in accordance with clause 23.2;
      14. a summary of **pass-through costs** and **recoverable costs** that provides the information set out in Schedule H: Pass-through costs and recoverable costs summary, including:
          1. the **pass-through costs** and **recoverable costs** recovered by **Transpower** from **customers** as part of its revenue for the **relevant pricing year**;
          2. the **pass-through costs** and **recoverable costs** incurred by **Transpower** during the **disclosure year**;
          3. a description and explanation of any **operating costs** incurred as part of a **major capex project**;
          4. a summary of the prudent net additional **operating costs** incurred in responding to a **catastrophic event**;
          5. the allocation of any adjustment amounts arising from the differences between the amounts in subclauses 20.1.14(a) and 20.1.14(b), applied in the forecast **pass-through costs** and forecast **recoverable costs** in the setting of transmission charges under the **TPM** in the next **pricing year** following the calculation of the adjustments; and
          6. a description and explanation of any voluntary revenue reduction **Transpower** has made in calculating the **recoverable costs** recovered by **Transpower** from **customers** as part of its revenue for the **relevant** **pricing year**;
      15. an updated summary of the approved **base capex** that provides the information set out in Schedule C: Approved base capex summary;
      16. details of any changes to **Transpower's** policy of hedging **capital expenditure** during the **disclosure year**; and
      17. a progress update on the **initiatives plan** specified in clause 27 and the **asset health models plan** specified in clause 28, including an explanation of:
          1. any changes to those plans since the most recent previous update; and
          2. progress against **Transpower’s** planned development of initiatives and asset health models.
4. Wash-up building blocks calculation
   1. For the purposes of calculating the **ex-post economic gain or loss** for the **disclosure year**, **Transpower** must use:
      1. the approach and formulae specified in Schedule E: Wash-up building blocks calculation;
      2. the **opening RAB value**;
      3. the actual amounts by month of **commissioning** in the **disclosure year** for **value of commissioned asset** of approved **base capex** and **major capex**;
      4. the **WACC**;
      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**;
      6. as the **opex allowance**, adjusted for any disparity between the **forecast CPI** and the actual **CPI**:
         1. for the **disclosure year** from 1 July 2015 to 30 June 2016, $276.6 million;
         2. for the **disclosure year** from 1 July 2016 to 30 June 2017, $284.6 million;
         3. for the **disclosure year** from 1 July 2017 to 30 June 2018, $292.5 million;
         4. for the **disclosure year** from 1 July 2018 to 30 June 2019, $294.0 million; and
         5. for the **disclosure year** from 1 July 2019 to 30 June 2020, $296.4 million;
      7. as the **forecast CPI** used to determine the **opex allowance** in subclause 21.1.6 :
         1. for the **disclosure year** from 1 July 2015 to 30 June 2016, 1.80%;
         2. for the **disclosure year** from 1 July 2016 to 30 June 2017, 2.09%;
         3. for the **disclosure year** from 1 July 2017 to 30 June 2018, 2.06%;
         4. for the **disclosure year** from 1 July 2018 to 30 June 2019, 2.03%; and
         5. for the **disclosure year** from 1 July 2019 to 30 June 2020, 2.00%;
      8. the **corporate tax rate**;
      9. the **regulatory tax allowance** calculated:
         1. 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**;
         2. using the **term credit spread differential allowance** calculated in accordance with Part 2, Subpart 4 of the **Transpower IM**; and
         3. using as the amount of regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:
            1. the regulatory profit/(loss) before tax disclosed by **Transpower** for the **disclosure year** in accordance with the **ID determination**; and
            2. the **term credit spread differential** **allowance** calculated in subclause (b);
      10. the **term credit spread differential allowance**;
      11. for actual revenues received by **Transpower**:
          1. the **actual** **transmission revenue** received in the **relevant pricing year**; and
          2. the sum of **other regulated income** received in the **disclosure year**;
      12. the **EV adjustments** included in the **forecast MAR** for the **relevant pricing year**; and
      13. any voluntary reduction in **actual** **transmission revenue** made by **Transpower** for the **disclosure year**.
5. Transpower to propose update of forecast MAR
   1. **Transpower** must propose an update of a **forecast MAR** for each remaining **pricing year** in the **regulatory period**, calculated in a manner consistent with its approach for calculating the **forecast MAR** for the full **regulatory period**, to take account of the incremental revenue effect of**:**
      1. forecast **major capex** approved by the **Commission** in the **disclosure** **year**;
      2. **base capex** approved by the **Commission** in the **disclosure year** relating to one or more of the **listed projects** in Schedule I: Listed projects; and
      3. an **EV adjustment** calculated for the **forecast MAR** in accordance with clause 24.1.
   2. The calculation of the update of a **forecast MAR** must, where applicable, use:
      1. the approach and formulae specified in Schedule D: Forecast MAR building blocks calculation;
      2. the forecast **opening RAB value**;
      3. the forecast amounts by month of **commissioning** in the **disclosure year** for **value of commissioned asset** of approved **base capex** and **major capex**;
      4. as the base capex allowance:
         1. for the **disclosure year** from 1 July 2015 to 30 June 2016, $235.2 million;
         2. for the **disclosure year** from 1 July 2016 to 30 June 2017, $249.5 million;
         3. for the **disclosure year** from 1 July 2017 to 30 June 2018, $242.0 million;
         4. for the **disclosure year** from 1 July 2018 to 30 June 2019, $231.6 million; and
         5. for the **disclosure year** from 1 July 2019 to 30 June 2020, $213.1 million;
      5. the **WACC**;
      6. 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**;
      7. the forecast **regulatory tax allowance** calculated:
         1. 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**;
         2. using the **term credit spread differential allowance** calculated in accordance with Part 3, Subpart 5 of the **Transpower IM**; and
         3. using as the amount of forecast regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:
            1. the forecast of the regulatory profit/(loss) before tax calculated using the calculation basis required for disclosure under the **ID determination**; and
            2. the forecast of the **term credit spread differential** **allowance** calculated in accordance with Part 2, Subpart 3 of the **Transpower IM**;
      8. the **EV adjustments** calculated for the **forecast MAR**; and
      9. any forecast voluntary reduction in forecast **HVAC** **revenue** or forecast **HVDC revenue** made by **Transpower** for the **disclosure year**.
   3. For the purposes of determining the revenue impact of **major capex** or **base capex** approved by the **Commission** relating to **listed projects**, **Transpower** must:
      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 2015 to 30 June 2020;
      2. identify each base capex project that is a **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 2015 to 30 June 2020; and
      3. for each project identified in accordance with subclauses 22.3.1 and 22.3.2, separately detail:
         1. the forecast date, or dates, that project assets are forecast to be commissioned; and
         2. the incremental revenue impact of the forecast **commissioning** of project assets on each applicable future forecast MAR.
6. EV account summary
   1. For the purposes of providing the information specified in clause 20.1.13 for the **disclosure year**, the EV Account Summary must for each **EV account** show:
      1. a reconciliation of the opening and closing balances of the **EV account** that takes into account:
         1. the opening balance of the **EV account**;
         2. the calculation of interest at **WACC** on the opening balance of the **EV account**;
         3. the allocation of **EV account entries** to the respective **HVAC** and **HVDC** **EV accounts** for **customers**; and
         4. the **EV adjustments** made in the **forecast MAR** in the **relevant pricing year**;
      2. the calculated forward spreading of **EV account** balances, showing how the opening balance of the **EV account** and the **EV account entries** for the **disclosure year** are converted into the forecast **EV adjustments** for each **disclosure year** remaining in **RCP2**, taking into account interest at **WACC** on the forecast opening **EV account** balance for each **disclosure year**;
      3. the source of calculation of the **EV account entries** referred to in subclause 23.1.1(c) for:
         1. the ex-post economic gain or loss calculated for the final **disclosure year** of **RCP1**;
         2. the after-tax gain or loss in respect of an **instrument that ceases to be an effective hedge** for the final **disclosure year** of **RCP1**;
         3. the after-tax gain or loss in respect of a **commodity instrument that is not an effective hedge** for the final **disclosure year** of **RCP1**;
         4. the after-tax economic gain of a **major capex efficiency adjustment** for **RCP1**, calculated in accordance with clause 4.1.1 of the **Capex IM**;
         5. the after-tax amount of **minor capital expenditure** in excess of aggregate approved **minor capital expenditure** for **RCP1** or of any **minor capital expenditure** that has not been fully subject to **Transpower’s** internal approval processes, calculated following the final **disclosure year** of **RCP1**;
         6. the after-tax revenue amount relating to **minor capital expenditure** in **RCP1** for which **Transpower** applies, and the **Commission** approves, after 30 June 2015 to partially or fully offset the amount in subclause (e);
         7. the ex-post economic gain or loss, as calculated in accordance with clause 21.1;
         8. the after-tax **gain or loss on capital expenditure commitments**;
         9. the after-tax economic gain or loss of a **grid output adjustment**, calculated in accordance with the **grid output mechanism**;
         10. the after-tax economic gain or loss of a **base capex expenditure adjustment**, calculated in accordance with Schedule B, clause B1 of the **Capex IM**;
         11. the after-tax economic loss of a **policies and processes adjustment**, calculated in accordance with Schedule B, clause B2 of the **Capex IM**;
         12. the after-tax economic loss of a **major capex overspend adjustment**, calculated in accordance with Schedule B, clause B4 of the **Capex IM**;
         13. the after-tax economic loss of a **major capex project output adjustment**, calculated in accordance with Schedule B, clause B5 of the **Capex IM**; and
         14. the after-tax amount of a **major capex sunk costs adjustment**, calculated in accordance with clause 3.3.5 of the **Capex IM**.
   2. For calculation of applicable **EV account entries**:
      1. the **major capex incentive rate** is 33%;
      2. the **base capex incentive rate** is 33%; and
      3. the **base capex allowance** is:
         1. for the **disclosure year** from 1 July 2015 to 30 June 2016, $235.2 million;
         2. for the **disclosure year** from 1 July 2016 to 30 June 2017, $249.5 million;
         3. for the **disclosure year** from 1 July 2017 to 30 June 2018, $242.0 million;
         4. for the **disclosure year** from 1 July 2018 to 30 June 2019, $231.6 million; and
         5. for the **disclosure year** from 1 July 2019 to 30 June 2020, $213.1 million;
      4. the **forecast CPI** used to determine the **base capex allowance** in subclause 23.2.3 is:
         1. for the **disclosure year** from 1 July 2015 to 30 June 2016, 1.80%;
         2. for the **disclosure year** from 1 July 2016 to 30 June 2017, 2.09%;
         3. for the **disclosure year** from 1 July 2017 to 30 June 2018, 2.06%;
         4. for the **disclosure year** from 1 July 2018 to 30 June 2019, 2.03%; and
         5. for the **disclosure year** from 1 July 2019 to 30 June 2020, 2.00%;
      5. the **forecast FX rate** used to determine the **base capex allowance** in subclause 23.2.3 is, for the conversion of the following currencies to NZ dollars:
         1. US Dollar: for each **disclosure year** in the **regulatory period**, 0.71;
         2. Euro: for each **disclosure year** in the **regulatory period**, 0.57;
         3. British pound: for each **disclosure year** in the **regulatory period**, 0.47;
         4. Australian dollar: for each **disclosure year** in the **regulatory period**, 0.79;
         5. Japanese yen: for each **disclosure year** in the **regulatory period**, 61.28;
         6. Swedish kroner: for each **disclosure year** in the **regulatory period**, 5.11; and
         7. Canadian dollar: for each **disclosure year** in the **regulatory period**, 0.71; and
      6. the amount of the **base capex allowance** to which the **forecast FX rate** applies for the purposes of determining the **base capex allowance** in subclause 23.2.3 is as set out in Table 5.1:

Table 5.1: Amount of the base capex allowance (NZD million) to which the forecast FX rate applies for the purposes of determining the base capex allowance in August 2014

| Currency | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| --- | --- | --- | --- | --- | --- |
| USD/NZD | 18.1 | 21.2 | 20.7 | 20.0 | 17.7 |
| EUR/NZD | 5.9 | 8.1 | 6.8 | 7.3 | 5.9 |
| GBP/NZD | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| AUD/NZD | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| JPY/NZD | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| SEK/NZD | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 |
| CAD/NZD | - | - | - | - | - |

1. EV adjustment calculations
   1. For the purposes of calculating an update of the **forecast MAR** for a **pricing year**, and subject to clause 25, the **EV adjustments** are:
      1. for each **pricing year** in **RCP2**:
         1. one-fifth of the part of the **EV account** balance at 30 June 2015 that relates to the **EV account** balance recorded by **Transpower** as at 30 June 2011, and including in that part any interest accrued to 30 June 2015 on that portion of the **EV account** balance calculated at the **WACC** specified for **RCP1**; and
         2. forecast interest at **WACC** specified for **RCP2**, calculated on each one-fifth instalment in subclause (a) for the period from 1 July 2015 to the commencement of each applicable **disclosure year** to which each one-fifth instalment is applied to the **forecast MAR**.
      2. for the 2016-17 **pricing year** of **RCP2**, amounts equal to:
         1. the ex-post economic gain or loss calculated for the final **disclosure year** of **RCP1**;
         2. the after-tax gain or loss in respect of an **instrument that ceases to be an effective hedge** for the final **disclosure year** of **RCP1**;
         3. the after-tax gain or loss in respect of a **commodity instrument that is not an effective hedge** for the final **disclosure year** of **RCP1**;
         4. the **major capex efficiency adjustment** for the final **disclosure year** of **RCP1**;
         5. the **major capex overspend adjustment** for the final **disclosure year** of **RCP1**;
         6. the **major capex sunk costs adjustment** for the final **disclosure year** of **RCP1**;
         7. the after-tax **EV account entry** in respect of **minor capital expenditure** in excess of aggregate approved **minor capital expenditure** for **RCP1** or any **minor capital expenditure** that has not been fully subject to **Transpower’s** internal approval processes, calculated following the final **disclosure year** of **RCP1**; and
         8. forecast interest at **WACC** specified for **RCP2**, calculated on each of the amounts in subclauses (a) to (f) (inclusive) for the period from 1 July 2015 to 30 June 2016.
      3. for the 2016-17 to 2019-20 **pricing years**, amounts equal to:
         1. the **ex-post economic gain or loss** for a preceding **disclosure year** of **RCP2** that has not yet been recovered or returned, as applicable, to Transpower’s customers in the **forecast MAR**;
         2. the after-tax **gain or loss on capital expenditure commitments** for a preceding **disclosure year** of **RCP2** that has not yet been recovered or returned, as applicable, to **Transpower’s** **customers** in the **forecast MAR**;
         3. the **major capex adjustments** for a preceding **disclosure year** of **RCP2** that have not yet been recovered or returned, as applicable, to **Transpower’s** **customers** in the **forecast MAR**;
         4. the **base capex adjustments** for a preceding **disclosure year** of **RCP2** that have not yet been recovered or returned, as applicable, to **Transpower’s** **customers** in the **forecast MAR**;
         5. the **grid output adjustment** for a preceding **disclosure year** of **RCP2** that has not yet been recovered or returned, as applicable, to **Transpower’s** **customers** in the **forecast MAR**;
         6. the after-tax revenue amount relating to **minor capital expenditure** in **RCP1** for which **Transpower** applies, and the **Commission** approves, after 30 June 2015 to partially or fully offset the amount of the **EV account entry** in subclause 24.1.2(g); and
         7. forecast interest at **WACC** specified for **RCP2**, calculated in each case from the end of the preceding **disclosure year** referred to in subclauses (a) to (e) (inclusive) for the period to the date of commencement of the **disclosure year** to which the **forecast MAR** referred to in clause 24.1 is associated.
      4. for the 2016-17 to 2019-20 **pricing years**, amounts equal to:
         1. the after-tax amount for each **pricing year** as determined by the **Commission** for any **major capex overspend adjustment** or **major capex project output adjustment** in respect of the North Island Grid Upgrade Project **commissioned** by **Transpower** in **RCP1**;
         2. interest at **WACC** specified for **RCP1**, calculated from the end of the **disclosure year** ending 1 July 2013 to 30 June 2015 on the sum of the amounts referred to in subclause (a); and
         3. forecast interest at **WACC** specified for **RCP2**, calculated in each case from 1 July 2015 for the period to the date of commencement of the **disclosure year** to which the **forecast MAR** referred to in clause 24.1 is associated.
      5. 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 subclauses 24.1.1, 24.1.2, 24.1.3 and 24.1.4 in order to express the **EV adjustments** on a pre-tax basis in the **forecast MAR** building block inputs.
2. Applications to spread EV adjustments
   1. When **Transpower** provides to the **Commission** its proposed update of a **forecast MAR** pursuant to clause 9.1, **Transpower** may also apply to the **Commission** for the **EV adjustment** in that proposed update of a **forecast MAR** to be spread over one or more remaining **pricing years** of the **regulatory period**.
   2. **Transpower**’s application must include reasons why it considers the **EV adjustment** in that proposed update of a **forecast MAR** has the potential to cause a price shock effect for **Transpower** or its **customers**.
   3. The **Commission** may, at its discretion, spread the **EV adjustment** over one or more remaining **pricing years** of the **regulatory period**, with consequent adjustments to the interest calculated on the balance of that **EV adjustment** using **WACC**.
3. Independent assurance report
   1. Where **Transpower** is required to provide an **annual compliance statement**, **Transpower** must procure an assurance report by an **auditor** (the **independent** **assurance report**) in respect of the **annual compliance statement** that:
      1. is prepared in accordance with Standard on Assurance Engagements 3100 – Compliance Engagements (SAE3100) and International Standard on Assurance Engagements 3000 (ISAE(NZ)3000) or their successor standards, signed by the **auditor**, either in his or her own name or that of his or her firm; and
      2. is addressed to the **directors** of **Transpower** and to the **Commission** as the intended users of the assurance report.
   2. The **independent assurance report** must state:
      1. that it has been prepared in accordance with Standard on Assurance Engagements 3100 – Compliance Engagements (SAE3100) and International Standard on Assurance Engagements 3000 (ISAE(NZ)3000) or their successor standards;
      2. the work done by the **auditor**;
      3. the scope and limitations of the assurance engagement;
      4. the existence of any relationship (other than that of auditor) which the **auditor** has with, or any interests which the **auditor** has in, **Transpower** or any of its subsidiaries;
      5. whether the **auditor** has obtained sufficient recorded information and explanations that he or she required and, if not, the information and explanations not obtained;
      6. whether, in the **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** have been kept by **Transpower** and, if not, the records not so kept;
      7. whether in the **auditor’s** opinion, as far as appears from the examination, the information used in the preparation of the **annual compliance statement** has, where applicable, been properly extracted from **Transpower’s** accounting and other records, sourced from its financial and non-financial systems; and
      8. whether in the **auditor’s** opinion, **Transpower** has complied, in all material respects, with this determination in preparing the **annual compliance statement** and, if not, the respects in which it has not done so.
4. Planned business improvement and performance measure development initiatives
   1. No later than 1 July 2015, **Transpower** must:
      1. provide to the **Commission** information (the **initiatives plan**); and
      2. publish the **initiatives plan** on its website.
   2. The **initiatives plan** must identify:
      1. the business improvement and performance development initiatives that **Transpower** plans to advance during **RCP2**;
      2. for any of the performance measure development initiatives identified by the **Commission** in *Setting Transpower’s individual price-quality path for 2015-2020* [2014] NZCC 23, any development, trialling or planned implementation (and reporting of the outputs) of the related measures that **Transpower** plans to advance during **RCP2**; and
      3. key milestones, deliverables, and associated timeframes for each of the initiatives **Transpower** plans to advance.
5. Asset health pilot reporting and models
   1. No later than the Friday of the third complete week in October after the end of each **disclosure year**, **Transpower** must provide to the **Commission** the following information about pilot **asset health grid output measures** AH1RL, AH4RL and AH5RL:
      1. the average remaining life (years, rounded to three decimal places) that existed at the end of the relevant **disclosure year** for:
         1. AH1RL: tower coating of transmission towers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the tower painting asset health model supplied by **Transpower** to the **Commission** on 27 June 2014;
         2. AH4RL: outdoor circuit breakers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the circuit breaker asset health model supplied by **Transpower** to the **Commission** on 27 June 2014; and
         3. AH5RL: power transformers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the transformer asset health model supplied by **Transpower** to the **Commission** on 27 June 2014;
      2. the difference between the average remaining life (years, rounded to three decimal places) that existed at the end of the relevant **disclosure year** and that which existed at the end of the preceding **disclosure year** for:
         1. AH1RL: tower coating of transmission towers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the tower painting asset health model supplied by **Transpower** to the **Commission** on 27 June 2014;
         2. AH4RL: outdoor circuit breakers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the circuit breaker asset health model supplied by **Transpower** to the **Commission** on 27 June 2014; and
         3. AH5RL: power transformers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the transformer asset health model supplied by **Transpower** to the **Commission** on 27 June 2014;
      3. the difference between the average remaining life (years) that existed at the end of the relevant **disclosure year** and that which existed at the end of the preceding **disclosure year** for:
         1. AH1RL: tower coating of transmission towers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the tower painting **live model**;
         2. AH4RL: outdoor circuit breakers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the circuit breaker **live model**; and
         3. AH5RL: power transformers within **Transpower**’s **asset replacement** and **asset refurbishment** programme, calculated in accordance with the transformer **live model**;
      4. For the purposes of clause 28.1.3, **live model** means the relevant asset health model used by **Transpower** for asset management purposes in the form it existed at the end of the relevant **disclosure year**.
   2. a progress update on any developments to the asset health models supplied by **Transpower** to the **Commission** on 27 June 2014, including:
      1. the reasons for any divergence from those models to any models developed and/or used by **Transpower** and existing at the end of the relevant **disclosure year**;
      2. any actions taken to improve data, model assumptions or algorithms.
   3. No later than 1 July 2015, **Transpower** must:
      1. provide to the **Commission** information (the **asset health models plan**); and
      2. publish the **asset health models plan** on its website.
   4. The **asset health models plan** must identify:
      1. the asset health models (for each **base capex category**) that **Transpower** plans to advance during **RCP2**;
      2. key milestones, deliverables, and associated timeframes for each of the asset health models **Transpower** plans to advance during **RCP2**; and
      3. for any of the asset health models that **Transpower** plans to advance during **RCP2**, any trialling or planned implementation of those models, and reporting of the related outputs.

# Schedule A: Forecast MAR summary

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Forecast MAR applied to pricing years in RCP2 ending** | **Forecast MAR is calculated based on building block values for the disclosure year ending** | **Initial determined value of forecast MAR** | **Incremental update to forecast MAR determined not later than 30 November 2015** | **Incremental update to forecast MAR determined not later than 30 November 2016** | **Incremental update to forecast MAR determined not later than 30 November 2017** | **Incremental update to forecast MAR determined not later than 30 November 2018** | **Total forecast MAR applicable to the pricing year (sum of amounts in columns 3 to 7)** |
| [Column 1] | [Column 2] | [Column 3] | [Column 4] | [Column 5] | [Column 6] | [Column 7] | [Column 8] |
| 31 March 2016  (Year 1) | 30 June 2016 | $XXX.X million | N/A | N/A | N/A | N/A | $XXX.X million |
| 31 March 2017  (Year 2) | 30 June 2017 | $XXX.X million | $XX.X million | N/A | N/A | N/A | $XXX.X million |
| 31 March 2018  (Year 3) | 30 June 2018 | $XXX.X million | $XX.X million | $XX.X million | N/A | N/A | $XXX.X million |
| 31 March 2019  (Year 4) | 30 June 2019 | $XXX.X million | $XX.X million | $XX.X million | $XX.X million | N/A | $XXX.X million |
| 31 March 2020  (Year 5) | 30 June 2020 | $XXX.X million | $XX.X million | $XX.X million | $XX.X million | $XX.X million | $XXX.X million |

# Schedule B: EV account summary

|  |  |  |
| --- | --- | --- |
| **Item** | **Formula** | **Description** |
| [Column 1] | [Column 2] | [Column 3] |
| **Opening EV account balance** | A | Closing balance in the **EV account** for the previous **disclosure year** |
| **WACC** | B | Post - tax **WACC** |
| Interest on **opening EV balance** | **C = A x B** | **Opening EV account balance** multiplied by post-tax **WACC** |
| **EV account entries** | D | The **EV account entries** as specified in clause 23.1.3 |
| **EV adjustments** relating to 2011 **EV account** balances | E | The **EV adjustments** relating to legacy **EV account** balances as specified in clause 24.1.1(a) |
| **EV adjustments** for the 2016-17 pricing year | F | The **EV adjustments** for the 2016-17 **pricing year** as specified in clauses 24.1.2(a) – (g) |
| **EV adjustments** for the 2016-17 to 2019-20 pricing years | G | The **EV adjustments** for 2016-17 to 2019-20 **pricing years** as specified in clauses 24.1.3(a) – (f) |
| **EV adjustments** relating to the North Island Grid Upgrade Project | H | The **EV adjustments** for 2016-17 to 2019-20 **pricing years** relating to the North Island Grid Upgrade Project as specified in clauses 24.1.4(a) and (b) |
| Closing **EV account** balance | **I = A + C + D - E – F – G - H** | **Opening EV account balance** plus interest on **opening EV account balance** plus **EV** **account entries** minus **EV** **adjustments** |

# Schedule C: Approved base capex summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Disclosure year ending** | **Value of base capex allowance as determined 29 August 2014** | **Incremental approved listed project base capex determined not later than 30 November 2015** | **Incremental approved listed project base capex determined not later than 30 November 2016** | **Incremental approved listed project base capex determined not later than 30 November 2017** | **Incremental approved listed project base capex determined not later than 30 November 2018** | **Approved base capex for purposes of forecast MAR and 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 2016 | $235.2 million | N/A | N/A | N/A | N/A | $XXX.X million |
| 30 June 2017 | $249.5 million | $XX.X million | N/A | N/A | N/A | $XXX.X million |
| 30 June 2018 | $242.0 million | $XX.X million | $XX.X million | N/A | N/A | $XXX.X million |
| 30 June 2019 | $231.6 million | $XX.X million | $XX.X million | $XX.X million | N/A | $XXX.X million |
| 30 June 2020 | $213.1 million | $XX.X million | $XX.X million | $XX.X million | $XX.X million | $XXX.X million |

# 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 | **WACC** | A1 | WACC = A1 |  |
| WACC return on forecast opening RAB value | Forecast sum of **opening RAB value** for the **disclosure year** | B | A1 / (1 + A1)163/365 | B x A1 / (1 + A1)163/365 |
| WACC return on forecast VCAJUL | Forecast sum of **value of commissioned asset** for the month in the **disclosure year** | C1 | ((1 + A1)349.5/365 - 1) / (1 + A1)163/365 | C1 x ((1 + A1)349.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAAUG | C2 | ((1 + A1)318.5/365 - 1) / (1 + A1)163/365 | C2 x ((1 + A1)318.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCASEP | C3 | ((1 + A1)288/365 - 1) / (1 + A1)163/365 | C3 x ((1 + A1)288/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAOCT | C4 | ((1 + A1)257.5/365 - 1) / (1 + A1)163/365 | C4 x ((1 + A1)257.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCANOV | C5 | ((1 + A1)227/365 - 1) / (1 + A1)163/365 | C5 x ((1 + A1)227/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCADEC | C6 | ((1 + A1)196.5/365 - 1) / (1 + A1)163/365 | C6 x ((1 + A1)196.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAJAN | C7 | ((1 + A1)165.5/365 - 1) / (1 + A1)163/365 | C7 x ((1 + A1)165.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAFEB | C8 | ((1 + A1)136/365 - 1) / (1 + A1)163/365 | C8 x ((1 + A1)136/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAMAR | Forecast sum of **value of commissioned asset** for the month in the **disclosure year** | C9 | ((1 + A1)106.5/365 - 1) / (1 + A1)163/365 | C9 x ((1 + A1)106.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAAPL | C10 | ((1 + A1)76/365 - 1) / (1 + A1)163/365 | C10 x ((1 + A1)76/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAMAY | C11 | ((1 + A1)45.5/365 - 1) / (1 + A1)163/365 | C11 x ((1 + A1)45.5/365 - 1) / (1 + A1)163/365 |
| WACC return on forecast VCAJUN | C12 | ((1 + A1)15/365 - 1) / (1 + A1)163/365 | C12 x ((1 + A1)15/365 - 1) / (1 + A1)163/365 |
| Total forecast capital charge | Sum of **forecast MAR** building block values for formulas B through C12 |  |  | Sum D = Sum of **forecast MAR** 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 **depreciation** | E | 1 / (1 + A1)163/365 | E / (1 + A1)163/365 | |
| Operating expenditure | **Opex allowance** approved by the **Commission** for the purposes of calculating the initial determined value of the **forecast MAR**, as specified in Part 5: Compliance and information reporting of this determination | F | (1 + A1)19/365 | F x (1 + A1)19/365 |
| Forecast tax | The forecast **regulatory tax allowance**, calculated in accordance with clause 22.2.7 | G | (1 + A1)19/365 | G x (1 + A1)19/365 | |
| Forecast TCSD | The forecast  **term credit spread differential allowance**, calculated in accordance with Part 3, Subpart 5 of the **Transpower IM** | H | (1 + A1)19/365 | H x (1 + A1)19/365 | |
| EV adjustment | **EV adjustment**, including a tax gross up at the **corporate tax rate** | I | 1 / (1 + A1)163/365 | I / (1 + A1)163/365 | |
| **TOTAL FORECAST MAR** | Sum of **forecast MAR** building block values for formulas D through I |  |  | Sum J = Sum D plus sum of **forecast MAR** building block values E to I | |

| **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 voluntary revenue adjustment | Forecast voluntary reduction in revenue as described by **Transpower** in accordance with Part 5: Compliance and information reporting | K | (1 + A1)19/365 | K x (1 + A1)19/365 |
| Forecast pass-through costs | Forecast **pass-through costs** in accordance with Part 3, Subpart 1 of the **Transpower IM**, including any accrual adjustment for prior over- or under-recoveries of actual **pass-through costs** | L | (1 + A1)19/365 | L x (1 + A1)19/365 |
| Forecast recoverable costs | Forecast **recoverable costs** in accordance with Part 3, Subpart 1 of the **Transpower IM**, including any accrual adjustment for prior over- or under-recoveries of actual **recoverable costs** | M | (1 + A1)19/365 | M x (1 + A1)19/365 |
| **TOTAL OF FORECAST TRANSMISSION REVENUE APPLIED TO THE TPM UNDER THE CODE** | Sum of forecast revenue values for formulas J through M |  |  | Sum N = Sum J plus sum of revenue values for K to M |

# 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 return on opening RAB value | Sum of **opening RAB value** for the **disclosure year** | B | WACC = A1 | B x A1 |
| WACC return on VCAJUL | Sum of **value of commissioned asset** for the month in the **disclosure year** | C1 | (1 + A1)349.5/365 - 1 | C1 x ((1 + A1)349.5/365 - 1) |
| WACC return on VCAAUG | C2 | (1 + A1)318.5/365 - 1 | C2 x ((1 + A1)318.5/365 - 1) |
| WACC return on VCASEP | C3 | (1 + A1)288/365 - 1 | C3 x ((1 + A1)288/365 - 1) |
| WACC return on VCAOCT | C4 | (1 + A1)257.5/365 - 1 | C4 x ((1 + A1)257.5/365 - 1) |
| WACC return on VCANOV | C5 | (1 + A1)227/365 - 1 | C5 x ((1 + A1)227/365 - 1) |
| WACC return on VCADEC | C6 | (1 + A1)196.5/365 - 1 | C6 x ((1 + A1)196.5/365 - 1) |
| WACC return on VCAJAN | C7 | (1 + A1)165.5/365 - 1 | C7 x ((1 + A1)165.5/365 - 1) |
| WACC return on VCAFEB | C8 | (1 + A1)136/365 - 1 | C8 x ((1 + A1)136/365 - 1) |
| WACC return on VCAMAR | C9 | (1 + A1)106.5/365 - 1 | C9 x ((1 + A1)106.5/365 - 1) |
| WACC return on VCAAPL | C10 | (1 + A1)76/365 - 1 | C10 x ((1 + A1)76/365 - 1) |
| WACC return on VCAMAY | Sum of **value of commissioned asset** for the month in the **disclosure year** | C11 | (1 + A1)45.5/365 - 1 | C11 x ((1 + A1)45.5/365 - 1) |
| WACC return on VCAJUN | C12 | (1 + A1)15/365 - 1 | C12 x ((1 + A1)15/365 - 1) |
| WACC return on lost assets | Sum of the **opening RAB value** of **lost assets** inthe **disclosure year** | D | 1 - (1 + A1)182/365 | D x (1 - (1 + A1)182/365 ) |
| WACC return on found assets | Sum of the **value of found asset** of **found assets** inthe **disclosure year** | E | 1 - (1 + A1)182/365 - 1 | E x (1 - (1 + A1)182/365 - 1) |
| WACC return on disposed assets | Sum of **opening RAB value** of **disposed assets** in the **disclosure year** | F | 1 - (1 + A1)182/365 | F x (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 **actual** **transmission revenue** | H | (1 + A1)163/365 | H x (1 + A1)163/365 |
| Revenue recovery of pass-through costs and recoverable costs | Sum of amounts in respect of **pass-through costs** and **recoverable costs** included in **actual transmission revenue** | I | (1 + A1)163/365 | I x (1 + A1)163/365 |
| Transpower adjustment to recognise voluntarily foregone revenues | Amount of **HVAC revenue** and **HVDC revenue** permanently foregone by **Transpower** | J | (1 + A1)163/365 | J x (1 + A1)163/365 |
| Other regulated income | Sum of **other regulated income** | K | (1 + A1)182/365 | K x (1 + A1)182/365 |
| Gain/(loss) on disposal of assets | Sum of disposal proceeds less **opening RAB value** for **disposed assets** | L | (1 + A1)182/365 | L x (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, less wash-up value I |

| **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 | **Opex allowance**, adjusted for any disparity between the **forecast CPI** and actual **CPI**, asspecified in Part 5: Compliance and information reporting | N | (1 + A1)182/365 | N x (1 + A1)182/365 |
| Depreciation | **Depreciation** (excluding **depreciation** on **disposed assets**) | O |  | O |
| TCSD | The **term credit spread differential allowance**, calculated in accordance with Part 3, Subpart 5 of the **Transpower IM** | P | (1 + A1)182/365 | P x (1 + A1)182/365 |
| Net operating profit/(loss) before tax | Sum of wash-up values for formulas M through P |  |  | Sum Q = Sum M, less wash-up values N to P |
| Tax | The **regulatory tax allowance**, calculated in accordance with clause 21.1.9 | R | (1 + A1)182/365 | R x (1 + A1)182/365 |
| Net operating profit/(loss) after tax | Sum of wash-up values for formulas Q and R |  |  | Sum S = Sum Q, less wash-up value R |
| **AFTER-TAX EX-POST ECONOMIC GAIN OR LOSS** | Difference between the capital charge (Sum G) and the net operating profit/(loss) after tax(Sum S) in accordance with clause 21.1 |  |  | Difference T = Sum G less Sum S |
| EV adjustment included in forecast MAR | Adjustment to recognise the **EV adjustment**, before tax gross up, as applied in setting the **forecast MAR** | U |  | U |
| **EV ACCOUNT ENTRY** | This is the after-tax **ex-post economic gain or loss** adjusted for the **EV adjustment** applied in setting the **forecast MAR** for the **relevant pricing year**,and is an **EV account entry** |  |  | Difference V = Difference T less value U |

# Schedule F: Quality standards - points of service, by category

| Category | Description | Points of service | | | |
| --- | --- | --- | --- | --- | --- |
| [Column 1] | [Column 2] | [Column 3] | | | |
| High priority | Point of service that serves very large or essential loads such as the Auckland CBD or the oil refinery at Bream Bay | ISL0661 Islington 66 kV  OPK0331 Opunake  ALB0331 Albany 33 kV  PAK0331 Pakuranga  ALB1101 Albany 110 kV  PEN0331 Penrose 33 kV (A)  BPE0331 Bunnythorpe 33 kV  PEN1101 Penrose 110 kV  BRB0331 Bream Bay  INV0331 Invercargill | | | ROS0221 Mt Roskill 22 kV  BRY0661 Bromley 66 kV  SVL0331 Silverdale  CPK0331 Central Park 33 kV  TAK0331 Takanini  HAM0331 Hamilton 33 kV  TKR0331 Takapu Road  HEN0331 Henderson  TWI2201 Tiwai  HEP0331 Hepburn Road  HOB1101 Hobson St 110kV  INV0331 Invercargill |
| Important | Point of service that serves key industrial loads or large numbers of customers such as Kaiwharawhara | ASY0111 Ashley  MNI0111 Motunui  BDE0111 Brydone  MPE1101 Maungatapere  OTA0221 Otahuhu 22 kV (A)  CBG0111 Cambridge  PEN0221 Penrose 22 kV  CPK0111 Central Park 11 kV  PRM0331 Paraparaumu  EDN0331 Edendale  ROS1101 Mt Roskill 110 kV  GFD0331 Gracefield  HAM0111 Hamilton 11 kV  HAY0111 Haywards 11 kV  TGA0331 Tauranga 33 kV  HOR0331 Hororata 33 kV  TMK0331 Temuka  HOR0661 Hororata 66 kV  TNG0111 Tangiwai 11 kV | | HUI0331 Huirangi  TWH0331 Te Kowhai  HWA0331 Hawera (A)  WHU0331 Waihou  HWB0331 Halfway Bush  WIL0331 Wilton  ISL0331 Islington 33 kV  WIR0331 Wiri  KAW0112 Kawerau (B)  EDG0331 Edgecumbe  KOE1101 Kaikohe  MGM0331 Mangamaire  KWA0111 Kaiwharawhara  SFD0331 Stratford  LFD1101 Lichfield  HWA1101 Hawera (A)  KBY0661 Kimberley  MNG0331 Mangere 33 kV  WRD0331 Wairau Road  MNG1101 Mangere 110 kV | |
| Standard | Those remaining points of service that serve demand customers and are not served by a single line/transformer | ASB0331 Ashburton 33 kV  MTM0331 Mt Maunganui 33 kV  ASB0661 Ashburton 66 kV  MTN0331 Marton  BAL0331 Balclutha  MTO0331 Maungaturoto  BDE0112 Brydone  NMA0331 North Makarewa  BLN0331 Blenheim  NPL0331 New Plymouth 33 kV (A)  NPL0332 New Plymouth 33 kV (B)  BOB0331 Bombay 33 kV  NSY0331 Naseby  BOB1101 Bombay 110 kV  OAM0331 Oamaru  BPE0551 Bunnythorpe 55 kV  ORO1101 Orowaiti  CML0331 Cromwell  OWH0111 Owhata  CST0331 Carrington St  PAO1101 Piako  CUL0331 Culverden  PEN0332 Penrose 33 kV (B)  CYD0331 Clyde  PNI0331 Pauatahanui  DOB0331 Dobson  RDF0331 Redclyffe  DVK0111 Dannevirke  RFN1101 Reefton  FHL0331 Fernhill  ROT0111 Rotorua 11 kV  FKN0331 Frankton (A)  ROT0331 Rotorua 33 kV  FKN0332 Frankton (B)  SBK0331 Southbrook  SDN0331 South Dunedin  GLN0332 Glenbrook (A)  STK0331 Stoke  GOR0331 Gore  STU0111 Studholme | GYM0661 Greymouth  TGA0111 Tauranga 11 kV  GYT0331 Greytown  TIM0111 Timaru  HAM0551 Hamilton 55 kV  TKU0331 Tokaanu (A)  HAY0331 Haywards 33 kV  TMI0331 Te Matai  HKK0661 Hokitika  TMN0551 Taumarunui  HLY0331 Huntly  TNG0551 Tangiwai 55 kV  HTI0331 Hangatiki  UHT0331 Upper Hutt  KAI0111 Kaiapoi  WDV0111 Woodville  KAW0111 Kawerau (A)  WEL0331 Wellsford  KIN0111 Kinleith 11 kV  WGN0331 Wanganui  KMO0331 Kaitimako  WKO0331 Waikino  KPU0661 Kopu  WPR0661 Waipara 66 kV  KUM0661 Kumara  WPT0111 Westport  LTN0331 Linton  WPW0331 Waipawa 33 kV  MHO0331 Mangahao  MLG0111 Melling 11kV  WRK0331 Wairakei  MLG0331 Melling 33 kV  WTK0331 Waitaki  WTU0331 Whakatu  MST0331 Masterton  SWN0251 Southdown 25 kV  HWB1101 Halfway Bush 110 kV  TUI1102 Tuai  STK0061 Stoke | | |
| Generator | Point of service that connects generation customers | ARI1101 Arapuni  OHK2201 Ohakuri  ATI2201 Atiamuri  OKI2201 Ohaaki  AVI2201 Aviemore  OTA1101 Otahuhu A 110 kV  BEN2201 Benmore 220 kV  OTA2201 Otahuhu C 220 kV  ROT1101 Rotorua 110 kV  COL0661 Coleridge  ROX1101 Roxburgh 110 kV  CYD2201 Clyde  ROX2201 Roxburgh 220 kV  HLY2201 Huntly  RPO2201 Rangipo  HWA1102 Hawera (B)  SFD2201 Stratford  KAW1101 Kawerau Geo  SWN2201 Southdown  KPO1101 Karapiro | THI2201 Te Mihi  MAN2201 Manapouri  TKB2201 Tekapo B  MAT1101 Matahina (A)  TKU2201 Tokaanu  MAT1102 Matahina (B)  TUI1101 Tuai  MTI2201 Maraetai  TWC2201 Tararua Windfarm C  NAP2201 Nga Awa Purua  WDV1101 Te Apiti Wind Farm  NAP2201 Ngatamariki  WHI2201 Whirinaki  OHA2201 Ohau A  WKM2201 Whakamaru  OHB2201 Ohau B  WRK2201 Wairakei  OHC2201 Ohau C  WTK0111 Waitaki | | |
| N-security | Point of service that is served by a single line/tranformer | ABY0111 Albury  NPK0331 National Park  APS0111 Arthurs Pass  OKN0111 Ohakune (B)  ARA2201 Aratiatia  OKN0112 Ohakune (A)  ARG1101 Argyle  ONG0331 Ongarue  ATU1101 Atarau  OTI0111 Otira  BPD1101 Bells Pond  BPT1101 BlackPoint  PEN0251 Penrose 25 kV  BRK0331 Brunswick  PPI2201 Poihipi  BWK1101 Berwick  TKA0111 Tekapo A  CLH0111 Castle Hill  TKA0331 Tekapo A  COL0111 Coleridge  TKH0111 Te Kaha  CUL0661 Culverden | TMU0111 Te Awamutu  GLN0331 Glenbrook (B)  TRK0111 Tarukenga  HIN0331 Hinuera  TUI0111 Tuai  HWA0332 Hawera (B)  TWZ0331 Twizel (A)  KIK0111 Kikiwa  TWZ0332 Twizel (B)  KIN0331 Kinleith 33 kV  WAI0111 Waiotahi  KPA1101 Kaponga  WHI0111 Whirinaki  MCH0111 Murchison  WPA2201 Waipapa  MER0331 Meremere  WPR0331 Waipara 33 kV  MKE1101 McKee  WPW0111 Waipawa 11 kV  WVY0111 Waverley  MTR0331 Mataroa  WWD1101 West Wind | | |

# Schedule G: Quality standards - selected circuits for HVAC availability measure

| Circuits | |
| --- | --- |
| Clyde-Cromwell-Twizel 1 and 2  Ohakuri-Wairakei 1  Manapouri-North Makarewa 1,2 and 3  Te Mihi-Whakamaru 1  North Makarewa-Tiwai 1 and 2  Bunnythorpe-Tokaanu 1 and 2  Clyde-Roxburgh 1 and 2  Rangipo-Tangiwai 1  Ashburton-Timaru-Twizel 1 and 2  Brownhill-Whakamaru 1 and 2  Brownhill-Pakuranga 1 and 2 | Atiamuri-Whakamaru 1  Invercargill- Manapouri 2  Te Mihi-Wairakei 1  Tekapo B-Twizel 1  Pakuranga-Whakamaru 1 and 2 (comprising Brownhill-Whakamaru 1 and 2 and Brownhill-Pakuranga 1 and 2)  Islington-Tekapo B 1  Ohau B-Twizel 3  Ohau C-Twizel 4  Ashburton-Islington 1  Islington-Livingstone 1 |

# Schedule H: Pass-through costs and recoverable costs summary

|  |  |  |
| --- | --- | --- |
| **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 to the **Commission** |
| Electricity Authority levies | C | Levies payable to the **Electricity Authority** |
| Total **pass-through costs** | **D = A + B+ C** | Sum of **pass-through costs** for the **disclosure year** |
| incremental rolling incentive scheme **recoverable costs** | E | Net **recoverable costs** under the incremental rolling incentive scheme |
| Instantaneous reserves availability charge | F | Instantaneous reserves availability charges in accordance with clause 3.1.3(1)(b) of the **Transpower IM** |
| Transmission alternative operating costs | G | Transmission alternative operating costs relating to a **non-transmission solution** |
| **Operating costs** incurred as part of a **major capex project** | H | The amount of **recoverable costs** as described by Transpower in accordance with clause 20.1.14(c) |
| Net additional **operating costs** incurred in responding to a **catastrophic event** | I | The amount of **recoverable costs** as described by **Transpower** in accordance with clause 20.1.14(d) |
| Total **recoverable costs** | **J = E + F + G + H + I** | Sum of **recoverable costs** for the **disclosure year** |
| Total **pass-through costs** and **recoverable costs** | **K = D + J** | Sum of total **pass-through costs** and **recoverable costs** for the **disclosure year** |
| Forecast **pass-through costs** and **recoverable costs** recovered in revenue | L | Forecast **pass-through costs** and **recoverable costs** for the **disclosure year** used for charging under the **TPM**, excluding any wash-up of **pass-through costs** and **recoverable costs** for a previous **disclosure year** |
| Wash-up on **pass-through costs** and **recoverable costs** | **M = K - L** | Wash-up on **pass-through costs** and **recoverable costs** |

# Schedule I: Listed projects



# 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 pricing year commencing [insert pricing year] complies with the requirements of the Transpower Individual Price-Quality Path Determination 2015 \*[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 associated information) for the period [insert disclosure year] and dated [insert date] complies with the requirements of the Transpower Individual Price-Quality Path Determination 2015 \*[except in the following respects].

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

[Signatures of directors]

[Date]

\*Delete if inapplicable.

# Schedule L: Explanatory note

The Transpower Individual Price-Quality Path Draft Determination 2015 [2014] NZCC XX (the **Transpower IPP**) sets an individual price-quality path for Transpower New Zealand Limited (**Transpower**) for the five pricing years beginning 1 April 2015. 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 2010 and that expires on 31 March 2015.

The Transpower IPP sets out Transpower's price path in terms of its maximum allowable revenue (being the forecast maximum allowable revenue) for each pricing year in the regulatory period from 1 April 2015 – 31 March 2020.  Key input values used to calculate Transpower’s maximum allowable revenue were determined by the Commission at the end of August 2014 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 year in the regulatory period.  Transpower is incentivised to maintain or improve its quality of supply of electricity transmission services, as each quality standard is linked by a formula to Transpower’s revenue: Transpower will be rewarded by an increase in its maximum allowable revenue if it meets or exceeds a quality standard, and will be penalised by a reduction in its maximum allowable revenue if it fails to meet a quality standard.

For the purposes of monitoring compliance with Transpower’s price-quality path, Transpower must provide the Commission each year with a pricing compliance statement and an annual compliance statement (and associated information). The Transpower IPP also requires Transpower to publicly disclose other information. The 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 plan for this regulatory period, rather than being enduring disclosures.

Pursuant to the Commission’s compliance monitoring and information disclosure powers under the Act, the Transpower IPP requires Transpower to:

1. state whether it has complied with the price path and demonstrate this with supporting information;
2. disclose its performance against each of the quality standards;
3. provide reasons for any non-compliance with the price path or variation (beyond cap or collar) from quality standards;
4. disclose updated forecasts of Transpower’s maximum allowable revenues calculated in accordance with methodologies specified by the Commission;
5. disclose non-financial performance measures of asset health, as well as plans for further developing asset health quality performance measures;
6. disclose plans and forecasts for Transpower’s development of initiatives;
7. provides director certification and an auditor’s report.

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

http://www.comcom.govt.nz/regulated-industries/electricity/electricity-transmission/transpower-individual -price-quality-regulation/transpowers-price-quality-path-from-2015-to-2020.

Copies of this determination are available for inspection free of charge at the Commission (during ordinary office hours), on the Commission’s website at the above link, or and are available for purchase at a reasonable price at the Commission.

# Appendix: Location of the defined terms used in this determination

| **Defined Term** | **Location of Definition** |
| --- | --- |
| Act | Transpower IM determination |
| actual transmission revenue | Transpower IPP determination |
| annual compliance statement | Transpower IPP determination |
| asset enhancement | Transpower IPP determination |
| asset health grid output measure | Capex IM determination |
| asset health models plan | Transpower IPP determination |
| asset performance measure | Capex IM determination |
| asset refurbishment | Capex IM determination |
| asset replacement | Capex IM determination |
| auditor | Transpower IM determination |
| base capex | Capex IM determination |
| base capex adjustments | Transpower IPP determination |
| base capex allowance | Capex IM determination |
| base capex expenditure adjustment | Capex IM determination |
| base capex incentive rate | Capex IM determination |
| business support | Capex IM determination |
| cap | Capex IM determination |
| Capex IM | Transpower IPP determination |
| capital expenditure | Transpower IM determination |
| catastrophic event | Transpower IM determination |
| category | Transpower IPP determination |
| code | Capex IM determination |
| collar | Capex IM determination |
| Commission | Commerce Act |
| commissioned | Transpower IM determination |
| commodity instrument that is not an effective hedge | Transpower IPP determination |
| consumer | Commerce Act |
| corporate tax rate | Transpower IM determination |
| CPI | Capex IM determination |
| customer | Transpower IPP determination |
| depreciation | Transpower IM determination |
| director | Transpower IPP determination |
| disclosure year | Transpower IM determination |
| disposed asset | Transpower IM determination |
| Electricity Authority | Transpower IM determination |
| electricity lines services | Commerce Act |
| EV account | Transpower IPP determination |
| EV account entry | Transpower IPP determination |
| EV adjustment | Transpower IPP determination |
| ex post economic gain or loss | Transpower IPP determination |
| forecast CPI | Capex IM determination |
| forecast FX rate | Capex IM determination |
| forecast MAR | Transpower IM determination |
| found asset | Transpower IM determination |
| GAAP | Transpower IM determination |
| gain or loss on capital expenditure commitments | Transpower IPP determination |
| grid | Capex IM determination |
| grid output | Capex IM determination |
| grid output adjustment | Capex IM determination |
| grid output incentive rate | Capex IM determination |
| grid output measure | Capex IM determination |
| grid output mechanism | Capex IM determination |
| grid output target | Capex IM determination |
| HVAC | Transpower IPP determination |
| HVAC revenue | Transpower IPP determination |
| HVAC transmission revenue | Transpower IPP determination |
| HVDC | Transpower IPP determination |
| HVDC link | Transpower IPP determination |
| HVDC pole | Transpower IPP determination |
| HVDC revenue | Transpower IPP determination |
| HVDC transmission revenue | Transpower IPP determination |
| IMs | Transpower IPP determination |
| ID determination | Transpower IM determination |
| independent assurance report | Transpower IPP determination |
| information system and technology assets | Capex IM determination |
| initiatives plan | Transpower IPP determination |
| instrument that ceases to be an effective hedge | Transpower IPP determination |
| interruption | Transpower IPP determination |
| listed project | ?? |
| live model | Transpower IPP determination |
| lost asset | Transpower IM determination |
| major capex | Capex IM determination |
| major capex adjustments | Capex IM determination |
| major capex efficiency adjustment | Capex IM determination |
| major capex incentive rate | Capex IM determination |
| major capex overspend adjustment | Capex IM determination |
| major capex project | Capex IM determination |
| major capex project output adjustment | Capex IM determination |
| major capex sunk costs adjustment | Capex IM determination |
| MAR | Transpower IPP determination |
| measure of grid performance | Capex IM determination |
| minor capital expenditure | Transpower IPP determination |
| new investment contract | Transpower IM determination |
| non-transmission solution | Capex IM determination |
| opening EV account balance | Transpower IPP determination |
| operating expenditure | Capex IM determination |
| operating cost | Transpower IM determination |
| opening RAB value | Transpower IM determination |
| opex allowance | Transpower IPP determination |
| opex incentive adjustment | ?? |
| other regulated income | Transpower IPP determination |
| outage | Transpower IPP determination |
| pass-through costs | Transpower IM determination |
| point of service | Transpower IPP determination |
| policies and processes adjustment | Capex IM determination |
| pricing compliance statement | Transpower IPP determination |
| pricing year | Transpower IPP determination |
| programme | Capex IM determination |
| project | Capex IM determination |
| RCP1 | Transpower IPP determination |
| RCP2 | Transpower IPP determination |
| recoverable cost | Transpower IM determination |
| regulatory period | Transpower IM determination  Transpower IPP determination |
| regulatory tax allowance | Transpower IM determination |
| relevant pricing year | Transpower IPP determination |
| restoration | Transpower IPP determination |
| revenue-linked grid output measure | Capex IM determination |
| system operator | Transpower IM determination |
| tax rules | Transpower IM determination |
| term credit spread differential | Transpower IM determination |
| term credit spread differential allowance | Transpower IM determination |
| TPM | Transpower IPP determination |
| transmission lines services | Transpower IPP determination |
| Transpower | Transpower IM determination |
| Transpower IM | Transpower IPP determination |
| unplanned interruption | Transpower IPP determination |
| unregulated services | Transpower IPP determination |
| value of commissioned asset | Transpower IM determination |
| value of found asset | Transpower IM determination |
| WACC | Transpower IM determination |
| working day | Commerce Act |
| works under construction | Transpower IM determination |