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Public version

## **Transpower Capital Expenditure Input Methodology Determination 2012 (Principal Determination)**

This consolidated version of the principal determination incorporates all amendments contained in relevant amendments determinations as at 29 January 2020.

Publication date: 29 January 2020

Commerce Commission

Wellington, New Zealand

## Status of this document

- This consolidated version of the Transpower Capital Expenditure Input Methodology 2012 (principal determination) is not the official version of the principal determination and is provided for reference and convenience purposes only.
- Official versions of Commission determinations have a decision number and are signed by a member of the Commission.
- The official versions of the principal determination and the relevant amendments determinations that make up the consolidated version of the principal determination are available on the Commission's website: <http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/transpower-input-methodologies/>.
- The official versions of 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.

## **Commencement and timing of application of amendments**

1. This consolidated version of the principal determination updates the consolidated version of the principal determination published on 1 June 2018. It includes all amendments made in the Transpower Capital Expenditure Input Methodology Amendments Determination 2019 [2019] NZCC 11 that came into force on 28 August 2019, Transpower Capital Expenditure Input Methodology Amendments Determination (No. 2) 2019 [2019] NZCC 17 that came into force on 13 November 2019 (2019 amendments determinations) and those made in any relevant earlier amendment determinations.
2. The amendments in the 2019 amendments determinations apply for any IPP determination in force from 1 April 2020 onwards.
3. Users of this consolidated version of the principal determination will need to check whether or not the amendments made to the principal determination by the 2019 amendments determinations and 2018 amendments determination are applicable whenever they make use of this consolidated version of the principal determination. If the amendments made by the 2019 amendments determinations and 2018 amendments determination do not apply yet, users should use the consolidated version of the principal determination published on 5 March 2015.

<b>Determination history</b>		
<b>Determination date</b>	<b>Decision number</b>	<b>Determination name</b>
31 January 2012	[2012] NZCC 2	Transpower Capital Expenditure Input Methodology Determination ('principal determination')
2 February 2012	n/a	Error correction: repaired reference links in clause D1(2)(b)
28 August 2014	[2014] NZCC 22	Transpower Input Methodologies Amendments Determination 2014
27 November 2014	[2014] NZCC 34	Transpower Input Methodologies Amendments Determination 2014 (No. 2)
5 February 2015	[2015] NZCC 3	Transpower Input Methodologies Amendment Determination 2015
25 May 2018	[2018] NZCC 8	Transpower Capital Expenditure Input Methodology Amendments Determination 2018
28 August 2019	[2019] NZCC 11	Transpower Capital Expenditure Input Methodology Amendments Determination 2019
13 November 2019	[2019] NZCC 17	Transpower Capital Expenditure Input Methodology Amendments Determination (No. 2) 2019

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## PART 1 GENERAL PROVISIONS

### 1.1.1 Title

This determination is the Transpower Capital Expenditure Input Methodology Determination.

### 1.1.2 Application

The **input methodology** in this determination applies to **electricity transmission services** in relation to **IPP** regulation under Subpart 7 of Part 4 of the **Act**.

### 1.1.3 Commencement

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

### 1.1.4 Transitional provisions

(1) A **major capex project** approved by-

- (a) the Electricity Commission under Part F of the Electricity Governance Rules 2003; or
- (b) the **Commission** in accordance with s 54R(3)(b) of the **Act**,

will be treated for the purposes of this determination as a **major capex project** that has been approved by the **Commission** under clause 3.3.5.

(2) Where subclause (1) applies, in treating the approval by the Electricity Commission or the **Commission** in question as an approval under clause 3.3.5-

- (a) the quantum of approved **major capex** is-
  - (i) the **major capex allowance**; or
  - (ii) **maximum recoverable costs**;

to the extent that the **major capex** relates to a **transmission investment** or **non-transmission solution** respectively;

- (b) any date specified as part of the approval as that on which the approval expires is the **approval expiry date**;
- (c) the quantum of any required outputs or deliverables are **approved major capex project outputs**;
- (d) any estimated cost adopted as part of approving the **major capex project** where the probability of the actual cost being lower than that estimated is 50% is the **P50**;
- (e) any forecast **commissioning date** of the **major capex project** adopted as part of approving the **major capex project** is the **commissioning date assumption**;

- (f) any forecast **completion date** in respect of a **non-transmission solution** adopted as part of approving the **major capex project** is the **completion date assumption**; and
- (g) any specification of the attribution of **major capex** in respect of a **non-transmission solution** as **recoverable costs** to one or more **disclosure years** is the **recovery scheme**.

#### 1.1.5 Interpretation

- (1) In this determination-
  - (a) unless stated otherwise, references to Parts are to named and numbered parts of the determination;
  - (b) references to subparts are to subparts within the same part in which the reference is made;
  - (c) unless the context otherwise requires, a word which denotes the singular also denotes the plural and vice versa;
  - (d) unless stated otherwise, any reference to an allowance, amount, cost, rate, sum or value is a reference to an allowance, amount, cost, rate, sum or value calculated in relation to **Transpower** in respect of a **disclosure year**; and
  - (e) any reference to a period of time must be interpreted in accordance with section 35 of the Interpretation Act 1999.
- (2) In this determination, including in the schedules, the words or phrases in bold type bear the following meanings:

### A

**Act** means the Commerce Act 1986;

**actual FX rate** means, in respect of each relevant currency, weighted average exchange rate obtained by **Transpower** in its foreign currency transactions for the **base capex** or **major capex** in question;

**Adjusted low incentive rate base capex allowance** means the value  $b^*$  calculated as specified in clause B1(3);f

**adjusted major capex allowance** means the value  $b$  calculated as specified in clause B3(1);

**adjusted standard incentive rate base capex allowance** means the value  $b$  calculated as specified in clause B1(2);

**ancillary service** has the same meaning as ‘ancillary service’ is defined in the **code**;

**annual compliance statement** has the meaning specified in the **IPP determination**;

**application submission date** means the date by which **Transpower** plans to submit a **major capex proposal**;

**approval expiry date** means date on which the approval given by the **Commission** in respect of a **major capex project** under clause 3.3.5 expires;

**approval timeframe** means a timeframe for the **Commission** to approve a **major capex project** or **staging project** under clause 3.3.5 or amend an existing approval of an **approved major capex project** under clause 3.3.6;

**approved major capex project** means a **major capex project** or **staging project** approved by the **Commission**;

**approved major capex project outputs** means the **grid outputs** applying to an **approved major capex project**;

**asset capability grid output measure** means a **grid output measure** that-

- (a) quantifies the capability or utilisation of the **grid**, whether at the level of-
  - (i) individual assets;
  - (ii) an aggregation of assets, such as by substation; or
  - (iii) the **grid**; and
- (b) reflects the output or benefit (where 'benefit' may include a reduction in risk) delivered by investment in additional capacity to **supply electricity transmission services**;

**asset health grid output measure** means a **grid output measure** that-

- (a) quantifies the fitness for service of the **grid**, whether at the level of-
  - (i) individual assets;
  - (ii) an aggregation of assets, such as by substation; or
  - (iii) the **grid**; and
- (b) reflects the output or benefit (where 'benefit' may include a reduction in risk) delivered by expenditure-
  - (i) on **asset refurbishment**;
  - (ii) on **asset replacement**; or
  - (iii) which is **operating expenditure**;

**asset performance measure** means a **grid output measure** that quantifies the performance, reliability or availability of the **grid**, whether at the level of-

- (a) individual assets;
- (b) an aggregation of assets, such as by substation; or
- (c) the **grid**;

**asset refurbishment** means work driven by **Transpower's policies** on a **project** or **programme** that refurbishes an asset, or sub-component of an asset, and-

- (a) materially extends its original economic life; and
- (b) does not improve its original service potential,

save that it excludes any work to ensure that the asset or sub-component is able to perform its designated function for its normal estimated operating life;

**asset replacement** means work driven by **Transpower's policies** on a **project** or **programme** that replaces substantially all of an asset, or sub-component of an asset, where the replacement-

- (a) is required due to the condition or performance of that asset; and
- (b) does not materially improve the original service potential beyond that attributable to using modern equivalent assets;

## **B**

**base capex** means:

- (a) except for the purposes of clause B1 of Schedule B, **capital expenditure** that-
  - (i) is incurred in relation to one or more of:
    - (A) **asset replacement**;
    - (B) **asset refurbishment**;
    - (C) **business support**; and
    - (D) **information system and technology assets**; or
  - (ii) is not forecast to be **major capex**; and
- (b) for the purposes of clause B1 of Schedule B, **capital expenditure** as for paragraph (a), but excluding any **capital expenditure** that is incurred in relation to any **right-of-use asset**;

**base capex allowance adjustment mechanism** means a mechanism specified in an **IPP determination** which will adjust the **standard incentive rate base capex allowance** in respect of one or more **E & D base capex projects** or **E & D base capex programmes** upwards by pre-set amounts once defined thresholds are met based on one or more drivers of **base capex**;

**base capex allowances** mean the **low incentive rate base capex allowance** and **standard incentive rate base capex allowance**;

**base capex category** means description of a category of **base capex** suitable for grouping **programmes** or **projects** relating to **base capex** as of similar type;

**base capex expenditure adjustment** means the amount calculated as specified in clause B1(1);

**base capex low incentive rate** means 15%;

**base capex programme** means a **programme** of **base capex**;

**base capex project** means a **project** of **base capex**;

**base capex proposal** means information submitted by **Transpower** to the **Commission** for the purpose of the **Commission** determining the things specified in clause 2.2.2;

**base capex standard incentive rate** means the rate calculated in accordance with the following formula-

$$\left(1 - \left(\frac{1}{(1+x)^6}\right)\right) \times 100\%$$

where:

'x' is the 67th percentile estimate of vanilla **WACC** determined in accordance with clause 3.5.5 of the Transpower Input Methodologies Determination 2010;

**base capex threshold** means \$20 million;

**business support** means costs not directly incurred in relation to the **grid** and incurred in relation to-

- (a) **information system and technology assets**;
- (b) office buildings;
- (c) depots and workshops;
- (d) office furniture and equipment;
- (e) motor vehicles; or
- (f) tools, plant and machinery;

## C

**calculation period** means 20 year period commencing on the **commissioning date** of the last asset to be delivered by the **proposed investment**, save that where significant **electricity market benefit or cost elements** and **project costs** are expected to-

- (a) cease to arise or be incurred during that period; or
- (b) arise or be incurred thereafter,

it means the period commencing on the **commissioning date** of the last asset delivered by the **proposed investment** and terminating on the last date that significant **electricity market benefit or cost elements** and **project costs** are expected to arise or be incurred;

**cap** means specified **grid output** which limits the amount of positive revenue adjustment arising from the calculation of the **grid output adjustment** through the application of the **grid output mechanism**;

**capital expenditure** or **capex** means costs that-

- (a) have been incurred in the acquisition or development of an asset that is, or is intended to be, **commissioned**; and
- (b) are intended to be included in the **value of commissioned asset**;

**closing RAB value** means the value calculated in accordance with clause 2.2.3(4) of the Transpower Input Methodologies Determination 2010, as modified pursuant to clause 3.3.1 of that determination;

**code** has the same meaning as 'code' is defined in the Electricity Industry Act 2010;

**collar** means specified **grid output** which limits the amount of negative revenue adjustment arising from the calculation of the **grid output adjustment** through the application of the **grid output mechanism**;

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

**commissioned** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

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

**commissioning date assumption** means the assumption made as to the **commissioning date** of the last asset to be delivered by an **approved major capex project**;

**committed project** has the meaning specified in clause D8(1);

**competition effects** has the meaning specified in clause D5;

**completion** means the provision of all services forecast to be delivered by the **non-transmission solution**;

**completion date** means the date that a **non-transmission solution** achieves **completion**;

**completion date assumption** means the assumption made as to the **completion date** for a **non-transmission solution**;

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

**CPI** means-

- (a) subject to paragraph (c), in respect of the December 2010 quarter and subsequent quarters, the consumer price index stipulated in the 'All Groups Index SE9A' as published by Statistics New Zealand;
- (b) subject to paragraph (c), in respect of each quarter prior to the December 2010 quarter, the same index as described in paragraph (a) multiplied by 1.02; and

- (c) in respect of quarters prior to any quarter in which the rate of **GST** is amended after this determination comes into force, the same index as described in paragraph (a), multiplied by the Reserve Bank of New Zealand's forecast change in that index (expressed as a decimal) arising from the amendment;

## D

**decommissioned asset** has the meaning specified in clause D8(2);

**demand and generation scenario** has the meaning specified in clause D3(1);

**demand and generation scenario variation** has the meaning specified in clause D3(2);

**director** means an individual occupying the position of director in the company, by whatever name that position is called;

**disclosure year** means a 12 month period ending on 30 June;

*Example: 'disclosure year 2012' means 12 month period ending on 30 June 2012;*

**discount rate** has the meaning specified in clause D6(3);

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

## E

**E & D base capex** means **base capex**-

- (a) that is not in relation to:
- (i) **asset replacement**;
  - (ii) **asset refurbishment**;
  - (iii) **business support**; or
  - (iv) **information system and technology assets**; and
- (b) is not funded under a **new investment contract**;

**E & D base capex project** means a **project** of **E & D base capex**;

**E & D base capex programme** means a **programme** of **E & D base capex**;

**electricity market benefit or cost element** has the meaning specified in clause D4(1);

**electricity transmission services** means electricity lines services (as 'electricity lines services' is defined in s 54C of the **Act**) supplied by **Transpower**;

**exempt major capex** means the amount of the **major capex allowance** to which the **major capex incentive rate** does not apply which may be expressed by reference to a category of expenditure within a **major capex project** or **staging project**, as determined by the **Commission** under clause 3.3.5(7);

**existing asset** has the meaning specified in clause D8(3);

**expected net electricity market benefit** has the meaning specified in clause D2(1);

## F

**forecast CPI** means **CPI**, unless **CPI** does not apply to the period in question, in which case it means the most recent **CPI** extended by-

- (a) in the case of a quarter for which a forecast of the annual percent change in the headline **CPI** contained in the current Monetary Policy Statement issued by the Reserve Bank of New Zealand has been made, that forecast; and
- (b) in respect of later quarters, the forecast last applying under paragraph (a) adjusted such that an equal increment or decrement made to that forecast for each of the following three years results in the forecast for the last of those years being equal to the target midpoint for the change in headline **CPI** set out in the Monetary Policy Statement referred to in paragraph (a);

**forecast FX rate** means, in respect of each relevant currency, forecast weighted average exchange rate that **Transpower** can reasonably be expected to obtain in its foreign currency transactions for the **base capex** or **major capex** in question;

## G

**generator** has the same meaning as defined in the **code**;

**good electricity industry practice** has the same meaning as specified in the **code**;

**grid** has the same meaning as specified in the **code**;

**grid output** means the output in respect of a particular **grid output measure**;

**grid output adjustment** means the amount calculated as specified in clause B2;

**grid output incentive rate** means the amount of money that **Transpower** may recover or must bear, as the case may be, per unit of the **grid output measure**, as a result of the quantum of difference between the **grid output** for a **disclosure year** and the **grid output target**, which rate will be expressed as a-

- (a) positive number where an increase in **grid output** is intended to result in an increase in revenue; and
- (b) negative number where an increase in **grid output** is intended to result in a decrease in revenue;

**grid output measure** means a measure that quantifies the output or benefit (where 'benefit' may include reduction in risk) delivered by the **grid**, investment in the **grid**, or expenditure facilitating or enabling future investment in the **grid**;

**grid output mechanism** means the formula by which the **grid output adjustment** is calculated, as specified in the table in clause B2(1);

**grid output target** means the quantum of output at which the **grid output adjustment** will be nil;

**grid reliability standards** has the same meaning as specified in Schedule 12.2 to the code;

**GST** has the same meaning as defined in s YA 1 of the Income Tax Act 2007 as amended from time to time, and any equivalent legislation that supplements or replaces that definition;

## I

**ID determination** means an information disclosure determination in relation to **Transpower** made by the **Commission** under s 52P of the **Act**;

**identified programmes** means the **base capex projects** and **base capex programmes** forecast to be undertaken by **Transpower** during the next **regulatory period** that are selected by reference to the categories or criteria agreed or specified under clause 2.2.1;

**information system and technology assets** means assets used in operating or supporting the operation of the **grid**, including-

- (a) **Transpower's** telecommunications network;
- (b) **SCADA**; and
- (c) devices which provide data to **SCADA** and **grid** systems;

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

**integrated transmission plan** means collection of **documents** describing **Transpower's** forecast expenditure and outputs that complies with clause 7.2.1;

**investment need** means need for **grid** investment;

**investment option** means a technically feasible solution, including a **non-transmission solution**, designed to facilitate or meet a specific **investment need**, other than an option fully funded under a **new investment contract**;

**investment test** means the test specified in Schedule D Division 1;

**IPP** means individual price-quality path;

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

**ITP narrative** means a high level description, that includes the information specified in clause E2;

**ITP supporting documents** means the **documents** specified in clause E3;

## L

**listed project** means a **base capex project** or **base capex programme** that is specified as a 'listed project' under clause 2.2.2(6);

**low incentive rate base capex allowance** means the amount subject to the **base capex low incentive rate** as determined under clause 2.2.2(1)(a);

**low incentive rate base capex expenditure adjustment** means the amount calculated as specified in clause B1(3);

**low incentive rate base capex project** means a **base capex project** or **base capex programme** that is specified as a 'low incentive rate base capex project' as determined under clause 2.2.2(2)(a);

## M

**major capex** means expenditure that-

- (a) is incurred to:
  - (i) meet the **grid reliability standards**; or
  - (ii) provide a **net electricity market benefit**; and
- (b) is forecast to be-
  - (i) **capital expenditure** included in a **project** or **programme** whose aggregate forecast **capital expenditure** exceeds the **base capex threshold** (subject to clause 3.3.3(2)); or
  - (ii) expenditure on a **non-transmission solution**; and
- (c) is not incurred in relation to any of the following things:
  - (i) **asset replacement**;
  - (ii) **asset refurbishment**;
  - (iii) **business support**; or
  - (iv) **information system and technology assets**;

**major capex allowance** means the amount of **major capex** approved by the **Commission** in relation to an **approved major capex project**;

**major capex expenditure and output adjustment** means the amount calculated by the **Commission** as specified in clause B3;

**major capex incentive rate** means 15% or an alternative rate specified by the **Commission** in respect of an **approved major capex project**;

**major capex project** means a **project** of **major capex** undertaken to address or enable a specific **investment need** to be met, which may be either or both, a **transmission investment** or **non-transmission solution**;

**major capex project outputs** means the **grid outputs** applying in respect of a **major capex project** or **staging project** contained in a **major capex proposal**;

**major capex project (staged)** means a **major capex project** consisting of two or more **projects** and includes any **major capex project** that is a continuation of an existing **major capex project (staged)**;

**major capex proposal** means a written application to the **Commission** for approval of a **major capex project** or one or more **staging projects** of a **major capex project (staged)**;

**major capex sunk costs adjustment** means the amount calculated by the **Commission** as specified under clause 3.3.7;

**maximum recoverable costs** means maximum amount of **major capex** which is not included in a **closing RAB value** and is approved in respect of a **non-transmission solution** by the **Commission**, over the duration of the **project**, as **recoverable costs**;

**measure of grid performance** means measure that quantifies the level of service received by **consumers**;

**modelled project** has the meaning specified in clause D8(4);

## N

**net electricity market benefit** has the meaning specified in clause D2(2);

**new investment contract** means contract for the provision of new **electricity transmission services** between **Transpower** and another person in respect of which-

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

**non-transmission solution** means an alternative to an investment in the **grid**, which is used by **Transpower** to-

- (a) avoid or defer a **transmission investment**, where the **transmission investment** would be **major capex**; or
- (b) manage operational risks due to unavailability of **grid** assets during a **major capex project**;

## O

**operating cost** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

**operating expenditure** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

**opex proposal** means **Transpower's** written response to an **ID determination** or a **s 53ZD notice** requiring information on proposed **operating expenditure** in respect of the **IPP** for the next **regulatory period**;

## P

**P50** means estimated aggregate **project costs** where the probability of the actual aggregate **project costs** being lower than that estimated is 50%;

**policies** means documented and **director** or management-approved short-term and long-term procedures, processes, strategies, guidelines, plans and approaches including those relating to-

- (a) asset management;
- (b) asset security;
- (c) augmentation and planning;
- (d) business cases, including cost-benefit analyses;
- (e) **capital expenditure** (e.g. **capital expenditure** approval and replacement);
- (f) condition monitoring and replacement;
- (g) corporate governance;
- (h) demand management;
- (i) disaster recovery;
- (j) energy supply and **consumer** growth forecasting;
- (k) information technology;
- (l) internal reviews;
- (m) investment decision making and evaluation;

- (n) land and easement acquisition;
- (o) network spares;
- (p) prioritisation and options analysis;
- (q) procurement;
- (r) project management;
- (s) regulatory compliance;
- (t) risk management and assessment;
- (u) self insurance; or
- (v) site and line safety;

**programme** means-

- (a) 2 or more **projects**; or
- (b) 2 or more **projects** and expenditure activities,

within the same category of **capital expenditure** that are grouped together on the basis of having a common purpose;

**project** means temporary endeavour requiring concerted effort, which is undertaken to create defined outcomes;

**project cost** has the meaning specified in clause D4(2) and its quantum is calculated in accordance with clause D6(1);

**proposed investment** means the **investment option** that **Transpower** submits in a **major capex proposal** to the **Commission**-

- (a) for approval as a **major capex project**; or
- (b) as a **major capex project (staged)**, seeking approval of one or more **staging projects**;

## R

**recovery scheme** means specification for the systematic attribution of **maximum recoverable costs** to one or more **disclosure years**, including by way of formulae;

**recoverable cost** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

**regulatory period** means the period to which an **IPP determination** relates;

**regulatory templates** means tables of information requirements regarding **Transpower's base capex**, whether actual or proposed, and which-

- (a) must at least-
  - (i) specify **base capex categories**; and

- (ii) require quantitative actual and forecast information in respect of those categories;
- (iii) require quantitative actual and forecast information in respect of **identified programmes**; and

(b) may contain instructions on how they must be completed;

**relevant demand and generation scenarios** has the meaning specified in clause D3(4);

**revenue-linked grid output measure** means **grid output measure** to which the **grid output mechanism** applies;

**right-of-use asset** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

## S

**SCADA** means systems for monitoring and controlling, from one location, equipment in different locations, using computing technologies;

**s 53ZD notice** means a notice issued by the **Commission to Transpower** under section 53ZD of the **Act**;

**sensitivity analysis** has the meaning specified in clause D7;

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

**staging project** means a **project** within a **major capex project (staged)**;

**standard incentive rate base capex allowance** means the amount subject to the **base capex standard incentive rate** as determined under clause 2.2.2(1)(a) and as adjusted in accordance with the **base capex allowance adjustment mechanism**;

**standard incentive rate base capex expenditure adjustment** means the amount calculated as specified in clause B1(2);

**supply** has the same meaning as defined in section 2 of the **Act**, and **supplied** must be construed accordingly;

**system operator** has the same meaning as defined in section 5 of the Electricity Industry Act 2010;

## T

**transmission alternative** means an alternative to an investment in the **grid**, which is used by **Transpower** to-

- (a) avoid or defer a need for a **transmission investment** which would be **base capex**;
- (b) manage operational risks due to unavailability of **grid** assets during a **base capex project**; or
- (c) manage operational risks or network constraints due to temporary unavailability of **grid** assets;

**transmission investment** means investment in the **grid** or expenditure facilitating or enabling future investment in the **grid**;

**Transpower** has the same meaning as defined in s 54B of the **Act**;

## V

**value of commissioned asset** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

**value of expected unserved energy** means-

- (a) the appropriate cost per megawatt hour specified in or under clause 4 of Schedule 12.2 to the **code**; or
- (b) another appropriate cost per megawatt hour,

of expected unserved energy (as 'expected unserved energy' is defined in the **code**);

## W

**WACC** has the same meaning as defined in the Transpower Input Methodologies Determination 2010;

**working day** has the same meaning as defined in section 2 of the **Act**.

## PART 2 PROCESSES PRIOR TO A REGULATORY PERIOD

### SUBPART 1 Integrated transmission plan

#### 2.1.1 Integrated transmission plan

- (1) **Transpower** must submit an **integrated transmission plan** in accordance with Part 7 to the **Commission** no later than the first **working day** in the December sixteen months before the start of a **regulatory period**.
- (2) **Transpower** must publish the information submitted to the **Commission** under subclause (1) on its website.

### SUBPART 2 Base capex

#### 2.2.1 Required information

- (1) In the period commencing on the first **working day** in the November which is twenty-nine months before the start of a **regulatory period**, and terminating on the last **working day** in the February which is twenty-six months before the start of a **regulatory period**, the **Commission** and **Transpower** must use reasonable endeavours to agree, in respect of that next **regulatory period**-
  - (a) the form and content of **regulatory templates**; and
  - (b) the categories or criteria to be used to define **identified programmes**.
- (2) Where no agreement is reached on one or more of the matters specified in subclause (1), the **Commission** must, having regard to the views **Transpower** expressed during the period referred to in subclause (1), specify those matters and notify **Transpower** thereof by the last **working day** in the March which is twenty-five months before the start of a **regulatory period**.
- (3) **Transpower** must submit a **base capex proposal** prepared in accordance with Part 7 to the **Commission** no later than the first **working day** in the December which is sixteen months before the start of a **regulatory period**.

#### 2.2.2 Commission evaluation and decisions

- (1) No later than the last **working day** in the August which is eight months before the start of a **regulatory period**, the **Commission** will, subject to subclause (9), determine in respect of that **regulatory period**, for the purposes of making an **IPP determination**-
  - (a) a **standard incentive rate base capex allowance** and, if applicable, a **low incentive rate base capex allowance** for each **disclosure year** of the **regulatory period**;

- (b) in accordance with clauses A5 and A6, the following as **revenue-linked grid output measures**-
    - (i) one or more **asset performance measures**;
    - (ii) one or more **measures of grid performance**;
    - (iii) if **Transpower** requests, one or more **asset capability grid output measures**; and
    - (iv) at **Transpower's** request, any other **grid output measure**;
  - (c) one or more **asset health grid output measures** which may be either **revenue-linked grid output measures** in accordance with clauses A5 and A6, or **grid output measure(s)** that are not linked to revenue in accordance with clause A5;
  - (d) in accordance with clause A7, in respect of each **revenue-linked grid output measure**, a-
    - (i) **cap**;
    - (ii) **collar**;
    - (iii) **grid output incentive rate**; and
    - (iv) **grid output target**.
- (2) When determining the **base capex allowances** in subclause (1)(a), the **Commission** will also specify the-
- (a) **low incentive rate base capex projects** if it determines a **low incentive rate base capex allowance**;
  - (b) **forecast CPI** used to determine the **base capex allowances**;
  - (c) **forecast FX rates** used to determine the **base capex allowances**; and
  - (d) amount or percentage of the **base capex allowances** to which the **forecast FX rates** may apply.
- (3) A **base capex project** or **base capex programme** may be specified as a **low incentive rate base capex project** by the **Commission** if it considers that it will require **capital expenditure** greater than \$20 million.
- (4) When determining the **revenue-linked grid output measures** in subclause (1)(b), the **Commission** may also determine in accordance with clause A5 one or more of the same types of **grid output measures** that are not linked to revenue.
- (5) When determining the **standard incentive rate base capex allowance** the **Commission** may specify a **base capex allowance adjustment mechanism**.

- (6) At the same time as determining the matters in subclause (1), the **Commission** may also determine in respect of the **regulatory period**, for purposes of making an **IPP determination, base capex projects or base capex programmes** that are **listed projects**.
- (7) A **base capex project or base capex programme** may only be determined to be a **listed project** by the **Commission** if it is a **base capex project or base capex programme**:
- (a) that the **Commission** considers:
    - (i) will require **capital expenditure** greater than \$20 million;
    - (ii) is reasonably required by **Transpower**; and
    - (iii) at least one asset is likely to have a **commissioning date** in the **regulatory period**;
  - (b) for which the **base capex** forecast to be incurred is in relation to **asset replacement, asset refurbishment, or both asset replacement and asset refurbishment**;
  - (c) for which a commencement date within the **regulatory period** is anticipated but cannot be forecast with specificity; and
  - (d) that is not already accommodated in the **base capex allowances** for the **regulatory period**.
- (8) Where the **Commission** considers that, for the purpose of deciding the matters specified in this clause, it requires further information from **Transpower**, the **Commission** will request **Transpower** to provide such information by a reasonable future date.
- (9) The **Commission** will only make the determinations specified in this clause after-
- (a) consulting in any manner specified in clause 8.1.1; and
  - (b) evaluating in accordance with Part 6-
    - (i) the **base capex proposal**; and
    - (ii) any further information received pursuant to subclause (8).
- (10) The **Commission** will publish its decisions under this clause as soon as reasonably practicable after they have been made.

## PART 3 PROCESSES DURING A REGULATORY PERIOD

### SUBPART 1 Integrated transmission plan

#### 3.1.1 Integrated transmission plan

- (1) Subject to subclause (2), **Transpower** must, by the last **working day** of September of each **disclosure year**, submit to the **Commission**-
  - (a) **ITP supporting documents**; and
  - (b) an updated **ITP narrative** that takes account of-
    - (i) any material changes to matters covered in the **ITP narrative** most recently submitted to the **Commission**; and
    - (ii) the content of the **ITP supporting documents**.
- (2) Subclause (1) does not apply in respect of the second last and last **disclosure years** commencing in a **regulatory period**.
- (3) **Transpower** must publish a copy of the information submitted to the **Commission** under subclause (1) on its website.

### SUBPART 2 Base capex

#### 3.2.1 Base capex projects or programmes with forecast cost of greater than \$20 million

In respect of a **base capex project** or **base capex programme** involving forecast **capital expenditure** of greater than \$20 million **Transpower** must, prior to undertaking the **project** or **programme**, undertake-

- (a) a cost-benefit analysis consistent with determining **expected net electricity market benefit**; and
- (b) consultation with interested persons in accordance with clause 8.1.2.

#### 3.2.2 Base capex annual adjustments

- (1) By the end of the month following the month in which **Transpower** provides its **annual compliance statement** to the **Commission** for a **disclosure year**, subject to subclauses (2) and (3), the **Commission** will calculate for that **disclosure year** a-
  - (a) **base capex expenditure adjustment**; and
  - (b) **grid output adjustment**.
- (2) Where the **Commission** considers that it requires further information for the purpose of calculating the adjustments in subclause (1), it will request **Transpower** to provide such information by a reasonable future date.

- (3) The **Commission** will not calculate the adjustments in subclause (1) until after having evaluated relevant information disclosed pursuant to:
- (a) a request made pursuant to subclause (2);
  - (b) an **ID determination**; or
  - (c) a **s 53ZD notice**.
- (4) The **Commission** will publish its decision under this clause as soon as reasonably practicable.

### 3.2.3 Approval of base capex for listed project in addition to the base capex allowances

- (1) **Transpower** may submit, no later than the last **working day** in the June twenty-two months before the end of a **regulatory period**, an application in respect of a **listed project** for approval of additional **base capex**, where expenditure is to be incurred after the date of application on assets that are forecast to be **commissioned** within that **regulatory period** in respect of a **listed project**.
- (2) **Transpower's** application under subclause (1) must include:
- (a) a description of the reasons for carrying out the **listed project**, supported by relevant technical information, including evidence of the current and future need for the applicable assets by reference to the **relevant demand and generation scenarios**;
  - (b) consideration of alternative options for carrying out the **listed project**, including non-replacement and demolition, enhancement or development of alternative assets, and **transmission alternatives**;
  - (c) intended scope of the **listed project**, including specification of the **grid outputs** that apply in respect of the **listed project**;
  - (d) all relevant technical and costing information used to estimate both the cost of the **listed project** and alternative options, including details on risk allowances and contingencies;
  - (e) estimated cost of the **listed project** broken down into year by year figures in expected **disclosure year** of expenditure, and the assumptions used to derive the estimated cost;
  - (f) a cost-benefit analysis in accordance with clause 3.2.1(a), including a **sensitivity analysis** and reasons for selecting the variables of the **sensitivity analysis**;
  - (g) if **Transpower** requests the **base capex low incentive rate** to apply to the additional **base capex**, information demonstrating that the **listed project** is still expected to require **capital expenditure** greater than \$20 million and information on the extent to which the factors set out in clause A4 are applicable;

- (h) evidence of consultation with interested persons in accordance with clause 3.2.1(b);
  - (i) evidence that its Board of Directors has approved the **listed project** as a **base capex project** or **base capex programme** and details of the quality assurance processes followed in respect of the Board's approval of the **listed project**; and
  - (j) certification of the application in accordance with clause 9.1.2.
- (3) Where the **Commission** considers that, for the purpose of deciding whether to approve **base capex** in respect of a **listed project** it requires further information than that provided in **Transpower's** application, the **Commission** will request **Transpower** to provide such information by a reasonable future date.
- (4) The **Commission** may in addition to the **base capex allowances**, at its discretion, determine an approved amount of **base capex** in respect of a **listed project** for **disclosure years** in a **regulatory period**, following evaluation of **Transpower's** application, in accordance with:
- (a) the consultation requirements in clause 8.1.1; and
  - (b) the criteria in clause 6.1.1(1), clause 6.1.1(2) and clause A2 that would apply if this application was part of the **base capex proposal** and the **listed project** were an **identified programme**.
- (5) In any decision to approve additional **base capex** in respect of a **listed project**, the **Commission** will-
- (a) apply the **forecast CPI** used to determine the **base capex allowances** for that **regulatory period** to the approved additional **base capex** for the **listed project**;
  - (b) apply the **forecast FX rates** used to determine the **base capex allowances** for that **regulatory period** to the approved additional **base capex** for the **listed project**;
  - (c) specify the amount or percentage of the additional **base capex** for the **listed project** to which the **forecast FX rates** may apply;
  - (d) determine whether the **base capex standard incentive rate** or **base capex low incentive rate** applies to the additional **base capex**.
- (6) The **Commission** will publish its decision on **Transpower's** application for approval of **base capex** in respect of a **listed project** as soon as reasonably practicable.

## SUBPART 3 Major capex projects

### 3.3.1 Notification of proposed investments

- (1) **Transpower** must notify the **Commission** of its intention to plan a **major capex project** that may become a **proposed investment**.
- (2) **Transpower's** notification under subclause (1) must include the following detail about the **major capex project** if it is planned to be a **major capex project (staged)**-
  - (a) all the proposed **staging projects** being planned; and
  - (b) if it is a continuation of an existing **major capex project (staged)**, all related previously approved **staging projects** and whether those **staging projects** have been completed.
- (3) The **Commission** and **Transpower** must, in the two-month period following a notification, under subclause (1) use reasonable endeavours to agree in respect of that **major capex project**-
  - (a) a consultation programme for a **transmission investment** or **non-transmission solution**, in accordance with clause 8.1.3;
  - (b) an approach to ensure appropriate consideration of **non-transmission solutions** to meet the **investment need** giving rise to the **major capex project** in accordance with clause 8.1.3;
  - (c) an **application submission date**; and
  - (d) an **approval timeframe**.
- (4) Where the **Commission** and **Transpower** have not agreed on each of the matters in subclause (3) within the two month period following a notification under subclause (1), the **Commission** must, after considering the views expressed by **Transpower**, specify those matters that have not been agreed within two weeks of the expiry of the two month period.
- (5) The consultation programme referred to in subclause (3)(a) may also include any consultation processes that the **Commission** intends to follow.
- (6) The **Commission** and **Transpower** must publish the matters agreed under subclause (3) or specified under subclause (4) as soon as reasonably practicable.
- (7) The **Commission** and **Transpower** must regularly review whether the matters published under subclause (6) (or published in amended form under subclause (8)) remain appropriate and reasonable and the **Commission** may, after considering **Transpower's** views, amend any of those matters to ensure that they remain appropriate and reasonable.
- (8) Where the **Commission** materially amends any of the matters under subclause (7), the **Commission** and **Transpower** must publish the amended matters or a summary of them as soon as reasonably practicable.

- (9) **Transpower** must consult interested persons in accordance with the published consultation programme and follow the published approach for consideration of **non-transmission solutions**.

### 3.3.2 Capital expenditure that can be recovered

- (1) **Major capex projects** that are not **major capex projects (staged)** must be approved by the **Commission** before **Transpower** can recover any **capital expenditure** relating to such **major capex projects**.
- (2) Where a **major capex project** is a **major capex project (staged)**, **Transpower** may only recover **capital expenditure** relating to approved **staging projects** of that **major capex project**.

### 3.3.3 Major capex proposals

- (1) **Transpower** must submit a **major capex proposal** to the **Commission** when it seeks approval for-
- (a) a **major capex project** that is not **major capex projects (staged)**; or
  - (b) one or more **staging projects** of a **major capex projects (staged)**.

For the avoidance of doubt, any application by **Transpower** to the **Commission** for approval of subsequent stages of a **major capex project (staged)** must be made in a new **major capex proposal**.

- (2) Where **Transpower** seeks approval of one or more **staging projects**-
- (a) the aggregate forecast **capital expenditure** and forecast **maximum recoverable costs** for all **staging projects** that comprise the **major capex project (staged)** must exceed the **base capex threshold**;
  - (b) the forecast **capital expenditure** and forecast **maximum recoverable costs** for a **staging project** for which approval is sought need not exceed the **base capex threshold**.
- (3) A **major capex proposal** may be submitted at any time during a **regulatory period**.

### 3.3.4 Commission rejection of a major capex proposal

The **Commission** may reject a **major capex proposal** where-

- (a) **Transpower** has not complied with the requirements specified in clause 3.3.1; or
- (b) the **major capex proposal** does not comply with clause 7.4.1.

### 3.3.5 Commission decisions on a major capex project or staging projects

- (1) If the **Commission** does not reject the **major capex proposal** under clause 3.3.4, it must either-
  - (a) approve-
    - (i) the **major capex project** if it is not a **major capex project (staged)**; or
    - (ii) one or more **staging projects** if the **major capex project** is a **major capex project (staged)**; or
  - (b) decline-
    - (i) the **major capex project** if it is not a **major capex project (staged)**; or
    - (ii) one or more **staging projects** if the **major capex project** is a **major capex project (staged)**.
- (2) For the avoidance of doubt, where **Transpower** has sought approval for a **major capex project**, the **Commission** may approve such **project** as a **major capex project** even where the **major capex allowance** it determines is below the **base capex threshold**.
- (3) When evaluating a new **major capex proposal** seeking approval for a **staging project** that is a continuation of an existing **major capex project (staged)**, the **Commission** may have regard to the information in the previous **major capex proposal** relating to the **major capex project (staged)**.
- (4) Where the **Commission** considers that it requires further information to decide whether to approve or decline a **major capex project** or **staging project**, it will request **Transpower** to provide such information by a reasonable future date.
- (5) The **Commission** may only decide to approve or decline a **major capex project** or **staging project** after-
  - (a) consulting in the manner specified in clause 8.1.1; and
  - (b) having evaluated, in accordance with Part 6 and subject to subclause (3)-
    - (i) the **major capex proposal**; and
    - (ii) any further information received pursuant to subclause (4).
- (6) Where the **Commission** approves a **major capex project** or **staging project** the-
  - (a) **maximum recoverable costs**;
  - (b) **recovery scheme**;
  - (c) **major capex project outputs**;
  - (d) **approval expiry date**;
  - (e) **commissioning date assumption**; and

- (f) **completion date assumption**,  
will be those specified by **Transpower** for the **major capex project** or **staging project**.
- (7) Where the **Commission** approves a **major capex project** or **staging project** the-
- (a) **major capex allowance**;
  - (b) **major capex incentive rate**; and
  - (c) **exempt major capex**,
- will be those determined by the **Commission** for the **major capex project** or **staging project**.
- (8) The **Commission** will publish its decisions as soon as reasonably practicable after they have been made.
- 3.3.6 Amendments to approved major capex projects
- (1) The **Commission** may, on **Transpower's** application, amend one or more of the following matters previously approved under clause 3.3.5-
- (a) **maximum recoverable costs**;
  - (b) **recovery scheme**;
  - (c) **approved major capex project outputs**; and
  - (d) **approval expiry date**.
- (2) Where **Transpower** makes an application under subclause (1)-
- (a) **Transpower** must comply with the requirements in clause 7.4.2;
  - (b) the **Commission** and **Transpower** must use reasonable endeavours to agree an **approval timeframe** in respect of the application within two weeks from the date of receipt of the application; and
  - (c) where the **Commission** and **Transpower** have not agreed an **approval timeframe** within the two weeks period, the **Commission** must, after considering **Transpower's** views and having regard to its obligations in subclauses (3) to (5), specify the **approval timeframes** within two weeks of the expiry of the two week period.
- (3) The **Commission** must make reasonable efforts to determine any amendments within the following timeframes-
- (a) for amendments to an **approval expiry date**, by the **approval expiry date** previously approved; and
  - (b) for amendments to any other matter specified in subclause (1), by the end of the second month after the month in which **Transpower** provides its **annual compliance statement** to the **Commission** for the **disclosure year** in which the **commissioning date** or **completion date** occurs.

- (4) Where the **Commission** considers that it requires further information to decide whether to make an amendment, it will request **Transpower** to provide such information by a reasonable future date.
- (5) The **Commission** may not make an amendment until it has evaluated, in accordance with Part 6-
  - (a) the application received from **Transpower** under subclause (1); and
  - (b) any information received pursuant to subclause (4).
- (6) Where an amendment is made by the **Commission** the amended-
  - (a) **maximum recoverable costs**; and
  - (b) **recovery scheme**;will be those specified by the **Commission** in its decision making the amendment.
- (7) Where an amendment is made by the **Commission** the amended-
  - (a) **major capex project outputs**; and
  - (b) **approval expiry date**,will be those proposed by **Transpower** in its amendment application.
- (8) Where the **Commission** makes an amendment to the **major capex project outputs**, the **Commission** may, at its discretion, make commensurate amendments to the **major capex allowance** and **exempt major capex**.
- (9) Where the **Commission** makes any amendment, the **Commission** may also make amendments to the-
  - (a) **commissioning date assumption**; and
  - (b) **completion date assumption**.
- (10) The **Commission** will publish its decisions as soon as reasonably practicable after they have been made.

### 3.3.7 Major capex sunk costs adjustment

- (1) The **Commission** may, at its discretion, on **Transpower's** application, calculate a **major capex sunk costs adjustment** where **Transpower** has incurred **capital expenditure** in relation to an **approved major capex project**, but prior to the **commissioning date** or **completion date** of the **approved major capex project**-
  - (a) **Transpower** has decided not to proceed with the **approved major capex project**; or
  - (b) a relevant **approval expiry date** has passed.
- (2) Where **Transpower** makes an application it must comply with the requirements in clause 7.4.3.

- (3) The **major capex sunk costs adjustment** is equal to the amount of the **major capex** incurred by **Transpower** in respect of the **approved major capex project** in question which, having regard to the factors listed in clause 6.1.1(6), the **Commission** considers should reasonably be recovered by **Transpower** under an **IPP determination**.
- (4) Where the **Commission** considers that it requires further information to decide whether to calculate a **major capex sunk costs adjustment**, it will request **Transpower** to provide such information by a reasonable future date.
- (5) The **Commission** may not decide whether to calculate a **major capex sunk costs adjustment** until it has evaluated, in accordance with Part 6-
  - (a) the application; and
  - (b) any information received pursuant to subclause (4).
- (6) Where the **Commission** calculates a **major capex sunk costs adjustment** in respect of an **approved major capex project** any approval of the **major capex project** or **staging project**, as applicable, is deemed to be revoked.
- (7) The **Commission** will publish its decision as soon as reasonably practicable.

#### 3.3.8 Decision on approved major capex project outputs after commissioning or completion

- (1) The **Commission** will decide, by the end of the month following the month in which **Transpower** provides its **annual compliance statement** to the **Commission** for a **disclosure year**, whether the **approved major capex project outputs** were met in respect of each **approved major capex project** having a **commissioning date** or **completion date** in that **disclosure year**.
- (2) The **Commission** may not decide whether the **approved major capex project outputs** were met until it has evaluated, to the extent relevant to the decision-
  - (a) the information disclosed by **Transpower** in respect of the last completed **disclosure year** pursuant to either or both of-
    - (i) an **ID determination**; or
    - (ii) a **s 53ZD notice**; and
  - (b) any information received pursuant to subclause (3).
- (3) Where the **Commission** considers that it requires further information to decide whether **approved major capex project outputs** were met, it will request **Transpower** to provide such information by a reasonable future date.
- (4) The **Commission** will publish its decisions as soon as reasonably practicable.

#### 3.3.9 Major capex expenditure and output adjustment

- (1) If an **approved major capex project** is a-
  - (a) **transmission investment**, and the last asset delivered by the **project** has a **commissioning date** in a **disclosure year**; or

- (b) **non-transmission solution**, and it has a **completion date** in a **disclosure year**,

then the **Commission** will calculate, by the end of the month following the month in which **Transpower** provides its **annual compliance statement** to the **Commission** for the **disclosure year**, the amount of the **major capex expenditure and output adjustment** in respect of that **approved major capex project**.

- (2) The **Commission** will not calculate the adjustment until after having considered-
  - (a) the information relevant to the calculations disclosed by **Transpower** in respect of the last completed **disclosure year** pursuant to either or both of-
    - (i) an **ID determination**; or
    - (ii) a **s 53ZD notice**;
  - (b) any decisions under clause 3.3.6 relevant to the calculations;
  - (c) any decisions under clause 3.3.8, and
  - (d) any information received pursuant to subclause (3).
- (3) Where the **Commission** considers that, for the purpose of making any of the calculations referred to in subclause (1), it requires further information than that referred to in subclauses (2)(a), (b) and (c) the **Commission** will request **Transpower** to provide such information by a reasonable future date.
- (4) The **Commission** will publish its decisions as soon as reasonably practicable after they have been made.

## **PART 4 [DELETED]**

## **PART 5 CONSEQUENCES OF COMMISSION NOT COMPLYING WITH TIMEFRAMES**

### 5.1.1 Consequences of timeframes not being met by Commission

- (1) None of the **Commission's** functions or decisions described in this determination are invalidated on account of any **Commission** failure to meet-
  - (a) timeframes applying to the **Commission** specified in this determination; or
  - (b) **approval timeframes**.
- (2) Notwithstanding subclause (1), the **Commission** will, as soon as reasonably practicable after it believes that a timeframe applying to the **Commission**-
  - (a) is not likely to be met; or
  - (b) has not been adhered to,notify **Transpower** and, where relevant, interested persons, of the new timeframe that applies.

## PART 6 COMMISSION EVALUATION OF MATTERS RELATING TO CAPITAL EXPENDITURE

### 6.1.1 Evaluation criteria

- (1) In evaluating anything pursuant to this Part, the **Commission** may-
  - (a) take into account-
    - (i) the views of any person the **Commission** has consulted pursuant to clause 8.1.1; and
    - (ii) any other information it considers relevant; and
  - (b) engage any appropriately qualified person to assist the **Commission** with its evaluation.
- (2) The **Commission** will apply the following criteria in evaluating **base capex proposals**, **major capex proposals** and applications under clause 3.3.6:
  - (a) whether what is proposed is consistent with the **input methodology** in this determination and, where relevant, the Transpower Input Methodologies Determination 2010;
  - (b) the extent to which what is proposed will promote the purpose of Part 4 of the **Act**; and
  - (c) whether, the data, analysis, and assumptions underpinning what is proposed are fit for the purpose of the **Commission** exercising its powers under Part 4 of the **Act**, including consideration as to the accuracy and reliability of data and the reasonableness of assumptions and other matters of judgement.
- (3) The **Commission** will also evaluate a **base capex proposal** in accordance with Schedule A.
- (4) The **Commission** will also evaluate a **major capex proposal** in accordance with Schedule C.
- (5) The **Commission** will also evaluate an application under clause 3.3.6 in accordance with the following criteria:
  - (a) the extent to which each key factor relevant to the proposed amendment-
    - (i) was reasonably foreseeable by **Transpower** before the **major capex project** was approved by **Commission**; and
    - (ii) was or is within **Transpower's** control;
  - (b) in relation to each key factor outside **Transpower's** control-
    - (i) the reasonableness of any applicable mitigation strategy devised by **Transpower**; and

- (ii) the reasonableness and extent of mitigation actions taken by **Transpower**;
  - (c) the extent to which the **major capex project's expected net electricity market benefit** would be materially lower as a result of the amendment than when it was approved; and
  - (d) in respect of a **major capex project** that has already commenced, the extent to which **Transpower** has incurred **capital expenditure** by the date of the application.
- (6) The **Commission** will also evaluate an application under clause 3.3.7 relating to the calculation of a **major capex sunk costs adjustment** in accordance with the following criteria:
- (a) the reasons and key factors that resulted in **Transpower** applying for the **major capex sunk costs adjustment**;
  - (b) in relation to each such key factor, whether it-
    - (i) was reasonably foreseeable by **Transpower** before the **major capex project** was approved by the **Commission**; and
    - (ii) was or is within **Transpower's** control;
  - (c) in relation to each key factor outside **Transpower's** control, the-
    - (i) reasonableness of any applicable mitigation strategy devised by **Transpower**; and
    - (ii) reasonableness and extent of mitigation actions taken by **Transpower**;
  - (d) the reasonableness of the progress of the **major capex project**, including details of-
    - (i) planning processes undertaken;
    - (ii) resource management consents, other regulatory consents, and property rights and access rights obtained;
    - (iii) construction and labour contracts and arrangements made;
    - (iv) construction completed;
    - (v) testing undertaken; and
    - (vi) **approved major capex project outputs** delivered; and
  - (e) the reasonableness of the **major capex** incurred and the extent of the forecast **major capex** yet to be incurred.

## **PART 7 INFORMATION REQUIREMENTS APPLYING TO TRANSPOWER**

### **SUBPART 1 General information requirements**

#### **7.1.1 Format of information**

- (1) This clause applies to all information provided by **Transpower** pursuant to this Part.
- (2) All significant financial and numerical data must be provided in an electronic Microsoft Excel file capable of a 'copy and paste' function being applied to it.
- (3) All other information must be provided in an electronic Microsoft Word, Microsoft Excel or Adobe PDF file capable of a 'copy and paste' function being applied to it.
- (4) Information provided must be accompanied by an index that-
  - (a) specifies the reference in this determination to the relevant information requirement;
  - (b) succinctly describes each relevant information requirement; and
  - (c) provides a reference to the place or places in the submitted **document** or collection of **documents** where a response to each relevant information requirement is provided.
- (5) Where data is provided on or derived from a spreadsheet, and has been computed or derived from other values in the spreadsheet through the use of formulae, all underlying formulae must be accessible or provided, as the case may be.

#### **7.1.2 Information claimed to be confidential**

- (1) Where **Transpower** considers that it has a right to confidentiality in any information it provides the **Commission** pursuant to this Part and it does not waive that right, it must-
  - (a) include that information in an appendix; and
  - (b) clearly mark it as confidential.
- (2) For the avoidance of doubt-
  - (a) nothing in subclause (1) prevents the **Commission** publishing such information in respect of which it considers **Transpower** has no right to confidentiality; and
  - (b) nothing in paragraph (a) affects **Transpower's** rights or remedies for breach of any right to confidentiality.

### 7.1.3 Omission of required information

Where **Transpower** provides the **Commission** with any **document** under this determination that omits any required information, the **Commission** may treat that **document** as compliant with the requirement in question where that **document** contains a reasonable explanation for its omission.

## SUBPART 2 **Integrated transmission plan**

### 7.2.1 Integrated transmission plans

An **integrated transmission plan** must contain the information specified in clause E1.

## SUBPART 3 **Base capex**

### 7.3.1 Base capex proposals

- (1) A **base capex proposal** must-
  - (a) contain completed-
    - (i) **regulatory templates** agreed pursuant to clause 2.2.1(1); or
    - (ii) **regulatory templates** specified pursuant to clause 2.2.1(2);
  - (b) comply with Schedule F; and
  - (c) contain the certificates specified in clause 9.1.1.
- (2) For the purpose of subclause (1)(a), the **regulatory templates** must specify **base capex categories**.
- (3) A requirement of Schedule F may be met by **Transpower** by providing a reference to information published in another **document**, such as the **documents** specified in clauses E3(a) or E3(b), provided that-
  - (a) the reference clearly and succinctly provides the required information, without the need for additional analysis, explanation or interpretation; and
  - (b) in respect of each **document** relied upon, an index is provided stating the-
    - (i) reference to the relevant requirement or requirements of Schedule F; and
    - (ii) precise reference or references within the **document** relied upon.
- (4) For the avoidance of doubt, one physical **document** may contain more than one of the certifications specified in clause 9.1.1.

## SUBPART 4 **Major capex**

### 7.4.1 Major capex proposals

- (1) A **major capex proposal** must-
  - (a) comply with Schedule G; and
  - (b) contain the certificates specified in clause 9.2.1.
- (2) The number of **investment options** contained in a **major capex proposal** must be appropriate given the magnitude of the estimated expenditure and the complexity of the **investment need** associated with the **proposed investment**.
- (3) With respect to each **investment option** described in such a proposal, the-
  - (a) specificity of information; and
  - (b) rigour and comprehensiveness of the analysis,must be commensurate with the estimated expenditure and complexity of that option.
- (4) For the avoidance of doubt, one physical **document** may contain more than one of the certifications specified in clause 9.2.1.

### 7.4.2 Amendment applications for approved major capex projects

- (1) An application under clause 3.3.6(1)(a) to 3.3.6(1)(c) must be received by the **Commission** by the date on which **Transpower** provides its **annual compliance statement** to the **Commission** for the **disclosure year** in which the **commissioning date** or **completion date** of the **approved major capex project** in question occurs.
- (2) An application under clause 3.3.6(1)(d) must be received by the **Commission** no later than 6 weeks before the **approval expiry date**.
- (3) An application under-
  - (a) clause 3.3.6(1)(a) and 3.3.6(1)(b) must contain the information specified in Schedule H Division 1;
  - (b) clause 3.3.6(1)(c) must contain the information specified in Schedule H Division 2; and
  - (c) clause 3.3.6(1)(d) must contain the information specified in Schedule H Division 3.
- (4) An application under clause 3.3.6 must contain the certificates specified in clause 9.3.1.
- (5) For the avoidance of doubt, one physical **document** may contain more than one of the certifications specified in clause 9.3.1.

#### 7.4.3 Sunk costs applications

- (1) Subject to subclause (2), an application under clause 3.3.7 must-
  - (a) be received by the **Commission** no later than 6 weeks after the **approval expiry date**;
  - (b) contain the information specified in Schedule H Division 4; and
  - (c) contain the certificates specified in clause 9.3.1.
- (2) For the avoidance of doubt, one physical **document** may contain more than one of the certifications specified in clause 9.3.1.
- (3) For the purpose of subclause (1), the **Commission**, at the request of **Transpower**, may extend the relevant timeframe for making an application where the **Commission** is satisfied that not all of the information relevant for its evaluation of an application is, or will be, available within the timeframe specified in subclause (1).

### SUBPART 5 **Expected benefits and impact of proposed expenditure on transmission charges**

#### 7.5.1 Explanation of the expected benefits of proposed expenditure and its impact on transmission charges

- (1) All **major capex proposals** and **listed project** applications must include-
  - (a) a description of the benefits the proposed expenditure is expected to deliver to **Transpower's** customers;
  - (b) to the extent reasonably possible, a quantitative estimate of the benefits the proposed expenditure is expected to deliver to **Transpower's** customers; and
  - (c) an estimate of the expected increase in **Transpower's** transmission charges due to the proposed expenditure, including estimated increases in transmission charges-
    - (i) per kilowatt of demand;
    - (ii) per kilowatt hours of energy supplied; and
    - (iii) for each affected grid exit point and grid injection point.
- (2) When **Transpower** submits a **base capex proposal** and **opex proposal** for a **regulatory period** to the **Commission** for the purpose of the **Commission** making an **IPP determination**, **Transpower** must submit to the **Commission**-
  - (a) a description of the benefits the proposed expenditure is expected to deliver to **Transpower's** customers;

- (b) an estimate of expected transmission charges allocated to each grid exit point and grid injection point based on the forecast transmission revenue for each year of the next **regulatory period**, being a year ending on 31 March; and
- (c) an estimate of expected changes in **Transpower's** transmission charges allocated to each grid exit point and grid injection point based on the forecast transmission revenue for the final year of the current **regulatory period** and for each year of the next **regulatory period**, being a year ending on 31 March; and
- (d) to the extent reasonably possible, for each year of the next **regulatory period**, being a year ending on 31 March, an estimated change of transmission charges-
  - (i) per kilowatt of demand; and
  - (ii) per kilowatt hours of energy supplied.

## PART 8 CONSULTATION

### 8.1.1 Consultation by Commission

- (1) After receiving any **base capex proposal, major capex proposal** or application for approval of **base capex** in respect of a **listed project** the **Commission**:
  - (a) must take all of the following actions-
    - (i) publish the relevant proposal or application;
    - (ii) make and publish a draft decision or decisions;
    - (iii) seek the written views of interested persons on anything so published; and
    - (iv) seek the written views of interested persons on others' submissions; and
  - (b) may seek the views of any person the **Commission** considers has expertise on a relevant matter and hold a conference at which the views of some or all interested persons may be sought orally or in other forms of presentation.
- (2) The **Commission** may take none, any or all of the actions listed in subclause (1) in evaluating applications received from **Transpower** or making decisions or calculations under:
  - (a) clause 3.3.6;
  - (b) clause 3.3.7;
  - (c) clause 3.3.8; or
  - (d) clause 3.3.9.
- (3) Where the **Commission** takes any of the actions referred to in subclause (1), it may do so in accordance with such timeframes and processes as it considers appropriate.

### 8.1.2 Base capex projects or programmes forecast to cost more than \$20 million

For the purpose of clause 3.2.1(b), consultation by **Transpower** with interested persons must be-

- (a) of a scope commensurate with the proposed **project's** or **programme's** nature, complexity, impact and significance; and
- (b) undertaken by **Transpower** acting in accordance with the **policies** and processes specified in its **base capex proposal**.

### 8.1.3 Consultation on major capex projects

- (1) For the purpose of clause 3.3.1(3), subject to subclause (2)-
  - (a) the consultation programme for a **transmission investment** or **non-transmission solution** must make provision for consultation by **Transpower** prior to submitting a **major capex proposal** on such matters specified in Schedule I as are applicable; and
  - (b) the approach to ensure appropriate consideration of **non-transmission solutions** must make provision for consultation by **Transpower** prior to submitting a **major capex proposal** on such matters specified in Schedule I Division 2 as are applicable.
- (2) For the purpose of subclause (1), the consultation programme and approach referred to-
  - (a) must have regard to:
    - (i) the complexity, nature and quantum of expenditure associated with the **major capex project**;
    - (ii) the likely costs and benefits arising from consultation, taking into account various stakeholder perspectives including **Transpower**, industry participants, proponents of **non-transmission solutions**, end users of electricity, and the **Commission**;
    - (iii) the urgency of the **investment need** that is the subject of the **major capex project**, including the duration of time available until a decision to proceed with options to address the **investment need** is required;
    - (iv) co-ordination between the consultation programme and the approach to considering **non-transmission solutions** for the **major capex project** in question;
    - (v) the extent and nature of any relevant prior consultations; and
  - (b) need not cover a matter specified in Schedule I where, on account of the **investment need** in question, the **Commission** is satisfied that its inclusion would be unreasonable in the circumstances.

## PART 9 CERTIFICATION

### SUBPART 1 Base capex proposals

#### 9.1.1 Director certification – base capex proposals

In relation to all information provided in accordance with the **regulatory templates** and Schedule F with respect to a **base capex proposal**, no fewer than 2 **directors** of **Transpower** must each certify in writing, that having made all reasonable enquiries, it is his or her belief that-

- (a) the information was derived from and accurately represents, in all material respects, the operations of **Transpower**; and
- (b) the **base capex proposal** complies, in all material respects, with the requirements of clause 7.3.1.

### SUBPART 1A Listed project applications

#### 9.1.2 Chief executive officer certification – listed project applications

In relation to all information provided with respect to an application for approval of **base capex** in respect of a **listed project**, the chief executive officer of **Transpower** must certify in writing that, having made all reasonable enquiries, it is his or her belief that:

- (a) the information provided in **Transpower's** application to the **Commission** was derived from and accurately represents, in all material respects, the relevant operations of **Transpower**; and
- (b) the **base capex** in respect of the **listed project** was approved by **Transpower** in accordance with the applicable requirements of **Transpower's capital expenditure approval policies**.

### SUBPART 2 Major capex proposals

#### 9.2.1 Chief executive officer certification – major capex proposals

In relation to all information provided in accordance with Schedule G with respect to a **major capex proposal**, the chief executive officer of **Transpower** must certify in writing, that having made all reasonable enquiries, it is his or her belief that-

- (a) the information was derived from and accurately represents, in all material respects, the operations of **Transpower**;
- (b) the **proposed investment** to which the information relates was approved in accordance with the applicable requirements of **Transpower's director and management approval policies**; and

- (c) the **major capex proposal** complies, in all material respects, with the requirements of clause 7.4.1.

### SUBPART 3 **Major capex project amendment and sunk costs applications**

#### 9.3.1 Chief executive officer certification – major capex project amendment and sunk costs applications

In relation to all information provided in accordance with Schedule H with respect to-

- (a) an application for amendment of components of an **approved major capex project**; or
- (b) an application for a **major capex sunk costs adjustment**,

the chief executive officer of **Transpower** must certify in writing, that having made all reasonable enquiries, it is his or her belief that-

- (c) the information was derived from and accurately represents, in all material respects, the operations of **Transpower**;
- (d) all parts of the **major capex project** to which the information relates have been approved in accordance with the applicable requirements of **Transpower's director** and management approval **policies**; and
- (e) the application complies, in all material respects, with the requirements of clause 7.4.2 or clause 7.4.3, as the case may be.

### SUBPART 4 **Changes in opinion or matters of fact**

#### 9.4.1 Changes in opinion or matters of fact

(1) Where-

- (a) a **director** or chief executive officer of **Transpower** has made a certification involving a matter of his or her opinion in accordance with this Part;
- (b) his or her opinion has changed before the **Commission's** decision in relation to the proposal or application in question; and
- (c) the change is likely to be material to the **Commission's** evaluation of the proposal or evaluation,

that **director** or chief executive officer must notify the **Commission** as soon as reasonably practicable.

(2) Where-

- (a) a **director** or chief executive officer of **Transpower** has made a certification involving a matter of fact in accordance with this Part;

- (b) before the **Commission's** decision in relation to the proposal or application in question, he or she-
  - (i) becomes aware that the fact is untrue; or
  - (ii) has significant cause to doubt the accuracy of that fact; and
- (c) that fact is likely to be material to the **Commission's** evaluation of the proposal or application,

that **director** or chief executive officer must notify the **Commission** as soon as reasonably practicable.

## SCHEDULE A      **BASE CAPEX PROPOSAL - EVALUATION CRITERIA**

### A1      **General evaluation of base capex proposals**

The **Commission** will have regard to the following factors when evaluating a **base capex proposal**:

- (a) whether the proposed **base capex allowances** have been prepared in accordance with **Transpower's policies** and planning standards for the **grid** and for each **base capex category**;
- (b) whether the **policies** and planning standards upon which the proposed **base capex allowances** rely are directed towards achieving cost-effective and efficient solutions;
- (c) the reasonableness of the key assumptions relevant to **base capex** relied upon, including-
  - (i) the method and information used to develop them;
  - (ii) how they were applied; and
  - (iii) their effect on the proposed **base capex allowances**;
- (d) whether **policies** regarding the need for, and prioritisation of **projects** and **programmes** demonstrate a risk-based approach consistent with good asset management practice;
- (e) the dependencies between the proposed **grid output measures** and the proposed **base capex allowances** at the level of the **grid** and for each **base capex category**;
- (f) the dependencies between the proposed **grid output targets** and the proposed **base capex allowances** at the level of the **grid** and for each **base capex category**;
- (g) the extent to which the **grid output targets** were met in the current and previous **regulatory period**;
- (h) the overall deliverability of the proposed **base capex** during the **regulatory period**;
- (i) mechanisms for controlling actual **capital expenditure** with respect to the proposed **base capex allowances** and achieving the proposed **grid output targets**;

- (j) the reasonableness and adequacy of any **asset replacement** models used to prepare the proposed **base capex allowances** including-
  - (i) inputs to the model; and
  - (ii) the methods used to check the reasonableness of the forecasts and related expenditure;
- (k) the reasonableness of the key assumptions, key input data and forecasting methods used in determining demand forecasts;
- (l) the appropriateness of using those demand forecasts and other key assumptions in determining the proposed **base capex allowances**;
- (m) the type of efficiency improvements obtained in the current and previous **regulatory periods**; and
- (n) the scope for efficiency improvements during the **regulatory period** in question.

## A2 Evaluation of identified programmes

In evaluating a **base capex proposal**, the **Commission** will undertake a review of each **identified programme** and such a review will include evaluation of at least-

- (a) whether **policies** regarding the need for the **identified programme** and its priority demonstrate a risk-based approach consistent with good asset management practice and were applied appropriately;
- (b) whether other relevant **policies** and planning standards were applied appropriately;
- (c) **Transpower's** process, including its use of cost-benefit analyses, to determine the **identified programme's** reasonableness and cost-effectiveness;
- (d) **Transpower's** internal processes for challenging a need for an **identified programme** and the possible alternative solutions;
- (e) how **grid outputs**, key drivers, assumptions, and cost modelling were used to determine the forecast **capital expenditure** of the **identified programme**;
- (f) the capital costing methodology and formulation, including unit rate sources, the method used to test the efficiency of unit rates and the quantum of included contingencies;
- (g) the effect of the **identified programme's** forecast **capital expenditure** on other cost categories, including the relationship with **operating expenditure**;
- (h) links with other **projects** or **programmes**, whether proposed or in progress; and

- (i) the efficiency of the proposed approach to procurement of associated goods and services for the **identified programme**.

### A3 **Evaluation techniques**

In undertaking the evaluations described in clauses A1 and A2, the **Commission** may employ one or more of the following techniques:

- (a) process benchmarking;
- (b) process or functional modelling;
- (c) unit rate benchmarking;
- (d) trending or time-series analysis;
- (e) high level governance and process reviews;
- (f) internal benchmarking of forecast costs against costs in the current period;
- (g) **capital expenditure** category and **operating expenditure** category benchmarking;
- (h) **project** and **programme** sampling;
- (i) critiques or independent development of-
  - (i) demand forecasts;
  - (ii) labour unit cost forecasts;
  - (iii) materials forecasts;
  - (iv) plant forecasts; and
  - (v) equipment unit cost forecasts; and
- (j) any other technique or approach that the **Commission** considers appropriate in the circumstances.

### A4 **Criteria for considering the low incentive rate base capex allowance**

Where the **Commission** considers that a **base capex project** or **base capex programme** proposed by **Transpower** as a **low incentive rate base capex project** is likely to require **capital expenditure** greater than \$20 million, the **Commission** will take into account at least the following criteria in deciding whether to specify the **base capex project** or **base capex programme** as a **low incentive rate base capex project**:

- (a) whether there are viable alternatives that meet the same **investment need**; and
- (b) the magnitude of cost uncertainty of the **base capex project** or **base capex programme**.

#### A5 **Criteria for considering grid output measures**

The **Commission** will take into account at least the following criteria in considering **grid output measures**:

- (a) the extent to which the proposed **grid output measure** is a recognised measure of either or both of the following things:
  - (i) risk in the **supply of electricity transmission services**; and
  - (ii) performance of the **supply of electricity transmission services**;
- (b) the relationship(s) between the proposed **grid output measure** and **base capex, major capex** and **operating expenditure** including the extent to which the relationship(s) can be quantified and the strength of the relationship(s);
- (c) whether the proposed **grid output measure** was devised in accordance with the **policies** and processes referred to in the **base capex proposal**, including consultation processes; and
- (d) the extent to which the proposed **grid output measure** aligns with the business processes used by **Transpower** in its **supply of electricity transmission services**.

#### A6 **Criteria for considering revenue-linked grid output measures**

In addition to the criteria specified in clause A5, the **Commission** will take into account at least the following criteria in considering **revenue-linked grid output measures**:

- (a) the extent to which the proposed **revenue-linked grid output measure** is a recognised measure of **grid outputs** that are valued by **consumers**; and
- (b) whether the proposed **revenue-linked grid output measure** is quantifiable, controllable by **Transpower**, auditable and replicable over time.

#### A7 **Criteria for considering matters relating to revenue-linked grid output measures**

The **Commission** will take into account at least the following criteria in considering the **caps, collars, grid output incentive rate** and **grid output targets** in respect of each **revenue-linked grid output measure**:

- (a) the value that **consumers** place on the relevant **grid output measure** and the relationship between this value and the proposed **grid output incentive rate**;
- (b) quantification and strength of the relationship between **base capex** and the **grid output** both-
  - (i) within the **regulatory period** in question; and

- (ii) over the longer term;
- (c) the extent of the likely effect of factors unrelated to **grid** investment that may affect the relevant **grid output**, such as-
  - (i) natural degradation in asset condition;
  - (ii) impact of changes in loading of the **grid**; and
  - (iii) extreme weather events;
- (d) the plausible range of the relevant **grid outputs** likely to be delivered taking into account the factors described in paragraphs (b) and (c);
- (e) the relationship between the range described in paragraph (d) and the proposed **caps** and **collars**; and
- (f) the impact on return on capital implied by both the range described in paragraph (d) and the application of the proposed **caps, collars** and **grid output incentive rate**.

**A8 Criteria for considering base capex allowance adjustment mechanism**

Where the **Commission** considers specifying a **base capex allowance adjustment mechanism** it will take into account:

- (a) the cost and/or timing uncertainties of **E & D base capex projects** or **E & D base capex programmes**; and
- (b) the extent to which the cost and/or timing uncertainties are linked to-
  - (i) a certain level of demand or connection of new generation; and/or
  - (ii) any other drivers of **E & D base capex**.

## SCHEDULE B REVENUE ADJUSTMENTS

### DIVISION 1 BASE CAPEX AND GRID OUTPUT ADJUSTMENTS

#### B1 Calculation of base capex expenditure adjustment

- (1) The **base capex expenditure adjustment** is the sum of the **standard incentive rate base capex expenditure adjustment** and the **low incentive rate base capex expenditure adjustment**.
- (2) Subject to subclause (4), the quantum of the **standard incentive rate base capex expenditure adjustment** for a **disclosure** year is calculated in accordance with the following formula:  $a(b-c-g)$

Term	Description	Specification
<i>a</i>	<b>base capex standard incentive rate</b>	$\left(1 - \left(\frac{1}{(1+x)^6}\right)\right) \times 100\%$ <p>where:</p> <p>'x' is the 67th percentile estimate of vanilla <b>WACC</b> determined in accordance with clause 3.5.5 of the Transpower Input Methodologies Determination 2010</p>
<i>b</i>	<b>adjusted standard incentive rate base capex allowance for the disclosure year</b>	$d + d' + e + f + h$
<i>c</i>	aggregate <b>capital expenditure</b> that is <b>base capex</b> subject to the <b>base capex standard incentive rate</b> in the <b>disclosure year</b>	<b>base capex</b> annual information required by an <b>ID determination</b> or a <b>s 53ZD notice</b>

<i>d</i>	<b>standard incentive rate base capex allowance</b> for the <b>disclosure year</b>	in accordance with clause 2.2.2(1)(a) and the <b>base capex allowance adjustment mechanism</b>
<i>d'</i>	amount of approved base capex in respect of listed projects subject to the <b>base capex standard incentive rate</b> for the <b>disclosure year</b>	in accordance with clause 3.2.3(5)(d)
<i>e</i>	adjustment correcting for disparity between <b>forecast CPI</b> that applied when the <b>standard incentive rate base capex allowance</b> was determined and actual <b>CPI</b> in respect of <i>d</i> and <i>d'</i>	<b>base capex</b> annual information required by an <b>ID determination</b> or a <b>s 53ZD notice</b>
<i>f</i>	adjustment correcting for disparity between <b>forecast FX rates</b> that applied when the <b>standard incentive rate base capex allowance</b> was determined and <b>actual FX rates</b> for each relevant currency in respect of <i>d</i> and <i>d'</i>	<b>base capex</b> annual information required by an <b>ID determination</b> or a <b>s 53ZD notice</b>
<i>g</i>	aggregate amount of <b>adjusted standard incentive rate base capex allowance</b> <i>b</i> to which the <b>base capex standard incentive rate</b> <i>a</i> does not apply, if the expenditure was included in the <b>standard incentive rate base capex allowance</b> <i>d</i> or in approved <b>base capex</b> of <b>listed projects</b> <i>d'</i> , and where either <b>base capex</b> has expanded in scope and has become <b>major capex</b> or where <b>base capex</b> included in <i>d</i> or <i>d'</i> has cost elements that vary significantly due to factors beyond the control of <b>Transpower</b>	<b>base capex</b> annual information required by an <b>ID determination</b> or a <b>s 53ZD notice</b>
<i>h</i>	adjustment, after correcting for the applicable portions of <i>e</i> and <i>f</i> , in respect of the portion of <i>d</i> that is subject to the <b>base capex allowance adjustment mechanism</b>	specified in an <b>IPP determination</b>

- (3) Subject to subclause (4), the quantum of the **low incentive rate base capex expenditure adjustment** for a **disclosure year** is calculated in accordance with the following formula:  $a^*(b^* - c^* - g^*)$

<b>Term</b>	<b>Description</b>	<b>Specification</b>
$a^*$	<b>base capex low incentive rate</b>	15%
$b^*$	<b>adjusted low incentive rate base capex allowance</b> for the <b>disclosure year</b>	$d^* + d'^* + e^* + f^*$
$c^*$	aggregate <b>capital expenditure</b> that is <b>base capex</b> subject to the <b>base capex low incentive rate</b> in the <b>disclosure year</b>	base capex annual information required by an <b>ID determination</b> or a s 53ZD notice
$d^*$	<b>low incentive rate base capex allowance</b> for the <b>disclosure year</b>	in accordance with clause 2.2.2(1)(a)
$d'^*$	amount of approved <b>base capex</b> in respect of <b>listed projects</b> subject to the <b>base capex low incentive rate</b> for the <b>disclosure year</b>	in accordance with clause 3.2.3(5)(d)
$e^*$	adjustment correcting for disparity between <b>forecast CPI</b> that applied when the <b>low incentive rate base capex allowance</b> was determined and actual <b>CPI</b> in respect of $d^*$ and $d'^*$	<b>base capex</b> information required by an <b>ID determination</b> or a s 53ZD notice
$f^*$	adjustment correcting for disparity between <b>forecast FX rates</b> that applied when the <b>low incentive rate base capex allowance</b> was determined and <b>actual FX rates</b> for each relevant currency in respect of $d^*$ and $d'^*$	<b>base capex</b> information required by an <b>ID determination</b> or a s 53ZD notice

$g^*$  aggregate amount of **adjusted low incentive rate base capex allowance  $b^*$**  to which **base capex low incentive rate  $a^*$**  does not apply, if the expenditure was included in the **low incentive rate base capex allowance  $d^*$**  or in approved **base capex of listed projects  $d'^*$** , and where either **base capex** has expanded in scope and become **major capex** or where **base capex** included in  $d^*$  or  $d'^*$  has cost elements that vary significantly due to factors beyond the control of **Transpower**

**base capex** annual information required by an **ID determination** or a **s 53ZD notice**

- (4) For the purposes of subclauses (2) and (3), in calculating the amounts or values for one or more of  $c$ ,  $e$ ,  $f$ ,  $g$ ,  $c^*$ ,  $e^*$ ,  $f^*$  and  $g^*$ , the **Commission** need not use the amounts or values in the **base capex** annual information provided by **Transpower** and may instead, having regard to the views of interested persons, use the amounts or values that it considers are correct in the circumstances.

## B2 Calculation of annual grid output adjustment

- (1) Subject to subclause (2), the quantum of the **grid output adjustment** is calculated for a **disclosure year** in accordance with the following table:

Term	Description	Specification
	<b>grid output adjustment</b>	$\sum i$
$i$	<b>grid output adjustment</b> in respect of the <b>revenue-linked grid output measure</b> in question	$\max(l(j-n), \min(l(m-n), l(k-n)))$
$j$	<b>collar</b> in respect of the <b>revenue-linked grid output measure</b> in question for the disclosure year	in accordance with clause 2.2.2(1)(d)(ii)
$k$	<b>cap</b> in respect of the <b>revenue-linked grid output measure</b> in question for the disclosure year	in accordance with clause 2.2.2(1)(d)(i)

<i>l</i>	<b>grid output incentive rate</b> in respect of the <b>revenue-linked grid output measure</b> in question	in accordance with clause 2.2.2(1)(d)(iii)
<i>m</i>	output achieved during the <b>disclosure year</b> in respect of the <b>revenue-linked grid output measure</b> in question	<b>base capex</b> information required by an <b>ID determination</b> or a s 53ZD notice
<i>n</i>	<b>grid output target</b> in respect of the <b>revenue-linked grid output measure</b> in question for the disclosure year	in accordance with clause 2.2.2(1)(d)(iv)

- (2) For the purpose of subclause (1), in calculating the value for *m*, the **Commission** need not use the value for *m* disclosed by **Transpower** in the **base capex** annual information and may instead, having regard to the views of interested persons, use the value that it considers is correct in the circumstances.

## DIVISION 2 MAJOR CAPEX ADJUSTMENTS

### B3 Calculation of major capex expenditure and output adjustment

- (1) Subject to subclause (2), the quantum of the **major capex expenditure and output adjustment** is calculated in accordance with the following formula for each **approved major capex project**:

$$a(b - t - c)$$

Term	Description	Specification
<i>a</i>	<b>major capex incentive rate</b> for the <b>approved major capex project</b>	in accordance with clause 3.3.5(7)
<i>b</i>	<b>adjusted major capex allowance</b> for the <b>approved major capex project</b>	$d + e + f$
<i>c</i>	amount of <b>capital expenditure</b> for the <b>approved major capex projects</b> less <b>exempt major capex</b>	<b>major capex</b> information required by an <b>ID determination</b> or a s 53ZD notice

<i>d</i>	<b>major capex allowance</b> for the <b>approved major capex project</b> less <b>exempt major capex</b>	in accordance with clause 3.3.5(7)
<i>e</i>	adjustment correcting for disparity between <b>forecast CPI</b> that applied when the <b>major capex allowance</b> for the <b>approved major capex project</b> was determined and actual <b>CPI</b> in respect of <i>d</i>	<b>major capex</b> information required by an ID determination or a s 53ZD notice
<i>f</i>	adjustment correcting for disparity between <b>forecast FX rates</b> that applied when the <b>major capex allowance</b> for the <b>approved major capex project</b> was determined and <b>actual FX rates</b> for each relevant currency in respect of <i>d</i>	<b>major capex</b> information required by an ID determination or a s 53ZD notice
<i>t</i>	estimated part of the <b>major capex allowance</b> for the approved <b>major capex project</b> that relates to the <b>approved major capex project outputs</b> not delivered	<b>major capex</b> annual information required by an <b>ID determination</b> or a <b>s 53ZD notice</b>

- (2) For the purposes of subclause (1), in calculating the amounts or values for one or more of *c*, *e*, *f* and *t*, the **Commission** need not use the amounts or values in the **major capex** information provided by **Transpower** in the **major capex** annual information and may instead, having regard to the views of interested persons, use the amounts or values that it considers are correct in the circumstances.

## SCHEDULE C MAJOR CAPEX PROPOSAL - EVALUATION CRITERIA

### C1 Proposed investment – investment test and components

- (1) When deciding whether to approve a **major capex project** or a **staging project**, the **Commission** must evaluate whether the **proposed investment** satisfies the **investment test**.
- (2) For the purposes of deciding whether a **proposed investment** that is a **major capex project (staged)** satisfies the **investment test**, the **Commission** will:
  - (a) where **Transpower** seeks approval for the first **staging project** of a **major capex project (staged)**, evaluate whether the **investment test** is satisfied for all proposed **staging projects** of the **major capex project (staged)**; and
  - (b) where **Transpower** seeks approval for a subsequent **staging project** of a **major capex project (staged)** that is a continuation of an existing **major capex project (staged)**, evaluate whether the **investment test** is satisfied for all proposed remaining **staging projects** of the **major capex project (staged)**.
- (3) The **Commission** will also evaluate, to the extent applicable to the **transmission investment** or **non-transmission solution** in question, the following components of the **major capex project** or **staging project(s)** for which **Transpower** seeks approval in its **major capex proposal**:
  - (a) **major capex allowance**;
  - (b) **maximum recoverable costs**;
  - (c) **recovery scheme**;
  - (d) **major capex project outputs**;
  - (e) **approval expiry date**;
  - (f) **major capex incentive rate**;
  - (g) **exempt major capex**;
  - (h) **commissioning date assumption**; and
  - (i) **completion date assumption**.
- (4) The **Commission** may only approve a **major capex project** or a **staging project** after carrying out the evaluations under subclauses (1) to (3), if it is satisfied-
  - (a) that the **proposed investment** satisfies the **investment test**; and
  - (b) with the components listed in subclause (3) taking account of its ability to determine the **major capex allowance**, **major capex incentive rate** and **exempt base capex**.

## C2 **General evaluation of major capex proposal**

The **Commission** must have regard to at least one of the following factors when evaluating a **major capex proposal**:

- (a) whether the **proposed investment and investment options**:
  - (i) reflect **good electricity industry practice**;
  - (ii) are technically feasible;
  - (iii) are able to be implemented in terms of the statutory planning process under the Resource Management Act 1991, other regulatory consents, and obtaining property and access rights; and
  - (iv) can be integrated into system and market operations;
- (b) whether the estimated time required for construction, consultation, meeting statutory planning and other regulatory requirements, and obtaining property and access rights prior to a proposed **commissioning date** or **completion date** is reasonable;
- (c) whether the key assumptions around outage planning are reasonable;
- (d) the extent to which, in complying with clause 3.3.1(9) with respect to the consultation programme or the approach for consideration of **non-transmission solutions**, **Transpower** has had regard to the views of interested persons; and
- (e) the impact of the **sensitivity analysis** on **electricity market benefit or cost elements** of the **proposed investment and investment options**.

## C3 **Evaluation of major capex allowance and maximum recoverable costs**

The **Commission** must have regard to at least one of the following factors when evaluating the **major capex allowance** and **maximum recoverable costs** for the **major capex project** or **staging project** that **Transpower** submits for approval in its **major capex proposal**:

- (a) how **major capex project outputs**, key drivers, key assumptions, and cost modelling were used to determine the **P50** and **major capex allowance** or **maximum recoverable costs**;
- (b) the capital costing methodology and formulation, including unit rate sources, the method used to test the efficiency of unit rates and the level of contingencies included;
- (c) the impact of forecast costs on other costs of **Transpower**, including the relationship with **operating expenditure**;

- (d) mechanisms for controlling actual **capital expenditure** with respect to the **major capex allowance** or **maximum recoverable costs**; and
- (e) the efficiency of the proposed approach to procurement of goods and services.

#### C4 Evaluation of approval expiry date

The **Commission** must have regard to at least one of the following factors when evaluating a proposed **approval expiry date**:

- (a) the effect of the proposed **approval expiry date** on the quantified and unquantified costs and benefits under the **investment test**;
- (b) the effect of the changes to the **commissioning date assumption** or **completion date assumption** on the **expected net electricity market benefit** under the **investment test**;
- (c) the effect of the proposed **approval expiry date** and the **commissioning date assumption** or **completion date assumption** in the **major capex proposal**;
- (d) the sensitivity of the proposed **approval expiry date** to the key assumptions used in the **major capex proposal**;
- (e) **demand and generation scenarios**; and
- (f) **sensitivity analysis**.

#### C5 Evaluation of major capex project outputs

The **Commission** must have regard to at least one of the following factors when evaluating proposed **major capex project outputs**:

- (a) the extent to which the **major capex project outputs** reflect the nature, quantum and functional capability of the **transmission investment** assets to be **commissioned**;
- (b) the extent to which the **major capex project outputs** reflect the change in the functional capability of the **grid** as a result of undertaking the proposed **major capex project** or **staging project**;
- (c) the extent to which the **major capex project outputs** are consistent with key assumptions used in determining the **major capex allowance** or **maximum recoverable costs**;
- (d) the nature of the **electricity market benefit or cost elements** directly related to the **supply of electricity transmission services** taken into account in applying the **investment test**; and

- (e) in the case of a **non-transmission solution**-
  - (i) the extent to which the **major capex project outputs** reflect the nature and quantum of any product or service provided to **Transpower**; and
  - (ii) the extent to which the **major capex project outputs** reflect the change in the functional capability of the **grid** resulting from the product or service provided to **Transpower**.

#### C6 Evaluation of major capex incentive rate

The **Commission** must have regard to at least one of the following factors when evaluating proposed **major capex incentive rates**:

- (a) the magnitude of the cost of the **major capex project** relative to the aggregate cost of other **major capex projects**;
- (b) the magnitude of the cost uncertainty of the **major capex project** relative to the cost uncertainty of other **major capex projects**.

#### C7 Evaluation techniques

In undertaking the evaluations described in the clauses in this schedule, the **Commission** may employ one or more of the following techniques:

- (a) analysis of powerflow and dynamics in the **grid**, in the context of the **proposed investment, investment options** and **modelled projects**;
- (b) detailed critiques of conceptual designs to the extent necessary to derive credible cost and time estimates, including forecast **commissioning dates** or **completion dates**;
- (c) analysis and review of the calculation of costs and benefits associated with the **proposed investment** and **investment options** including, but not limited to:
  - (i) calculation of loss benefits;
  - (ii) reductions in fuel consumption by **generators** of electricity;
  - (iii) enabled lower cost generation;
  - (iv) reliability benefits; and
  - (v) **competition effects**;
- (d) critiques of market development scenarios contained in **major capex proposals**;
- (e) unit rate benchmarking; and

- (f) any other technique or approach that the **Commission** considers appropriate in the circumstances.

## SCHEDULE D MAJOR CAPEX - INVESTMENT TEST

### DIVISION 1 INVESTMENT TEST

#### D1 Major capex - investment test

- (1) The **investment test** is satisfied in respect of a **proposed investment** if the **proposed investment** is an **investment option** that-
  - (a) is sufficiently robust under **sensitivity analysis**;
  - (b) has a positive **expected net electricity market benefit** unless it is designed to meet an **investment need** the satisfaction of which is necessary to meet the deterministic limb of the **grid reliability standards**; and
  - (c) has-
    - (i) the highest **expected net electricity market benefit**, where only quantified **electricity market benefit or cost elements** are taken into account; or
    - (ii) the highest **expected net electricity market benefit** including a qualitative assessment to take into account the contribution of associated unquantified **electricity market benefit or cost elements**, if the **proposed investment** has a similar **expected net electricity market benefit** to the **investment option** with the highest **expected net electricity market benefit** where only quantified **electricity market benefit or cost elements** are taken into account.
- (2) For the purpose of subclause (1)(c)(ii)-
  - (a) a similar **expected net electricity market benefit** is one where the difference in quantum, subject to subclause (3), is 10% or less of the aggregate **project costs** of the **investment option** to which the **proposed investment** is compared; and
  - (b) an **electricity market benefit or cost element** may be treated as unquantified where-
    - (i) the cost of calculating its quantum in accordance with clause D6(4) is likely to be disproportionately large relative to the quantum; or
    - (ii) its expected value cannot be calculated in accordance with clause D6(4) with an appropriate level of certainty due to the extent of uncertainties in underlying assumptions or calculation approaches.
- (3) For the purpose of subclause (2)(a), the **Commission** may, at its discretion, adopt an alternative percentage to 10% as proposed by **Transpower**.

## DIVISION 2 MEANING OF TERMS USED IN INVESTMENT TEST

### D2 Expected net electricity market benefit

- (1) **Expected net electricity market benefit** means, in respect of an **investment option**, the weighted average of the **net electricity market benefit** under each **relevant demand and generation scenario**, where each **relevant demand and generation scenario** is accorded the explicit or implicit weighting assigned to it by the party who developed the scenario, unless **Transpower** considers that alternative weightings should apply and has consulted on these as part of its consultation on the short list of **investment options**.
- (2) **Net electricity market benefit** means, in respect of an **investment option** applied to a **demand and generation scenario**, its aggregated quantum of each **electricity market benefit or cost element** less its aggregated quantum of each **project cost**.

### D3 Demand and generation scenario, demand and generation scenario variation, and relevant demand and generation scenario

- (1) **Demand and generation scenario** means a description of a hypothetical future situation relating to forecast electricity demand and generation published by the Ministry of Business, Innovation and Employment (or other agency which subsequently assumes the responsibility) for the purpose of the preparation or evaluation of **major capex proposals**.
- (2) **Demand and generation scenario variation** means a reasonable variation on a **demand and generation scenario** that reasonably has regard to the views of interested persons.
- (3) For the purpose of subclause (2) a variation must be feasible and reasonable with regard to at least the following factors:
  - (a) existing and forecast demand;
  - (b) the **grid reliability standards**;
  - (c) the **value of expected unserved energy**;
  - (d) transfer capacities and capabilities of the **grid**;
  - (e) the cost of supplying sufficient **ancillary services**;
  - (f) the cost of losses necessarily incurred in efficiently meeting demand;
  - (g) **operating expenditure** incurred in efficiently meeting demand by means of **existing assets, committed projects, decommissioned assets and modelled projects**;
  - (h) the capital cost of efficiently meeting demand by means of **modelled projects**;

- (i) the timing of decommissioning an asset or removing or re-rating a **decommissioned asset**; and
  - (j) likely range of **investment options** to which the **investment test** relates.
- (4) **Relevant demand and generation scenarios** means-
- (a) all current **demand and generation scenarios** that have not been varied under subclause (2); and
  - (b) where there are **demand and generation scenario variations**, all **demand and generation scenario variations** plus all current **demand and generation scenarios** that have not been varied under subclause (2).

#### D4 **Costs or benefits**

- (1) **Electricity market benefit or cost element** means, subject to subclause (3), any of the following things received or incurred by **consumers** during the **calculation period** under the **demand and generation scenario** in question that will affect **net electricity market benefits**:
- (a) fuel costs incurred by **generators** in relation to **existing assets, committed projects** and **modelled projects**;
  - (b) the cost of involuntary demand curtailment borne by end users of electricity;
  - (c) the costs of demand-side management;
  - (d) capital costs of **modelled projects**;
  - (e) costs resulting from operations and maintenance expenditure on **committed projects, existing assets** and **modelled projects**;
  - (f) the cost of **ancillary services** including **system operator** costs;
  - (g) the cost of losses, including local losses;
  - (h) any real option value;
  - (i) subject to subclause (5), the value of any benefit associated with any financial contribution that a third party has committed to make towards the costs of the **project**;
  - (j) subsidies or other benefits-
    - (i) relating to anything listed in paragraphs (a) to (i); and
    - (ii) provided under or arising pursuant to all electricity-related legislation and electricity-related administrative determinations;
  - (k) **competition effects**; and

- (l) any other benefit or cost occurring in the electricity market proposed by **Transpower** prior to its consultation on the short list of **investment options** and agreed to by the **Commission**.
- (2) **Project cost** means any of the following things reasonably incurred by **Transpower** prior to or during the **calculation period** in undertaking a **major capex project**:
  - (a) **capital expenditure** incurred, including **capital expenditure** in relation to land specified in subclause (6), prior to the date implied by the **commissioning date assumption** for assets associated with the **investment option**;
  - (b) amounts payable to a third party in relation to its testing of assets associated with the **investment option**;
  - (c) an amount reasonably related to the **commissioning** of assets associated with the **investment option**;
  - (d) operating, maintenance and dismantling costs associated with the **investment option**;
  - (e) reasonable costs of complying with or arising pursuant to all applicable existing and reasonably anticipated legislation relating to the approval for and undertaking of an **investment option**;
  - (f) reasonable costs of complying with or arising pursuant to administrative requirements relating to the approval for and undertaking of an **investment option**, including costs relating to the preparation of a **major capex proposal**; and
  - (g) any other reasonable costs incurred by **Transpower** associated with the **investment option**.
- (3) For the purpose of subclause (1), an **electricity market benefit or cost element** excludes any **project cost** incurred by **Transpower** specified in subclause (2).
- (4) For the purpose of subclause (1)(h), real option value means the value attaching to the flexibility of a participant in the electricity market to make investment decisions, relating to an overall investment, in phases, where the value reflects the expected relative reduction of future costs to future benefits due to the making of those investment decisions based on information available in the future but presently unavailable or uncertain.
- (5) For the purpose of subclause (1)(i), the value of any such benefit may not exceed the amount of the contribution committed by the third party.
- (6) The land referred to in subclause (2)(a) is land that, at the time of the **major capex proposal**, is **commissioned** but which is not used by **Transpower** to provide **electricity transmission services**.

## D5 Competition effects

**Competition effects** means the value of the expected change in economic surplus due to a change in competition among participants in the electricity market as a result of a **major capex project** undertaken by **Transpower**, which must exclude any expected change in economic surplus due to a change in another **electricity market benefit or cost element** listed in clause D4(1).

## D6 Quantification of costs and benefits

- (1) The quantum of a **project cost** incurred prior to the **calculation period** must be calculated using compounding of the **project cost** over the period from the date it was incurred to the start of the **calculation period** using the **discount rate**.
- (2) The quantum of an **electricity market benefit or cost element** received or incurred during the **calculation period** must be calculated using discounting of the **electricity market benefit or cost element** over the **calculation period** using the **discount rate**.
- (3) **Discount rate** means-
  - (a) a standard rate of 7%; or
  - (b) a non-standard rate other than 7% which is appropriate in the circumstances and subject to consultation under clause I3.
- (4) The quantum of an **electricity market benefit or cost element** or **project cost** must be calculated using its expected value, which is the probability-weighted average of the possible values of the cost or benefit where the probability weightings reflect the uncertainties in underlying assumptions or calculation approaches.
- (5) The cost of involuntary demand curtailment borne by end users of electricity is the expected quantity of curtailed demand multiplied by the **value of expected unserved energy**.
- (6) The quantum of a **project cost** must be calculated using **good electricity industry practice**.

## D7 Sensitivity analysis

- (1) **Sensitivity analysis** means consideration, save where it is neither reasonably practicable nor reasonably necessary, of the effect on quantum of variations in the following parameters, taking into account their probability of occurrence:
  - (a) forecast demand;

- (b) size, timing, location, fuel costs and operating and maintenance costs, relevant to **existing assets, committed projects, modelled projects** and the **investment option** in question;
  - (c) capital cost of the **investment option** in question (including variations up to proposed **major capex allowance**) and **modelled projects**;
  - (d) timing of decommissioning, removing or de-rating **decommissioned assets**;
  - (e) subject to subclause (2), the **value of expected unserved energy**;
  - (f) **discount rate**;
  - (g) range of hydrological inflow sequences;
  - (h) **relevant demand and generation scenario** probability weightings;
  - (i) in relation to any **competition effects** associated with an **investment option, generator** offering and demand-side bidding strategies; and
  - (j) any other variables that **Transpower** considers to be relatively uncertain.
- (2) For the purpose of subclause (1)(e), where paragraph (b) of the definition of **value of expected unserved energy** is relied on, **sensitivity analysis** must be undertaken in respect of variations in both the value described in that paragraph and the value described in paragraph (a) of the definition of **value of expected unserved energy**.
- (3) For the purpose of subclause (1)(f), **sensitivity analysis** must be undertaken in respect of the following **discount rates**-
- (a) 4%;
  - (b) the standard rate of 7%;
  - (c) 10%; and
  - (d) any non-standard rate other than 7% which has been adopted by **Transpower**.

## D8 Assets and projects

- (1) **Committed project** means assets that are likely to be **commissioned** during the **calculation period** and-
- (a) in relation to which all of the following are satisfied:
    - (i) the proponent has obtained all required planning consents, construction approvals, and licences, and fulfilled any other regulatory requirement that must be met before commencing construction;
    - (ii) construction has commenced or a firm commencement date for construction has been set;

- (iii) the proponent has acquired or executed an agreement to acquire land (or commenced legal proceedings to acquire land), or has executed an agreement for the leasing of land, for the purposes of construction;
  - (iv) contracts for supply and construction of the major components of the plant and equipment (including any generating units, turbines, boilers, transmission towers, conductors, termination station equipment) have been executed (i.e. all the necessary formal legal requirements have been observed to make the contract valid and complete); and
  - (v) if required, contracts for the financing of the project, including any debt plans, have been executed (i.e. all the necessary formal legal requirements have been observed to make the contract valid and complete); or
- (b) that is an approved investment (as ‘approved investment’ is defined in the **code**).
- (2) **Decommissioned asset** means an existing asset in relation to which-
- (a) the following things are satisfied:
    - (i) a final decision to decommission, remove or de-rate the existing asset after a specified date has been made and publicly announced; and
    - (ii) firm arrangement to directly or indirectly facilitate the decommissioning, removal or de-rating of the existing asset has been made;
  - (b) consents or contracts for its operation and maintenance have-
    - (i) been terminated; or
    - (ii) expired with no reasonable prospect of renewal; or
  - (c) agreements for early termination of consents or contracts for its operation and maintenance have been executed.
- (3) **Existing asset** means any asset in operation at the time a **major capex proposal** is made.
- (4) **Modelled project** means assets, other than those that are part of an **investment option**-
- (a) which are likely to exist-
    - (i) as part of a **demand and generation scenario**; and
    - (ii) during the **calculation period** for any **investment option** based on that scenario; and
  - (b) for which the likelihood, nature and timing of their existence are affected by an **investment option** proceeding.

## SCHEDULE E      **INTEGRATED TRANSMISSION PLAN**

### E1      **Information to be included in integrated transmission plan**

- (1) The information that must be included is:
  - (a) an **ITP narrative**; and
  - (b) **ITP supporting documents**.
- (2) The information listed in this schedule in relation to the **ITP narrative** is, unless otherwise stated, required in respect of a period of at least ten **disclosure years** commencing on the first day of the next **regulatory period**.
- (3) The robustness of information provided must be commensurate with the degree of certainty **Transpower** may be reasonably expected to have in respect of it.

### E2      **Information to be included in the ITP narrative**

- (1) with reference, where relevant, to the information contained in the **ITP supporting documents**, a high level-
  - (a) overview of the expenditure and outputs which are proposed for the first **regulatory period** to which the **ITP narrative** relates coinciding with the **disclosure year** and forecast expenditure needs and outputs over the next **regulatory period**;
  - (b) overview of the key assumptions and scenarios used to determine forecast expenditure and **grid outputs**;
  - (c) assessment of the key uncertainties in the key assumptions, and forecast expenditure and **grid outputs**;
  - (d) assessment of the key risks affecting forecast expenditure;
  - (e) assessment of how the key uncertainties and key risks will affect **Transpower's** ability to deliver the forecast **grid outputs**;
  - (f) description of the proposed measures to manage and mitigate the key uncertainties and key risks;
  - (g) description of the key relationships, including any synergies or trade-offs, within and between the following:
    - (i) **projects** and **programmes** assumed for the purpose of determining the forecast expenditure; and
    - (ii) the forecast **grid outputs**; and

- (h) explanations of how key aspects of the **ITP narrative** take account of any changes in **Transpower's** strategic directions or scenarios since the publication of the previous **ITP narrative**, including by reference to any new reports by **Transpower** on strategic directions or scenarios.
- (2) forecast expenditure in the form of a schedule in respect of each **disclosure year** for-
  - (a) **operating expenditure** (disaggregated by major areas of expenditure);
  - (b) **base capex** (disaggregated by major areas of expenditure); and
  - (c) approved **major capex** (disaggregated by project);
- (3) forecast **grid outputs** in the form of a schedule in respect of each **disclosure year** for-
  - (a) each **revenue-linked grid output measure** described in the **base capex proposal** relating to the first **regulatory period** to which the **ITP narrative** relates;
  - (b) all proposed **grid output measures** other than those referred to in (a) above described in that **base capex proposal** relating to the first **regulatory period**; and
  - (c) **major capex project outputs** assumed to be delivered by each approved **major capex project**;
- (4) a summary of **major capex projects** under development, including:
  - (a) a summary of the key issues being addressed with reference to the planning report which is an **ITP supporting document**;
  - (b) estimates of likely **capital expenditure**; and
  - (c) estimates of project timings, including those relating to consultation periods, submissions for approval, construction, and **commissioning**.

### E3 **ITP supporting documents**

the following **documents**, prepared or updated no more than two years before the submission date-

- (a) an asset management plan that includes the information specified in clause E4;
- (b) a planning report that includes the information specified in clause E5;
- (c) a report setting out **Transpower's** output and performance objectives that includes the information specified in clause E6.

**E4 Information to be included in the asset management plan**

- (1) overall asset management strategy and objectives;
- (2) overall asset risk management framework; and
- (3) asset management plans for each asset class covering:
  - (a) specifications for assets life cycle activities;
  - (b) general condition of existing assets;
  - (c) intended **programmes** of asset management works;
  - (d) routine maintenance and repair plans for assets; and
  - (e) **programmes** for routine maintenance and repair plans.

**E5 Information to be included in the planning report**

- (1) the capabilities of the existing **grid**;
- (2) demand and generation forecasts for the forthcoming 10 years;
- (3) the **grid's** ability to meet future demand and generation needs;
- (4) the role of the **grid** in facilitating generation; and
- (5) **grid** investment that may be required to meet future needs for the next 10 years and beyond, by way of-
  - (a) **grid** backbone transmission plans for the main North and South Island transmission corridors and for the HVDC link; and
  - (b) a set of regional plans.

**E6 Information to be included in the report on output and performance objectives**

- (1) a longer term view of the **grid outputs** and associated **grid** performance that will be economic to achieve, taking account of-
  - (a) performance expectations of end users of electricity, including in relation to the value of unserved energy;
  - (b) the costs of delivering changes in the level of **grid outputs**;
  - (c) the impact of committed expenditure on **grid outputs**; and
  - (d) any forecast degradation in asset condition or performance which will affect **grid outputs**;
- (2) a detailed description on the analysis, assumptions and approach used to determine the longer term view; and

- (3) an approach to convert the longer term view to appropriate shorter term objectives for **grid outputs**.

## SCHEDULE F      **BASE CAPEX PROPOSAL - QUALITATIVE INFORMATION**

### F1      **Qualitative information required in a base capex proposal**

For the purpose of clause 7.3.1(1)(b), a **base capex proposal** must, in addition to the other things specified in that clause, include all the information listed or described in this schedule. The information listed or described in this schedule is, unless otherwise stated, required in respect of the **regulatory period** to which the **base capex proposal** relates, i.e. the next **regulatory period**.

### F2      **List of identified programmes, listed projects, low incentive rate base capex projects and E & D base capex projects**

- (1) Identify all proposed **identified programmes** and explain how they were selected with reference to the categories or criteria agreed or specified under clause 2.2.1;
- (2) Identify all proposed **listed projects** and explain why they meet the criteria for **listed projects** set out in clause 2.2.2(7);
- (3) Identify all proposed **low incentive rate base capex projects** and explain-
  - (a) why each is expected to require **capital expenditure** exceeding \$20 million;
  - (b) the extent to which there are viable alternatives to meet the same **investment need**; and
  - (c) the magnitude of the cost uncertainty.
- (4) Identify all **E & D base capex projects** or **E & D base capex programmes** that **Transpower** considers should be subject to the **base capex allowance adjustment mechanism** and explain the extent to which the cost and/or timing uncertainties are linked to-
  - (a) a certain level of demand or connection of new generation; and/or
  - (b) any other drivers of **E & D base capex**.

### F3      **Overview**

- (1) An overview narrative on how the proposed **base capex projects** and **base capex programmes** are consistent with the-
  - (a) most recent **integrated transmission plan**, and an explanation for any material divergence; and
  - (b) **opex proposal**;

- (2) overall description of **Transpower's** aims and objectives with respect to **base capex**;
- (3) summary of the key evidence supporting those aims and objectives;
- (4) explanation as to the overall deliverability of the proposed **base capex projects** and **base capex programmes**; and
- (5) identification and explanation of the factors likely to affect the deliverability of the proposed **base capex projects** and **base capex programmes** by **base capex category**.

#### F4 **Governance and consultant reports**

- (1) schedule listing **Transpower's** governance arrangements (including **policies**, processes, strategies and risk assessments) applicable to **base capex** concerning-
  - (a) **base capex projects** costing over \$20 million;
  - (b) **base capex programmes**;
  - (c) asset management;
  - (d) business planning; and
  - (e) capital works;
- (2) description of all material changes to **policies** and processes that have had a material impact on expenditure levels; and
- (3) schedule listing all consultant reports commissioned for the purpose of preparing the **base capex proposal**.

#### F5 **Cost and efficiency**

- (1) evidence demonstrating if, and how, **Transpower** has, in relation to **base capex**, during the current **regulatory period**-
  - (a) pursued, and is pursuing process improvements;
  - (b) ensured and is seeking to ensure appropriate least-whole-of-life cost and efficient interventions;
  - (c) pursued and is pursuing cost reduction strategies for its **projects** and **programmes**;
  - (d) ensured and is seeking to ensure that both internal and external suppliers of goods and services have incentives to perform well and identify cost savings;
- (2) description of all efficiency assumptions relied upon in the proposed **base capex allowances**; and

- (3) description of-
  - (a) any contingency included in proposed costs; and
  - (b) the methodology for calculating such contingencies.

**F6 Information on identified programmes**

- (1) description, in respect of each **identified programme**, of the milestones that have been passed in accordance with **Transpower's** internal approval processes;
- (2) in respect of each **identified programme**-
  - (a) description of the **identified programme**, including its aims and objectives;
  - (b) economic analyses that support it;
  - (c) explanation as to its deliverability, with reference to factors likely to specifically affect the **identified programme**;
  - (d) description of the methodology used to generate the forecast of its **base capex**, including, but not limited to-
    - (i) the relevant key assumptions and how they were applied;
    - (ii) any relevant cost benchmarking undertaken by or for **Transpower**;
    - (iii) internal historical cost trends for specific cost components relied upon e.g. unit costs; and
    - (iv) any models used, accompanied by explanations of the models and how they were relied upon;
  - (e) any material change from historical costs in any cost component included in the **identified programme** and its effect on the forecast **base capex**;
  - (f) list of all relevant **documents** taken into account in forecasting the **identified programme's base capex**, including **documents** relating to the **identified programme's** deliverability, relevant **policies** and consultant reports;
  - (g) explanation of the extent to which the **identified programme's** forecast **base capex** implements the key assumptions, any consultant reports, and **policies** relating to the planning of the **grid** and the forecasting of **capital expenditure** and **operating expenditure** for that purpose, including in relation to-
    - (i) long term **grid** development;
    - (ii) **grid** maintenance; and
    - (iii) **grid** operation;
  - (h) explanation of all material departures from any-
    - (i) relevant **policies**;

- (ii) planning standards; or
    - (iii) conclusions and recommendations contained in the consultant reports identified pursuant to paragraph (f);
  - (i) overview of any significant tradeoffs between **operating expenditure, base capex** and quality that **Transpower** considered in the development of the **identified programme**;
  - (j) assessment of its impact upon either or both of the-
    - (i) quality performance; and
    - (ii) serviceability,
 of the assets to which the **identified programme** relates;
  - (k) description of relevant legally enforceable duties owed by **Transpower**, whether arising under legislation, at common law or in contract, that have a material impact on the **identified programme**;
  - (l) description of any material step change compared to historic costs for the same or a similar type of **project** or **programme**;
  - (m) explanation of the effect of a step change described pursuant to paragraph (l) on the forecast **base capex** of the **identified programme**.
- (3) in respect of each **identified programme** with a forecast **commissioning date** in the next **regulatory period**-
- (a) description of the reasons for the **identified programme** and the key assumptions underlying the **investment need**;
  - (b) where options have been considered, provide a summary of the options considered, the analyses undertaken and the reasons for selecting the preferred option;
  - (c) summary of expected costs and a description of benefits and outputs; and
  - (d) identify, quantify and justify all contingency sums included in the forecast cost of the **identified programme**.
- (4) in respect of each **identified programme** with a forecast **commissioning date** in the **regulatory period** after the next **regulatory period**-
- (a) describe the milestones that are planned to be completed in the next **regulatory period**; and
  - (b) provide the forecast **commissioning date**.

- (5) in relation to each **identified programme** that may use outsourced services which may have a material effect on the desired outcome of the **identified programme** to the extent known-
  - (a) identify the outsourced services;
  - (b) explain whether those outsourced services are to be provided-
    - (i) under a discrete contract; or
    - (ii) as part of a broader operational arrangement or contract or similar;
  - (c) provide an overview of the procurement process, including an explanation of the extent to which the process will involve competitive bidding, and if not, why not;
  - (d) identify any significant components of any outsourced services that have been, or will be sub-contracted to another supplier; and
  - (e) identify relevant procurement **documents** in a schedule, including but not limited to requests for tender and submissions in response.

**F7 Procurement**

- (1) Provide a description of the procurement process that will be used to deliver the proposed expenditure included in the **base capex proposal**; and
- (2) Identify and explain any key risks associated with procurement that has the potential to affect the delivery of **base capex projects** and **base capex programmes** in the next **regulatory period**.

**F8 Resourcing and delivery**

- (1) description of plans for resourcing and delivering the proposed **base capex projects** and **base capex programmes**;
- (2) identification of the key risks associated with resourcing and delivering the proposed **base capex projects** and **base capex programmes** including explanation of each risk's potential to affect-
  - (a) the forecast **base capex**; and
  - (b) forecast **grid output measures**; and
- (3) description of the processes that will be implemented to manage or mitigate the risks to which subclause (2) relates.

F9 **Other capex**

In respect of any **base capex** included in the **regulatory templates** agreed pursuant to clause 2.2.1(1) or specified pursuant to clause 2.2.1(2) that does not relate to an **identified programme**, description of the rationale for any forecast **base capex** exceeding \$1 million in any one **disclosure year**.

F10 **Escalation factors and foreign exchange assumptions**

- (1) in respect of each escalation factor relied on to account for changes in input prices in completing the **regulatory templates** agreed pursuant to clause 2.2.1(1) or specified pursuant to clause 2.2.1(2)-
  - (a) description of each such escalation factor and rationale for its use;
  - (b) methodology underlying the calculation of its quantum, by reference to data sources, data conversions and assumptions relied upon, including lags;
  - (c) the weighting given to it and description of how that weighting was determined, including any assumptions relied upon;
  - (d) explanation of whether the same escalation factor has been used in the **base capex proposal** and **opex proposal**, and if not, explanation and supporting evidence as to why different escalator factors were applied;
  - (e) an explanation of whether, in applying escalation factors that relate to labour or material inputs, additional contingency factors were applied and, if so, description of the uncertainties they account for and how they were calculated;
- (2) a list of the foreign exchange rates used to prepare the proposed **base capex allowances**;
- (3) an estimate of the exposure to foreign currency for each foreign currency for each year of the next **regulatory period** and description of how these estimates were produced.

F11 **Information on proposed grid output measures**

- (1) list of all proposed **grid output measures** that-
  - (a) must include the following-
    - (i) one or more **asset performance measures**;
    - (ii) one or more **measures of grid performance**; and
    - (iii) one or more **asset health grid output measures**;
  - (b) may include the following-
    - (i) one or more **asset capability grid output measures**; and

- (ii) any other **grid output measures**;
- (2) description of each **grid output measure** listed under subclause (1) including-
  - (a) detailed definitions;
  - (b) details as to what the **grid output measure** includes and excludes;
  - (c) the reasons for selecting each **grid output measure**, including the relationship with the-
    - (i) risks associated with the **grid**;
    - (ii) forecast performance of the **grid**; and
    - (iii) the purposes of the investment in the **grid** as proposed in the **base capex proposal**.
- (3) in respect of each **grid output measure** listed under subclause (1)-
  - (a) identify whether it is proposed as a **revenue-linked grid output measure**, or not linked to revenue;
  - (b) the effect that the proposed **base capex allowances** would have on the measure during the next **regulatory period** and beyond it;
  - (c) the alignment with the underlying business processes used to plan and operate the **grid**; and
  - (d) all relevant calculations, models and supporting data;
- (4) in respect of each **grid output measure** listed under subclause (1) not linked to revenue-
  - (a) the forecast value of the **grid output measure** at the start and by the end of the **regulatory period**; and
  - (b) an explanation of how the forecast value was determined.

## F12 Revenue-linked grid output measures

- (1) in respect of each proposed **revenue-linked grid output measure**-
  - (a) a description of how it will be linked to revenue through the **grid output mechanism**;
  - (b) in respect of each **disclosure year** of the **regulatory period**, a proposed-
    - (i) **grid output target**;
    - (ii) **grid output incentive rate**;
    - (iii) **cap**; and
    - (iv) **collar**;

- (c) description of and justification for the proposed **grid output targets, caps, collars, and grid output incentive rates** including-
    - (i) how each was determined by reference to the relevant definitions;
    - (ii) whether, and if so, for each **grid output target**, **Transpower** has had regard to any consultation responses and relates to relevant **policies** and key assumptions;
  - (d) to the extent possible, historical performance data for the seven most recently completed **disclosure years**;
- (2) commentary comparing and evaluating the performance of each proposed **revenue-linked grid output measure** with respect to actual **capital expenditure** and **operating expenditure** over the 7 most recently completed **disclosure years**;
  - (3) commentary as to how the proposed **grid output targets** relate to the proposed **base capex allowances** and proposed **operating expenditure** allowance as contained in the **opex proposal**;
  - (4) identification of any key assumptions relied upon and modifications or changes made to historical performance data for the purpose of determining the proposed **grid output targets**; and
  - (5) description of models and all data used to determine the proposed **grid output targets, caps and collars**.

## SCHEDULE G MAJOR CAPEX PROPOSALS

### G1 Information required in a major capex proposal

For the purpose of clause 7.4.1(1)(a)-

- (a) a **major capex proposal** must include the information listed or described in this schedule; and
- (b) where the **major capex proposal** relates to the continuation of an existing **major capex project (staged)**, the information may be provided as updates to the information previously supplied for the **major capex project (staged)** and previously approved **staging projects**.

### G2 Information on the investment need

explanation of the need for investment, including-

- (a) information on its nature, extent, location and timing;
- (b) commentary as to how the **investment need** is consistent with the most recent **integrated transmission plan**; and
- (c) a summary of consultation participants' views on the **investment need** and how **Transpower** had regard to those views and if not, why not.

### G3 Information on relevant demand and generation scenarios

- (1) detailed description of each **demand and generation scenario variation**, including-
  - (a) an explanation of the major variations between the **demand and generation scenario variation** and the related original **demand and generation scenario**;
  - (b) the rationale for the variations; and
  - (c) a summary of consultation participants' views on them;
- (2) in respect of each **relevant demand and generation scenario**-
  - (a) the relative weighting of each scenario; and
  - (b) where that weighting was determined by **Transpower**, the methodology used to determine it.

#### G4 **Information relating to each investment option**

In relation to each **investment option** contained in the **major capex proposal**-

- (1) description of the **investment option**;
- (2) **net electricity market benefit** of each **investment option** under each **relevant demand and generation scenario**;
- (3) in respect of each **investment option**, quantum of-
  - (a) each **electricity market benefit or cost element**;
  - (b) each **project cost**;
  - (c) aggregate **electricity market benefit or cost element**; and
  - (d) the **P50**,  
used to calculate each **net electricity market benefit**;
- (4) methodology used to determine the quantum of all information provided pursuant to subclause (3), including details commensurate with the estimated **capital expenditure** and complexity of the **investment option** of any-
  - (a) internal and external benchmarking and how the results were applied;
  - (b) relevant existing or proposed supply or procurement processes;
  - (c) modelling tools or techniques; and
  - (d) key publications and data sources;
- (5) key assumptions used to determine the **net electricity market benefit** of each **investment option**, including-
  - (a) **discount rate**;
  - (b) **calculation period**; and
  - (c) cost per megawatt hour used to determine the **value of expected unserved energy**; and
- (6) **expected net market benefit** of each **investment option**.

#### G5 **Information relating to proposed investment only**

- (1) identification of the **proposed investment** and, where the **proposed investment** is a **major capex project (staged)**, provide-
  - (a) a description of all the proposed **staging projects** of the **major capex project (staged)**;
  - (b) full details of each **staging project** for which approval is being sought;

- (c) reasons for the proposed staging, including the extent to which splitting the **major capex project (staged)** into stages has the potential to reduce the timing, scope or cost uncertainties of the **major capex project**; and
  - (d) the estimated **project costs**, proposed **major capex project outputs** and planned timing of each **staging project** for which approval is being sought;
- (2) detailed description of the components of the **major capex project** or **staging projects** , including at least-
- (a) identification of the extent to which the **major capex project** or each **staging project** includes a **transmission investment** or a **non-transmission solution**;
  - (b) a summary of requirements for completion of the **major capex project** or each **staging project**, such as property or property right acquisition, resource management approvals, asset purchases, asset construction and site remediation;
  - (c) any proposed **major capex allowance** for the **major capex project** or each **staging project**, which must be the **P50**, of **capital expenditure** and the estimated probability distribution of the **P50**;
  - (d) where a **major capex allowance** is applicable, the **commissioning date assumption** and rationale for it;
  - (e) any proposed **maximum recoverable costs**;
  - (f) where **maximum recoverable costs** are applicable, the **completion date assumption** and rationale for it;
  - (g) the **major capex incentive rate** where a different rate to the default rate of 15% is proposed and the rationale for it;
  - (h) all relevant supporting technical information and costing information;
  - (i) where the **major capex project** or a **staging project** includes a **non-transmission solution**-
    - (i) the proposed **recovery scheme**; and
    - (ii) an explanation of the relationship between any proposed **major capex allowance** and any proposed **maximum recoverable costs** for that **non-transmission solution**; and
  - (j) proposed **approval expiry date** and rationale for it;
- (3) detailed description of the rationale for the **proposed investment**;
- (4) summary of the key evidence that supports the rationales such as contracts, reports, memos, financial or other data, results of modelling exercises, customer documentation and letters, and statements from **directors**;

- (5) commentary as to how consistent the **proposed investment** is with the most recent **integrated transmission plan**, and if not, why not;
- (6) identification of anything associated with the **proposed investment** falling under any of clauses D4(1)(a) to D4(1)(g) that did not meet the definition of **electricity market benefit or cost element** only by virtue of its being unlikely to affect the **net electricity market benefit** to an appreciable degree;
- (7) description of considerations, assumptions and calculations used to determine that something falling under any of clauses D4(1)(a) to D4(1)(g) did not meet the definition of **electricity market benefit or cost element** by virtue of its being unlikely to affect the **net electricity market benefit** to an appreciable degree;
- (8) outcome of **sensitivity analysis**;
- (9) description of the methodology applied in undertaking **sensitivity analysis**;
- (10) explanation as to how robust to **sensitivity analysis** the **proposed investment** is;
- (11) reasons for any selection of a-
  - (a) **discount rate** other than 7%; and
  - (b) **calculation period** other than 20 years;
  - (c) cost per megawatt hour determined using paragraph (b) of the definition of **value of expected unserved energy**;
- (12) a description as to how consistent with **good electricity industry practice** the **proposed investment** is;
- (13) rationale for determining that the **proposed investment** may satisfy the **investment test** by reference to each subclause and paragraph of that test; and
- (14) a plan for monitoring costs, **project** milestones and deliverables that reflects the best information available to **Transpower**.

## G6 **Grid outputs**

In relation to the **major capex project** or, each **staging project** for which **Transpower** seeks approval-

- (1) **the major capex project outputs** that are proposed;
- (2) the quantum of each proposed **major capex project output**;
- (3) the rationale for the proposed **major capex project outputs**, including-
  - (a) description of key factors and key assumptions relevant to their determination including the uncertainty associated with each such factor or assumption; and

- (b) explanation of the extent to which the quantum of each proposed **major capex project output** reflects:
  - (i) the assets to be **commissioned**;
  - (ii) the forecast changes to the functional capability of the **grid**;
  - (iii) the quantum of forecast **electricity market benefit or cost elements** directly related to the **supply of electricity transmission services**; and
  - (iv) in respect of a **non-transmission solution**, any service provided by a third party;
- (4) explanation of the relationship between the proposed **major capex allowance** and the quantum of each **major capex project output** that is proposed including the sensitivity of the quantum of each **major capex project output** that is proposed to changes in the proposed **major capex allowance**, including commentary in terms of increases or decrease in the scope of the **project**;
- (5) description of factors that may affect **Transpower's** ability to achieve each **major capex project output** that is proposed, including identification of each factor, with reasons, as within or outside **Transpower's** control; and
- (6) in the case of a **non-transmission solution**, a description of the **transmission investment** it avoids in terms of both assets and expected costs avoided.

#### G7 Information on consultation

In respect of consultation, the specified information is a description as to how the consultation programme referred to in clause 3.3.1(9) was followed, including-

- (a) a list of the relevant consultation steps and confirmation by **Transpower** that each occurred;
- (b) a list of respondents to the consultation;
- (c) a description of all issues raised by interested persons in response to **Transpower's** intended **major capex proposal**;
- (d) a summary of the arguments raised in respect of each issue to which paragraph (c) applies; and
- (e) in respect of the issues to which paragraph (c) applies, an explanation as to whether the **major capex proposal** accommodates the arguments referred to in paragraph (d); and
  - (i) if so, how; and
  - (ii) if not, why not.

**G8 Information on non-transmission solutions**

In respect of **non-transmission solutions**, a description as to how the requirements of Schedule I Division 2 were met, including-

- (a) summary of the process followed to identify and assess **non-transmission solutions**;
- (b) description of **non-transmission solutions** suitable to meet the relevant **investment need** identified either by **Transpower** or by consultation participants;
- (c) explanation as to how the **non-transmission solutions** to which paragraph (b) applies were taken into account when determining the **investment options** and applying the **investment test**; and
- (d) description and justification of how any assets that would be **commissioned** by **Transpower** form part of the **non-transmission solution**.

**G9 Additional information**

Any additional supporting material **Transpower** reasonably considers is relevant to the decision of the **Commission** under clause 3.3.5.

# SCHEDULE H INFORMATION REQUIREMENTS FOR AMENDMENT AND SUNK COSTS APPLICATIONS FOR MAJOR CAPEX PROJECTS

## DIVISION 1 AMENDMENTS TO MAXIMUM RECOVERABLE COSTS OR RECOVERY SCHEME

### H1 Information to be provided

For the purpose of clause 7.4.2(3)(a), the amendment application must include the information listed or described in this division.

### H2 Project identification and specifications

identification of-

- (a) the relevant **non-transmission solution**;
- (b) its **maximum recoverable costs**; and
- (c) its **major capex allowance**, if any.

### H3 Amendments sought

- (1) quantum of any proposed amendment to **maximum recoverable costs**;
- (2) calculations showing how the quantum of the proposed amendment was calculated;
- (3) assumptions made in making those calculations;
- (4) evidence in support of the calculations, including, where relevant-
  - (a) correspondence from manufacturers, suppliers, contractors and other relevant parties; and
  - (b) equipment test results;
- (5) an explanation of the relationship between the proposed **maximum recoverable costs** and any **major capex allowance** for that **non-transmission solution**; and
- (6) description of any amendment proposed to the **recovery scheme**.

### H4 Progress of project

description of progress made on the **non-transmission solution**, including details of-

- (a) planning processes undertaken;

- (b) resource management consents, other regulatory consents, and property rights and access rights obtained;
- (c) any request for information or request for services issued to third parties;
- (d) construction and labour contracts and arrangements made with providers of **non-transmission solutions**;
- (e) construction completed;
- (f) testing undertaken; and
- (g) the proportion (measured by reference to costs incurred by **Transpower**) of the **non-transmission solution**-
  - (i) already provided; and
  - (ii) remaining to be provided.

H5 **Current and forecast expenditure**

- (1) **operating expenditure** incurred, in aggregate;
- (2) **operating expenditure** incremental to the **operating expenditure** allowance specified in the **IPP determination** proposed to be classified as a **recoverable cost** (in aggregate and broken down by type);
- (3) capital costs incurred proposed to be classified as **recoverable costs** (in aggregate and broken down by type);
- (4) total expenditure incurred proposed to be classified as a **recoverable cost**;
- (5) forecast remaining expenditure proposed to be classified as a **recoverable cost**;
- (6) difference between the proposed amendment to **maximum recoverable costs** and **maximum recoverable costs**.

H6 **Reasons for making the application**

- (1) reason for applying, including-
  - (a) description of key factors leading to the application;
  - (b) explanation as to the extent to which each key factor is within **Transpower's** control; and
  - (c) explanation as to the extent to which each key factor was reasonably foreseeable by **Transpower** before the relevant **major capex proposal** was approved;
- (2) description of the implications of the proposed amendment on the relevant **approved major capex project outputs**;

- (3) where an application for amendment to the **approved major capex project outputs** is being made concurrently, explanation as to how the proposed amendments relate to each other in light of the information to which subclause (2) applies;
- (4) where no application for amendment to the **approved major capex project outputs** is being made concurrently, explanation as to why those **approved major capex project outputs** will remain appropriate were the proposed adjustment made in light of the information to which subclause (2) applies;
- (5) statement as to whether the **expected net electricity market benefit** of the **non-transmission solution** is materially lower at the time of the application than when the relevant **major capex proposal** was approved and if so, current quantum of its **expected net electricity market benefit**; and
- (6) explanation as to why making the proposed amendment would promote the long-term benefit of **consumers**, taking into account-
  - (a) any costs that are sunk;
  - (b) the context in which the **major capex proposal** was made; and
  - (c) the context in which any subsequent amendments to the approval were made by the **Commission**.

## DIVISION 2 **AMENDMENT TO APPROVED MAJOR CAPEX PROJECT OUTPUTS**

### H7 **Information to be provided**

For the purpose of clause 7.4.2(3)(b), the amendment application must include the information listed or described in this division.

### H8 **Project identification and specifications**

identification of relevant **approved major capex project** and its **approved major capex project outputs**;

### H9 **Amendment sought**

- (1) proposed amendments to the **approved major capex project outputs**;
- (2) explanation as to how each proposed amendment was arrived at; and
- (3) description of the extent to which each proposed amendment reflects a change to the-
  - (a) assets to be **commissioned**;
  - (b) functional capability of the **grid**;

- (c) quantum of **electricity market benefit or cost elements** directly related to the **supply of electricity transmission services** that are likely to be achieved as a result of undertaking the **project**; and
- (d) in the case of a **non-transmission solution**, description of the extent to which each proposed amendment reflects a change to any relevant service provided by a third party;

#### H10 **Progress of project**

description of progress made on the **approved major capex project**, including as applicable details of-

- (a) planning processes undertaken;
- (b) resource management consents, other regulatory consents, and property rights and access rights obtained;
- (c) construction and labour contracts and arrangements made;
- (d) construction completed; and
- (e) testing undertaken;

#### H11 **Current and forecast expenditure**

- (1) in the case of a **transmission investment**:
  - (a) **major capex** incurred; and
  - (b) forecast remaining **major capex**;
- (2) in the case of a **non-transmission solution**:
  - (a) total costs incurred proposed to be classified as **recoverable costs**;
  - (b) total costs incurred in relation to assets to be **commissioned** in relation to the **non-transmission solution**;
  - (c) forecast remaining costs proposed to be classified as **recoverable costs**; and
  - (d) forecast remaining costs incurred in relation to assets to be **commissioned** in relation to the **non-transmission solution**.

#### H12 **Reasons for making the application**

- (1) reason for applying, including-
  - (a) description of key factors leading to the application;
  - (b) commentary on the extent to which each key factor is within **Transpower's** control and actions taken to mitigate it; and

- (c) commentary on the extent to which each key factor was reasonably foreseeable by **Transpower** before approval of the relevant **approved major capex project**;
- (2) description and, where relevant, quantum of any current key assumptions different to those relied upon in applying the **investment test** in the **major capex proposal**;
- (3) description of the outcome of applying the **investment test** as it was applied in the **major capex proposal** modified by the proposed amendments and key assumptions described in subclause (2), including all relevant calculations and justifications for any exercises of judgment;
- (4) explanation as to why making the proposed amendment would promote the long-term benefit of **consumers** taking account of-
  - (a) the outcome referred to in subclause (3);
  - (b) any costs that are sunk;
  - (c) the context in which the **major capex proposal** was made; and
  - (d) the context in which any subsequent amendments to the approval were made by the **Commission**;
- (5) where no application for amendment to the **maximum recoverable costs**, is being made concurrently, an explanation as to why those costs will remain appropriate were the proposed amendment to **approved major capex project outputs** made; and
- (6) an explanation as to the appropriate **major capex allowance** if the proposed amendment to the **approved major capex project outputs** were made.

### DIVISION 3 **AMENDMENT TO APPROVAL EXPIRY DATE**

#### H13 **Information to be provided**

For the purpose of clause 7.4.2(3)(c), the amendment application must include the information listed or described in this division.

#### H14 **Project identification and specifications**

identification of relevant **approved major capex project** and-

- (a) its **approval expiry date**; and
- (b) its **major capex allowance** or **maximum recoverable costs**;

#### H15 **Amendment sought**

proposed new **approval expiry date**;

#### H16 Progress of project

- (1) where a **major capex allowance** is applicable, the **commissioning date assumption**;
- (2) where **maximum recoverable costs** are applicable, the **completion date assumption**; and
- (3) description of progress made on the **approved major capex project**, including details of-
  - (a) planning processes undertaken;
  - (b) details of resource management consents, other regulatory consents, and property rights and access rights obtained;
  - (c) details of resource management consents, other regulatory consents, and property rights and access rights still in progress;
  - (d) details of other consent, property or access negotiations in progress;
  - (e) any request for information or request for services issued to third parties;
  - (f) construction and labour contracts and arrangements made;
  - (g) construction completed; and
  - (h) testing undertaken;

#### H17 Current and forecast expenditure

- (1) **major capex** incurred;
- (2) forecast remaining **major capex**; and
- (3) amount of any **major capex** in the forecast remaining **major capex** in excess of the **major capex allowance** or **maximum recoverable costs**, as the case may be.

#### H18 Reasons for making the application

- (1) reason for making the application, including-
  - (a) a description of the key factors leading to the application;
  - (b) commentary on the extent to which each key factor is within **Transpower's** control; and
  - (c) commentary on the extent to which each key factor was reasonably foreseeable by **Transpower** before the approval of the relevant **approved major capex project**;

- (2) description of the likely implications of the amendment, including the effect over the **calculation period** on other **approved major capex projects** where, in the case of an **approved major capex project** that is a-
  - (a) **transmission investment**, the last asset to be delivered by the **project** has not yet been **commissioned**; or
  - (b) **non-transmission solution**, has not yet achieved **completion**.
- (3) statement as to whether the **expected net electricity market benefit** of the **approved major capex project** is materially lower at the time of the amendment application than when the relevant **approved major capex project** was approved and if so, current quantum of its **expected net electricity market benefit**; and
- (4) explanation as to why making the proposed amendment would promote the long-term benefit of **consumers**, taking into account:
  - (a) any costs that are sunk;
  - (b) the context in which the **major capex proposal** was made; and
  - (c) the context in which any subsequent amendments to the approval were made by the **Commission**.

#### DIVISION 4 **SUNK COSTS APPLICATIONS**

##### H19 **Information to be provided**

For the purpose of clause 7.4.3(1), the application for the **major capex sunk costs adjustment** must include the information listed or described in this division.

##### H20 **Project identification and specifications**

identification of relevant **approved major capex project**;

##### H21 **Sunk costs approvals sought**

quantum of **major capex** that is sought to be recovered as sunk costs;

##### H22 **Current and forecast expenditure**

information on current and forecast expenditure, including-

- (a) **major capex** incurred;
- (b) forecast remaining **major capex** to be incurred;
- (c) calculations showing how the amount in clause H21 was calculated;
- (d) assumptions made in calculating the amount in clause H21; and

- (e) evidence in support of the **major capex** incurred, forecast remaining **major capital expenditure** and the amount in clause H21, including, where applicable, **documents** and correspondence from manufacturers, suppliers, contractors and other relevant parties.

#### H23 **Progress of project**

description of progress made on the **approved major capex project**, including details of-

- (a) planning processes undertaken;
- (b) resource management consents, other regulatory consents, and property rights and access rights obtained;
- (c) construction and labour contracts and arrangements made;
- (d) construction completed;
- (e) testing undertaken; and
- (f) **approved major capex project outputs** delivered.

#### H24 **Reasons for making the application**

- (1) reason for applying, including-
  - (a) description of key factors leading to the application, including the date of **Transpower** became aware of each of them;
  - (b) commentary on the extent to which each key factor was within **Transpower's** control and actions taken to mitigate its adverse effects; and
  - (c) commentary on the extent to which each key factor was reasonably foreseeable by **Transpower** before approval of the relevant **approved major capex project**; and
- (2) explanation as to why making the **major capex sunk costs adjustment** would promote the long-term benefit of **consumers**;

# SCHEDULE I MAJOR CAPEX CONSULTATION REQUIREMENTS

## DIVISION 1 CONSULTATION ON OPTIONS

### I1 What Transpower must consult on

- (1) **Transpower** must, except where the **Commission** is satisfied that the inclusion of any matter outlined below would be unreasonable in the circumstances as provided for by clause 8.1.3(2)(b), consult on-
  - (a) its **investment need**;
  - (b) each **demand and generation scenario variation**;
  - (c) key assumptions;
  - (d) a long list of options to meet each **investment need**; and
  - (e) a short list of **investment options** to meet each **investment need**.
- (2) When consulting on the matters referred to in subclause (1)(e) that consultation must occur after any consultation on the matters referred to in the other paragraphs of that subclause has taken place.
- (3) For the avoidance of doubt, the matters referred to in subclauses (1)(a) to (1)(d) may be consulted upon together or separately.

### I2 Long list consultation requirements

- (1) Options that must be contained on the long list for consultation purposes must be solutions for meeting the **investment need**.
- (2) When consulting on a long list of options, in its consultation **document**, **Transpower** must-
  - (a) provide a description of the relevant **investment need** that includes appropriate references to other **documents** referring to that need or a similar need, such as the most recent **integrated transmission plan** and any prior consultation **document** on the **investment need**;
  - (b) provide information on the key assumptions and **relevant demand and generation scenarios** it is developing for the purpose of applying the **investment test**;
  - (c) specify any non-standard values or amounts, as the case may be, of the **calculation period** or **value of expected unserved energy** that it may use for the purpose of the **investment test**;

- (d) specify any non-standard **discount rate** that it may use for the purpose of the **investment test**; and
- (e) in respect of each option-
  - (i) specify whether it is a **transmission investment** or **non-transmission solution**;
  - (ii) where it is a **non-transmission solution**, describe its type, where possible by reference to the things listed in the definition of **non-transmission solution**;
  - (iii) describe its features, by reference to at least type, location, and anticipated duration of the works required;
  - (iv) identify if the option may be staged and if so, describe its potential stages; and
  - (v) consult on the proposed staging of the options identified in subclause (iv).

### 13 Short list consultation requirements

- (1) When consulting on a short list of **investment options**, in its consultation **document**, **Transpower** must, except where **Commission** is satisfied that the inclusion of any matter outlined below would be unreasonable in the circumstances as provided for by clause 8.1.3(2)(b)-
  - (a) describe the **relevant demand and generation scenarios** it intends using for the purpose of the **investment test** and the weightings of those scenarios; and
  - (b) provide information on the relevant key assumptions, including-
    - (i) **value of expected unserved energy** used to calculate the cost of involuntary demand curtailment borne by end users of electricity; and
    - (ii) any other variables material to application of the **investment test**.
- (2) In respect of each **investment option** on its short list, **Transpower** must, as a minimum-
  - (a) describe its features by reference to-
    - (i) the definition of **investment option**; and
    - (ii) at least its type, location, and anticipated duration of the works required.
  - (b) address any submissions raised in respect of each option described during the previous consultation;

- (c) describe the likely **electricity market benefit or cost elements** and **project costs**;
  - (d) specify which **electricity market benefit or cost elements** are treated as unquantified;
  - (e) specify an estimate of the quantum of each likely **electricity market benefit or cost element** and **project cost** that is quantified; and
  - (f) specify the methodology or methodologies used to quantify **electricity market benefit or cost elements** and **project costs**;
- (3) In respect of the **investment options** on its short list, **Transpower** must-
- (a) demonstrate that they are appropriate in number and technology with respect to the **investment need** in question;
  - (b) describe the outcome of a preliminary application of the **investment test** based on the information required to be provided by subclauses (1) and (2);
  - (c) where the option **Transpower** considers satisfies the **investment test** is not the option with the highest **expected net electricity market benefit**, explain with reasons how the option satisfying the **investment test** was selected; and
  - (d) in respect of its application of the **investment test**-
    - (i) describe the nature and application of the qualitative assessment used to take into account the contribution of any unquantified **electricity market benefit or cost elements**;
    - (ii) explain the approach taken to **sensitivity analysis**; and
    - (iii) specify any non-standard values or amounts, as the case may be, of the **calculation period, discount rate** or **value of expected unserved energy** used, and why those non-standard values or amounts are appropriate.

#### 14 **Key assumptions**

For the purpose of clause 13, the key assumptions consulted upon must include the following things:

- (a) nature of the qualitative assessment used to take into account the contribution of associated unquantified **electricity market benefit or cost elements**;
- (b) **value of expected unserved energy** used to calculate the cost of involuntary demand curtailment borne by end users of electricity;
- (c) **discount rate** used; and

- (d) **calculation period** used.

## DIVISION 2 **NON-TRANSMISSION SOLUTIONS**

### 15 **Approach to consideration of non-transmission solutions to meet investment need**

- (1) The approach to enabling consideration of whether one or more **non-transmission solution** may meet an **investment need** must take into account-
  - (a) the size and nature of the **investment need**; and
  - (b) the likelihood that one or more **non-transmission solutions** could reasonably meet it.
- (2) The approach must enable the-
  - (a) reasonable information needs of interested persons, including potential proponents of **non-transmission solutions** to be met; and
  - (b) views of interested persons, including potential proponents of **non-transmission solutions** to be expressed and taken into account.
- (3) As a minimum, the approach must include the requirements that-
  - (a) when consulting on an **investment need**, **Transpower** must-
    - (i) invite interested persons to provide views or information relevant to possible **non-transmission solutions** to meet that need; and
    - (ii) provide sufficient information to enable interested persons, including potential proponents of **non-transmission solutions** to propose **non-transmission solutions**; and
  - (b) **Transpower** need not seek proposals for **non-transmission solutions** from interested persons prior to the initial consultations on its long list of **investment options**, but must take those views and information on or relevant to possible **non-transmission solutions** into account to the extent they have been provided prior to or during the period in which the long list is developed, including pro-actively engaging with the parties providing them, where appropriate; and
  - (c) when consulting on its long list of **investment options**, **Transpower** must -
    - (i) include potential **non-transmission solutions** in its list of **investment options**; and
    - (ii) invite interested potential proponents of **non-transmission solutions** to provide information or proposals on **non-transmission solutions**; and

- (d) when developing the short list of **investment options** that includes a **non-transmission solution**, **Transpower** must invite proponents of **non-transmission solutions** to provide comprehensive proposals in respect of their **non-transmission solution(s)**.
- (4) The invitations described in subclauses (3)(c) and (3)(d) must grant interested persons and proponents of **non-transmission solutions** 6 weeks to respond, subject to subclause (5).
- (5) For the purpose of subclause (4), the approach may specify a longer or shorter period where appropriate in light of the factors specified in subclause (1).

### DIVISION 3 MAJOR CAPEX PROJECT (STAGED)

#### 16 Approach to consulting on major capex project (staged)

- (1) The consultation requirements for the commencement of a **major capex project (staged)** are as set out in clauses 11 to 15.
- (2) The consultation requirements for all subsequent unapproved **staging projects** of the **major capex project (staged)** are, in relation to all such **staging projects** consultation on the following matters:
  - (a) updates on the **investment need**;
  - (b) updated **relevant demand and generation scenarios**;
  - (c) updates of key assumptions;
  - (d) update of options to meet each **investment need**;
  - (e) invitation for proposals on **non-transmission solutions**; and
  - (f) the **investment test** if there is material difference between the method or parameters of the **investment test** between previous approved **staging projects** and subsequent **staging projects** of the **major capex project (staged)**.
- (3) The extent of consultation by **Transpower** for the purposes of subclause (2) shall be commensurate with the materiality of changes identified in subclause (2) but shall contain sufficient information to enable interested and affected parties to engage on all unapproved **staging projects** of the **major capex project (staged)**.