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Public version

Transpower Individual Price-Quality Path Determination 2015

This consolidated version of the principal determination and amendment determinations consolidates all amendments as at 26 November 2018

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Commerce Commission

Wellington, New Zealand

Status of this document

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- The determinations are also available for inspection at the Commission's office at Level 9, 44 The Terrace, Wellington, and printed copies may be purchased at a reasonable price.

Associated documents		
Publication date	**Decision number**	**Determination name**
28 November 2014	[2014] NZCC 35	Transpower Individual Price-Quality Path Determination 2015
11 November 2015	[2015] NZCC 29	Transpower Individual Price-Quality Path Amendment Determination 2015
25 August 2016	[2016] NZCC 16	Transpower Individual Price-Quality Path Amendment Determination 2016
3 November 2016	[2016] NZCC 23	Transpower Individual Price-Quality Path Amendment Determination 2016 (No.2)
3 November 2017	[2017] NZCC 26	Transpower Individual Price-Quality Path Amendment Determination 2017 (No.1)
8 December 2017	[2017] NZCC 29	Transpower Individual Price-Quality Path Amendment Determination 2017 (No.2)
2 November 2018	[2018] NZCC 16	Transpower Individual Price-Quality Path Amendment Determination 2018 (No.1)

CONTENTS

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

Part 1: General provisions

1. Title

1.1 This determination is the Transpower Individual Price-Quality Path Determination 2015.

2. Commencement

2.1 This determination takes effect on 1 April 2015.

3. Application

3.1 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

4.1 Unless the context otherwise requires—

4.1.1 words appearing in bold type (except for headings) in this determination are defined terms;

4.1.2 terms used in this determination that are defined in the **IMs**, but not in this determination, have the meaning given in the **IMs**;

4.1.3 terms used in this determination that are defined in the Commerce Act 1986, but not in this determination, or in the **IMs**, have the meaning given in the Commerce Act 1986;

4.1.4 financial items must be measured and disclosed in accordance with **GAAP**, unless otherwise required by this determination or the **IMs**;

4.1.5 non-financial items must be measured and disclosed in accordance with standard industry practice unless otherwise required in this determination, or the **IMs**;

4.1.6 an obligation to do something is deemed to include an obligation to cause that thing to be done; and

4.1.7 a word which denotes the singular also denotes the plural and vice versa.

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

5. Individual price-quality path

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

5.1.1 the price-path in Part 3: Price path; and

5.1.2 the quality standards in Part 4: Quality standards and grid output measures.

5.2 **Transpower** must comply with the requirements to provide compliance statements and information disclosures in Part 5: Compliance and information reporting.

6. Applicable input methodologies

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

6.1.1 Part 3 of the **Transpower IM** – input methodologies applying to individual price quality path; and

6.1.2 the **Capex IM** – capital expenditure.

Part 2: Defined terms

7. 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 the information required to be provided under clauses 28.3 and 28.4

assurance 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 post-tax estimate corresponding to **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

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 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 **assurance 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 electricity from **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 amount of **operating expenditure** specified 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 an annual update of a **forecast MAR** or an **ex-post economic gain or loss**, the weighted average cost of capital published by the **Commission** in accordance with Part 3 of the **Transpower IM**.

Part 3: Price path

8. Maximum revenues

8.1 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**.

8.2 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.**

8.3 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**:

8.3.1 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:

(a) the forecast **HVAC revenue**; plus

(b) the forecast **HVAC pass-through costs** for the **pricing year** to be recovered from **customers**; plus

(c) the adjustment amounts in respect of prior **pricing year** forecast **HVAC pass-through costs** for **customers**; plus

(d) the forecast **HVAC recoverable costs** for the **pricing year** to be recovered from **customers**; plus

(e) the adjustment amounts in respect of prior **pricing year** forecast **HVAC recoverable costs** for **customers**; and

8.3.2 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:

(a) the forecast **HVDC revenue**; plus

(b) the forecast **HVDC pass-through costs** for the **pricing year** to be recovered from **customers**; plus

(c) the adjustment amounts in respect of prior **pricing year** forecast **HVDC pass-through costs** for **customers**; plus

(d) the forecast **HVDC recoverable costs** for the **pricing year** to be recovered from **customers**; plus

(e) the adjustment amounts in respect of prior **pricing year** forecast **HVDC recoverable costs** for **customers**.

9. Transpower to provide proposed annual update of forecast MAR

9.1 No later than the 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.

10. Forecast MAR

10.1 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.

11. Opex allowance and the incremental rolling incentive scheme

11.1 The **opex allowance** is:

11.1.1 for the **disclosure year** from 1 July 2015 to 30 June 2016, $276.6 million;

11.1.2 for the **disclosure year** from 1 July 2016 to 30 June 2017, $284.6 million;

11.1.3 for the **disclosure year** from 1 July 2017 to 30 June 2018, $292.5 million;

11.1.4 for the **disclosure year** from 1 July 2018 to 30 June 2019, $294.0 million; and

11.1.5 for the **disclosure year** from 1 July 2019 to 30 June 2020, $296.4 million;

11.2 The amount of forecast **operating expenditure** specified by the **Commission** for the purpose of calculating an **opex incentive amount** is, for a **disclosure year**, the **opex allowance** specified for that **disclosure year** in clause 11.1 then adjusted for any disparity between the **forecast CPI** that applied when the **opex allowance** was determined and the actual **CPI**.

11.3 For the purposes of any disparity adjustments for calculating the **ex-post economic gain or loss** or an **opex incentive amount**, the **forecast CPI** that applied when the **opex allowance** was determined is:

11.3.1 for the **disclosure year** from 1 July 2015 to 30 June 2016, 1.80%;

11.3.2 for the **disclosure year** from 1 July 2016 to 30 June 2017, 2.09%;

11.3.3 for the **disclosure year** from 1 July 2017 to 30 June 2018, 2.06%;

11.3.4 for the **disclosure year** from 1 July 2018 to 30 June 2019, 2.03%; and

11.3.5 for the **disclosure year** from 1 July 2019 to 30 June 2020, 2.00%.

12. Listed projects

12.1 The **projects** or **programmes** identified as **listed projects** for **RCP2** are set out in Schedule I.

12.2 Notwithstanding clause 12.1, if at any time during **RCP2** a **project** or **programme** identified in Schedule I ceases to be a **base capex project** or **base capex programme** it is no longer a **listed project** for **RCP2**.

Part 4: Quality standards and grid output measures

Quality standards

13. 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

14. Revenue-linked grid output measures

14.1 The **revenue-linked grid output measures** are the:

14.1.1 annual **measures of grid performance** specified in clause 14.2;

14.1.2 annual **asset performance measures** specified in clause 14.3;

14.1.3 annual **asset health grid output measures** specified in clause 14.4; and

14.1.4 periodic (five year) **asset health grid output measures** specified in clause 14.5.

14.2 The annual **measures of grid performance** are:

14.2.1 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 and 16.6 as GP1A, GP1B, GP1C, GP1D and GP1E);

14.2.2 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 and 16.6 as GP2A, GP2B, GP2C, GP2D and GP2E);

14.2.3 duration (minutes) of the **unplanned interruption** that is at the 90^{th} 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 and 16.6 as GP3A, GP3B, GP3C, GP3D and GP3E).

14.3 The annual **asset performance measures** are:

14.3.1 **HVDC** energy availability of the **HVDC poles** 2 and 3 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);

14.3.2 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).

14.4 The annual **asset health grid output measures** are:

14.4.1 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);

14.4.2 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);

14.4.3 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).

14.5 The periodic (five year) **asset health grid output measures** are:

14.5.1 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);

14.5.2 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);

14.5.3 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).

15. Grid output targets, caps, collars and grid output incentive rates

15.1 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	56	38	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 (%)	Selected 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)	427	467	387	28.2
	2016/17	AH1 (16/17)	523	563	483	28.2

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]
	2017/18	AH1 (17/18)	517	557	477	28.2
	2018/19	AH1 (18/19)	558	598	518	28.2
	2019/20	AH1 (19/20)	555	595	515	28.2
Number of grillages commissioned	2015/16	AH2 (15/16)	339	370	308	9.9
	2016/17	AH2 (16/17)	396	427	365	9.9
	2017/18	AH2 (17/18)	408	439	377	9.9
	2018/19	AH2 (18/19)	390	421	359	9.9
	2019/20	AH2 (19/20)	377	408	346	9.9
Number of insulators commissioned	2015/16	AH3 (15/16)	1532	1647	1417	1.9
	2016/17	AH3 (16/17)	1466	1581	1351	1.9
	2017/18	AH3 (17/18)	1402	1517	1287	1.9
	2018/19	AH3 (18/19)	1315	1430	1200	1.9
	2019/20	AH3 (19/20)	1375	1490	1260	1.9
Number of outdoor circuit breakers commissioned	2019/20	AH4	141	153	129	47.5
Number of power transformers commissioned	2019/20	AH5	26	28	24	1,370

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]
Number of outdoor to indoor conversions commissioned	2019/20	AH6	15	16	14	2,710

16. The grid output adjustment applies to revenue-linked grid output measures

16.1 **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.**

16.2 The **revenue-linked grid output measures** to be used by **Transpower** to calculate the **grid output adjustment** for a **disclosure year** are:

16.2.1 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;

16.2.2 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.

16.3 For the purposes of calculating the **grid output adjustment**, the output achieved in respect of the following **revenue-linked grid output measures** is:

16.3.1 for GP1A, GP1B, GP1C, GP1D and GP1E, the total number of all **unplanned interruptions** in the relevant **disclosure year**;

16.3.2 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**;

16.3.3 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;

16.3.4 for AP1, the **HVDC** energy availability for the **HVDC poles** 2 and 3 is calculated as a percentage term in the following manner:

$$100 - \frac{100 \sum_{j=0}^{N} (reduction\ in\ capacity\ due\ to\ \boldsymbol{outage}\ j)\ (duration\ of\ \boldsymbol{outage}\ j\ in\ hours)}{(maximum\ capacity\ of\ \boldsymbol{HVDC\ poles})\ (total\ number\ of\ hours\ in\ the\ \boldsymbol{disclosure\ year})}$$

where:

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

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

16.3.5 for AP2, the percentage term calculated as:

$$100 - \frac{100(total\ duration\ (in\ hours)\ of\ all\ \boldsymbol{outages}\ on\ the\ \boldsymbol{HVAC}\ circuits\ listed\ in\ Schedule\ G\ )}{(number\ of\ \boldsymbol{HVAC}\ circuits\ listed\ in\ Schedule\ G)\ (total\ number\ of\ hours\ in\ the\ \boldsymbol{disclosure\ year})};$$

16.3.6 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**;

16.3.7 for AH2, the total number of grillages **commissioned** within **Transpower**'s **asset replacement** and **asset refurbishment** programme in the relevant **disclosure year**;

16.3.8 for AH3, the total number of insulators **commissioned** within **Transpower**'s **asset replacement** and **asset refurbishment** programme in the relevant **disclosure year**.

16.3.9 for AH4, the total number of outdoor circuit breakers **commissioned** within **Transpower**'s **asset replacement** and **asset refurbishment** programme in the **regulatory period**;

16.3.10 for AH5, the total number of power transformers **commissioned** within **Transpower**'s **asset replacement** and **asset refurbishment** programme in the **regulatory period**;

16.3.11 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**.

16.4 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:

16.4.1 **restoration**; or

16.4.2 seven days after the **interruption** started.

16.5 For the purposes of all **measures of grid performance** specified in clause 14.2, **unplanned interruptions** excludes any:

16.5.1 **unplanned interruptions** originating on another party's system and where the **Transpower grid** operated correctly;

16.5.2 **unplanned interruptions** to the auxiliary load used by electricity generator assets.

16.6 For the purposes of all **measures of grid performance** specified in clause 14.2 other than GP1D, GP2D and GP3D, **unplanned interruptions** excludes any:

16.6.1 load restrictions achieved completely by the use of controllable load, interruptible load or demand-response;

16.6.2 automatic under-frequency load-shedding; and

16.6.3 **unplanned interruptions** for which all load is supplied by a backfeed or by embedded generation.

Grid output measures that are not revenue-linked

17. Grid output measures to which the grid output mechanism will not apply

17.1 The **grid output measures** to which the **grid output mechanism** will not apply are the pilot **asset health grid output measures** specified in clause 17.2.

17.2 The pilot **asset health grid output measures** are the forecast percentages and the actual percentages of the asset population with scores > eight determined in accordance with the asset health index set out in clause 17.2.1 below, for each of the five asset classes (by reference to the specified asset group) within **Transpower's asset replacement** and **asset refurbishment** programme set out in clause 17.2.2 below, based on scores calculated using Transpower's applicable **live models**:

17.2.1

Asset Health Index							
1-4	>4-5	>5-6	>6-7	>7-8	>8-9	>9-9.5	>9.5
Read scores from left to right: left-hand side scores mean better condition than right-hand side scores.							

17.2.2

Asset Groups	Asset Classes
Lines	Tower foundations – grillage
Lines	Tower protective coating
Lines	Insulators
Stations	Outdoor circuit breakers
Stations	Power transformers.

17.3 **Transpower** must report performance against these pilot **asset health grid output measures** as required in clause 28.1.

Part 5: Compliance and information reporting

18. Pricing compliance statement

18.1 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:

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

18.1.2 publish the **pricing compliance statement** on its website.

18.2 The **pricing compliance statement** must:

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

18.2.2 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**;

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

18.2.4 include a certificate in the form set out in Schedule J: Directors' certificate – pricing compliance statement signed by at least two **directors** of **Transpower**.

19. Annual compliance statement

19.1 No later than the Friday of the third complete week of October after the end of each **disclosure year**, **Transpower** must:

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

19.1.2 publish the **annual compliance statement** and accompanying **independent assurance report** on its website.

19.2 The **annual compliance statement** must:

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

(a) complied with the price path in Part 3: Price path for the **disclosure year**; and

(b) complied with the requirement to publicly disclose, in accordance with the **ID determination**, its annual **grid output adjustment** calculation for the **disclosure year**, including the values for *m*;

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

19.2.3 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

19.2.4 be accompanied by an **independent assurance report** procured and prepared in accordance with clause 26.

20. Annual compliance statement – information required

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

20.1.1 if **Transpower** has not complied with the price path, the reasons for non-compliance;

20.1.2 reasons why the output achieved for any **revenue-linked grid output measure**:

(a) exceeds (ie, over-achieves relative to) the **cap**; or

(b) fails to meet (ie, under-achieves relative to) the **collar**;

20.1.3 the **ex-post economic gain or loss** (including for each of **HVAC** and **HVDC**) for the **disclosure year**, calculated in accordance with clause 21.1 and Schedule E: Wash-up building blocks calculation, including any supporting information;

20.1.4 the **forecast MAR** used for the **relevant pricing year**;

20.1.5 the **HVAC revenue** for the **relevant pricing year**;

20.1.6 the **HVDC revenue** for the **relevant pricing year**;

20.1.7 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**;

20.1.8 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;

20.1.9 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;

20.1.10 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**;

20.1.11 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**;

20.1.12 an updated summary of the **forecast MAR** that provides the information set out in Schedule A: Forecast MAR summary;

20.1.13 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 clause 23.1, where the **EV account entries** are calculated in accordance with clause 23.2;

20.1.14 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:

(a) the **pass-through costs** and **recoverable costs** recovered by **Transpower** from **customers** as part of its revenue for the **relevant pricing year**;

(b) the **pass-through costs** and **recoverable costs** of **Transpower** during the **disclosure year**;

(c) a description and explanation of any **operating costs** incurred as part of a **major capex project**;

(d) a summary of the prudent net additional **operating costs** incurred in responding to a **catastrophic event**;

(e) the allocation of any applicable 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

(f) 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**;

20.1.15 an updated summary of the approved **base capex** that provides the information set out in Schedule C: Approved base capex summary;

20.1.16 details of any changes to **Transpower's** policy of hedging **capital expenditure** during the **disclosure year**; and

20.1.17 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:

(a) any changes to those plans since the most recent previous update; and

(b) progress against **Transpower's** planned development of initiatives and asset health models.

21. Wash-up building blocks calculation

21.1 For the purposes of calculating the **ex-post economic gain or loss** for the **disclosure year**, **Transpower** must use:

21.1.1 the approach and formulae specified in Schedule E: Wash-up building blocks calculation;

21.1.2 the **opening RAB value**;

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

21.1.4 the **WACC**;

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

21.1.6 the **opex allowance** specified in clause 11.1;

21.1.7 the **corporate tax rate**;

21.1.8 the **regulatory tax allowance** calculated:

(a) by applying the **tax rules** and **corporate tax rate** to the regulatory profit/(loss) before tax in accordance with Part 2, Subpart 3 of the **Transpower IM**;

(b) using the **term credit spread differential allowance** calculated in accordance with Part 2, Subpart 4 of the **Transpower IM**; and

(c) using as the amount of regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:

(i) the regulatory profit/(loss) before tax disclosed by **Transpower** for the **disclosure year** in accordance with the **ID determination**; and

(ii) the **term credit spread differential allowance** calculated in subclause (b);

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

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

(a) the **actual transmission revenue** received in the **relevant pricing year**; and

(b) the sum of **other regulated income** received in the **disclosure year**;

21.1.11 the **EV adjustments** included in the **forecast MAR** for the **relevant pricing year**; and

21.1.12 any voluntary reduction in **actual transmission revenue** made by **Transpower** for the **disclosure year**.

22. Transpower to propose update of forecast MAR

22.1 **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**:**

22.1.1 forecast **major capex** approved by the **Commission** in the **disclosure year**;

22.1.2 **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

22.1.3 an **EV adjustment** calculated for the **forecast MAR** in accordance with clause 24.1.

22.2 The calculation of the update of a **forecast MAR** must, where applicable, use:

22.2.1 the approach and formulae specified in Schedule D: Forecast MAR building blocks calculation;

22.2.2 the forecast **opening RAB value**;

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

22.2.4 as the **base capex allowance**:

(a) for the **disclosure year** from 1 July 2015 to 30 June 2016, $235.2 million;

(b) for the **disclosure year** from 1 July 2016 to 30 June 2017, $249.5 million;

(c) for the **disclosure year** from 1 July 2017 to 30 June 2018, $243.0 million;

(d) for the **disclosure year** from 1 July 2018 to 30 June 2019, $241.2 million; and

(e) for the **disclosure year** from 1 July 2019 to 30 June 2020, $213.1 million;

22.2.5 the **WACC**;

22.2.6 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**;

22.2.7 the forecast **regulatory tax allowance** calculated:

(a) 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**;

(b) using the **term credit spread differential allowance** calculated in accordance with Part 3, Subpart 5 of the **Transpower IM**; and

(c) using as the amount of forecast regulatory profit/(loss) before tax for the purpose of this calculation, the sum of:

(i) the forecast of the regulatory profit/(loss) before tax calculated using the calculation basis required for disclosure under the **ID determination**; and

(ii) the forecast of the **term credit spread differential allowance** calculated in accordance with Part 2, Subpart 3 of the **Transpower IM**;

22.2.8 the **EV adjustments** calculated for the **forecast MAR**; and

22.2.9 any forecast voluntary reduction in forecast **HVAC revenue** or forecast **HVDC revenue** made by **Transpower** for the **disclosure year**.

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

22.3.1 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;

22.3.2 identify each **listed project** for which **base capex** is approved by the **Commission** in the **disclosure year** if **project** assets are forecast to be **commissioned** during the period from 1 July 2015 to 30 June 2020; and

22.3.3 for each **project** identified in accordance with subclauses 22.3.1 and 22.3.2, separately detail:

(a) the forecast date, or dates, that **project** assets are forecast to be **commissioned;** and

(b) the incremental revenue impact of the forecast **commissioning** of **project** assets on each applicable future **forecast MAR**.

23. EV account summary

23.1 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:

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

(a) the opening balance of the **EV account**;

(b) the calculation of interest at the post-tax estimate corresponding to **WACC** on the opening balance of the **EV account**;

(c) the allocation of **EV account entries** to the respective **HVAC** and **HVDC EV accounts** for **customers**; and

(d) the **EV adjustments** made in the **forecast MAR** in the **relevant pricing year**;

23.1.2 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 the post-tax estimate corresponding to **WACC** on the forecast opening **EV account** balance for each **disclosure year**;

23.1.3 the source of calculation of the **EV account entries** referred to in subclause 23.1.1(c) for:

(a) the ex-post economic gain or loss calculated for the final **disclosure year** of **RCP1**;

(b) the after-tax gain or loss in respect of an **instrument that ceases to be an effective hedge** for the final **disclosure year** of **RCP1**;

(c) the after-tax gain or loss in respect of a **commodity instrument that is not an effective hedge** for the final **disclosure year** of **RCP1**;

(d) 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**;

(e) 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**;

(f) 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);

(g) the **ex-post economic gain or loss,** as calculated in accordance with clause 21.1;

(h) the after-tax **gain or loss on capital expenditure commitments**;

(i) the after-tax economic gain or loss of a **grid output adjustment**, calculated in accordance with the **grid output mechanism**;

(j) 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**;

(k) the after-tax economic loss of a **policies and processes adjustment**, calculated in accordance with Schedule B, clause B2 of the **Capex IM**;

(l) the after-tax economic loss of a **major capex overspend adjustment**, calculated in accordance with Schedule B, clause B4 of the **Capex IM**;

(m) 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

(n) the after-tax amount of a **major capex sunk costs adjustment**, calculated in accordance with clause 3.3.5 of the **Capex IM**.

23.2 For calculation of applicable **EV account entries**:

23.2.1 the **major capex incentive rate** is 33%;

23.2.2 the **base capex incentive rate** is 33%; and

23.2.3 the **base capex allowance** is:

(a) for the **disclosure year** from 1 July 2015 to 30 June 2016, $235.2 million;

(b) for the **disclosure year** from 1 July 2016 to 30 June 2017, $249.5 million;

(c) for the **disclosure year** from 1 July 2017 to 30 June 2018, $243.0 million;

(d) for the **disclosure year** from 1 July 2018 to 30 June 2019, $241.2 million; and

(e) for the **disclosure year** from 1 July 2019 to 30 June 2020, $213.1 million;

23.2.4 the **forecast CPI** used to determine the **base capex allowance** in subclause 23.2.3 is:

(a) for the **disclosure year** from 1 July 2015 to 30 June 2016, 1.80%;

(b) for the **disclosure year** from 1 July 2016 to 30 June 2017, 2.09%;

(c) for the **disclosure year** from 1 July 2017 to 30 June 2018, 2.06%;

(d) for the **disclosure year** from 1 July 2018 to 30 June 2019, 2.03%; and

(e) for the **disclosure year** from 1 July 2019 to 30 June 2020, 2.00%;

23.2.5 the **forecast FX rate** used to determine the **base capex allowance** in subclause 23.2.3 is, for the conversion of US dollars to NZ dollars:

(a) for the **disclosure year** from 1 July 2015 to 30 June 2016, 0.79;

(b) for the **disclosure year** from 1 July 2016 to 30 June 2017, 0.77;

(c) for the **disclosure year** from 1 July 2017 to 30 June 2018, 0.76;

(d) for the **disclosure year** from 1 July 2018 to 30 June 2019, 0.74; and

(e) for the **disclosure year** from 1 July 2019 to 30 June 2020, 0.72;

23.2.6 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:

(a) Euro: for each **disclosure year** in the **regulatory period**, 0.57;

(b) British pound: for each **disclosure year** in the **regulatory period**, 0.47;

(c) Australian dollar: for each **disclosure year** in the **regulatory period**, 0.79;

(d) Japanese yen: for each **disclosure year** in the **regulatory period**, 61.28;

(e) Swedish kroner: for each **disclosure year** in the **regulatory period**, 5.11; and

(f) Canadian dollar: for each **disclosure year** in the **regulatory period**, 0.71; and

23.2.7 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 as used 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

Currency	2015/16	2016/17	2017/18	2018/19	2019/20
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	-	-	-	-	-

24. EV adjustment calculations

24.1 For the purposes of calculating an update of the **forecast MAR** for a **pricing year**, and subject to clause 25, the **EV adjustments** are:

24.1.1 for each **pricing year** in **RCP2**:

(a) 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 post-tax estimate corresponding to **WACC** specified for **RCP1**; and

(b) forecast interest at the post-tax estimate corresponding to **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**.

24.1.2 for the 2016-17 **pricing year** of **RCP2**, amounts equal to:

(a) the ex-post economic gain or loss calculated for the final **disclosure year** of **RCP1**;

(b) the after-tax gain or loss in respect of an **instrument that ceases to be an effective hedge** for the final **disclosure year** of **RCP1**;

(c) the after-tax gain or loss in respect of a **commodity instrument that is not an effective hedge** for the final **disclosure year** of **RCP1**;

(d) the **major capex efficiency adjustment** for the final **disclosure year** of **RCP1**;

(e) the **major capex overspend adjustment** for the final **disclosure year** of **RCP1**;

(f) the **major capex project output adjustment** for the final **disclosure year** of **RCP1**;

(g) the **major capex sunk costs adjustment** for the final **disclosure year** of **RCP1**;

(h) 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

(i) forecast interest at the post-tax estimate corresponding to **WACC** specified for **RCP2**, calculated on each of the amounts in subclauses (a) to (h) (inclusive) for the period from 1 July 2015 to 30 June 2016.

24.1.3 for the 2016-17 to 2019-20 **pricing years**, amounts equal to:

(a) 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**;

(b) 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**;

(c) 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**;

(d) 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**;

(e) 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**;

(f) 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 subclauses 24.1.2(h) and (i); and

(g) forecast interest at the post-tax estimate corresponding to **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.

24.1.4 for the 2016-17 to 2019-20 **pricing years**, amounts equal to:

(a) 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**;

(b) interest at the post-tax estimate corresponding to **WACC** specified for **RCP1**, calculated from 1 July 2013 to 30 June 2015 on the sum of the amounts referred to in subclause (a);

(c) the **major capex adjustments** for the final **disclosure year** of **RCP1** that have not yet been recovered or returned, as applicable, to **Transpower's customers** in the **forecast MAR**; and

(d) forecast interest at the post-tax estimate corresponding to **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.

24.1.5 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.

25. Applications to spread EV adjustments

25.1 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**.

25.2 **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**.

25.3 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 the post-tax estimate corresponding to **WACC** specified for **RCP2**.

26. Independent assurance report

26.1 Where **Transpower** is required to provide an **annual compliance statement**, **Transpower** must procure an assurance report by an **assurance auditor** (the **independent assurance report**) in respect of the **annual compliance statement** that:

26.1.1 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 **assurance auditor**, either in his or her own name or that of his or her firm; and

26.1.2 is addressed to the **directors** of **Transpower** and to the **Commission** as the intended users of the assurance report.

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

26.2.1 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;

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

26.2.3 the scope and limitations of the assurance engagement;

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

26.2.5 whether the **assurance auditor** has obtained sufficient recorded information and explanations that he or she required and, if not, the information and explanations not obtained;

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

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

26.2.8 whether in the **assurance auditor's** opinion, **Transpower** has complied, in all material respects, with this determination in preparing the **annual compliance statement** and, if not, the respects in which it has not done so.

27. Planned business improvement and performance measure development initiatives

27.1 No later than 1 July 2015, **Transpower** must:

27.1.1 provide to the **Commission** information (the **initiatives plan**); and

27.1.2 publish the **initiatives plan** on its website.

27.2 The **initiatives plan** must identify:

27.2.1 the business improvement and performance development initiatives that **Transpower** plans to advance during **RCP2**;

27.2.2 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

27.2.3 key milestones, deliverables, and associated timeframes for each of the initiatives **Transpower** plans to advance.

28. Asset health pilot reporting and models

28.1 No later than the Friday of the third complete week in October after the end of each **disclosure year**, **Transpower** must provide the **Commission** with separate tables containing the information set out in Tables 5.2 to 5.4 below, determined using its **live models**, together with the required explanatory notes:

Tables

Table 5.2: Report on pilot asset health grid output measures and materiality thresholds

Asset Group	Asset Class	Asset population for the relevant disclosure year	Percentage of asset population not scored during the relevant disclosure year	Percentage of asset population with Asset Health Index >8							
				Actual % for 2017 disclosure year	Forecast % for 2018 disclosure year	Actual % for 2018 disclosure year	Forecast % for 2019 disclosure year	Actual % for 2019 disclosure year	Forecast % for 2020 disclosure year	Actual % for 2020 disclosure year	Materiality Thresholds
Lines	Tower foundations - grillage										
	Tower protective coating										
	Insulators										
Stations	Outdoor circuit breakers										
	Power Transformers										

where –

28.1.1 the forecast percentages for the 2018, 2019 and 2020 **disclosure years** (columns 6, 8 and 10) are as forecast in the disclosures due for the 2017 **disclosure year**;

28.1.2 the actual percentages for the 2017, 2018, 2019 and 2020 **disclosure years** (columns 5, 7, 9 and 11) are as assessed at the end of each of the **relevant disclosure years**; and

28.1.3 the materiality thresholds (column 12) are the thresholds under which the actual percentages that are greater than the forecast percentages would be treated as having not exceeded the forecast percentages;

Table: 5.3 Report on asset health scores

Asset Group	Asset Class	Asset population for the relevant disclosure year	Percentage of assets not scored for the relevant disclosure year	Asset health scores expressed as a percentage of the population of each asset class							
				1-4	>4-5	>5-6	>6-7	>7-8	>8-9	>9-9.5	>9.5
Lines	Tower foundations - grillage										
	Tower protective coating										
	Insulators										
Stations	Outdoor circuit breakers										
	Power Transformers										

Table 5.4: Report on forecast asset health scores assuming no asset replacement or asset refurbishment expenditure

Asset Group	Asset Class	Forecast asset health scores expressed as a percentage of the population of each asset class							
		1-4	>4-5	>5-6	>6-7	>7-8	>8-9	>9-9.5	>9.5
Lines	Tower foundations - grillage								
	Tower protective coating								
	Insulators								
Stations	Outdoor circuit breakers								
	Power Transformers								

where –

28.1.4 the forecast percentages (columns 3, 4, 5, 6, 7, 8, 9 and 10) are for the **disclosure year** following the **relevant disclosure year** assuming there will be no **asset replacement** or **asset refurbishment** expenditure during that **disclosure year**;

Table 5.5: Report on forecasts of asset replacement & asset refurbishment expenditure rates and total expenditure for RCP2

Asset Group	Asset Class	Asset population for the relevant disclosure year	Forecasts of the rate of asset replacement & asset refurbishment for the whole of RCP2 expressed as a percentage of the relevant asset population (total RCP2 replacements divided by the total population)	Forecasts of total asset replacement & asset refurbishment expenditure for the whole of RCP2	Actual rate of asset replacement & asset refurbishment for the whole of RCP2 expressed as a percentage of the relevant asset population (total RCP2 replacements divided by the total population)	Actual total asset replacement & asset refurbishment expenditure for the whole of RCP2
			%	$	%	$
Lines	Tower foundations - grillage					
	Tower protective coating					
	Insulators					
Stations	Outdoor circuit breakers					
	Power Transformers					

where -

28.1.5 the forecast rates of **asset replacement** and **asset refurbishment** (column 4) and forecast total **asset replacement** and **asset refurbishment** expenditure (column 5) must be disclosed in each of the disclosures due for the 2017, 2018 and 2019 **disclosure years**; and

28.1.6 the actual rates of **asset replacement** and **asset refurbishment** (column 6) and actual total **asset replacement** and **asset refurbishment** expenditure (column 7) must be disclosed in the disclosures due for the 2020 **disclosure year**; and

Required Explanatory Notes

28.1.7 a description of how the scores in the asset health index in clause 17.2.1 and Tables 5.2 to 5.4 relate to the health of the assets, for example, "as new condition", "at end of life", "should be replaced", or "high asset related risk";

28.1.8 an explanation of differences between the forecasts and actuals in Table 5.2 and Table 5.5;

28.1.9 an explanation for any changes to the materiality thresholds in Table 5.2 where the changes occurred between consecutive **disclosure years**;

28.1.10 an explanation for any changes in the forecasts in Table 5.5 where the changes occurred between consecutive **disclosure years**;

28.1.11 an explanation for any material changes to the **live models**, including the reasons for the changes and an overview of the effect of the changes on the information provided in tables 5.2 to 5.5, where the changes occurred between consecutive **disclosure years**.

28.2 No later than 1 July 2015, **Transpower** must:

28.2.1 provide to the **Commission** information (the **asset health models plan**); and

28.2.2 publish the **asset health models plan** on its website.

28.3 The **asset health models plan** must identify:

28.3.1 the asset health models (for each **base capex category**) that **Transpower** plans to advance during **RCP2**;

28.3.2 key milestones, deliverables, and associated timeframes for each of the asset health models **Transpower** plans to advance during **RCP2**; and

28.3.3 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.

28.4 For the purposes of clauses 17.2 and 28.1 **live model** means the relevant asset health models used by **Transpower** for asset management purposes.

28.5 For the purposes of clause 28.1 **relevant disclosure year** means **disclosure year** being reported on.

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

29.1 exempt **Transpower** from any of the information disclosure requirements contained in clauses 17.3, 20.1.8, 20.1.17 and 28.1 and 28.2 of this determination, for a period and on such terms and conditions as the **Commission** specifies in the notice; and

29.2 amend or revoke any such exemption.

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 the second Wednesday in November 2015**	**Incremental update to forecast MAR determined not later than the second Wednesday in November 2016**	**Incremental update to forecast MAR determined not later than the second Wednesday in November 2017**	**Incremental update to forecast MAR determined not later than the second Wednesday in 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	$881.6 million	N/A	N/A	N/A	N/A	$881.6 million
31 March 2017 (Year 2)	30 June 2017	$918.6 million	$(7.0) million	N/A	N/A	N/A	$911.7 million
31 March 2018 (Year 3)	30 June 2018	$951.8 million	$0.4 million	$38.4 million	N/A	N/A	$990.7 million
31 March 2019 (Year 4)	30 June 2019	$949.4 million	$0.5 million	$0.00 million	-$17.8 million	N/A	$932.1 million
31 March 2020 (Year 5)	30 June 2020	$956.8 million	$0.5 million	$0.00 million	-$18.6 million	$14.3 million	$953 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**
Post-tax **WACC**	B	The post-tax estimate corresponding to **WACC**
Interest on **opening EV balance**	**C = A x B**	**Opening EV account balance** multiplied by the post-tax estimate corresponding to **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** relating to the final **disclosure year** of **RCP1**	F	The **EV adjustments** for the 2016-17 **pricing year** relating to the final **disclosure year** of **RCP1** as specified in clauses 24.1.2(a) – (h)
EV adjustments for the 2016-17 to 2019-20 **pricing years** relating to **RCP2**	G	The **EV adjustments** for the 2016-17 to 2019-20 **pricing years** for **RCP2** as specified in clauses 24.1.3(a) – (f)
EV adjustments for the 2016-17 to 2019-20 **pricing years** relating to the North Island Grid Upgrade Project	H	The **EV adjustments** for the 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)
EV adjustments for the 2016-17 to 2019-20 **pricing years** relating to the final **disclosure year** of **RCP1** that have not yet otherwise been recovered or returned	I	The **EV adjustments** for the 2016-18 and 2019-20 **pricing years** relating to the **final disclosure year** of **RCP1** as specified in clause 24.1.4(c)
Closing **EV account** balance	**J = A + C + D - E – F – G – H - I**	**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 the second Wednesday in November 2015	Incremental approved listed project base capex determined not later than the second Wednesday in November 2016	Incremental approved listed project base capex determined not later than the second Wednesday in November 2017	Incremental approved listed project base capex determined not later than the second Wednesday in 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	$235.2 million
30 June 2017	$249.5 million	$XX.X million	N/A	N/A	N/A	$249.5 million
30 June 2018	$242.0 million	$XX.X million	$XX.X million	$1.0 million	N/A	$243.0 million
30 June 2019	$231.6 million	$XX.X million	$XX.X million	$9.6 million	N/A	$241.2 million
30 June 2020	$213.1 million	$XX.X million	$XX.X million	$0.0 million	$XX.X million	$213.1 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	$A1 / (1 + A1)^{163/365}$	$B \times A1 / (1 + A1)^{163/365}$
WACC return on forecast VCA_{JUL}	Forecast sum of **value of commissioned asset** for the month in the **disclosure year**	C1	$((1 + A1)^{349.5/365} - 1) / (1 + A1)^{163/365}$	$C1 \times ((1 + A1)^{349.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{AUG}		C2	$((1 + A1)^{318.5/365} - 1) / (1 + A1)^{163/365}$	$C2 \times ((1 + A1)^{318.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{SEP}		C3	$((1 + A1)^{288/365} - 1) / (1 + A1)^{163/365}$	$C3 \times ((1 + A1)^{288/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{OCT}		C4	$((1 + A1)^{257.5/365} - 1) / (1 + A1)^{163/365}$	$C4 \times ((1 + A1)^{257.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{NOV}		C5	$((1 + A1)^{227/365} - 1) / (1 + A1)^{163/365}$	$C5 \times ((1 + A1)^{227/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{DEC}		C6	$((1 + A1)^{196.5/365} - 1) / (1 + A1)^{163/365}$	$C6 \times ((1 + A1)^{196.5/365} - 1) / (1 + A1)^{163/365}$
WACC return on forecast VCA_{JAN}		C7	$((1 + A1)^{165.5/365} - 1) / (1 + A1)^{163/365}$	$C7 \times ((1 + A1)^{165.5/365} - 1) / (1 + A1)^{163/365}$

FORECAST MAR BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR FORECAST INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO FORECAST NOMINAL VALUE INPUT	FORECAST MAR BUILDING BLOCK VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC return on forecast VCA_{FEB}	Forecast sum of **value of commissioned asset** for the month in the **disclosure year**	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 VCA_{MAR}		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 VCA_{APL}		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 VCA_{MAY}		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 VCA_{JUN}		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** as specified in clause 11.1	F	$(1 + A1)^{19/365}$	$F \times (1 + A1)^{19/365}$
Forecast tax	The forecast **regulatory tax allowance**, calculated in accordance with clause 22.2.7	G	$(1 + A1)^{19/365}$	$G \times (1 + A1)^{19/365}$
Forecast TCSD	The forecast **term credit spread differential allowance**, calculated in accordance with Part 3, Subpart 5 of the **Transpower IM**	H	$(1 + A1)^{19/365}$	$H \times (1 + A1)^{19/365}$
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	$(1 + A1)^{19/365}$	$K \times (1 + A1)^{19/365}$
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	$(1 + A1)^{19/365}$	$L \times (1 + A1)^{19/365}$
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	$(1 + A1)^{19/365}$	$M \times (1 + A1)^{19/365}$

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

WASH-UP BUILDING BLOCK	DESCRIPTION OF NOMINAL VALUE INPUT TO BE APPLIED	FORMULA FOR INCOME/ EXPENDITURE/ OTHER NOMINAL VALUES	CASH FLOW TIMING FACTOR TO APPLY TO NOMINAL VALUE INPUT	WASH-UP VALUE
[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]
WACC return on VCA_{MAR}	Sum of **value of commissioned asset** for the month in the **disclosure year**	C9	$(1 + A1)^{106.5/365} - 1$	C9 x $((1 + A1)^{106.5/365} - 1)$
WACC return on VCA_{APL}		C10	$(1 + A1)^{76/365} - 1$	C10 x $((1 + A1)^{76/365} - 1)$
WACC return on VCA_{MAY}		C11	$(1 + A1)^{45.5/365} - 1$	C11 x $((1 + A1)^{45.5/365} - 1)$
WACC return on VCA_{JUN}		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** in the **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** in the **disclosure year**	E	$(1 + A1)^{182/365} - 1$	E x $((1 + A1)^{182/365} - 1)$
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	$(1 + A1)^{163/365}$	$H \times (1 + A1)^{163/365}$
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	$(1 + A1)^{163/365}$	$I \times (1 + A1)^{163/365}$
Transpower adjustment to recognise voluntarily foregone revenues	Amount of **HVAC revenue** and **HVDC revenue** permanently foregone by **Transpower**	J	$(1 + A1)^{163/365}$	$J \times (1 + A1)^{163/365}$
Other regulated income	Sum of **other regulated income**	K	$(1 + A1)^{182/365}$	$K \times (1 + A1)^{182/365}$
Gain/(loss) on disposal of assets	Sum of disposal proceeds less **opening RAB value** for **disposed assets**	L	$(1 + A1)^{182/365}$	$L \times (1 + A1)^{182/365}$
Total income	Sum of wash-up values for formulas H to L			Sum M = sum of wash-up values H, J, K and L, 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** as specified in clause 11.1, adjusted for any disparity between the **forecast CPI** specified in clause 11.3 and actual **CPI**	N	$(1 + A1)^{182/365}$	$N \times (1 + A1)^{182/365}$
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	$(1 + A1)^{182/365}$	$P \times (1 + A1)^{182/365}$
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 21.1.8	R	$(1 + A1)^{182/365}$	$R \times (1 + A1)^{182/365}$
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)			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**	U		U

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]
	MAR			
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
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	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

Category	Description	Points of service	
		HOR0331 Hororata 33 kV	HWA1101 Hawera (A)
		TMK0331 Temuka	KBY0661 Kimberley
		HOR0661 Hororata 66 kV	MNG0331 Mangere 33 kV
		TNG0111 Tangiwai 11 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	GYM0661 Greymouth
		MTM0331 Mt Maunganui 33 kV	TGA0111 Tauranga 11 kV
		ASB0661 Ashburton 66 kV	GYT0331 Greytown
		MTN0331 Marton	TIM0111 Timaru
		BAL0331 Balclutha	HAM0551 Hamilton 55 kV
		MTO0331 Maungaturoto	TKU0331 Tokaanu (A)
		BDE0112 Brydone	HAY0331 Haywards 33 kV
		NMA0331 North Makarewa	TMI0331 Te Matai
		BLN0331 Blenheim	HKK0661 Hokitika
		NPL0331 New Plymouth 33 kV (A)	TMN0551 Taumarunui
		NPL0332 New Plymouth 33 kV (B)	HLY0331 Huntly
		BOB0331 Bombay 33 kV	TNG0551 Tangiwai 55 kV
		NSY0331 Naseby	HTI0331 Hangatiki
		BOB1101 Bombay 110 kV	UHT0331 Upper Hutt
		OAM0331 Oamaru	KAI0111 Kaiapoi
		BPE0551 Bunnythorpe 55 kV	WDV0111 Woodville
		ORO1101 Orowaiti	KAW0111 Kawerau (A)
		CML0331 Cromwell	WEL0331 Wellsford
		OWH0111 Owhata	KIN0111 Kinleith 11 kV
		CST0331 Carrington St	WGN0331 Wanganui
		PAO1101 Piako	KMO0331 Kaitimako
		CUL0331 Culverden	WKO0331 Waikino
		PEN0332 Penrose 33 kV (B)	KPU0661 Kopu
		CYD0331 Clyde	WPR0661 Waipara 66 kV
		PNI0331 Pauatahanui	KUM0661 Kumara

Category	Description	Points of service	
		DOB0331 Dobson	WPT0111 Westport
		RDF0331 Redclyffe	LTN0331 Linton
		DVK0111 Dannevirke	WPW0331 Waipawa 33 kV
		RFN1101 Reefton	MHO0331 Mangahao
		FHL0331 Fernhill	MLG0111 Melling 11kV
		ROT0111 Rotorua 11 kV	WRK0331 Wairakei
		FKN0331 Frankton (A)	MLG0331 Melling 33 kV
		ROT0331 Rotorua 33 kV	WTK0331 Waitaki
		FKN0332 Frankton (B)	WTU0331 Whakatu
		SBK0331 Southbrook	MST0331 Masterton
		SDN0331 South Dunedin	SWN0251 Southdown 25 kV
		GLN0332 Glenbrook (A)	HWB1101 Halfway Bush 110 kV
		STK0331 Stoke	TUI1102 Tuai
		GOR0331 Gore	STK0061 Stoke
		STU0111 Studholme	
Generator	Point of service that connects generation customers	ARI1101 Arapuni	THI2201 Te Mihi
		OHK2201 Ohakuri	MAN2201 Manapouri
		ATI2201 Atiamuri	TKB2201 Tekapo B
		OKI2201 Ohaaki	MAT1101 Matahina (A)
		AVI2201 Aviemore	TKU2201 Tokaanu
		OTA1101 Otahuhu A 110 kV	MAT1102 Matahina (B)
		BEN2201 Benmore 220 kV	TUI1101 Tuai
		OTA2201 Otahuhu C 220 kV	MTI2201 Maraetai
		ROT1101 Rotorua 110 kV	TWC2201 Tararua Windfarm C
		COL0661 Coleridge	NAP2201 Nga Awa Purua
		ROX1101 Roxburgh 110 kV	WDV1101 Te Apiti Wind Farm
		CYD2201 Clyde	NAP2201 Ngatamariki
		ROX2201 Roxburgh 220 kV	WHI2201 Whirinaki
		HLY2201 Huntly	OHA2201 Ohau A
		RPO2201 Rangipo	WKM2201 Whakamaru

Category	Description	Points of service	
		HWA1102 Hawera (B)	OHB2201 Ohau B
		SFD2201 Stratford	WRK2201 Wairakei
		KAW1101 Kawerau Geo	OHC2201 Ohau C
		SWN2201 Southdown	WTK0111 Waitaki
		KPO1101 Karapiro	
N-security	Point of service that is served by a single line/transformer	ABY0111 Albury	TMU0111 Te Awamutu
		NPK0331 National Park	GLN0331 Glenbrook (B)
		APS0111 Arthurs Pass	TRK0111 Tarukenga
		OKN0111 Ohakune (B)	HIN0331 Hinuera
		ARA2201 Aratiatia	TUI0111 Tuai
		OKN0112 Ohakune (A)	HWA0332 Hawera (B)
		ARG1101 Argyle	TWZ0331 Twizel (A)
		ONG0331 Ongarue	KIK0111 Kikiwa
		ATU1101 Atarau	TWZ0332 Twizel (B)
		OTI0111 Otira	KIN0331 Kinleith 33 kV
		BPD1101 Bells Pond	WAI0111 Waiotahi
		BPT1101 BlackPoint	KPA1101 Kaponga
		PEN0251 Penrose 25 kV	WHI0111 Whirinaki
		BRK0331 Brunswick	MCH0111 Murchison
		PPI2201 Poihipi	WPA2201 Waipapa
		BWK1101 Berwick	MER0331 Meremere
		TKA0111 Tekapo A	WPR0331 Waipara 33 kV
		CLH0111 Castle Hill	MKE1101 McKee
		TKA0331 Tekapo A	WPW0111 Waipawa 11 kV
		COL0111 Coleridge	WVY0111 Waverley
		TKH0111 Te Kaha	MTR0331 Mataroa
		CUL0661 Culverden	WWD1101 West Wind

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

Circuits	
Clyde-Cromwell-Twizel 1 and 2	Atiamuri-Whakamaru 1
Ohakuri-Wairakei 1	Invercargill- Manapouri 2
Manapouri-North Makarewa 1,2 and 3	Te Mihi-Wairakei 1
Te Mihi-Whakamaru 1	Tekapo B-Twizel 1
North Makarewa-Tiwai 1 and 2	Pakuranga-Whakamaru 1 and 2
Bunnythorpe-Tokaanu 1 and 2	(comprising Brownhill-Whakamaru 1 and
Clyde-Roxburgh 1 and 2	2 and Brownhill-Pakuranga 1 and 2)
Rangipo-Tangiwai 1	Islington-Tekapo B 1
Ashburton-Timaru-Twizel 1 and 2	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	Sum of **recoverable costs** under the incremental rolling incentive scheme in accordance with clause 3.1.3(1)(a) of the **Transpower IM**
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 in accordance with clause 3.1.3(1)(c) of the **Transpower IM**
Operating costs incurred as part of a **major capex project**	H	The amount of any **operating costs** that are **recoverable costs** in accordance with clause 3.1.3(1)(d) of the **Transpower IM**
Net additional **operating costs** incurred in responding to a **catastrophic event**	I	The amount of **recoverable costs** in accordance with clause 3.1.3(1)(e) of the **Transpower IM**
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

Line Name (Section)	Estimated Cost	
	RCP2 Cost ($m)	Project Total Cost RCP2 and later ($m)
BPE-WIL A (WIL-JFD section)	49	49
OTB-HAY A (Churton Park Section 45A-68)	28	28
CPK-WIL B (Full)	26	26
BRK-SFD B (Full)	11	65
BPE-WIL A (BPE-JFD section)	4	107
Total estimated cost	118	275

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
assurance auditor	Transpower IPP 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

Defined Term	Location of Definition
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 IPP determination
found asset	Transpower IM determination

Defined Term	Location of Definition
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 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

Defined Term	Location of Definition
interruption	Transpower IPP determination
listed project	Capex IM determination
live model	Transpower IPP determination
lost asset	Transpower IM determination
major capex	Capex IM determination
major capex adjustments	Transpower IPP 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
measure of grid performance	Capex IM determination
minor capital expenditure	Transpower IPP determination
new investment contract	Transpower 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 amount	Transpower IM determination
other regulated income	Transpower IPP determination
outage	Transpower IPP determination

Defined Term	Location of Definition
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 IPP determination
regulatory tax allowance	Transpower IPP 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	Commerce Act
Transpower IM	Transpower IPP determination

Defined Term	Location of Definition
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 IPP determination
working day	Commerce Act
works under construction	Transpower IM determination