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TRANSPOWER CAPITAL EXPENDITURE INPUT METHODOLOGY

REASONS PAPER

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TABLE OF ABBREVIATIONS

Abbreviation	Definition
Act	Commerce Act 1986
Capex	Capital expenditure
Code	Electricity Industry Participation Code
EV account	Economic value account
HVDC	High voltage direct current
IM	Input methodology
IPP	Individual price-quality path
forecast MAR	Forecast maximum allowable revenue
MAR	Maximum allowable revenue
RAB	Regulatory asset base
RCP	Regulatory control period
SOSPA	System operator service provider agreement
TPM	Transmission pricing methodology
WACC	Weighted average cost of capital

EXECUTIVE SUMMARY

Introduction

Purpose of this paper

X1 As required by s 54S of the Commerce Act 1986, the Commission has determined a capital expenditure input methodology for the submission and evaluation of Transpower's capital expenditure proposals. [1] The capital expenditure input methodology determination (Capex IM Determination) has been released alongside this Reasons Paper.

X2 This purpose of this Reasons Paper is to summarise the decisions that underpin the Capex IM Determination and to provide explanations for those decisions.

X3 The summary in this paper of our decisions does not replace the requirements, and related definitions, set out in the Capex IM Determination.

Requirement to determine a Capex IM

X4 The Commission was required to determine an input methodology for evaluating Transpower's capital expenditure proposals by 1 February 2012.

X5 Under s 54S(2), the Capex IM must include the:

a. requirements that must be met by Transpower, including the scope and specificity of information required, the extent of independent verification and audit, and the extent of consultation and agreement with consumers

b. criteria the Commission will use to evaluate capital expenditure proposals

c. time frames and processes for evaluating capital expenditure proposals.

Overview of our decisions on the capital expenditure input methodology

Summary of features of the Commission's decisions

X6 The main features of the Commission's decisions included in the Capex IM are set out below:

a. Capital expenditure must be classified as either Base capex or Major capex.

b. The Capex IM will apply to all capital expenditure intended to enter Transpower's Regulatory Asset Base (RAB), including both Base and Major capex.

c. Major capex is required to be consulted on, assessed and approved on a project-by-project basis using the requirements set out in the Capex IM.

d. Transpower cannot substitute any Major capex between individual Major capex projects or to Base capex.

e. Base capex is subject to ex-ante approval, prior to the regulatory period.

[1] Commerce Commission, Transpower Capital Expenditure Input Methodology, 27 January 2012.

f. Substitution of Base capex between years and across categories is allowed.

g. An incentive regime will apply to both Base capex and Major capex.

h. Transpower must publish an integrated transmission plan that explains Transpower's view about the long-term development of the grid.

i. Transpower is required to consider transmission alternatives in its development of all Major capex proposals.

j. The Capex IM will not usually apply to capital expenditure relating to either new investment contracts or the System Operator Service Provider Agreement.

Incentive regime

X7 We have developed an incentive regime whereby Transpower is offered incentives to deliver the outcomes valued by consumers. A suite of mechanisms will collectively provide incentives for Transpower to improve efficiency, to deliver outputs within approved expenditure, and to improve the outputs themselves.

X8 Exposing Transpower to incentives will encourage downward pressure on costs, as well as consideration of non-transmission solutions. The benefits of any cost efficiencies achieved will be shared between Transpower and consumers.

X9 An output mechanism has been developed to counter any incentives for Transpower to under-invest. This will help ensure the appropriate level of service is delivered. The mechanism links Transpower's actual delivery of outputs to those outputs agreed at the time the Commission sets the Base capex allowance or approves a Major capex project. This will also provide visibility to stakeholders of the outputs delivered.

Integrated Transmission plan

X10 Transpower is now required to publish an integrated transmission plan. The purpose of the integrated transmission plan is to explain Transpower's view of the long-term operation and development of the grid. It must explain Transpower's anticipated plans for the national grid and for associated expenditure over the next 10 years. It must provide detail on Transpower's long-term quality and performance objectives. The plan will help stakeholders assess Base and Major capex proposals.

Transmission Alternatives

X11 We have required Transpower to consider transmission alternatives in its development of all Major capex proposals. Where expenditure on transmission alternatives is not Major capex, ie, is classified as operating expenditure or Base capex and would not otherwise be Major capex, the respective approval process and incentive framework for those types of expenditure applies.

X12 Where use of a transmission alternative avoids a transmission investment that would otherwise be Major capex, the transmission alternative is called a 'non-transmission solution'. This is to distinguish non-transmission solutions from other transmission alternatives and ensure non-transmission solutions are given equal consideration alongside transmission investment options, including through the application of the investment test.

X13 Making use of transmission alternatives may be an economically efficient decision where it avoids or defers expenditure on transmission investment. For this reason, reducing expenditure on transmission investments in this manner is an appropriate consideration and is consistent with s 54Q.

Approval of Base capital expenditure

X14 Base capex for each regulatory period will be approved and set prior to the start of each regulatory period. The Commission will evaluate the level of Base capex proposed by Transpower, determine and set the allowance.

X15 The Base capex proposal must also present Transpower's view on the most appropriate grid output measures to apply to that regulatory control period. Some of these measures will be linked to revenue, and will have targets, caps and collars set to maintain the impact of the incentives provided at an appropriate level.

X16 The Capex IM sets out the process for submitting, assessing and approving Transpower's Base capex proposals. Likewise, the Capex IM provides detailed information requirements that Transpower must comply with, and assessment criteria that the Commission will apply.

X17 The key steps in the assessment and approval process include:

a. Prior to a regulatory period the Commission and Transpower will agree the regulatory templates that Transpower will complete and provide as part of its Base capex proposal including the criteria for identifying which projects and programmes may be subject to individual review.

b. After receiving a Base capex proposal, the Commission will publish the proposal, assess the proposal, publish its draft decisions and seek the views of interested persons.

c. By the end of August of the year before the April start of a regulatory period, the Commission will determine:

   i. the Base capex allowances for each year of the RCP

   ii. the Base capex incentive rate

   iii. the revenue-linked grid output measures (including caps, collars, and targets)

   iv. any grid output measures to which will be only subject to disclosure.

Approval of Major capital expenditure

X18 Major capex will be assessed and approved on a project-by-project basis. Transpower may submit Major capex projects for approval at any time during the regulatory period.

X19 Unlike Base capex, where the Commission will determine and set the allowance, for Major capex, the Commission will only reject or approve Transpower's Major capex proposals. If a project receives approval, the key features of the approval will be those set out in Transpower's proposal.

X20 The Capex IM sets out the process and content for submitting, assessing and approving Major Capex proposals. The key steps in the assessment and approval process are provided below.

X21 First, Transpower will notify the Commission of its intention to plan a Major capex project. The Commission and Transpower will then agree:

a. an approach to ensure appropriate consideration of non-transmission solutions

b. a consultation programme for the transmission investment or non-transmission solution

c. timeframes for the Commission to make a decision on a Major capex project.

X22 In accordance with the agreed consultation programme, and prior to submitting a Major capex proposal for approval, Transpower will consult with interested parties.

X23 Transpower will then apply the investment test to identify which of the possible options should be the proposed investment, and then submit its Major capex proposal. All proposals must comply with the information requirements set out in Schedule G of the Capex IM Determination.

X24 The Commission will publish the proposal and its draft decision, and consult on the information published. If changes or updates to the proposal are identified as being necessary during the evaluation process, these will form part of the draft decision consultation.

X25 The Commission will either approve or reject a Major capex proposal. The Commission may reject a Major capex proposal if the Commission is not satisfied that all evaluation criteria have been met. The Commission may also reject a Major capex proposal where:

a. Transpower has not complied with the consultation requirements, approach to non-transmission solutions, or approval timeframes

b. The proposal does not comply with the prescribed information and certification requirements.

Investment Test

X26 For any project to receive Commission approval, it must satisfy the investment test. The investment test uses cost-benefit analysis and discounting of relevant costs and benefits in the electricity market over a defined calculation period.

X27 The costs and benefits to be included in the investment test are those accruing to participants in the electricity market. Focusing the test on participants in the electricity market is consistent with standard cost-benefit analysis because that approach captures relevant impacts in all other markets that are workably competitive.

X28 For a proposed investment to satisfy the investment test it must:

a. have a positive expected net electricity market benefit unless it is designed to meet an investment need generated by a deterministic requirement of the grid reliability standards; and

b. be sufficiently robust under sensitivity analysis.

X29 In addition, the proposed investment must have the highest expected net electricity market benefit of the alternatives under consideration, having regard only to the expected monetary value of electricity market costs and benefits.

X30 Alternatively, if other investment options have similar expected net electricity market benefits, Transpower may seek approval of the proposed investment option that has the highest expected net electricity market benefit by having regard to quantified electricity market costs and benefits, and a qualitative assessment of any unquantified electricity market costs and benefits.

Amendments

X31 Transpower will be able to apply for amendments to previously approved Major capex projects prior to the project approval expiry date. Allowing amendments recognises that Major capex projects may be planned well in advance of construction, and that construction, in some cases, may span a number of years. The potentially large lead times can create uncertainty in the costs and timing of an investment. Likewise, given the nature of Major capex projects, there will likely be factors that are outside Transpower's control that will affect projects.

X32 However, Transpower will be limited to applying for amendments to only certain components of the approved project. These are set out in detail in Chapter 6.

Other requirements and provisions

Reporting requirements

X33 The Capex IM sets out new reporting requirements. These include annual reporting on Base capex and approved Major capex projects.

X34 Requiring Transpower to report on an annual basis will transparently demonstrate actual performance and delivery of outputs against Transpower's forecasts of Base and Major capex. The reporting requirement will demonstrate performance against the grid output mechanism, and provide updates to any forecasts and timing matters.

X35 The Commission is currently in the process of developing an information disclosure determination. This will include information disclosure requirements that cover Base and Major capex. Until this information disclosure determination is completed, the Commission intends to specify the Base and Major capex annual reporting requirements in a s 53ZD Notice. The Notice will be issued to Transpower annually.

Certification requirements

X36 All proposals will require certification by either Transpower's Chief Executive Officer or by directors. There will be no requirement to obtain independent verification or audit.

X37 The Commission must be able to rely on the information provided by Transpower in its expenditure proposals and amendment applications when making its decisions. Stakeholders also rely on the information. Verification by the Chief Executive Officer

or directors of Transpower helps to ensure the appropriate level of rigour and scrutiny has been applied in Transpower's internal approval processes.

Transition provisions

X38 As a consequence of the limitations on the ability to re-open a price-quality path during an RCP, the Commission's ability to implement some aspects of the Capex IM during RCP1 is constrained. This limitation promotes certainty for regulated parties and other interested persons. The Commission also considers it appropriate, in line with the objective of input methodologies promoting certainty, to wait until RCP2 to give effect to some elements of the Capex IM.

X39 For Base capex, transitional provisions include:

a. the level of Base capex for RCP1 is that which was approved prior to the Capex IM

b. the new grid outputs measures will not apply during RCP1, but the existing quality standards will continue to apply during RCP1

c. wording differences in definitions between the IPP and Capex IM Determination

d. the obligations for Base capex project forecast to cost more than $20 million, will not apply.

X40 For Major capex projects, transitional provisions include:

a. Major capex projects that were approved prior to the Capex IM Determination, but have not yet been commissioned, are not subject to the newly determined Capex IM but will be subject to the previous approval process

b. that Major capex projects submitted for approval prior to the Capex IM Determination, and that are still being reviewed, are not subject to the Capex IM but will be subject to the previous approval process

c. the new incentives will not apply to Major capex projects that were approved prior to the Capex IM Determination.

X41 No transitional provisions apply from RCP2.

CHAPTER 1: INTRODUCTION

1.1 Overview

Purpose of this paper

1.1.1 As required under s 54S of the Commerce Act 1986,[2] the Commission has determined a capital expenditure input methodology for the submission and evaluation of Transpower's capital expenditure proposals.[3] The capital expenditure input methodology determination has been released alongside this Reasons Paper.

1.1.2 This purpose of this Reasons Paper is to summarise the decisions that underpin the capital expenditure input methodology determination (Capex IM Determination) and to provide explanations for those decisions. The summary in this paper of the decisions does not replace the actual decisions made. Our decisions are set out in full, with relevant definitions, in the Capex IM Determination.

1.1.3 A summary of the Capex IM and its reasons will be published in the New Zealand Gazette.[4]

1.1.4 This Reasons Paper also explains the consequential changes that are required to existing determinations. This includes changes to the existing Commerce Act (Transpower Input Methodologies) Determination 2010 that currently applies to Transpower (the 2010 TP IM Determination),[5] and changes to the Commerce Act (Transpower Individual Price-Quality Path) Determination 2010 (the IPP Determination).

1.1.5 A number of the provisions in the Capex IM will be given effect in future determinations. This Reasons Paper explains which of these will take effect during regulatory control period one (RCP1) and which will take effect from RCP2, as well as the instruments that will be used to give effect to these decisions.

1.1.6 In addition to the Capex IM Determination that is being released alongside this Reasons Paper, we have released an amendment to the IPP Determination.

1.1.7 We intend, in future, to amend the 2010 TP IM Determination, and publish new information disclosure requirements to apply to Transpower. This will be done prior to the start of RCP2.

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2 Statutory references in this Reasons Paper are to the Commerce Act 1986 (the Act) unless otherwise specified.

3 Commerce Commission, *Transpower Capital Expenditure Input Methodology*, 27 January 2012.

4 Section 52W requires the Commission to publish every input methodology by way of notice in the Gazette within 10 working days after the Commission determines the input methodology.

5 Commerce Commission, *Commerce Act (Transpower Input Methodologies) Determination 2010*, 22 December 2010.

Key features of the Capex IM Determination

1.1.8 The Capex IM completes the required transfer of responsibilities from the Electricity Commission, and governance under the former Electricity Governance Rules, to the Commerce Commission under Part 4.

1.1.9 The outcome of the Capex IM Determination is a clear approach to the development, evaluation and approval of Transpower's proposed investments in the national grid.

1.1.10 The Capex IM also introduces a new suite of incentive mechanisms that will apply to Transpower in relation to capital expenditure. Transpower will not only have incentives to invest, but will have stronger financial incentives to deliver improved performance in terms of outputs and cost efficiency. This is beneficial to both Transpower and consumers.

1.1.11 The capital expenditure approvals, as well as the incentive mechanisms, will be given effect through the IPP Determination.

1.1.12 The Capex IM provides clarity around the processes that must be followed when Transpower submits, and the Commission approves, capital expenditure. With predefined information requirements, timeframes and evaluation criteria, the processes and tests are intended to be transparent and predictable. The aim is to provide a high level of certainty, consistent with the purpose of Part 4 of the Act (Part 4 Purpose).

1.2 Background

Type of regulation that applies to Transpower

1.2.1 Transpower is the state-owned enterprise that owns and operates New Zealand's high voltage electricity transmission system (ie, 'the national grid'). Transpower transmits electricity from where it is generated, to local electricity distribution businesses and some major industrial consumers. Transpower is also responsible for ensuring that the grid is kept in good condition. It therefore maintains, refurbishes and replaces assets where needed.

1.2.2 Transpower is subject to individual price-quality (IPP) regulation under Part 4 of the Act.[6] On 22 December 2010, the Commission made a s 52P Determination setting out how IPP regulation applies to Transpower.[7] The Commission also determined and applied input methodologies for the IPP on 22 December 2010.[8] The Commission was not required to determine the Capex IM until 1 February 2012.[9]

6 Commerce (Part 4 Regulation – Transpower) Order 2010.

7 Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, 22 December 2010.

8 Commerce Commission, *Commerce Act (Transpower Input Methodologies) Determination 2010*, 22 December 2010.

9 Section 54S.

Transition of responsibility to the Commerce Commission

1.2.3 Prior to the repeal of Part 4A, the Electricity Commission was responsible for providing scrutiny and approval of Transpower's grid upgrade proposals. The process and criteria for assessing these proposals was set out in the Electricity Governance Rules.

1.2.4 On 1 November 2010, amendments to the Act transferred the role of approving Transpower's grid upgrade plan proposals from the Electricity Commission to the Commerce Commission. Until a Capex IM was determined under s 54S, the Commission was to consider any grid upgrade plan proposal submitted by Transpower in accordance with s 54R.[10] The Commission was required to apply the relevant provisions of the Electricity Governance Rules, with any modification the Commission considered necessary.

1.2.5 The responsibility for reviewing and approving Transpower's Base capex (previously referred to as 'minor capex') formed part of the Commission's jurisdiction under the previous Part 4A and remains with the Commission under Part 4.[11]

1.2.6 Section 54V sets out provisions relating to the interface with the Electricity Industry Act 2010, including specifying those matters which the Commission must take into account before exercising its powers or performing its functions under Part 4.

1.2.7 The Electricity Authority has assumed many of the now disestablished Electricity Commission's functions. The Commission and the Electricity Authority have entered into a memorandum of understanding to coordinate their respective roles under the EIA and the Act. [12] The Commission has considered its obligations under the Act and the relevant implications of the memorandum of understanding when making its decisions on the Capex IM.

Requirement to determine a Capex IM

1.2.8 Section 54S requires the Commission to determine an IM for Transpower's capital expenditure proposals. The Commission published its notice of intention to begin work on a Capex IM on 5 November 2010.[13]

1.2.9 The Commission was originally required to determine the Capex IM by no later than 1 November 2011. However, the Minister of Commerce granted an extension until 1 February 2012.[14]

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10 Section 54R.

11 Capital expenditure categories (Base/Major) are explained in Section 2.5.

12 *Memorandum of Understanding between the Electricity Authority and the Commerce Commission,* December 2010.

13 Commerce Commission, *Notice of Intention - Process for Determining Input Methodology for Transpower's Capital Expenditure Proposals*, November 2010.

14 Section 54S(3) provides for the possibility of an extension of up to three months with the permission of the Minister of Commerce. Concerns were raised by Transpower and the Major Electricity Users Group (MEUG) about the timeframes for consultation, and the need for engagement on the technical drafting of the Capex IM. In response to these concerns, the Commission sought and received an extension. The Minister's decision to extend the timeframes was published in the New Zealand Gazette on 30 June 2011.

1.2.10 After notifying its intention to start work, the Commission published the Capital Expenditure Input Methodology Discussion Paper on 24 December 2010,[15] seeking submissions and cross-submissions from interested parties. Submissions were received from Contact Energy, Genesis Energy, Meridian Energy, Major Electricity Users Group (MEUG), New Zealand Wind Energy and Transpower. Cross submissions were received from Genesis Energy and MEUG.

1.2.11 After having regard to submissions, the Commission published an update on its emerging views on 8 April 2011. This set out the Commission's emerging views which were discussed at the Transpower Capex IM workshop held on 28 April 2011.[16] The workshop was attended by a wide representation of key industry stakeholders.

1.2.12 Post workshop submissions were received from Meridian Energy, MEUG, Mighty River Power and Transpower.

1.2.13 After considering the feedback received at the workshop, the Commission consulted on its draft decisions[17] and draft determination,[18] as well as a draft of the consequential amendments required as a result of the Capex IM, to the 2010 TP IM Determination.[19] Submissions were received from Transpower and Genesis Energy, and cross submissions from Transpower and MEUG.

1.2.14 Finally, an update paper was published on 4 November 2011 that sought views, for a second time, on the technical drafting of the Capex IM, prior to publishing final decisions. At the same time the Commission also consulted on the necessary consequential amendments:

a. Both the consequential changes and the reasons to the IPP Determination were explained in an update paper,[20] with proposed amendments highlighted in a draft version of the proposed amended IPP Determination.[21]

b. The changes to the 2010 TP IM Determination were again highlighted in a draft version of the proposed amended 2010 TP IM Determination.[22]

1.2.15 Transpower was the only interested party to provide a submission on this final round of technical consultation.

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15 Commerce Commission, *Capital Expenditure Input Methodology (Transpower) Discussion Paper*, 24 December 2010.

16 Commerce Commission, *Transpower Workshop - Capital Expenditure Input Methodology*, 8 April 2011.

17 Commerce Commission, *Capital Expenditure Input Methodology (Transpower) Draft Reasons Paper*, 1 July 2011.

18 Commerce Commission, *Commerce Act (Transpower Input Methodologies)(Capital Expenditure) Determination 2011*, 1 July 2011.

19 Commerce Commission, *Draft Commerce Act (Transpower Input Methodologies)(Amendment) Determination 2011*, 1 July 2011.

20 Commerce Commission, *Transpower Individual Price-Quality Path Update Paper*, 11 November 2011.

21 Commerce Commission, *Draft Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, 11 November 2011.

22 Commerce Commission, *Draft Commerce Act (Transpower Input Methodologies) Amendment Determination (No.2) 2011*, 4 November 2011.

1.2.16 The Commission has given due regard to all submissions provided at each stage of developing the Capex IM. Each stage of consultation carefully set out the Commission's views, and how its views had developed from the previous stage. These stages explained how the Commission had taken into account and responded to the views of submitters.

1.2.17 Where the reasons for the Commission's decisions remain unchanged from our preliminary views and reasons, parties will find an explanation of the Commission's reasons in the Commission's draft decision and reasons papers, and the Commission's update paper.[23] Where the Commission's views differ from its preliminary views and decisions, the reasons for the Commission's decision are set out in this Reasons Paper.

Permissible changes to existing determinations

1.2.18 Once price-quality paths are determined, the Commission may not re-open the price-quality path during an RCP due to a changing input methodology except in the event of a successful appeal.[24] This limitation promotes certainty for regulated parties and other interested persons.

1.2.19 As a consequence, the Commission's ability to implement some aspects of the Capex IM during RCP1 is limited. The Commission also considers it appropriate, in line with the objective of input methodologies promoting certainty, to wait until RCP2 to give effect to some elements of the Capex IM. This is due to the impact that these elements would otherwise have on Transpower's price path during the current regulatory period. For example, applying the new grid output measures during RCP1 would have the effect of altering the price path. The Capex IM will however, apply to all new Major capex proposals submitted to the Commission for approval from 1 February 2012.

1.2.20 Specific transition provisions that apply only to RCP1 are provided in Chapter 11.

Responsibility for the transmission pricing methodology

1.2.21 While the responsibility for approving capital expenditure proposals for the grid has transferred to the Commission, responsibility for the transmission pricing methodology (TPM) lies with the Electricity Authority. Provision for the TPM is made in Schedule 12.4 of the Electricity Industry Participation Code 2010 (the Code).

1.2.22 The TPM is a regulated methodology that determines how Transpower's total transmission revenue (as approved by the Commission) is allocated between, and recovered from, Transpower's customers. The existing TPM has been in place since 1 April 1999, with some modifications applying from 1 April 2008.

1.2.23 Section 52T(1)(b) provides that the Commission is not required to set pricing methodologies in relation to particular goods or services where these are subject to

[23] Commerce Commission, *Capital Expenditure Input Methodology (Transpower) Draft Reasons Paper,* 1 July 2011, and Commerce Commission, *Transpower Individual Price-Quality Path Update Paper,* 11 November 2011.

[24] Section 53ZB, as incorporated by S 53ZC. The 2010 TP IM Determination also specifies when the Commission may reconsider the IPP during an RCP (refer Subpart 7).

regulation by an industry-specific regulator (such as the Electricity Authority). To avoid duplication with pricing methodologies approved by the Electricity Authority, the Commission's determination does not address matters on how recovery of, and a return on, capital expenditure approved under the Capex IM, is allocated between different customers.

1.2.24 The Electricity Authority is currently reviewing the TPM. The Commission has been keeping informed on developments on the TPM, and has been liaising with the Electricity Authority. While no decisions have been made by the Electricity Authority on changes to the TPM, the Commission is aware that the level and structure of transmission charges has the potential to influence the use of the network. This includes economic dispatch in the electricity market, and efficient investment in generation, demand-side management and transmission. For example, transmission charges can influence the location choices of generators and their offering behaviour.

1.2.25 The Commission is liaising with the Electricity Authority and monitoring developments of the TPM. While the review to date has not raised any material implications for the Capex IM, changes to the TPM in future may result in the Commission needing to review certain aspects of the Capex IM at an appropriate point in the future. Any material amendment to the Capex IM, will follow the process set out in s 52V.

1.3 Compliance with the regulatory framework

1.3.1 Part 4 provides for the regulation of the price and quality of goods or services supplied in markets where there is little or no competition, and little or no likelihood of a substantial increase in competition (s 52).

1.3.2 Section 52B explains that Part 4 provides for a number of different types of regulation—price-quality regulation, information disclosure regulation, and negotiate-arbitrate regulation. For electricity lines services regulated under Part 4 that are supplied by Transpower, the Commission is required to make determinations under s 52P that specify how price-quality regulation and information disclosure regulation apply to Transpower. These determinations must comply with input methodologies that set out the rules, requirements and processes applying to the regulation of those services.

1.3.3 The following sections set out the statutory requirements for the Capex IM and relevant factors that the Commission has had regard to in developing the Capex IM.

Purpose statement

1.3.4 Section 52A states that the purpose of the Part 4 is:

> to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—
>
> (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and
>
> (b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and

(c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and

(d) are limited in their ability to extract excessive profits.

1.3.5 For the Commission's interpretation of the Part 4 Purpose for regulating electricity lines services, refer to Chapter 2 of the Electricity Distribution and Gas Pipeline Services Input Methodologies Reasons Paper.[25]

1.3.6 In determining the Capex IM, the Commission has been guided by the Part 4 Purpose. In particular, we have considered how the Capex IM can promote outcomes consistent with those in a workably competitive market, such that it provides for the objectives in s 52A(1)(a)-(d).

1.3.7 The Capex IM, in combination with the IPP and other input methodologies that apply, will ensure that Transpower's revenue provides an opportunity to earn an appropriate return on investments, consistent with s 52A(1). Together, over the long-term, the IPP and Capex IM promote the overall objectives of the Act as set out in s 52A(1)(a)-(d). In particular, the Capex IM, described in the following chapters, promotes the long-term benefit of consumers by providing:

a. incentives to invest, by allowing Transpower to earn an appropriate return on its Commission-approved incremental investments, consistent with s 52A(1)(a)

b. a performance incentive regime that rewards efficiency improvements, such as delivering projects at lower cost, and provides incentives to minimise additional costs, consistent with s 52A(1)(b)

c. a performance incentive regime that allows Transpower to retain part of any savings or bear part of any cost increases relative to set allowances (ie the sharing of efficiency gains, and/or sharing of additional costs, with consumers), consistent with s 52A(1)(c), and

d. limiting excessive profits that can be made by Transpower in any given regulatory period, consistent with s 52A(1)(d).

1.3.8 Each component has been designed to balance the incentives provided, taking into account the package as a whole. While it might not always be apparent in isolation how each individual component of the Capex IM gives effect to the Part 4 Purpose, it is when considered in combination with each other, and with other requirements such as the other IM and the IPP determinations, as well as information disclosure regulation, that it can be seen that the components of the Capex IM will provide strong incentives for Transpower to act in a manner consistent with the Part 4 Purpose.

Purpose and definition of input methodologies

1.3.9 Section 52R provides further guidance in the development of the Capex IM by specifying that the purpose of input methodologies is:

[25] Commerce Commission, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Pape*r, 22 December 2010, Section 2.4.

> to promote certainty for suppliers and consumers in relation to the rules, requirements, and processes applying to the regulation, or proposed regulation, of goods or services under [Part 4].

1.3.10 The Capex IM will promote regulatory certainty because it sets out the key 'inputs' for the IPP in relation to capital expenditure and the basis for approving capital expenditure. The Capex IM provides sufficient detail so that Transpower is able to reasonably estimate the material effect of the Capex IM. The Capex IM is consistent with the other input methodologies that apply to Transpower.[26]

Energy efficiency, demand side management and energy loss reduction

1.3.11 Section 54Q requires the Commission to promote incentives, and avoid imposing disincentives, for suppliers of electricity lines services to invest in energy efficiency and demand-side management and to reduce energy losses.

1.3.12 Demand-side management and reduction of energy losses are of particular relevance to the Capex IM. We have provided for such matters to be taken into account in the assessment of Transpower's capital expenditure proposals. For example:

a. loss reductions are included as a market benefit under the quantitative investment test. This will result in promotion of investment options that result in lower transmission losses over those that do not (other factors being equal), and

b. we require close attention be given to the process for identification and consideration of non-transmission solutions (NTS). We expect that this will result in greater consideration being given to investment options that improve network utilisation, for example, load shifting or peak shaving, demand-inter-trip schemes and operation of local generation.

Statutory process for determining input methodologies

1.3.13 The statutory process for determining input methodologies is contained in s 52V. The Commission has followed the requirements set out in this provision in determining the Capex IM Determination. The Commission has also followed the process and consultation steps that we announced when starting the development of the Capex IM.[27]

1.3.14 Under s 54S(2), the Capex IM must include:

a. requirements that must be met by Transpower, including the scope and specificity of information required, the extent of independent verification and audit, and the extent of consultation and agreement with consumers

b. criteria the Commission will use to evaluate capital expenditure proposals

c. time frames and processes for evaluating capital expenditure proposals, including what happens if the Commission does not comply with those time frames.

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26 Section 52T(2).

27 Commerce Commission, *Notice of Intention - Process for Determining Input Methodology for Transpower's Capital Expenditure Proposals*, November 2010.

1.3.15 The detail of these requirements is set out in the Capex IM Determination. In the following chapters of this paper we explain the reasons for our decisions and how we see the Capex IM Determination operating.

1.4 Structure of this paper

1.4.1 The remainder of this Reasons Paper is set out as follows:

- Chapter 2: Provides an overview of the different components of the Capex IM and the new incentives that apply. It provides the overall context and sets out matters such as the categories of Base and Major capex, transmission alternatives, and the need for an integrated transmission plan.
- Chapter 3: Explains the Base capex incentive mechanisms that have been introduced, and the timing for when these come into effect, as well as the approach for transmission alternatives.
- Chapter 4: Explains the Major capex incentive mechanisms that have been introduced and apply immediately.
- Chapter 5: Base capex approval process - sets out the approval processes, the Commission's evaluation and decision process, the required content of a proposal and the criteria for approval that will be applied to each Base capex proposal.
- Chapter 6: Major capex approval process - sets out the approval processes, required contents of a proposal, criteria for approvals, and the consultation requirements that will be applied to Major capex proposals.
- Chapter 7: Major capex investment test - sets out the form and scope of the investment test, the application of the test, and mechanics of applying the test.
- Chapter 8: Explains the process for, and the situations where it may be necessary for Transpower to apply for an amendment to a previously approved Major capex project.
- Chapter 9: Sets out the certification requirements for capital expenditure proposals.
- Chapter 10: Sets out new reporting requirements, including annual reporting.
- Chapter 11: Explains the transitional arrangements that apply only during RCP1.

1.4.2 Each section of this Reasons Paper is set out using the following structure:

a. an explanation and context of the section

b. a summary of the relevant decisions in the section

c. reasons for the decisions in the section

d. a table that identifies the relevant clauses in the various determinations that give effect to each decision in the section.

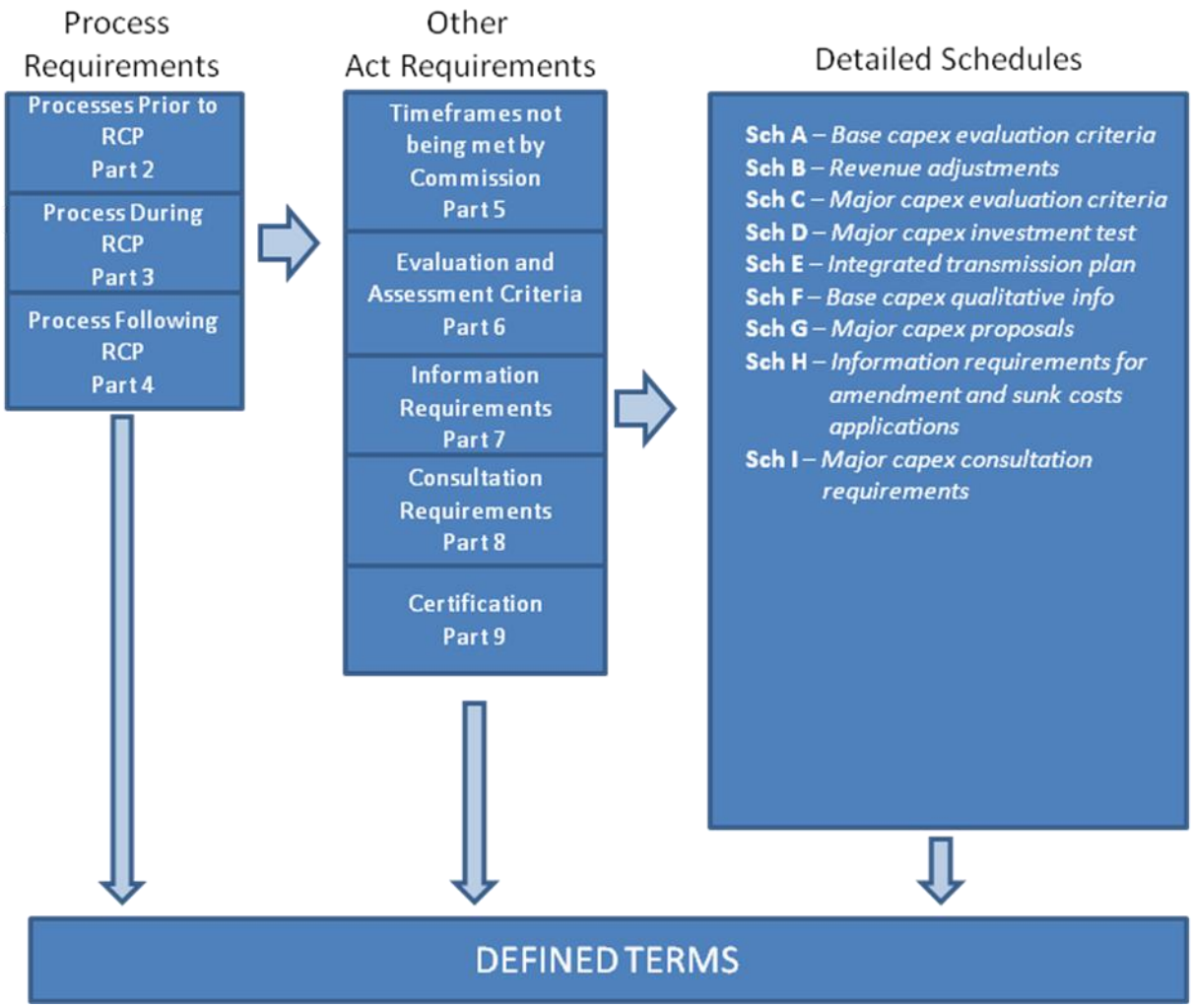
1.5 Structure of Capex IM Determination

1.5.1 The Commission has structured the Capex IM Determination around the following key requirements of s 54S(2):

- timeframes and process for evaluating capital expenditure
- what happens if the Commission does not comply with the timeframes
- the criteria that the Commission will use to evaluate capital expenditure proposals
- information requirements applying to Transpower's capital expenditure proposals
- consultation requirements applying to Transpower for capital expenditure proposals
- audit and certification applying to Transpower's capital expenditure proposals and annual reporting

1.5.2 Schedules have been provided where detailed information specifications are required, including for evaluation criteria, information requirements, consultation requirements and adjustment calculations. The structure of the Capex IM Determination is illustrated in Figure 1.1 below.

Figure 1.1 Capex IM Determination structure



CHAPTER 2: CAPEX IM FRAMEWORK

2.1.1 This purpose of this chapter is to provide an overview of the different components of the Capex IM and to show how these components fit together. This chapter also provides the context and high-level decisions on matters such as the categories of Base and Major capex, transmission alternatives, and the need for an integrated transmission plan.

2.2 Overview of the incentive framework that has been developed

2.2.1 The Capex IM describes the process for capital expenditure to be submitted to the Commission for approval. It prescribes the processes that must be followed by both Transpower and the Commission, the information that must be provided to the Commission, and the evaluation criteria and approach that the Commission will use in approving (or rejecting) capex proposals.

2.2.2 The overall approach is that Base capex for each regulatory period will be approved and set prior to the start of each regulatory period. For Base capex, the Commission will evaluate the level of expenditure proposed by Transpower, and determine the allowance to be set.

2.2.3 The Base capex allowance cannot, except in very limited circumstances, be amended.

2.2.4 In contrast, a Major capex proposal may be submitted and approved at any time during the regulatory period. While revenue allowances are set at the start of each regulatory period, they will be updated annually.[28] These annual updates will take account of any Major capex approved during the regulatory period and ensure the correct timing of recovery.

2.2.5 For Major capex, the Commission will not determine the allowance, outputs, or any individual components of the proposal. We will only approve or decline a given proposal.

2.2.6 We have developed a regime whereby Transpower is offered incentives to deliver the outcomes valued by consumers. A suite of mechanisms will collectively provide incentives for Transpower to improve efficiency, to deliver outputs within approved expenditure, and to improve the outputs themselves. Exposing Transpower to incentives will put downward pressure on costs, as well as consideration of non-transmission solutions.[29]

[28] Commerce Commission, *Individual Price-Quality Path (Transpower) Reasons Paper,* December 2010, Chapter 3.

[29] This is consistent with the requirement in s 54Q that the Commission must, in applying Part 4, promote incentives and avoid imposing disincentives for suppliers of electricity lines services to invest in energy efficiency, demand side management and energy loss reductions.

2.2.7 Transpower has been provided incentives to invest, and will be rewarded for good performance. The benefits of any cost efficiencies will be shared between Transpower and consumers.

2.2.8 Incentives to deliver specified outputs at lower cost are provided by allowing Transpower to retain part of any savings achieved. This is beneficial to both Transpower and consumers, as both share the savings.

2.2.9 Output mechanisms have been developed to counter incentives for Transpower to under-invest. These mechanisms will help ensure the appropriate level of service is delivered. The output mechanisms link Transpower's actual delivery of outputs, including measures of quality, to those outputs agreed at the time the Commission sets the Base capex allowance or approves a Major capex project. This will also provide visibility to stakeholders of the outputs delivered.

2.2.10 We have provided a mix of symmetric and asymmetric incentives. Where incentives provided are symmetrical, these provide for both rewards and penalties. Where incentives are asymmetrical, they are either a reward only or a penalty only.

2.2.11 There are three sets of incentive mechanisms: incentives that apply to Base capex (refer Chapter 3), incentives that apply to individual Major capex projects (refer Chapter 4), both of which have been determined as part of this Capex IM, and the Incremental Rolling Incentive Scheme (IRIS) that applies to operating expenditure which was set under the 2010 TP IM Determination (refer Section 2.9).

2.2.12 The incentive mechanisms are described in Figure 2.1 as 'adjustments'. This reflects how the Capex IM interacts with the general methodologies regarding assets in the 2010 TP IM Determination, which is that:

a. All commissioned assets relating to the supply of electricity transmission services by Transmission will enter the RAB under the 2010 TP IM Determination irrespective of the Commission’s approvals relating to specific assets or categories of assets;

b. Each incentive mechanism is then given effect through an adjustment to Transpower’s allowable revenues thereby modifying the financial effect of the presence of the assets in the RAB, ie to effectively counteract or augment the financial effect of having the assets in the RAB.

2.2.13 While the process for calculating and determining the value of the revenue adjustments is set out in the Capex IM, the process for giving effect to all adjustments, and their impact on revenue, is set out in the IPP Determination (refer Section 2.3).

2.2.14 Figure 2.1 shows that three incentive mechanisms will be applied to the Base capex allowance, that up to four incentive mechanisms may be applied to each approved Major capex project, and one incentive mechanism, the IRIS, applies to operating expenditure.

2.2.15 For completeness, Figure 2.1 shows how these mechanisms fit together, as a package. However, not all aspects of Figure 2.1 are given effect through, nor sit under, the Capex IM Determination. For example, the IRIS sits under the 2010 TP IM Determination, and the revenue adjustments that are calculated as a result of the application of each

incentive mechanism are given effect through the IPP Determination. These matters are set out in detail in subsequent chapters.

2.2.16 Figure 2.1 also shows that different incentive rates apply to the various incentive mechanisms. While multiple incentive rates exist, each incentive rate is explicitly defined. The various incentive rates are explained in further detail in Section 3.6 (Base capex) and Section 4.6 (Major capex) of this Reasons Paper.

2.2.17 The incentives for Base capex that were applied in the IPP Determination will continue to apply to RCP1. In RCP2, the incentive mechanisms set out in the Capex IM Determination will apply. From RCP2, Transpower will be able to retain part of any savings, but will also bear part of any cost increases, relative to the Base capex allowance.

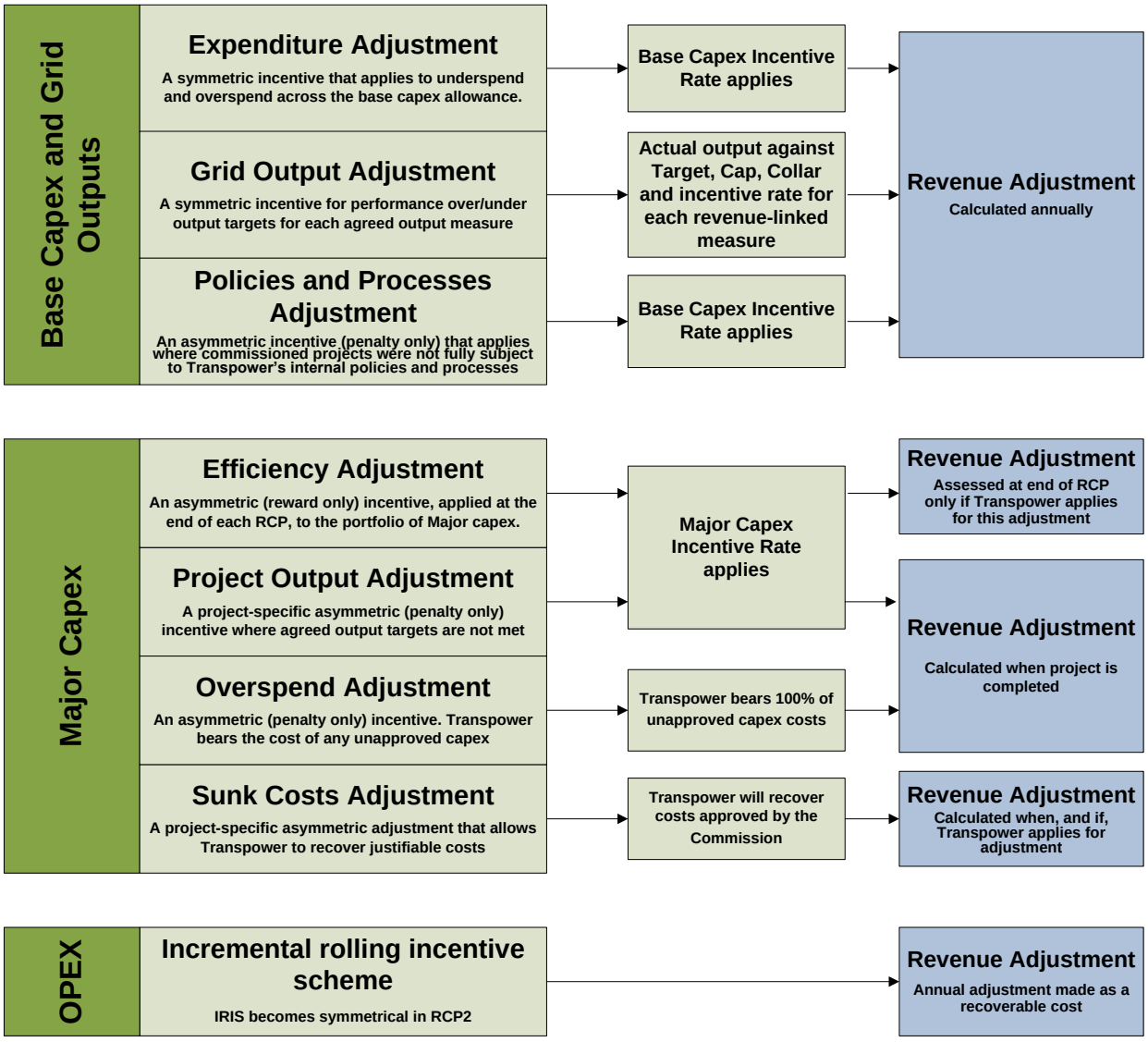
2.2.18 In the case of Major capex, the incentive mechanisms are effective immediately. Transpower will be rewarded for efficiency gains obtained over the portfolio of Major capex projects commissioned during a regulatory period (an asymmetric reward mechanism). Two asymmetric penalties also apply.

2.2.19 The general premise of the Capex IM we have determined is that Transpower is the principal grid planner and is responsible for proposing, seeking approval, and justifying the capital expenditure it considers is necessary. Likewise, Transpower will undertake the construction and management of approved projects, is responsible for maintaining robust practices, and should report on these in a transparent manner.

2.2.20 Transpower is required to apply the Capex IM when preparing and submitting capital expenditure proposals, or applying for or calculating incentive adjustments. The Commission will apply the Capex IM when assessing those proposals, setting capital expenditure allowances, and calculating incentive adjustments.

2.2.21 The Commission's role is to provide independent scrutiny, and where appropriate, approval of projects and programmes of capital expenditure.

Figure 2.1 Overview of incentive mechanisms for RCP2



2.3 Interaction with the IPP Determination

Overview

2.3.1 The IPP Determination is the mechanism that translates commissioned projects into the actual revenues that Transpower may recover. All the incentive mechanisms and adjustments will flow through into the revenue calculation mechanisms via the IPP Determination. This section provides a high-level explanation of how the Capex IM will be implemented in the IPP.

2.3.2 From RCP2, maximum revenues, that is the forecast MAR, will be set by the Commission for a five-year period.[30] This will be done on an ex-ante basis. The forecast MAR is set and announced prior to the start of the regulatory period. This

[30] Commerce Commission, Individual Price-Quality Path (Transpower) Reasons Paper (IPP Reasons Paper), paragraph 3.2.1

provides certainty to Transpower, customers and consumers, regarding the baseline revenues that Transpower will be seeking to recover.

2.3.3 On an annual basis, the forecast MAR, which takes into account forecasts of the timing of assets to be commissioned, is updated for actual timing and actual costs of commissioned capital projects. This will remove forecasting errors and ensures that Transpower recovers exactly the cost of capital set by the Commission (plus or minus the incentive effects).

2.3.4 Transpower maintains an EV account that records the post-tax effect of revenue adjustments that at any time have not been passed back to or recovered from customers. Included in the updates to the forecast MAR is a zeroing of the EV account balance by offsetting the balance of the EV account with an equivalent pre-tax adjustment to revenues.[31]

2.3.5 The incentive adjustments for Major capex and Base capex are given effect through EV account entries.[32] These affect the balance of the EV account, which is later set to zero through the revenue adjustments at each forecast MAR update.

2.3.6 A number of decisions within the Capex IM will be given effect through the IPP Determination. As some of these decisions cannot take effect until RCP2 (refer paragraph 1.2.18), the Commission will publish an updated IPP determination prior to RCP2. For this reason, a number of the implementation tables in this Reasons Paper highlight specific decisions will be effective 'From RCP2'.

Decision - Interaction with the IPP Determination

2.3.7 All capital expenditure adjustments will be applied as post-tax entries to the appropriate EV account.

2.3.8 From RCP2, the Commission will retain discretion to spread an EV adjustment over more than one year. This will be applied where the Commission considers the magnitude of the EV adjustment would result in an unacceptable price shock.

Reason - Interaction with the IPP Determination

2.3.9 Applying capital expenditure adjustments as entries to the appropriate EV account means the impact of those adjustments will flow through to the next available forecast MAR update. Recording and applying these as separate EV account entries maintains the transparency of all adjustments.

2.3.10 The discretion to spread an EV adjustment over more than one year will be built into the IPP Determination applying from RCP2. This will enable the Commission to avoid unacceptably large price shocks. Given the restrictions on amending the price-quality

[31] Forecast MAR updates are governed by the IPP Determination. Refer to the IPP Reasons Paper, Section 3.8 to 3.10 for an explanation of the wash-up and forecast MAR update process.

[32] All capital expenditure incentive adjustments will be entered into Transpower's EV accounts. These will be applied in later years as EV adjustments when setting Transpower's forecast MAR. The EV accounts are maintained on a post-tax basis, as the entries forming the original basis of the accounts had previously arisen from the calculation of the post-tax economic gain or loss on the annual MAR wash-ups. The post-tax balances in the EV accounts are grossed up to pre-tax revenue adjustment amounts when they are applied as revenue adjustments in those subsequent years. Refer IPP Reasons Paper, Paragraph 3.10.31.

path during an RCP, this relief mechanism cannot be implemented for RCP1.[33] This is not problematic for RCP1, however, given the forecast timing for commissioning of the existing Major capex projects and the shorter length of the RCP.

Implementation - Interaction with the IPP Determination

Implementation: Interaction with the IPP Determination	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Calculations relating to adjustments for Base Capex and Grid outputs	Schedule B, Division 1	For RCP 2	
Calculations relating to Major Capex adjustments	Schedule B, Division 2	Clause 5.3(4)(e)	
Major capex adjustments are EV account entries		Part 2 (Defined Terms), definition of 'EV account entry', paragraph (d)	
Transpower must calculate EV adjustments that attribute the balances of the EV accounts to the update of the forecast MAR		Clause 5.3(4)(b)	
The Commission has discretion to spread an EV adjustment over a number of years		From RCP2	
Key definitions			
EV account entry		Part 2 (Defined Terms)	
EV adjustment		Part 2 (Defined Terms)	
Major capex adjustments		Part 2 (Defined Terms)	

2.4 Capex IM - Core framework

Decision - Capex IM - Core framework

2.4.1 The core elements of the Commission's decisions are as follows:

a. Capital expenditure requiring approval is classified as either Base capex or Major capex.

b. The Capex IM will apply to all capital expenditure intended to enter Transpower's Regulatory Asset Base (RAB), including both Base and Major capex.[34]

c. Major capex is required to be consulted on, assessed and approved on a project-by-project basis using the requirements set out in the Capex IM.

[33] Section 53ZB and s 53ZC.

[34] Refer Section 2.5 for descriptions of capital expenditure categories.

d. Transpower cannot substitute expenditure between individual Major capex projects or from Major capex projects to Base capex.

e. Full substitution of expenditure between years and across categories of Base capex is allowed.

f. Base capex is subject to ex-ante approval (prior to the regulatory period) of a Base capex allowance for each year of the regulatory period.

g. An incentive regime will apply to both Base capex and Major capex.

h. Transpower must produce and make available an integrated transmission plan. The integrated transmission plan is discussed in Section 2.7.

i. Transpower is required to consider transmission alternatives in its development of all Major capex proposals.[35]

j. The Capex IM does not apply to capital expenditure relating to New Investment Contracts if the party that is contracting with Transpower, agrees in writing, that the terms and conditions are reasonable or reflect workable or effective competition for the provision of the goods and services.

k. Where there is a System Operator Service Provider Agreement (SOSPA) between the Electricity Authority and Transpower, any SOSPA capital expenditure will not be assessed under the Capex IM.

Reasons - Capex IM - Core framework

2.4.2 Given the importance of the RAB in determining Transpower's MAR, the Commission considers that all capital expenditure entering the RAB (Base and Major capex) should be subject to the requirements of the Capex IM.

2.4.3 The definitions of Base and Major capex are set out in Section 2.5. The distinction between Base and Major capex exists because the difference in nature, timing and magnitude of these types of capital expenditure is such that a different approval process is appropriate. We also consider it to be important to have a project-by-project approval process for Major capex projects because the level of interest from stakeholders in Major capex projects, and the scope for other parties to provide alternative solutions, is likely to be much greater than for Base capex. Options for Base capex are likely to be more limited and less contentious than Major capex projects.

2.4.4 Transpower will not be permitted to substitute an alternative Major capex project to replace an approved Major capex project. We consider it would be inappropriate for Transpower, having undertaken detailed analysis and gained regulatory approval for specific Major projects, to apply the approved costs of that project to cover other work. Allowing substitution of expenditure within one Major capex project to another would distort the effectiveness of the approval process and the incentives that are applied on a project specific basis. Incentives that apply to Major capex projects are discussed in Section 4.1.

2.4.5 Likewise, the magnitude of Major capital projects is potentially such that, if substitution between Major capex projects and the Base capex allowance was

[35] Refer Section 2.8 for classification of transmission alternatives between Major capex, Base capex and operating expenditure

permitted, substitution of even a single Major project could potentially swamp the Minor category. This would undermine the efficiency incentives being provided.

2.4.6 From RCP2, Transpower will be able to spend more or less than the Base capex allowance and recover the expenditure from its customers, subject to the incentives that apply. This differs from RCP1 where the allowance caps the amount of Base capex that Transpower may recover from its customers. From RCP2, the Base capex allowance will be determined and used to set revenues, and later used to calculate the incentive adjustments (refer paragraph 3.3.6).

2.4.7 Ex-ante approval (prior to the regulatory period) of Base capex has a number of economic and process benefits:

a. Transpower can reprioritise and substitute expenditure between projects within the overall Base capex allowance.

b. Transpower has incentives to improve the quality and accuracy of forecasting, and to undertake planning in a more integrated manner.

c. The Commission can consider operating expenditure and Base capex plans in a more integrated manner, including assessing unit costs and applying standard processes across a range of projects.

d. A greater proportion of expenditure can be included in the forecast maximum allowable revenue (forecast MAR), providing greater price certainty to consumers.

2.4.8 An incentive regime provides Transpower incentives to deliver the outcomes valued by consumers. The incentive regime applying to both Base capex and Major capex are discussed in Section 2.2.

2.4.9 A key component of an incentive-based regulatory regime is the treatment of any divergence of actual expenditure from the approved expenditure allowance or values used to determine the price path. Incentives are provided by the treatment of any under- or over-spend, compared to approved amounts, at the end of the regulatory period.

2.4.10 An incentive regime is generally based on specifying, ex-ante, the approved level of expenditure, with this being used in a building block approach to set revenue. The approach for how any benefit/loss resulting from any under/over-spend will be shared between customers and shareholders ('incentive rate'), is normally stated up front.

2.4.11 Unless a supplier can retain all or some of the savings it creates, limited incentives exist for that supplier to pursue efficiencies. The higher the incentive rate, the stronger the financial incentive will be to achieve efficiencies.

2.4.12 The purpose of the integrated transmission plan is to provide the Commission, stakeholders and interested parties an integrated overview of the expected future of, and activities on, the grid. The integrated transmission plan is discussed in Section 2.7.

2.4.13 Transmission alternatives are alternatives to investment in the grid. Transmission alternatives are discussed in more detail in Section 2.8.

2.4.14 The asset valuation IM that applies to Transpower excludes assets covered by New Investment Contracts and assets associated with delivering the SOSPA from Transpower's RAB. The recovery of these assets is excluded from Transpower's revenue calculation, which is set by the IPP Determination. The Commission will not interpose itself between Transpower and its contract counterparties by requiring the revenue associated with New Investment Contracts to be subject to an IPP, provided certain conditions are met around workable competition. In the case of the SOSPA, this contract is negotiated with the Electricity Authority.[36]

Implementation - Capex IM - Core framework

Implementation: Capex IM - Core framework	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Capex IM applies to capital expenditure related to the provision of regulated services intended to enter Transpower's RAB	Clauses 1.1.2, clause 1.1.5, definition of capital expenditure		
Capital expenditure definition under the Capex IM includes non-transmission solutions	Clause 1.1.5, definition of capital expenditure		
The Capex IM does not apply to capital expenditure relating to New Investment Contracts	Clause 1.1.5 definition of capital expenditure, Schedule D, clause D2		
Capital expenditure requiring approval is classified as either Base capex or Major capex	Clause 1.1.5 defintion of base capex and Major capex		
Integrated transmission plan for capital expenditure expected to be incurred over the next 10 years to be submitted by Transpower and updated annually	Clauses 2.1.1 3.1.1, 7.2.1 and Schedule E, clause E1		
Base capex allowance to be approved for each year of the regulatory period	Clause 2.2.2	From RCP2	
Major capex to be assessed and approved by applying the Capex IM	Part 3 (subpart 3),6 and 8	Clause 1.6	Clause 3.7.5(2)(g)(i)
No substitution between Major capex projects	Clause 1.1.5, definition of base capex and Major capex		
Incentive regime to apply to Base capex	Clause 3.2.3	From RCP2	
Incentive regime to apply to Major capex	Clauses 3.3.5 to 3.3.7, and	Clause 5.3(4)(e)	

[36] Chapter 3 of the Input Methodologies (Transpower) Reasons Paper provides more detailed discussion and reasons for this approach.

Implementation: Capex IM - Core framework	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
	clause 4.1.1		
SOSPA capital expenditure not assessed under the Capex IM	Clause 1.1.5, definition of capital expenditure	Part 2,	Clause 2.1.1
Key definitions			
Base capex	Clause 1.1.5	From RCP2	
Base capex allowance	Clause 1.1.5	From RCP2	
Base capex programme threshold	Clause 1.1.5		
Base capex project threshold	Clause 1.1.5		
Capital expenditure	Clause 1.1.5	Part 2	Clause 1.1.4
Closing RAB value	Clause 1.1.5	Part 2	Clause 1.1.4
Major capex	Clause 1.1.5	Part 2	
Major capex adjustments		Part 2	
Major capex allowance	Clause 1.1.5		
New investment contract	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Value of commissioned asset	Clause 1.1.5	Part 2	Clause 1.1.4

2.5 Categories and definitions for capital expenditure

Decisions - Categories and definitions for capital expenditure

2.5.1 Major capex is capital expenditure that exceeds the Base capex project threshold, or is included in a programme whose aggregate forecast capital expenditure exceeds the Base capex programme threshold. For capital expenditure to be Major capex, it must be incurred to:

a. meet the grid reliability standards,[37] or

b. provide a net electricity market benefit.

2.5.2 Major capex includes the costs of transmission alternatives where those transmission alternatives have been classified as a non-transmission solution.[38]

2.5.3 Major capex does not include any expenditure incurred in relation to any of the following:

[37] The Electricity Authority is responsible for the Grid Reliability Standards, which are set out in Part 12 of the Code.

[38] Refer Section 2.8 for classification of transmission alternatives between Major capex, Base capex and operating expenditure

a. asset replacement

b. asset refurbishment

c. business support

d. information system and technology assets

2.5.4 Base capex means capital expenditure that is incurred in relation to one or more of the following things:

a. asset replacement

b. asset refurbishment

c. business support

d. information system and technology assets

e. capital expenditure that is not forecast to:

i. exceed the Base capex project threshold, or

ii. be included in a programme whose aggregate forecast capital expenditure exceeds the Base capex programme threshold.

2.5.5 Base capex excludes capital expenditure that is a non-transmission solution.

2.5.6 Base capex programme threshold means the following, where the last asset delivered by the programme to which the capital expenditure relates has a forecast commissioning date in:

a. the Transition Year, the threshold for the programme is $5 million[39]

b. the Remainder Period, the threshold for the programme is $5 million

c. any period other than RCP1, the threshold for the programme is $20 million.

2.5.7 Base capex project threshold means, where the last asset delivered by the project to which the capital expenditure relates has a forecast commissioning date in:

a. the Transition year, the threshold for the project is $1.5 million

b. the Remainder Period, the threshold for the project is $5 million

c. any period other than RCP1, the threshold for the project is $20 million.

Reasons - Categories and definitions for capital expenditure

2.5.8 Major capex is capital expenditure that is required to meet the Grid Reliability Standards in the Code, or which provides a net electricity market benefit that exceeds the Base capex project threshold.

2.5.9 The reason for the classification of transmission alternatives between Major capex, Base capex and operating expenditure is provided in Section 2.8.

2.5.10 Base capex is capital expenditure on asset replacement, asset refurbishment, business support, and information systems and technology and any other capital expenditure that

[39] The rationale for separating the Transition Year and the Remainder Period is set out in Section 3.2 of the IPP determination.

does not exceed the Base capex threshold. Base capex is intended to cover all capital expenditure, save those individual, large projects that, given their nature (such as enhancement projects) and magnitude (over the threshold), warrant individual scrutiny and public consultation. Including such projects in the Base capex allowance would also significantly impact the incentives on the remaining Base capex where these large projects incur scope or timing changes. These reasons are explained in more detail in Section 5.2 of the IPP Reasons Paper.

2.5.11 The Base capex threshold for the Transition year was $1.5 million. The threshold was increased to $5 million for the Remainder Period. These thresholds were set prior to the Capex IM being determined and remain unchanged for the duration of RCP1.

2.5.12 In our view, a $20 million threshold in RCP2 will provide the right balance between protecting the interests of stakeholders who want Major capex projects to be subject to individual scrutiny, the scope for other parties to provide alternative solutions, and allowing the benefits of the ex-ante approach applied to Base capex to be applied to projects below the threshold. In addition, the move in RCP2 to a threshold of $20 million will further reduce the likely number of projects requiring individual regulatory approval.

2.5.13 The level of analysis undertaken by Transpower should be commensurate with the size of the project, irrespective of whether that project is deemed to be Base or Major capex. We consider that this approach, including the requirement for Transpower to report on the analysis undertaken for Base capex projects over $20 million, will ensure the appropriate level of analytical rigour.

Implementation - Categories and definitions of capital expenditure

Implementation: Categories and definitions for capital expenditure	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Capital expenditure requiring approval is classified as Base capex or Major capex	Clause 1.1.5 definitions	To apply from RCP2	
Adjustment made to the Base capex allowances for a project that subsequently becomes a Major capex project		Clause 5.2(4)(c)	
Key definitions			
Base capex	Clause 1.1.5	To apply from RCP2	
Base capex programme threshold	Clause 1.1.5	To apply from RCP2	
Base capex project threshold	Clause 1.1.5	To apply from RCP2	
Major capex	Clause 1.1.5	Part 2	
RCP1	Clause 1.1.5	Part 2	
Remainder Period	Clause 1.1.5	Part 2	
Transition Year	Clause 1.1.5	Part 2	

2.6 Situations in which capital expenditure may be recategorised

Decision - Situations in which capital expenditure may be recategorised

2.6.1 Transpower may submit to the Commission for approval, a previously-approved Base capex project or programme, or a project or programme that the Commission considers was originally accounted for in the Base capex allowance for that RCP. It may do this where the project or programme has become a Major capex project due to forecast scope or cost variations. In such instances, the project or programme will be subject to review under the Major capex approval process.

2.6.2 If Transpower makes an application described in paragraph 2.6.1, the Base capex allowance will be reduced accordingly. This reduction of the Base capex allowance will be reflected in the calculation of the annual Base capex expenditure adjustment.[40]

Reasons - Situations in which capital expenditure may be recategorised

2.6.3 This adjustment is made to account for the natural forecast scope and cost variations that will occur in practice and that may result in a project that was initially forecast to be Base capex becoming forecast to be Major capex.

2.6.4 It is appropriate in those circumstances for the Base capex allowance to be reduced when calculating the Base capex incentive, because once the project becomes a Major capex project, the project would otherwise be subject to both the Major capex and Base capex incentives. If this were to occur, gains or loses would be double counted when applying the incentive mechanisms.

Implementation - Situations in which capital expenditure may be recategorised

Implementation: Situations in which capital expenditure may be recategorised	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Base capex proposal identifies the projects that are forecast to be undertaken during the next regulatory period	Schedule F, clause F2(1)		
Commission evaluates the projects in the identified programme and approves the Base capex allowance	Schedule A, clause A2, and clause 2.2.2(1)(a)	From RCP2	
Transpower to report annual information on approved Base capex projects in accordance with ID Determination or s 53ZD Notice issued by the Commission	Schedule B, clause B1(1), specification of term 'g' in the 'base capex expenditure adjustment' formula	From RCP2	

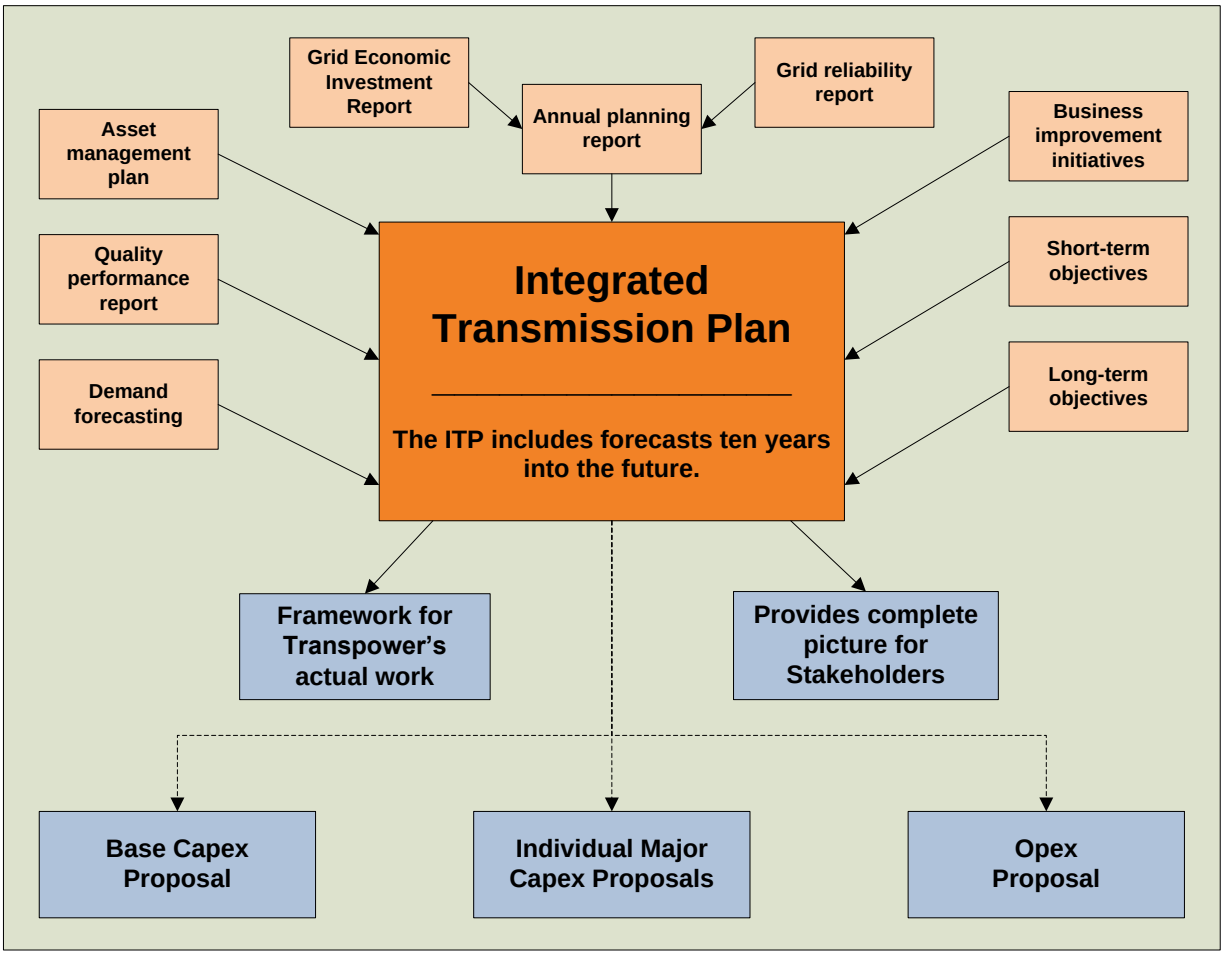
[40] Refer to Section 3.3 for decisions on the Base capex expenditure adjustment.

Implementation: Situations in which capital expenditure may be recategorised	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex allowance to be adjusted in calculating the Base capex expenditure adjustment when Transpower applies for a previously approved Base capex project to become a Major capex project	Schedule B, clause B1(1), description of term 'g' in the 'Base capex expenditure adjustment' formula	From RCP2	
Key Definitions			
Adjusted base capex allowance	Clause 1.1.5		
Base capex	Clause 1.1.5	From RCP2	
Base capex allowance	Clause 1.1.5	From RCP2	
Base capex expenditure adjustment	Clause 1.1.5	From RCP2	
Base capex incentive rate	Clause 1.1.5	From RCP2	
Base capex proposal	Clause 1.1.5		
ID Determination	Clause 1.1.5		
Identified programme	Clause 1.1.5 and Schedule F, clause F2		
Programme	Clause 1.1.5	Part 2	
Project	Clause 1.1.5	Part 2	

2.7 Integrated transmission plan

2.7.1 The purpose of the integrated transmission plan is to provide an integrated overview of the long-term development of, and activities on, the grid. It will provide detail on Transpower's stated long-term quality and performance objectives, and summarise the expenditure requirements of the grid and the outputs or benefits this expenditure will deliver. The integrated transmission plan is designed to sit at a level above the Base capex and Major capex information requirements, thereby providing context for stakeholders, and the context within which the Base and Major capex information can be assessed. This is shown in Figure 2.2.

Figure 2.2 Function of the integrated transmission plan



Decision - Requirement to provide an integrated transmission plan

2.7.2 Transpower must submit an integrated transmission plan to the Commission no later than the first working day in the December sixteen months before the start of a regulatory period.

2.7.3 Transpower must make a copy of the integrated transmission plan publicly available on its website.

2.7.4 The integrated transmission plan is required to forecast at least ten years ahead from the first day of the next regulatory period.

2.7.5 The integrated transmission plan must include a narrative and supporting documents that explain Transpower's anticipated plans for the national grid and associated expenditure over the next 10 years.

2.7.6 In summary, the narrative must include, but is not limited to, the following matters:[41]

a. an overview of the expenditure and grid outputs that are proposed for the first regulatory period to which the integrated transmission plan narrative relates, as well as the key assumptions and scenarios used, an assessment of the uncertainties and risks, and how those uncertainties and risks will affect Transpower's ability to deliver the forecast grid outputs

b. a description of the key relationships, synergies or trade-offs, within and between projects and programmes and forecast grid outputs

c. for each disclosure year, forecast expenditure for each major area of operating expenditure, Base capex, approved transmission investments, and approved non-transmission solutions

d. for each disclosure year for the first regulatory period to which the integrated transmission plan narrative relates, the forecast grid outputs[42] for each grid output measure linked and not linked to revenue, and Major capex project outputs assumed to be delivered by each approved Major capex project

e. a summary of Major capex projects under development.

2.7.7 The required supporting documents for the integrated transmission plan, in summary, include, but are not limited to, the following documents:

a. an asset management plan, which must include information such as the overall asset management strategy and objectives, risk management framework and asset management plans for each asset class

b. a planning report which must include information such as the capabilities of the existing grid, 10 year demand and generation forecasts, grid backbone transmission plans and a set of regional plans

c. a report setting out Transpower's output and performance objectives. This must provide Transpower's long-term view of the grid outputs and associated grid performance that will be economic to achieve taking into account the performance expectations of end users, details of the analysis, assumptions and approach used to determine that long-term view, and Transpower's approach to converting the long-term view into short-term objectives for grid outputs.

Decision - Integrated transmission plan updates

2.7.8 Transpower must, by the last working day of September of each disclosure year, submit to the Commission an updated integrated transmission plan narrative that takes account of any material changes to matters covered in the integrated transmission plan narrative most recently submitted to the Commission.

[41] The integrated transmission plan narrative content requirements are set out in detail in Schedule E of the Capex IM Determination.

[42] Grid outputs are discussed in Section 3.4 of this Reasons Paper.

2.7.9 The asset management plan, the planning report, and the report setting out Transpower's output and performance objectives, that are provided to the Commission with the integrated transmission plan, must be no older than two years. Alternatively, these documents may have been updated from a previous, older version, provided the most recent update was within two years of the submission date.[43]

Reasons - Integrated transmission plan

2.7.10 The information in the integrated transmission plan provides insight into Transpower's long-term objectives for grid investment and performance. This will assist the Commission when considering whether to approve a capital expenditure proposal. It will also help stakeholders understand the possible trade-offs between operating and capital expenditures being considered and provide valuable context for considering how individual expenditure proposals fit within the overall long term development framework.

2.7.11 The key supporting documents include an asset management plan, a planning report and a report setting out Transpower's output and performance objectives. Transpower's current asset management plan and annual planning report, which includes all the requirements of the grid reliability report and grid economic investment report mandated under the Code, reflect the required content of the first two supporting documents. The output and performance objectives report needs to include Transpower's long-term view of the grid outputs and associated grid performance that it considers will be economic to achieve.

Implementation - Integrated transmission plan

Implementation: Integrated transmission plan	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Requirement to submit an integrated transmission plan	Clause 2.1.1(1)		
Requirement to make each integrated transmission plan publicly available	Clause 2.1.1(2)		
Required to cover a period of at least ten disclosure years	Schedule E, clause E1		
Information to be included in each integrated transmission plan, and supporting documents to be provided	Schedule E, clauses E2 and E3		
Annual requirement to update the integrated transmission plan	Clause 3.1.1		
Key definitions			
Integrated transmission plan	Clause 1.1.5		
Integrated transmission plan narrative	Clause 1.1.5		
Integrated transmission plan supporting documents	Clause 1.1.5		

[43] Refer paragraph 2.7.2 for the integrated transmission plan submission date.

2.8 Transmission alternatives

Overview

2.8.1 Transmission alternatives are alternatives to investment in the grid. Examples include investment in local generation, energy efficiency, demand-side management and local network augmentation. Transmission alternatives play an important role in delivering efficient investment outcomes for the electricity market.

2.8.2 The nature of transmission alternatives can vary significantly. Transmission alternatives may involve, for example, Transpower procuring services from a third party to provide demand side management. Where Transpower procures demand side management, Transpower might incur expenditure that does not result in the creation of assets, ie operating expenditure. In other cases, a transmission alternative may require Transpower to invest in assets. In this case, Transpower would incur asset related expenditure that would normally be considered to be capital expenditure.

2.8.3 We have required Transpower to consider transmission alternatives in its development of all Major capex proposals, including through its consultation process. These requirements are set out in Chapter 6.

2.8.4 Making use of transmission alternatives may be an economically efficient decision where it avoids or defers expenditure on transmission investment. For this reason, reducing expenditure on transmission investments in this manner is an appropriate consideration.

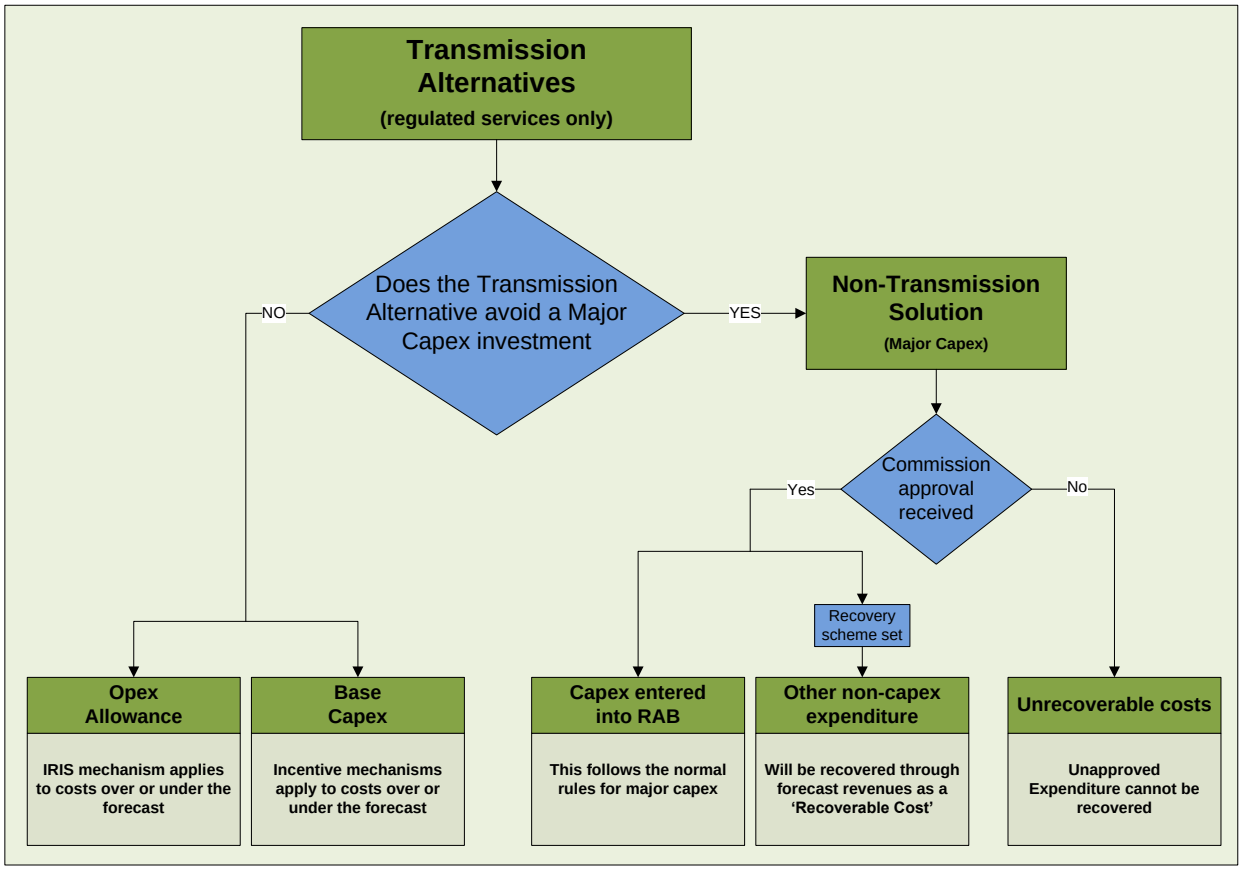
2.8.5 Promoting transmission alternatives is consistent with s 54Q. Section 54Q requires the Commission to promote incentives, and not impose disincentives, to investment in energy efficiency, demand-side management and energy losses reduction.

2.8.6 Where use of a transmission alternative avoids a transmission investment that would otherwise be Major capex, the transmission alternative is classified as a 'non-transmission solution'. This is to ensure non-transmission solutions are given equal consideration alongside transmission investment options, including through the application of the investment test.

2.8.7 The process for identifying non-transmission solutions and recovering their costs is set out in Figure 2.3.

2.8.8 The decisions and reasons for this approach are set out in the following sections.

Figure 2.3 Identification and cost recovery of a non-transmission solution



Classifications of transmission alternatives

Decisions - Classification of transmission alternatives

2.8.9 Transmission alternative means costs incurred by Transpower in relation to one or more of the following that avoids or defers expenditure on the grid:

a. electricity generation
b. energy efficiency
c. demand-side management
d. local network augmentation
e. improvement to the systems and processes of the system operator
f. the provision of ancillary services.

2.8.10 Expenditure on transmission alternatives may meet the definition of:

a. operating expenditure
b. Base capex
c. a non-transmission solution.

2.8.11 Where expenditure on a transmission alternative is classified as operating expenditure or Base capex, the respective approval process and incentive framework for those types of expenditure applies.

2.8.12 Where a transmission alternative is classified as a non-transmission solution, it is deemed to be Major capex. As non-transmission solutions are Major capex, the Major capex approval process, as set out in Chapter 6 applies.

Reasons - Classification of transmission alternatives

2.8.13 Where expenditure on transmission alternatives is classified as operating expenditure or Base capex, no project-specific approval is required from the Commission (though the project may be specifically listed as an identified programme in the Base capex or operating expenditure approved by the Commission). This is because transmission alternatives classified either Base capex or operating expenditure will follow the normal approval process for those types of expenditure.

2.8.14 With both operating expenditure and Base capex, Transpower must manage its expenditure within the appropriate ex-ante allowances provided, subject to the incentive mechanisms that apply. This provides the right economic incentive for Transpower to make the trade-off between investment in the grid (Base capex) and transmission alternatives (operating expenditure).

2.8.15 Where a transmission alternative meets the criteria to be classified as a non-transmission solution, it is Major capex, and the Major capex approval process applies. This ensures that where a transmission alternative can avoid or defer a transmission investment that is Major capex, it is given equal consideration alongside transmission investment options, including through the application of the investment test.

Implementation - Classification of transmission alternatives

Implementation: Classification of transmission alternatives	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Expenditure on transmission alternatives may comprise operating expenditure, Base capex or non-transmission solutions	See respective definitions below		
Operating expenditure is approved under the IPP Determination		Clause 5.2(7)(b)	
Base capex proposals are approved under the Capex IM	Clauses 2.2.2		
Non-transmission solutions are categorised as Major capex and are approved as Major capex proposals under the Capex IM	Clauses 3.3.2		
Key definitions			
Base capex	Clause 1.1.5	From RCP2	
Major capex	Clause 1.1.5	Part 2	
Non-transmission solutions	Clause 1.1.5		
Operating cost	Clause 1.1.5		Clause 1.1.4
Operating expenditure	Clause 1.1.5	Part 2	Clause 1.1.4
Operating expenditure allowance		Part 2	

Definition of non-transmission solutions

Decision - Definition of non-transmission solutions

2.8.16 A non-transmission solution is a transmission alternative that avoids or defers a transmission investment where the transmission investment both:

a. satisfies the investment test if the investment options did not include any transmission alternatives, and

b. is Major capex.

2.8.17 Satisfying the definition of a non-transmission solution is not dependent on the cost of the non-transmission solution, nor whether the costs are normally considered operating expenditure or asset related capital expenditure (and a non-transmission solution can include a mix of both).

Reasons - Definition of non-transmission solution

2.8.18 The definition of a non-transmission solution has been developed to be consistent with the definition of transmission alternatives used in the Code but limited to only those that avoid or defer a transmission investment that would be Major capex.

2.8.19 The nature (ie, operating or capital expenditure) or magnitude of the costs involved do not impact on whether the non-transmission solution meets the definition, as these factors are accounted for in the application of the investment test.

2.8.20 For example, a transmission alternative can meet the definition for a non-transmission solution, irrespective of whether the transmission alternative costs would normally be considered as 100% operating expenditure, 100% capital expenditure (regardless of whether the asset related capital expenditure is higher or lower than the Base capex project threshold) or a mix of both operating expenditure and capital expenditure.

Implementation - Definition of non-transmission solution

Implementation: Definition of Non-transmission solution	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transmission alternative that avoids or defers expenditure that would be Major capex and would meet the investment test is defined to be a non transmission solution	Clause 1.1.5, definition of 'non-transmission solution'		
For approval purposes, a non-transmission solution is treated under the Capex IM as if it is a capital expenditure amount	Clause 1.1.5, definition of 'capital expenditure'		
Key definitions			
Investment option	Clause 1.1.5		
Major capex	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

Approval and cost recovery of non-transmission solutions

Decision - Approval and cost recovery of non-transmission solutions

2.8.21 A non-transmission solution may include a combination of both asset-related expenditure and non-asset related expenditure:

a. The asset-related portion of a non-transmission solution is approved and recovered in the same way as a Major capex transmission investment.

b. The non-asset related expenditure portion of a non-transmission solution is approved in the same way as a Major capex transmission investment except that a maximum recoverable cost and a completion date assumption apply.[44]

2.8.22 The non-asset related expenditure portion of a non-transmission solution is recovered as recoverable costs via a recovery scheme.[45] The recovery scheme will be proposed by Transpower and will set the method by which the recoverable costs are allocated to one or more disclosure years.

2.8.23 All cost components (asset related and non-asset related expenditure) of a non-transmission solution are subject to the Major capex incentives.[46] Any operating expenditure incurred by Transpower on the non-transmission solution, in excess of the level approved by the Commission, is unrecoverable through revenue. Such costs may not be classified or reported as costs under the operating expenditure allowance set by the Commission. This also ensures they are not subject to the IRIS incentive mechanism.

Reasons - Approval and cost recovery of non-transmission solutions

2.8.24 Transmission alternatives, including non-transmission solutions, may involve capital expenditure or other expenditure that does not create assets. For this reason, the Commission has established mechanisms to allow Transpower to recover non-transmission solution costs that may include both operating expenditure and capital expenditure.

2.8.25 The recovery scheme (paragraph 2.8.22) is required to set out how the recoverable costs are spread over time. This will reflect the timing of Transpower's actual costs, for example, annual payments to a provider of demand side management.

[44] Maximum recoverable costs, and the completion date assumption are the equivalent of the Major capex allowance and commissioning date assumption that apply to Major capex transmission investments and the asset-related portion of a non-transmission solution.

[45] Recoverable costs, as defined in the 2010 IM Determination, are added to the forecast MAR for the purpose of calculating Transpower's forecast revenue.

[46] For Major capex incentives, refer to Section 4.1 of this Reasons Paper.

Implementation - Approval and cost recovery of non-transmission solutions

Implementation: Approval and cost recovery of non-transmission solutions	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Capital expenditure portion of a non-transmission solution is approved and recovered by Transpower as a transmission investment, subject to a Major capex allowance and a commissioning date assumption	Clauses 3.3.3(5)(a) and 3.3.3(5)(g)		
Non-capital expenditure portion of a non-transmission solution is subject to maximum recoverable costs and a completion date assumption	Clauses 3.3.3(5)(b), 3.3.3(5)(c) and 3.3.3(5)(h)		
Non-capital expenditure portion of a non-transmission solution is recovered as a recoverable cost under a defined recovery scheme that attributes the maximum recoverable costs to disclosure years, including by way of formulae	Clause 1.1.5, definition of 'recovery scheme'		
Key definitions			
Commissioned	Clause 1.1.5	Part 2	Clause 1.1.4
Commissioning date	Clause 1.1.5		Clause 1.1.4
Commissioning date assumption	Clause 1.1.5		
Completion	Clause 1.1.5		
Completion date	Clause 1.1.5		
Completion date assumption	Clause 1.1.5		
Major capex allowance	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Maximum recoverable costs	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Recoverable cost	Clause 1.1.5	Part 2	Clause 1.1.4
Recovery scheme	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

2.9 Incremental rolling incentive scheme

2.9.1 Under the 2010 TP IM Determination, the IRIS mechanism is asymmetrical. Only positive efficiency gains are carried forward into any subsequent RCP. The 2010 TP IM Determination will be modified, prior to RCP2, to make the IRIS symmetrical from the start of RCP2. This means that both net gains and net losses will be carried forward.

Decision - Incremental rolling incentive scheme

2.9.2 The IRIS and the resulting incentive that applies to operating expenditure during RCP1 is not altered.

2.9.3 The operating expenditure incentive rate under the IRIS will become symmetric from RCP2, adopting a five-year retention period on sustained efficiency gains.

Table 2.1 Operating expenditure incentive rates

Area	Incentive Mechanism	Nature of incentive	Incentive rate for RCP1	Incentive rate for RCP2
Operating expenditure	IRIS	IRIS does not apply to the Transition Year of RCP1. From the start of the Remainder Period in RCP1, IRIS will apply, and will operate as an asymmetric incentive mechanism. From RCP2, IRIS will be a fully symmetric incentive mechanism.	RCP1Transition Year - IRIS does not apply. RCP1 Remainder Period – Five-year retention period provided only on sustained efficiency gains.	Five-year retention period provided on sustained efficiency gains and losses.

Reason - Incremental rolling incentive scheme

2.9.4 Under the 2010 TP IM Determination, while both incremental efficiency gains and losses were carried forward to the subsequent five years, only positive net balances that were carried forward into the next regulatory period were treated as recoverable costs. The result of this was that the IRIS mechanism was asymmetrical.

2.9.5 Given the new incentive framework created under the Capex IM, it is beneficial to amend the IRIS to align the operating expenditure incentives created by IRIS with the capital expenditure incentives created by the Capex IM. Aligning the capital expenditure and operating expenditure incentives improves the potential effectiveness of both types of incentive, for example, there will be a reduced incentive for Transpower to pursue an operating expenditure solution over capital expenditure solutions, to obtain a more favourable incentive adjustments. This change is to take effect only from the start of RCP2 due to the restrictions on changing input methodologies during a regulatory period (refer paragraph 1.2.18).

Implementation - Incremental rolling incentive scheme

Implementation: Incremental Rolling Incentive Scheme	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
The IRIS is symmetrical from RCP2.		Schedule D, Formula K	Clause 3.1.3(1)(a)
Key definitions			
Recoverable cost or recoverable costs		Part 2	Clause 1.1.4

CHAPTER 3: BASE CAPEX INCENTIVE AND OUTPUT FRAMEWORK

3.1 Incentives that apply to Base capex during RCP1

Decision

3.1.1 The incentive mechanisms that were established for Base capex for RCP1 under the IPP Determination remain unaltered by the Capex IM.

3.1.2 The quality standards set under the IPP Determination continue to apply until RCP2

Reasons

3.1.3 The quality standards that apply during RCP1 were set in December 2010. Likewise, the Base capex and operating expenditure allowances for RCP1 were set by the Commission prior to the Capex IM. The Commission's approach is to set all these matters at the same time, taking all decision components into account at the time each is being set. This is not possible for RCP1, given the separate timing of the IPP and Capex IM determinations.

3.1.4 Therefore, we are of the view that it would not be appropriate for us to change our previous decision, that Transpower's performance against the quality standards would not be subject to financial incentives during RCP1.

3.1.5 Furthermore, the restrictions that govern the changes that are allowed during any RCP, explained in paragraph 1.2.18, apply.

3.2 Incentives that apply to Base capex from RCP2

3.2.1 Three incentive mechanisms apply to Base capex, starting from RCP2. These are the 'Base capex expenditure adjustment', the 'grid output adjustment' and the 'Base capex policies and processes adjustment'.

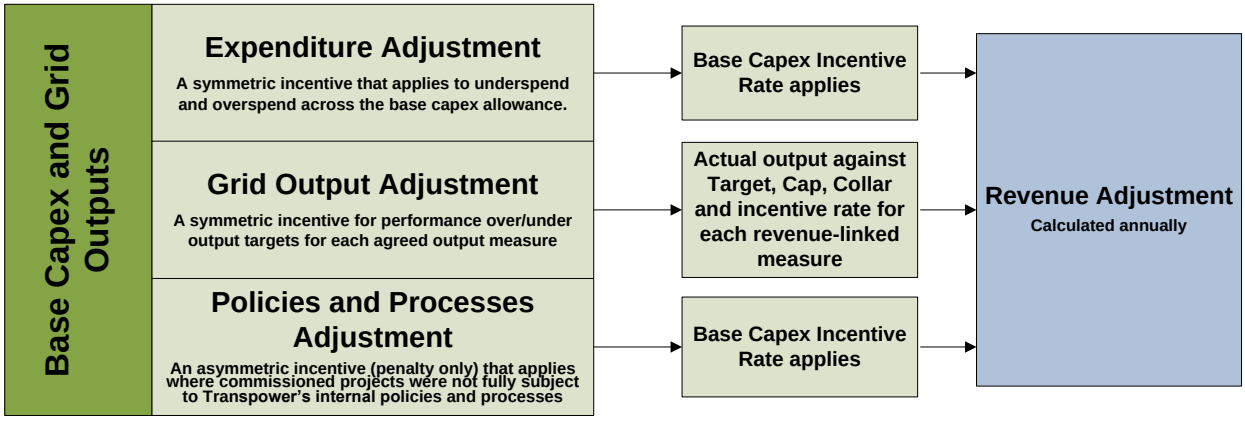
3.2.2 The Base capex expenditure adjustment (refer Section 3.3) and the Base capex policies and processes adjustment (refer Section 3.5) both apply incentives at the rate specified by the Base capex incentive rate (refer paragraph 3.6.4). The grid output mechanism (refer Section 3.4) applies the incentive rates set for each grid output measure prior to the start of each RCP (refer paragraph 3.6.7).

3.2.3 All incentive adjustments applying to Base capex are made on a post-tax basis.[47] These capital expenditure adjustments must be calculated in accordance with Schedule B of the Capex IM.

3.2.4 Figure 3.1 shows the three incentive mechanisms and the incentive rates that apply. Each mechanism is described more fully in the following sections.

[47] Refer to Footnote 32.

Figure 3.1 Incentives that apply to Base capex in RCP2



3.3 Base capex expenditure adjustment

3.3.1 The Base capex expenditure adjustment will provide a symmetric incentive (ie, apply to both over and under spend on the same basis) across the Base capex allowance within each disclosure year from RCP2. This will be given effect through a revenue adjustment calculated on an annual basis.

Decision - Base capex expenditure adjustment for RCP2 onwards

3.3.2 The Base capex expenditure adjustment applies to each RCP, starting from RCP2.

3.3.3 The Base capex expenditure adjustment for each disclosure year is the after-tax economic gain or loss, calculated as the adjusted Base capex allowance less the actual Base capex, multiplied by the Base capex incentive rate. The adjusted Base capex allowance for this purpose is the approved Base capex allowance used in calculating the forecast MAR, adjusted for disparities in the CPI and foreign exchange rate assumptions used in setting the allowance.

3.3.4 Prior to calculating the Base capex expenditure adjustment, three adjustments must be made to ensure that Transpower does not retain savings or bear costs related to cost elements that are largely outside its control. These include:

a. an adjustment to the Base capex allowance to correct for differences between the forward FX rate assumed by Transpower when proposing the Base capex allowance, and the actual rate achieved by Transpower

b. an adjustment to the Base capex allowance to correct for differences between the forecast CPI inflation used to set the Base capex allowance, and the actual level of CPI inflation that occurs during the period

c. an adjustment to the Base capex to remove or add any portion of Base capex to which the Base capex incentive rate does not apply.[48]

[48] Refer to Section 2.6 for an example of a situation in which Base capex may be recategorised as Major capex.

3.3.5 The Commission must have regard to the views of interested persons in determining the above adjustments where it proposes an outcome that differs to that calculated by Transpower.

Reason - Base capex expenditure adjustment

3.3.6 A Base capex expenditure adjustment has been developed to provide a symmetric incentive (ie, to apply to both over and under-spend) across the Base capex allowance within each disclosure year. This is because we consider it desirable to have the incremental incentive strength to be consistent regardless of whether Transpower over-spends or under-spends the Base capex allowance. This will ensure Transpower is indifferent to whether it spends operating expenditure or capital expenditure. Because of this indifference, Transpower should select the lowest lifetime cost, rather than making operating expenditure versus capital expenditure trade-off decisions based on the nature of regulatory mechanisms in place at the time. This also avoids an incentive to over- or under-capitalise.

3.3.7 The Base capex expenditure adjustment allows Transpower to retain part of any savings or bear part of any cost increases relative to the Base capex allowance. This provides the incentive for Transpower to pursue efficiency savings.

3.3.8 The requirement for the foreign exchange rate and CPI inflation adjustments is to ensure that Transpower does not retain savings or bear costs related to cost elements that are largely outside its control. Taken together, these adjustments go some way to avoiding perverse incentives that might otherwise arise for Transpower to price the risk of errors (with respect to foreign exchange and inflation forecasts) into its Base capex proposal, or simply to over-forecast these variables to reduce exposure risk.

3.3.9 The purpose of the discretionary adjustment by the Commission (paragraph 3.3.4c) to the values disclosed by Transpower for Base capex, is to provide the flexibility to exclude or include values that the Commission considers will correctly classify Base capex. For example, Transpower may have disclosed certain capital expenditure as Major capex, but the Commission may determine that it is more correct to classify this capital expenditure as Base capex, for the purposes of this calculation.

Implementation - Base capex expenditure adjustment

Implementation: Base capex expenditure adjustment	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Commission requirement to calculate the expenditure adjustment annually	Clause 3.2.3(1)(a)		
Incentive adjustment information requirements	Clauses 3.2.3(2) and 3.2.3(3)		
Formula for calculating the expenditure adjustment	Schedule B, clause B1		
Commission publishes the expenditure adjustment decision	Clause 3.2.3(5)		
Transpower records the EV account entry		To apply from RCP2	

Implementation: Base capex expenditure adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Key definitions			
Actual FX rates	Clause 1.1.5		
Adjusted Base capex allowance	Clause 1.1.5		
Base capex	Clause 1.1.5	To apply from RCP2	
Base capex allowance	Clause 1.1.5	To apply from RCP2	
Base capex expenditure adjustment	Clause 1.1.5 and Schedule B, clause B1(1)	To apply from RCP2	
Base capex incentive rate	Clause 1.1.5	To apply from RCP2	
Capital expenditure revenue adjustments		To apply from RCP2	
Capital expenditure	Clause 1.1.5		
CPI	Clause 1.1.5		
EV account entry		To apply from RCP2	
Forecast CPI	Clause 1.1.5		
Forecast FX rate	Clause 1.1.5		

3.4 Grid output adjustment

A grid output adjustment will be introduced from RCP2. The new framework makes Transpower responsible for proposing a suite of grid output measures to apply to each RCP. It also makes Transpower responsible for proposing which output measures will be linked to revenue. Transpower must propose both performance-based and asset-based measures, but may also propose other measures. The Commission will then determine which measures, or others as it sees fit, to apply.

3.4.1 Only those grid output measures that are linked to revenue will be used to calculate the grid output adjustment . Each grid output measure linked to revenue will be assigned a target, cap, collar and incentive rate.

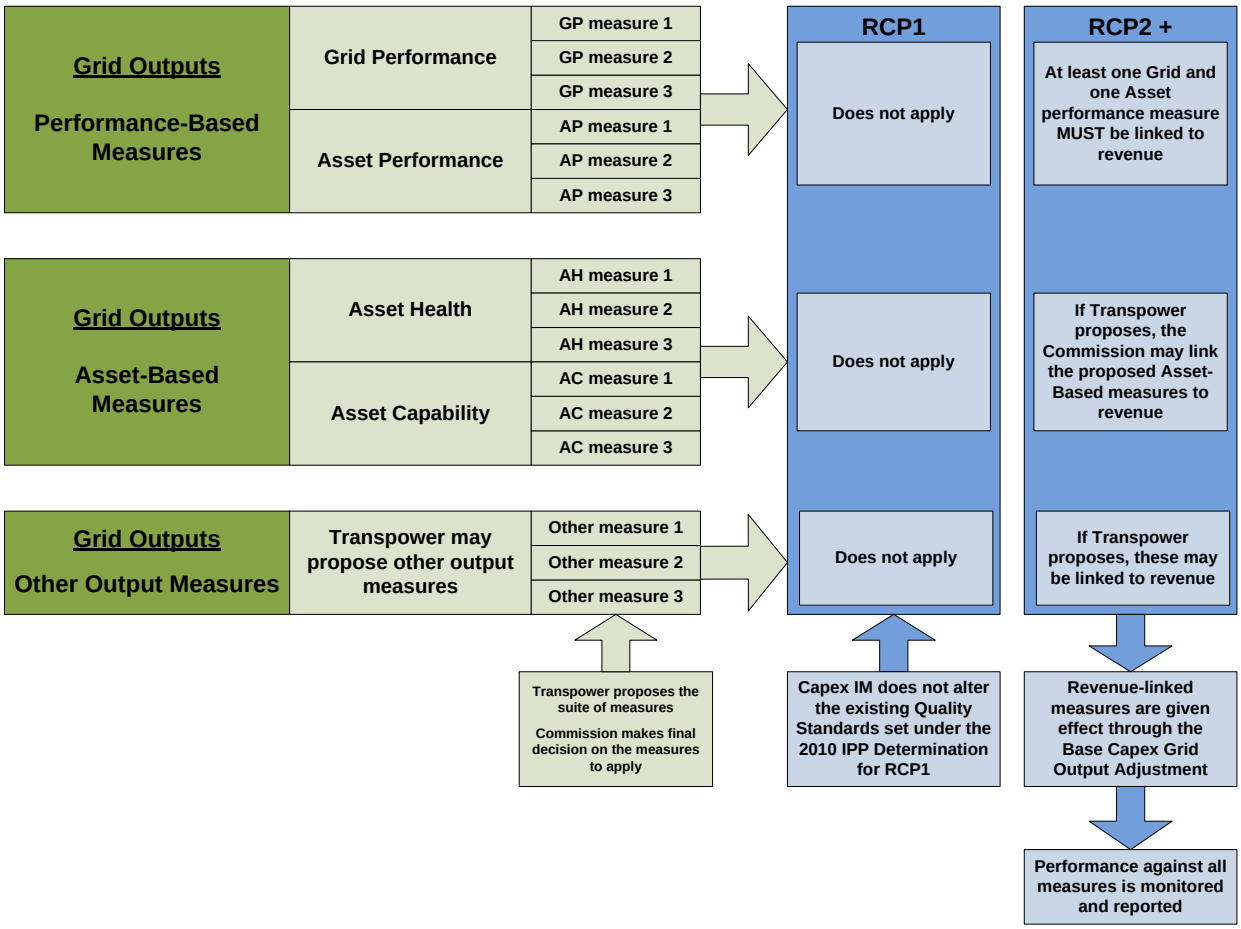
3.4.2 The grid output adjustment is calculated from performance against those grid output measures linked to revenue. Measuring performance and linking this to revenue, as well as disclosing other measures, will provide incentives to balance cost/quality trade-offs. This is consistent with the provisions in s 53M(2).

3.4.3 The grid output adjustment will be given effect through a revenue adjustment calculated on an annual basis. It will provide a symmetric incentive (ie, it will apply penalties for performance under the individual targets set, and reward performance over the targets) to deliver the agreed levels of outputs.

3.4.4 A subset of the grid output measures[49] that are determined and apply to a given RCP, will be, in part, the quality standards that apply to that RCP. This will fulfill the requirement of s 53M for the Commission to set quality standards. However, the determination that specifies the quality standards may set additional quality standards to those captured by the grid outputs.

3.4.5 This framework is shown in Figure 3.2 and explained in the sections below.

Figure 3.2 Grid output measures



[49] In particular, performance-based measures that quantify the level of service received by consumers.

Grid output adjustment - development of grid output measures

Decision - Grid output adjustment - development of output measures

3.4.6 Transpower's proposed suite of grid output measures must consist of performance-based grid output measures and asset-based grid output measures.

3.4.7 There are two types of performance-based grid output measures:

a. Measures of grid performance, being consolidated measures of performance as experienced by consumers (both demand and generation). Examples include total impact of interruptions measured in system minutes, loss of supply event frequency, time to restore following an event, energy not supplied and energy not injected

b. Measures of asset performance, being measures that quantify the performance, reliability or availability of an asset whether at the level of an individual asset, an aggregation of assets (such as a substation) or the grid. Examples include fault rates, availability, unavailability, planned unavailability and time to repair.

3.4.8 There are also two types of asset-based grid output measures are defined as:

a. Asset health grid output measures, which are consolidated measures of asset condition and/or health. Examples include measures reflecting asset condition, failure probability and consequences of failure

b. Asset capability grid output measures, which are consolidated measures of capability or utilisation of an asset or assets. Examples are network utilisation, capacity head room, fault levels, firm capacity, energy at risk, and constraints.

3.4.9 Transpower may propose other additional output measures.

Reason - Grid output adjustment - development of output measures

3.4.10 The mix of grid output measures that Transpower must propose has been developed to ensure a balanced overview of performance is provided. This includes the performance of individual components of the grid, as well as of the grid as a whole.

Implementation - Grid output adjustment - development of output measures

Implementation: Grid output adjustment - development of output measures	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower Base capex proposal to include proposed grid output measures	Schedule F, clauses F11 to F13		
Key definitions			
Asset capability grid output measure	Clause 1.1.5		
Asset health grid output measure	Clause 1.1.5		
Base capex allowance	Clause 1.1.5		
Cap	Clause 1.1.5		
Collar	Clause 1.1.5		
Grid output	Clause 1.1.5		

Implementation: Grid output adjustment - development of output measures	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Grid output adjustment	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Grid output mechanism	Clause 1.1.5		
Grid output target	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Measure of grid performance	Clause 1.1.5		
Performance-based measure	Clause 1.1.5		
Revenue-linked grid output measure	Clause 1.1.5		

Grid output adjustment - framework

Decision - Grid output adjustment - framework

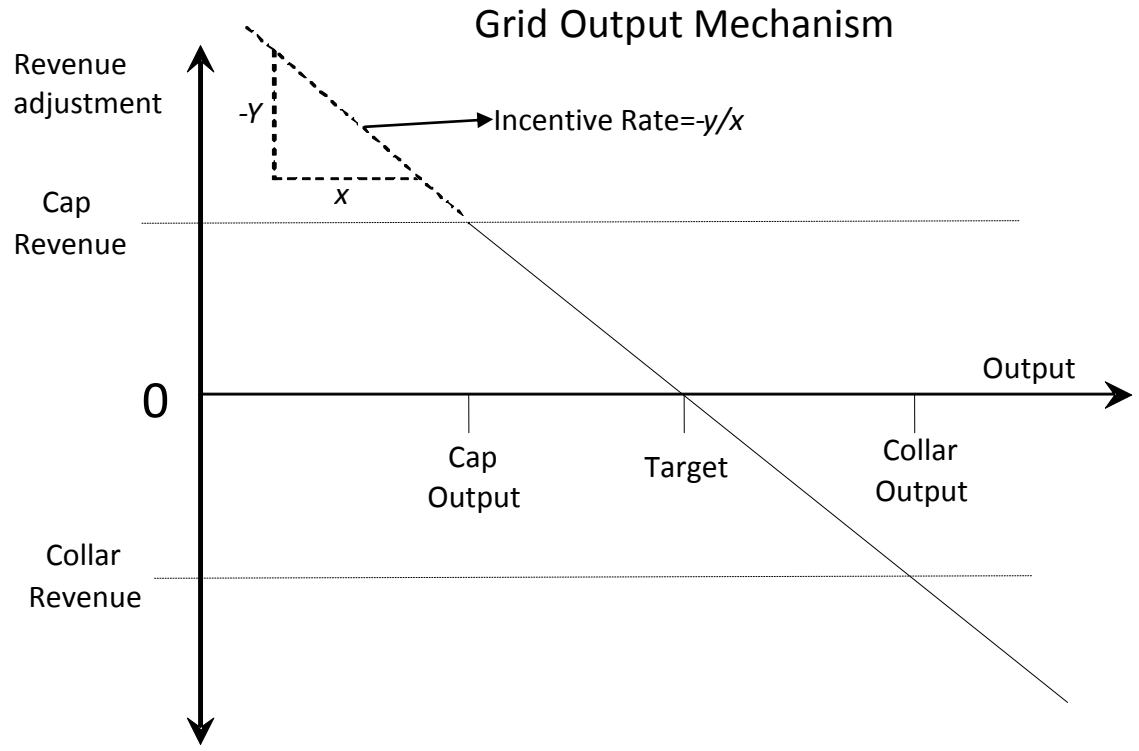
3.4.11 The grid output adjustment applies to each RCP, starting from RCP2.

3.4.12 The grid output adjustment for each disclosure year, from RCP2, is the after-tax economic gain or loss resulting from the grid output mechanism.

3.4.13 The grid output measures that are to be linked to revenue through the grid output mechanism, will be linked as set out in Figure 3.3.

3.4.14 Only the performance-based grid output measures will be linked to Transpower's revenue, unless Transpower elects to link some of the asset-based measures or other proposed measures to revenue.

Figure 3.3 Grid output mechanism



Note: The example in Figure 3.3 is based on a negative output incentive rate due to an increasing grid output value resulting in poorer performance (eg. total impact of interruptions in system minutes).

Reason - Grid output adjustment - framework

3.4.15 Grid output measures are an important element of the incentive regime, as these allow the Commission to measure whether Transpower has delivered the agreed outputs. Output measures also reduce incentives for under-investment that may result from other incentive mechanisms used. This helps to ensure a focus on the overall outputs, service, and delivery to the customer.

3.4.16 The cap and collar are in place to limit the financial exposure of both Transpower and consumers to the output incentive. The target sets the point at which Transpower will be neither penalised nor rewarded.

Implementation - Grid output adjustment - framework

Implementation: Grid output adjustment - framework	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission requirement to calculate the output adjustment annually	Clause 3.2.3(1)(c)		
Output adjustment information requirements	Clauses 3.2.3(2) and 3.2.3(3)		

Implementation: Grid output adjustment - framework	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Formula for calculating an output adjustment for each grid output measure and accumulation of results into overall output adjustment	Schedule B, clause B3		
Commission publishes output adjustment decision	Clause 3.2.3(5)		
Transpower records EV account entry		To apply from RCP2	
Key definitions			
Cap	Clause 1.1.5		
Capital expenditure revenue adjustments		To apply from RCP2	
Collar	Clause 1.1.5		
EV account entry		To apply from RCP2	
Grid output adjustment	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5	To apply from RCP2	
Grid output target	Clause 1.1.5		
Revenue-linked grid output measure	Clause 1.1.5		

Grid output adjustment - Process

Decision - Grid output adjustment - Process

3.4.17 Prior to each RCP, Transpower will develop and propose a suite of grid output measures. The grid output measures must be included as part of Transpower's Base capex proposal.

3.4.18 The Commission will review Transpower's proposed grid output measures and determine:

a. the grid output measures to apply, including which measures are linked to revenue

b. for grid output measures linked to revenue, a grid output target, cap, collar and output incentive rate for each disclosure year.

3.4.19 In applying the grid output measures to calculate the grid output adjustment, the Commission may calculate a value for the outputs achieved that differs from the value disclosed by Transpower that we consider correct. In doing so, the Commission must have regard to the views of interested persons.

Reason - Grid output adjustment - Process

3.4.20 Identifying measures which best demonstrate performance will provide opportunity for Transpower to achieve a return higher than its cost of capital if it can beat the targets. This will create an incentive for Transpower to propose linking additional measures to

revenue, as it gives Transpower more opportunity to outperform. Likewise, providing a suite of appropriate measures spreads Transpower's risk where one area under-performs.

3.4.21 The Commission considers that at least one grid-performance and one asset-performance measure, linked to revenue, may be sufficient to maintain relative incentives to avoid under-investment. This, however, depends on the nature and scope of the measures adopted. In practice, our expectation is that Transpower should propose at least three or more of each type of measure because a suite of measures is more likely to provide an accurate and complete picture of performance. This may be more practical than finding one composite measure that accurately represents grid or asset performance.

3.4.22 Under the Capex IM we have retained the ability to make the final decision on which, and how many, measures should and will be implemented. If we are not satisfied with Transpower's proposed suite of grid output measures, including those linked to revenue, we may reject Transpower's proposed measures. In this case, we will set what we consider to be appropriate measures, or adopt a mix of our measures and those proposed by Transpower.

3.4.23 The reason for creating a framework where Transpower is responsible for proposing the suite of grid output measures to be adopted, is that this approach:

a. creates a higher level of accountability where Transpower is responsible for delivering to outputs it proposed and agreed were appropriate

b. maintains Transpower's role as the grid planner

c. is more likely to deliver strong incentives for performance, as Transpower will propose which measures to link to revenue

d. helps to ensure the measures are dynamic and remain relevant to the changing nature of capital expenditure being undertaken, and

e. the final decision can only be made in view of the magnitude and nature of the proposed capital expenditure plan for that period.

Implementation - Grid output adjustment - Process

Implementation: Grid output adjustment - Process	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower information requirements and Base capex proposal	Clauses 2.2.1 and 2.2.2(3)		
Commission consultation requirements	Clause 8.1.1		
Commission consideration of grid output measures to apply	Schedule A, clause A4		
Commission consideration of revenue-linked grid output measures to apply	Schedule A, clause A5		
Commission consideration of caps, collars, targets and incentive rates to apply	Schedule A, clause A6		

Implementation: Grid output adjustment - Process	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission determination of grid output measures, caps, collars, incentive rate, targets and incentive rate	Clauses 2.2.2(1)(c) and 2.2.1(1)(d)		
Commission publication of decisions	Clause 2.2.2(5)		
Key definitions			
Asset capability grid output measure	Clause 1.1.5		
Asset health grid output measure	Clause 1.1.5		
Asset performance measure	Clause 1.1.5		
Cap	Clause 1.1.5		
Collar	Clause 1.1.5		
Grid output	Clause 1.1.5		
Grid output adjustment	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5		
Grid output target	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Grid output mechanism	Clause 1.1.5		
Measure of grid performance	Clause 1.1.5		
Regulatory templates	Clause 1.1.5		
Revenue-linked grid output measure	Clause 1.1.5		

3.5 Base capex policies and processes adjustment

3.5.1 The Capex IM introduces changes to the existing Base capex policies and processes adjustment by reducing Transpower's exposure rate from 100% down to the rate specified by the Base capex incentive rate.

Decision - Base capex policies and processes adjustment

3.5.2 The Base capex policies and processes adjustment set out in the IPP Determination, applying to RCP1, is retained. The Capex IM does not amend this mechanism for RCP1.

3.5.3 The Capex IM amends the Base capex policies and processes adjustment, starting from RCP2. Applying from RCP2, the Base capex policies and processes adjustment for each disclosure year is calculated using the aggregate value of commissioned Base capex assets that were not subjected to the policies and processes in Transpower's Base capex proposal, unless we are satisfied that it was appropriate for the policies or processes not to be followed. The aggregate value also includes projects with a value in excess of $20 million that did not in all material respects meet the requirement to undertake a cost-benefit analysis and consultation consistent with Major capex. The Base capex policies and processes adjustment is calculated as the aggregate value of base capex which did not comply multiplied by the Base capex incentive rate.

3.5.4 In calculating the Base capex policies and processes adjustment, we may calculate a value for the capital expenditure for which the policies and processes requirements have not been met that differs from the value disclosed by Transpower, and in doing so must have regard to the views of interested persons.

Reasons - Base capex policies and processes adjustment

3.5.5 The Capex IM moves Transpower away from operating under a fixed cap on capital expenditure, as was implemented under the IPP Determination for RCP1. The approach in RCP1 was adopted to provide time for Transpower to improve its planning and forecasting systems. Moving to a more traditional incentive framework allows Transpower to produce agreed outputs, but provides incentives to produce those same outputs at lower cost. Providing a sharing ratio through the Base capex policies and processes adjustment encourages Transpower to find the most cost-effective solutions (ie, alternative solutions that produce the same output at a lower price).

3.5.6 The Base capex policies and processes adjustment is an asymmetric penalty that makes Transpower bear a portion of the costs, determined by the Base capex incentive rate, for those Base capex assets that were not fully subjected to Transpower's policies and processes, or in all material respects meet the requirement to undertake a cost-benefit analysis and consultation consistent with Major capex. The reason for this is to ensure that a thorough and rigorous process is applied when testing the economics and engineering solutions of any base capital expenditure.

Implementation

Implementation: - Base capex policies and processes adjustment	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower to undertake cost-benefit analysis and consultation for Base capex project or programme exceeding $20 million	Clauses 3.2.1 and 8.1.2		
Transpower requirement to act in accordance with each policy specified in its Base capex proposal	Clause 3.2.2		
Commission requirement to calculate the policies and processes adjustment annually	Clause 3.2.3(1)(b)		
Policies and processes adjustment information requirements	Clauses 3.2.3(2) and 3.2.3(3)		
Formula for calculating the policies and processes adjustment	Schedule B, clause B2, subject to clause 3.2.3(4)		
Commission publishes policies and processes adjustment decision	Clause 3.2.3(5)		
Transpower records EV account entry		To apply from RCP2	
Key definitions			
Base capex	Clause 1.1.5		
Base capex incentive rate	Clause 1.1.5	To apply from RCP2	

Implementation: - Base capex policies and processes adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex proposal	Clause 1.1.5		
Capital expenditure revenue adjustments		To apply from RCP2	
EV account entry		To apply from RCP2	
Expected net electricity market benefit	Clause 1.1.5		
Policies	Clause 1.1.5		
Policies and processes adjustment	Clause 1.1.5		

3.6 Base capex incentive rates

Overview

3.6.1 Unless a supplier can retain all or some of the savings it creates, limited incentives exist to pursue efficiencies. The higher the incentive rate, the stronger the financial incentive will be to achieve efficiencies.

3.6.2 Incentive rates can be set anywhere between Transpower gaining/losing 100% of any under-spend/over-spend (the traditional incentive rate used for operating expenditure), and Transpower gaining/losing zero percent of any under-spend/over-spend. The latter is equivalent to a cost pass-through to consumers.

3.6.3 The Commission has adopted a mix of incentive rates. Different incentive mechanisms apply different incentive rates to promote the desired behaviour. The implementation of the incentive rates is through the calculation of revenue adjustments.

Decision - Base capex incentive rates

3.6.4 The Capex IM does not amend the incentives or the incentive rates that apply to Base capex, set for RCP1 by the IPP.

3.6.5 The incentive rate that applies to the Base capex policy adjustment during RCP1 is:

a. where projects have been fully subject to Transpower's consultation obligations, or Transpower's internal policy and process requirements, and do not exceed the aggregate Base capex allowance, Transpower may fully recover its costs

b. where any capital expenditure has not been fully subject to Transpower's consultation obligations, or Transpower's internal policy and process requirements, Transpower bears 100% of the costs of those projects.

3.6.6 The Base capex incentive rate for each RCP, starting from RCP2, will be set by the Commission prior to the start of the RCP. The Commission will determine and set the incentive rate once it has reviewed Transpower's capital expenditure proposal. The incentive rate will be set in the IPP Determination.

3.6.7 Incentive rates for the grid output adjustment will be set for each grid output measure. These will be set prior to the start of each RCP.

3.6.8 The incentive rates that apply to Base capex are shown in Table 3.1.

Table 3.1 Base capex incentive rates

Area	Incentive Mechanism	Nature of incentive	Incentive rate for RCP1	Incentive rate for RCP2
Base Capex	Incentive Adjustment	A symmetric incentive that applies to over and under spend, across the Base capex allowance within each disclosure year. This is given effect through an annual revenue adjustment.	Does not apply in RCP1.	Base capex incentive rate applies. Will be determined prior to RCP2.
	Output Adjustment	A symmetric incentive will apply to performance both over and under the individual output targets agreed. Output targets will replace the existing quality standards set out in the IPP Determination from RCP2. These new adjustments are calculated by assessing the total annual revenue impact from the target, cap, collar and incentive rate for each grid output measure linked to revenue. It will be given effect through a revenue adjustment calculated on an annual basis.	Does not apply in RCP1.	Separate incentive rates for each grid output measure. To be determined prior to RCP2.
	Policy Adjustment	An asymmetric incentive (penalty only applies to Transpower) where costs of any commissioned project have not been fully subject to Transpower's internal processes set out in policy. From RCP2, Transpower's exposure rate decreases from 100% down to the rate specified by the Base capex incentive rate.	Transpower bears 100 % of the entire project cost for all non-compliant projects.	Transpower bears the percentage of project costs, for all non-compliant projects at the rate of the Base capex incentive rate.

Reasons – Base capex incentive rates

3.6.9 Under a price cap regime, incentives exist around capital expenditure regardless of whether a specific incentive regime is implemented. The Commission considers it appropriate to amend the natural incentive properties of the ex-ante building block approach such that each incentive is explicit and targeted at clearly promoting specific behaviours and outcomes. This will further promote the objectives of s 52A.

3.6.10 The Commission considers that the natural incentive properties provided by the ex-ante building blocks methodology could be further promoted by making the incentive both fixed (ie, the same in each year of the RCP) and symmetric (ie, both rewards and penalties). We currently favour applying an incentive rate of 33%, ie, Transpower retains 33% of any under-spend or bears 33% of any over-spend.

3.6.11 The Commission also considers that the 33% incentive is appropriate for Transpower to ensure that all Base capex projects are evaluated in accordance with its own approval processes. This requires Transpower to do no more than its own processes currently intend it to do. The 33% rate is consistent with that applied for operating expenditure,

which is approximately the same as a five-year carry-forward of efficiency gains. The Commission's current thinking remains that 33% is appropriate for both Base and Major capex in RCP2, but will consult on this further prior to making its IPP determination for RCP2 (refer paragraph 4.6.6).

3.6.12 The incentive rate may be amended in future once experience with the incentive regime is available, for example, increasing the level of incentive applying to Transpower.

Implementation – Base capex incentive rates

Implementation: Base capex incentive rates	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Set rate for Base capex policies and processes adjustment - RCP1	Not applicable	IPP Determination, clause 5.3(4)(d)	
Set rate for Base capex expenditure adjustment - RCP2	Clause 2.2.2(1)(b)	To be added for RCP2	
Set rates for grid output adjustment - RCP2	Clause 2.2.2(1)(d)(iii)	To be added for RCP2	
Set rate for Base capex policies and processes adjustment - RCP2	Clause 2.2.2(1)(b)	To be added for RCP2	
Key definitions			
Base capex expenditure adjustment	Clause 1.1.5	To be added for RCP2	
Base capex incentive rate	Clause 1.1.5	To be added for RCP2	
Grid output adjustment	Clause 1.1.5	To be added for RCP2	
Policies and processes adjustment	Clause 1.1.5	To be added for RCP2	

CHAPTER 4: MAJOR CAPEX INCENTIVE AND OUTPUT FRAMEWORK

4.1 Incentives that apply to Major capex

4.1.1 Four incentive mechanisms apply to all Major capex commissioned after the date of the Capex IM Determination. These are the 'Major capex efficiency adjustment', the 'Major capex project output adjustment', the 'Major capex overspend adjustment', and the 'Major capex sunk costs adjustment'.

4.1.2 The Major capex efficiency adjustment (refer Section 4.2) is an asymmetric incentive mechanism that rewards Transpower for efficiency gains. The Major capex project output adjustment (refer Section 4.3) is an asymmetric incentive mechanism that applies a penalty if Transpower does not deliver the agreed outputs. Both apply incentives at the rate specified by the Major capex incentive rate which, in RCP1, is 33% (refer paragraph 4.6.1).

4.1.3 The Major capex overspend adjustment (refer Section 4.4) and the Major capex sunk costs adjustment (refer Section 4.5) are also both asymmetric incentive mechanisms. The Major capex overspend adjustment is a potential penalty that applies where Transpower spends more than the approved level of capex for an individual project. In this case, Transpower bears 100% of those unapproved costs. In contrast, the Major capex sunk costs adjustment allows Transpower to recover project costs in certain circumstances. This avoids Transpower being exposed to costs where a project is abandoned for good reason, or the project takes longer than expected (passes the approved expiry date). The incentive rates set for the Major capex overspend adjustment and the Major capex sunk costs adjustment are set out in paragraphs 4.4 and 4.5.

4.1.4 While the full amount of expenditure on assets that are commissioned will enter the RAB, the overall outcome of the Commission's decisions on Major capex incentives is that Transpower will only earn a full return on that capital expenditure, determined by WACC, where:

a. expenditure is equal to, or lower than, the Major capex project allowance (which may have been the subject of an amendment), and

b. the Major capex output measures have been delivered (including delivery to alternate outputs approved by the Commission), and

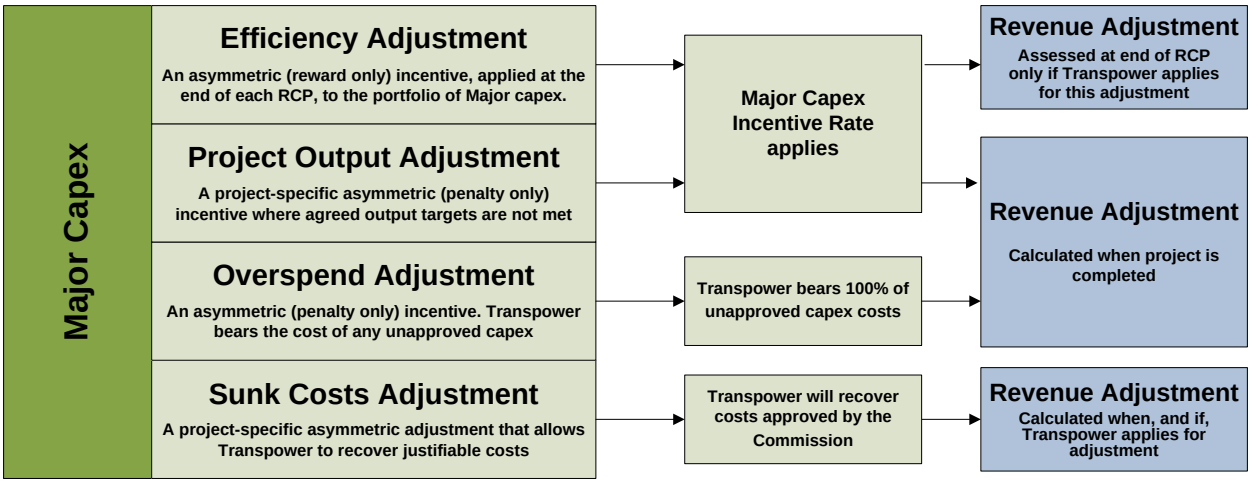
c. the project was commissioned prior to the approval expiry date.

4.1.5 The combination of these mechanisms provides the correct incentives to manage costs of individual projects, as well as ensuring that agreed outputs are delivered.

4.1.6 All incentive adjustments applying to Major capex are determined on a post-tax basis. These capital expenditure adjustments must be calculated in accordance with the Capex IM Determination.[50]

4.1.7 Figure 4.1 shows the four incentive mechanisms and the incentive rate that applies to each. Each mechanism is described more fully below.

Figure 4.1 Incentives that apply to Major capex from RCP1



4.2 Major capex efficiency adjustment

4.2.1 The Capex IM makes a capital expenditure revenue adjustment available to Transpower if it can demonstrate to the Commission's satisfaction that it has achieved positive net efficiencies across the portfolio of Major capex projects during a given RCP. The Major capex efficiency adjustment is the only incentive mechanism that applies across the portfolio of Major capex projects.

Decision - Major capex efficiency adjustment

4.2.2 The Major capex efficiency adjustment is the after-tax economic gain to take account of demonstrated net Major capex efficiencies that Transpower may retain. This is calculated as the Major capex net efficiencies multiplied by the Major capex incentive rate.

4.2.3 The Major capex efficiency adjustment is asymmetric. Only net efficiencies will be included in the calculation of the incentive amount. If the Commission decides that no net efficiencies were achieved over the portfolio of Major capex projects commissioned during the RCP, the incentive amount will be zero.

4.2.4 A Major capex efficiency adjustment will only be considered if Transpower chooses to apply for this adjustment.

[50] Refer to Schedule B of the Capex IM Determination.

4.2.5 If Transpower elects to apply for a Major capex efficiency adjustment, the application must be submitted by the last working day in the September following the end of the RCP.

4.2.6 An application for Major capex efficiency adjustments must include:

a. a summary of Major capex projects where all assets under each project have been commissioned during the RCP, including for each project:

i. the approved Major capex project allowance and agreed grid outputs

ii. the annually updated expected final costs for the project (consistent with a P50 calculation)[51]

iii. the actual capital expenditure and achieved grid outputs for the project

iv. the quantum of net cost efficiencies that Transpower considers have been achieved, including descriptions, explanations, and assumptions made

b. a proposal regarding the quantum of net efficiencies that Transpower considers it has achieved as a result of efficient performance in delivery of its Major capex project portfolio during the RCP. This proposal must include supporting evidence of the net efficiency (net efficiency refers to the aggregate of the efficiencies and inefficiencies for each of the individual projects, with foreign exchange and inflation forecast errors excluded from the assessment).

4.2.7 The Commission may require Transpower to provide in a time that is reasonable any additional information we require to calculate or justify the Major capex efficiency adjustment.

4.2.8 Following receipt of Transpower's application, the Commission will assess the net efficiency achieved by Transpower, and decide by the last working day in November after the RCP, the incentive amount to be allowed.

4.2.9 In making its assessment of the net efficiency achieved, the Commission will take into account, but is not limited to, the following:

a. changes in the expected outturn cost through the design and build phases

b. contractual arrangements, including sharing of risk between Transpower and its contractors

c. the impact of unforeseen external events and the actions taken by Transpower to mitigate them.

4.2.10 In calculating the Major capex efficiency adjustment, the Commission will calculate a value for the net efficiency, having regard to the views of interested persons.

4.2.11 An EV account entry will be made at the time that the Commission makes its decision on the incentive amount to be allowed.

[51] Refer to paragraph 6.7.7 for an explanation of P50.

Reason - Major capex efficiency adjustment

4.2.12 Applications for the Major capex efficiency adjustment must set out details relating to all Major capex projects commissioned during the RCP, together with Transpower's view as to the efficiency incentive adjustment it should receive based on the net efficiencies it considers it achieved across the portfolio of Major capex projects commissioned during the RCP. This is necessary so that the Commission can assess Transpower's performance in relation to delivering the portfolio of Major capex projects over the RCP, and decide the amount of any incentive allowed as a result of any net efficiency gains achieved.

4.2.13 The intention of the Major capex efficiency adjustment is to provide an incentive to maintain downward pressure on costs within the aggregate amount of the portfolio of approved Major capex projects, not just on those costs in excess of the approved level. This will promote the objectives of s 52A.

Implementation - Major capex efficiency adjustment

Implementation: Major capex efficiency adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission determines Major capex incentive rate	Clause 2.3.1	Clause 5.2(9)	
Major capex efficiency adjustments will only be considered if Transpower applies for an adjustment	Clause 4.1.1(1)		
Timing for Major capex efficiency adjustment applications	Clause 4.1.1(1)		
Incentive adjustment information requirements. (Majority of information requirements will be set out in a future information disclosure determination)	Clauses 4.1.1(2)(a) and 4.1.1(3)		
Evaluation criteria for assessing Major capex efficiencies for calculating incentive adjustment applications	Clauses 6.1.1(7)		
Formula for calculating incentive adjustment	Schedule B, clause B7	Part 2, definition of 'Major capex adjustments'	
Commission's decision by the end of November	Clause 4.1.1(1)		
Commission publishes its decision	Clause 4.1.1(4)		
Transpower records EV account entry		Clause 5.3(4)(e)	
Key definitions			
Capex revenue adjustments		To apply from RCP2	
Capital expenditure	Clause 1.1.5	Part 2	Clause 1.1.4
Commissioned	Clause 1.1.5	Part 2	Clause 1.1.4
EV account entry		Part 2	
Major capex adjustments		Part 2	
Major capex efficiencies	Clause 1.1.5		
Major capex efficiency adjustment	Clause 1.1.5		

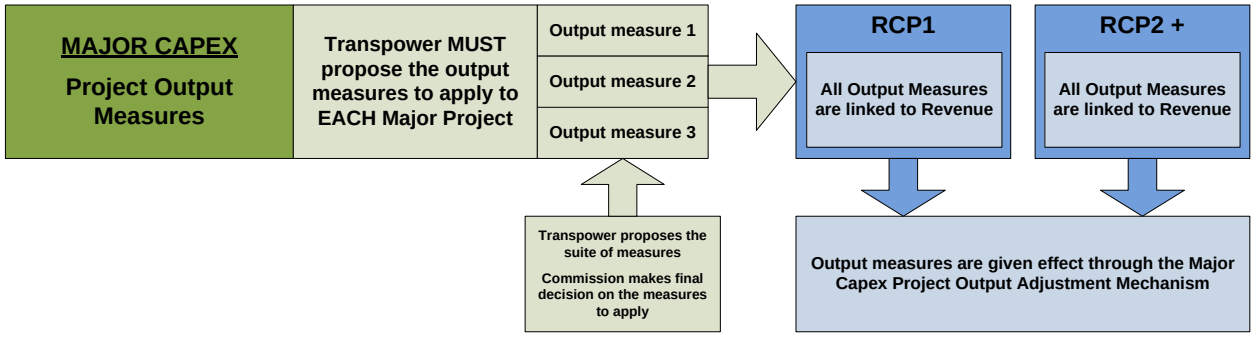
Implementation: Major capex efficiency adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex incentive rate	Clause 1.1.5	Part 2	
Major capex project	Clause 1.1.5		

4.3 Major capex project output adjustment

4.3.1 The Major capex project output adjustment is an asymmetric incentive mechanism (penalty only). It is designed to provide an incentive to Transpower to deliver the outputs that were specified by Transpower and approved by the Commission.

4.3.2 Outputs measures will be specified for each project. All Major capex output measures will be linked to revenue. This is shown in Figure 4.2.

Figure 4.2 Major capex project outputs



Decision - Major capex project output adjustment - framework

4.3.3 A Major capex project output adjustment will be made for each individual Major capex project whenever the approved outputs are not delivered.

4.3.4 The output adjustment is the after-tax economic gain or loss that takes account of under delivery of Major capex project outputs. This is calculated as the aggregate value of commissioned assets (for a given project) multiplied by the Major capex incentive rate.

4.3.5 At the end of each disclosure year, a single EV account entry will be made to reflect the sum of the individual output adjustments calculated for each Major capex project commissioned in that disclosure year.

Reason - Major capex project output adjustment - framework

4.3.6 The Major capex project outputs will be set for each project at the time the Commission provides approval for a given project (refer paragraph 6.7.5d). Given that the value of such projects is justified on the need for specified outputs, and that customers will be paying specifically for those outputs, it is appropriate that Transpower be accountable to deliver the agreed outputs.

4.3.7 Failure to deliver the outputs would be reflected in any output adjustment applied.

4.3.8 The Major capex project output adjustment will only apply where Transpower has not delivered the Major capex project outputs and has not sought and obtained approval for an amendment that reflects the Major capex project outputs actually delivered.

Implementation - Major capex project output adjustment - framework

Implementation: Major capex project output adjustment - framework	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission determines incentive rate	Clause 2.3.1	Clause 5.2(9)	
Output adjustment information requirements	Clauses 3.3.6(2), 3.3.7(3) and 3.3.7(5)		
Commission calculation of output adjustment annually	Clause 3.3.7(2)		
Formula for calculating output adjustment	Schedule B, clause B5		
The Commission publishes its decision	Clause 3.3.7(6)		
Transpower records EV account entry		Clause 5.3(4)(e)	
Key definitions			
Approved Major capex project outputs	Clause 1.1.5		
Capital expenditure revenue adjustments		To apply from RCP2	
Commissioning date	Clause 1.1.5		
Completion date	Clause 1.1.5		
EV account entry		Part 2	
Major capex adjustments		Part 2	
Major capex incentive rate	Clause 1.1.5	Part 2	
Major capex project	Clause 1.1.5		
Major capex project output adjustment	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

Decision - Major capex project output adjustment - process

4.3.9 Each Major capex proposal must specify the Major capex project outputs that will be delivered. If a project receives approval from the Commission, the Major capex project outputs determined will be those specified in Transpower's proposal.

4.3.10 For each project that is commissioned (ie transmission investments) or completed (ie non-transmission solutions), Transpower must provide a report to the Commission that sets out which Major capex project outputs have been achieved. Transpower must provide explanations for any variances between actual and approved Major capex project outputs. The Commission will then decide whether approved Major capex project outputs for that project were met.

4.3.11 A Major capex project output adjustment will be made, if required.

4.3.12 The Commission may require Transpower to provide within a reasonable time any additional information we require to calculate or justify the Major capex project output adjustment.

4.3.13 In calculating the Major capex project output adjustment, the Commission may determine a value for the project expenditure on which the Major capex project outputs have not been met that differs from the value disclosed by Transpower, and in doing so must have regard to the views of interested persons.

4.3.14 The Commission will decide which projects have achieved the project outputs, by the last working day of the first November after each disclosure year.

Reason - Major capex project output adjustment - process

4.3.15 In this instance, we consider a rigid process, to give effect to the Major capex project output adjustment, is not appropriate. Flexibility is necessary to take into consideration the many factors which cannot reasonably be foreseen or assessed in advance, that factors may affect the outputs delivered. This is the most pragmatic and efficient way of implementing this incentive mechanism. Likewise, this flexibility enables the Commission to take a pragmatic view of whether outputs were sufficiently delivered, ie, delivered the desired outcome. This will not be done in a rigid, quantitative fashion. This decision provides an appropriate balance between providing certainty without specifying an inflexible approach.

Implementation - Major capex project output adjustment - process

Implementation: Major capex project output adjustment - process	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower specification of Major capex project outputs in each Major capex proposal	Schedule G, clause G6		
Transpower to report on the Major capex project outputs achieved for commissioned projects	Clause 3.3.6(2)		
Commission decision on whether the approved Major capex project outputs were met	Clause 3.3.6(1)		
Commission publishes its decision on whether the approved Major capex project outputs were met	Clause 3.3.6(3)		
Key definitions			
Approved Major capex project outputs	Clause 1.1.5		
Electricity market benefit or cost element	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
P50	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

Decision - Major capex project output adjustment - development of output measures

4.3.16 Transpower is responsible for developing and proposing the Major capex project output measures to apply for each Major capex project.

4.3.17 The Major capex project output measures proposed by Transpower must capture:

a. the nature and quantum of the transmission investment assets to be commissioned

b. the change in the functional capability of Transpower's network as a result of undertaking the proposed investment.

4.3.18 In the case of non-transmission solutions, the output measures must capture:

a. the nature and quantum of any product or service provided to Transpower

b. the change in the functional capability of the grid resulting from the product or service provided to Transpower.

4.3.19 The outputs measures must be consistent with:

a. key assumptions used in determining the Major capex allowance or maximum recoverable costs

b. the nature of the electricity market benefit or cost elements taken into account in applying the investment test.

Reasons - Major capex project output adjustment - development of output measures

4.3.20 Setting outputs, based on what is to be physically delivered (including the change in the functional capability), is adequate for Major capex because of the robustness of the approval process. The approval process is based on the application of a net electricity market cost-benefit test to a number of specific investment options.

4.3.21 Network outputs delivered by the approved option are considered within the cost-benefit test, creating a link between these benefits and what will be physically delivered by the engineering design and functional capability of the approved option. Therefore the delivery of physical assets will demonstrate delivery of the wider network outputs and benefits assumed in the cost-benefit test. For example, the cost-benefit test will include a quantification of the reduction in the risk of unsupplied energy resulting from physical delivery of the investment option.

Implementation - Major capex project output adjustment - development of output measures

Implementation: Major capex project output adjustment - development of output measures	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower to propose Major capex project outputs for each investment option in a Major capex proposal	Schedule G, clause G6		
Major capex project output measures to reflect nature and quantum of a transmission investment	Schedule G, clause G6(3)(b)(i)		
Major capex project output measures for a non-transmission solution to reflect the nature and quantum of services provided to Transpower	Schedule G, clause G6(3)(b)(iv)		

Implementation: Major capex project output adjustment - development of output measures	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex project output measures to reflect the change in functional capability of the grid from the transmission investment or non-transmission solution	Schedule G, clause G6(3)(b)(ii)		
Major capex project output measures must be consistent with key assumptions in the Major capex proposal	Schedule G, clause G6(3)(b)(iii)		
Major capex project output measures must be consistent with costs and benefits taken into account in the investment test	Schedule G, clause G6(3)(a)		
Key definitions			
Approved Major capex project outputs	Clause 1.1.5		
Commissioned	Clause 1.1.5		Clause 1.1.4
Electricity market benefit or cost element	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Key assumption	Clause 1.1.5		
Major capex project outputs	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
P50	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

4.4 Major capex overspend adjustment

4.4.1 The Major capex overspend adjustment is a project-specific adjustment. The overspend adjustment is a potential penalty calculated at the completion of a project. The penalty applies where costs on a given project exceed the level of approval for that project. The penalty requires Transpower to bear 100% of the present value of the after-tax revenue for costs in excess of the total approved costs for a given project. Where costs are at or below the level approved, Transpower fully recovers its actual costs in accordance with the 2010 TP IM Determination.[52]

Decision - Major capex overspend adjustment

4.4.2 The Major capex overspend adjustment is made for each Major capex project commissioned or completed in a given disclosure year. The adjustment relates to all Major capex projects that are transmission investments and the asset-related portion of Major capex projects that are non-transmission investments.

[52] Commerce Commission, *Commerce Act (Transpower Input Methodologies) Determination 2010*, 22 December 2010, Part 2, Subpart 2, clause 2.2.7.

4.4.3 The Commission will determine, by the last working day of each November, each Major capex overspend adjustment. An adjustment for the sum total of these will be given effect through a single EV account entry in the IPP Determination.

4.4.4 The Major capex overspend adjustment operates as follows:

a. where project costs have been approved by the Commission, Transpower may fully recover its costs (100% recovery) up to that approved level

b. where project costs are in excess of the total approved by the Commission, Transpower bears 100% of the costs in excess of the approved amount.

4.4.5 As part of calculating the Major capex overspend adjustment two ex-post adjustments must be made to ensure that Transpower does not bear costs related to cost elements that are largely outside its control:

a. an adjustment to correct for differences between the forward FX rate assumed by Transpower when proposing the Major capex allowance, and the actual rate achieved by Transpower

b. an adjustment to correct for differences between the forecast CPI inflation used to set the Major capex allowance, and the actual level of CPI inflation that occurs during the delivery of the Major capex project.

4.4.6 A third ex-post adjustment may be made to account for limited circumstances where a change to the approved project amount is considered necessary.

4.4.7 The overspend adjustment will be calculated in accordance with Schedule B of the Capex IM Determination. The adjustment requires Transpower to bear the full net present value of the sum of the costs that exceed the level approved.

Reason - Major capex overspend adjustment

4.4.8 The Major capex overspend adjustment is imposed only if Transpower exceeds the approved Major capex allowance for a project and Transpower has not sought and obtained an amendment to the project allowance that reflects the actual costs incurred.

4.4.9 This approach will encourage Transpower to deliver the outputs at the level of cost that the assessment of Transpower's Major capex proposal was based on. This will encourage Transpower to discuss alternatives with the Commission at the time Transpower recognises the agreed outputs will not be achieved at the expected cost.

4.4.10 The requirement for the foreign exchange rate and CPI inflation adjustments is to ensure that Transpower does not bear costs related to cost elements that are largely outside its control. Taken together, the Commission considers that the CPI and foreign exchange adjustments will reduce the incentives that might otherwise arise for Transpower to price the risk of difference (for foreign exchange and inflation forecasts) into its Major capex proposal, or to over-forecast these variables to reduce exposure risk.

4.4.11 The general adjustment term (paragraph 4.4.6) effectively allows an amendment to the Major capex overspend adjustment calculated for the approval amount due to changes in circumstances that are identified after approval is given and the project has been commissioned. For example, this may be required where changes in the outputs to be delivered have been approved under a project amendment, but on a like-for-like basis,

the project has exceeded what would have been the approved amount of expenditure given the amended outputs.

4.4.12 Flexibility has been retained to address a range of situations (which may not have been foreseen). The Commission must have have regard to the views of interested persons when determining any adjustment where it proposes an outcome that differs to that calculated by Transpower. We consider this is necessary to properly promote appropriate investment.

Implementation - Major capex overspend adjustment

Implementation: Major capex overspend adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex overspend adjustment information requirements	Clauses 3.3.7(3) and 3.3.7(5)		
Commission calculation of Major capex overspend adjustment annually	Clause 3.3.7(1)		
Formula for calculating Major capex overspend adjustment	Schedule B, clause B4		
Commission publishes its decision	Clause 3.3.7(6)		
Transpower records EV account entry		Clause 5.3(4)(e)	
Key definitions			
Actual FX rates	Clause 1.1.5		
Adjusted Major capex allowance	Clause 1.1.5		
Capital expenditure revenue adjustments		To apply from RCP2	
Closing RAB values	Clause 1.1.5		
Commissioning date	Clause 1.1.5		
CPI	Clause 1.1.5		
EV account entry		Part 2	
Forecast CPI	Clause 1.1.5		
Forecast FX rate	Clause 1.1.5		
Major capex adjustments		Part 2	
Major capex allowance	Clause 1.1.5		
Major capex overspend adjustment	Clause 1.1.5		

4.5 Sunk costs adjustment

4.5.1 The Major capex sunk costs adjustment is a project-specific adjustment. Transpower may apply for a sunk costs adjustment to avoid being exposed to costs where a project is abandoned for good reason, or the project passes the expiry date that was approved for that project. The rationale for a project expiry date is explained in Section 6.9.

Decision - Major capex sunk costs adjustment

4.5.2 Transpower may apply for a project-specific sunk costs adjustment at any stage during a project, or not later than six weeks after the expiry of a project approval expiry date. If Transpower complies with this timing requirement, a sunk costs adjustment will be calculated by the Commission.

4.5.3 A sunk costs adjustment will take account of those costs sufficiently justified by Transpower. Where the Commission considers that:

a. the costs are sufficiently justified, an EV account entry will be made to allow Transpower to recover those justified costs

b. a portion of those costs are not sufficiently justified, Transpower will bear those costs that are considered to be not sufficiently justified.

4.5.4 To determine which costs are sufficiently justified, the Commission will apply the criteria set out in the Capex IM.[53]

4.5.5 The Commission may require Transpower to provide any additional information required to calculate or justify a Major capex sunk costs adjustment application.

Reason - Major capex sunk costs adjustment

4.5.6 It is feasible that during the construction process, new information may suggest that an approved project should be abandoned before completion. For example, a project may have become uneconomic, or the demand for that project changed such that either some or all of a project should be abandoned.

4.5.7 The 2010 TP IM Determination limits the assets that may enter the RAB to those that are commissioned in accordance with the project's approval. The impact of this is that Transpower would, for reasons potentially outside of its control or not foreseeable by Transpower, be exposed to the sunk costs of an abandoned project, or be unable to recover costs of a project where the project expiry date has been missed, because the rules would prevent recovery of those costs. The costs, in this example, are legitimate because the project was considered appropriate and economic at the time it received regulatory approval, and at the time construction began on the project.

4.5.8 Allowing sunk costs adjustments for projects that pass the project approval expiry date, and within the six week window, provides the recovery mechanism for those projects that are commissioned only slightly late.

4.5.9 The purpose of the sunk costs adjustment is to provide the correct incentive for Transpower to discontinue a project when it is no longer in customers' interests. This avoids an incentive to finish a project that becomes uneconomic part way through construction. The incentive to correctly abandon projects is provided by allowing Transpower to recover its costs, up to the point that Transpower becomes aware that the project is no longer economic.

[53] Clause 6.1.1(6).

Implementation - Major capex sunk costs adjustment

Implementation: Sunk Costs Adjustment	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower application for sunk costs adjustment	Clause 3.3.5.		
The timing requirements that limits sunk cost applications to no later than six weeks after the approval expiry date of a project, subject to Commission approval for a time extension	Clauses 7.4.3(1)(a) and 7.4.3(2)		
Information requirements for sunk costs applications	Clauses 3.3.5(3) and 7.4.3(1) and Schedule H, clauses H25 to H30		
Commission criteria for assessing a sunk costs adjustment application	Clause 6.1.1(6)		
Formula for calculating sunk costs adjustment	Schedule B, clause B6		
Commission publishes its decision	Clause 3.3.5(5)		
Transpower records EV account entry		Clause 5.3(4)(e)	
Key definitions			
Approval expiry date	Clause 1.1.5		
Capital expenditure revenue adjustments		To apply from RCP2	
EV account entry		Part 2	
Major capex adjustments		Part 2	
Major capex project	Clause 1.1.5		
Major capex project outputs	Clause 1.1.5		
Major capex sunk costs adjustment	Clause 1.1.5		

4.6 Major Capex Incentive rates

Decision - Major capex incentive rates

4.6.1 The Major capex incentive rate that applies for RCP1 is 33%. The Major capex incentive rate applies to all Major capex projects commissioned during RCP1.

4.6.2 The Major capex incentive rate for each RCP, starting from RCP2, will be set by the Commission prior to the start of each RCP. The Major capex incentive rate will apply for the length of the RCP. The Commission will determine and set the incentive rate at the same time as we review Transpower's Base capex proposal and set the Base capex incentive rate.

4.6.3 The incentive rate that applies to the Major capex overspend adjustment is:

a. where project costs are within the level approved by the Commission, Transpower may fully recover its costs (100% recovery)

b. where project costs are in excess of the total level approved by the Commission, Transpower will bear 100% of the portion of costs that exceed the approved amount.

4.6.4 The incentive rate that applies to the Major capex sunk costs adjustment is:

a. where sunk costs have been approved by the Commission, Transpower may fully recover its costs

b. where sunk costs are in excess of the level of sunk costs approved by the Commission, Transpower will bear 100% of the costs in excess of the approved amount.

4.6.5 The incentive rates that apply to Major capex are shown in Table 4.1.

Table 4.1 Major capex incentive rates

Area	Incentive Mechanism	Nature of incentive	Incentive rate for RCP1	Incentive rate for RCP2
Major capex	Efficiency Adjustment	Asymmetric (reward only applies to Transpower). At the end of each RCP, if Transpower applies, Transpower may be rewarded for net efficiency gains across the portfolio of Major capex projects	RCP1 Major capex incentive rate is 33%.	Major capex incentive rate will be determined prior to RCP2
	Output Adjustment	Asymmetric (penalty only applies to Transpower). An incentive mechanism applied individually to each project to provide an incentive to deliver agreed outputs.	RCP1 Major capex incentive rate is 33%.	Major capex incentive rate will be determined prior to RCP2
	Overspend Adjustment	Asymmetric (penalty only applies to Transpower). An incentive mechanism applied individually to each project to provide an incentive to deliver agreed outputs at the agreed cost.	100% of approved costs are recoverable. Transpower bears 100% of unapproved costs.	100% of approved costs are recoverable. Transpower bears 100% of unapproved costs.
	Sunk Costs Adjustment	A project-specific asymmetric adjustment that allows Transpower to recover all justified costs to avoid being exposed to costs where a project is abandoned for good reason, or the project passes the approved expiry date. The purpose is to provide the correct incentive for Transpower to discontinue a project when it is no longer economic, necessary, or in customers' interests.	100% of approved sunk costs are recoverable. Transpower bears 100% of any unapproved sunk costs.	100% of approved sunk costs are recoverable. Transpower bears 100% of any unapproved sunk costs.

Reasons - Major capex incentive rates

4.6.6 We consider that a 33% incentive rate is appropriate to apply to the Major capex efficiency adjustment and the Major capex project output adjustment in RCP1. The

setting of this rate is a judgment call about what rate provides the most reasonable sharing of rewards and risks between Transpower and consumers. We consider 33% an appropriate balance of risk and reward in the first RCP that this mechanism will apply. This value was set following a consultation process with interested persons.

4.6.7 The incentive rate may be amended in future once experience with the incentive regime is available. For example, we may increase the level of incentive applying to Transpower.

Implementation - Major capex incentive rates

Implementation: Major capex incentive rates	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Set rate for Major capex overspend adjustment	Schedule B, clauses B4(1) and B4(3)		
Set rate for Major capex sunk costs adjustment	Schedule B, clause B6		
Set rate for Major capex project output adjustment and Major capex efficiency adjustment - RCP1	Clause 2.3.1(1)	Clause 5.2(9)	
Set rate for Major capex project output adjustment and Major capex efficiency adjustment prior to regulatory period - RCP2	Clause 2.3.1(2)	To be added for RCP2	
Publish determination of Major capex project output adjustment and Major capex efficiency adjustment rates - RCP2	Clause 2.3.1(3)		
Key definitions			
Closing RAB value	Clause 1.1.5		Clause 1.1.4
IPP determination	Clause 1.1.5		
Major capex incentive rate	Clause 1.1.5	Part 2	
Major capex overspend adjustment	Clause 1.1.5		
Major capex sunk costs adjustment	Clause 1.1.5		
RCP1	Clause 1.1.5	Part 2	
Regulatory period	Clause 1.1.5	Part 2	

CHAPTER 5: BASE CAPEX ALLOWANCE - APPROVAL PROCESS

5.1 Introduction

5.1.1 This chapter sets out the approval process that will be applied by both Transpower and the Commission when proposing and determining the ex-ante Base capex allowance.

5.1.2 Unlike Major capex, which is subject to individual approval, Base capex is approved in aggregate ie, at the total level, and for the whole RCP (a five-year period). This approach has a number of economic and process benefits for this type of expenditure.

5.2 Process for agreeing the quantitative information requirements

Decisions - Process for agreeing the quantitative information requirements

5.2.1 Between the first working day of November and the last working day of February two years prior to the start of the regulatory period the Commission and Transpower must use reasonable endeavours to agree:

a. the form and nature of the content of the regulatory templates that Transpower will be required to complete and provide as part of its Base capex proposal

b. the categories or criteria for identifying which projects and programmes may be subject to individual review, taking into account the categories and criteria outlined in Schedule F of the Capex IM Determination.

5.2.2 If agreement on the form and the content of the regulatory templates and the criteria for identifying project and programmes for individual review is not reached, the Commission will decide these matters. In making its decision, the Commission will have regard to Transpower's views. The Commission must notify Transpower of its decisions by the last working day of March, two years prior to the start of the regulatory period.

Reasons - Process for agreeing the quantitative information requirements

5.2.3 Some programmes and projects will be subject to a higher level of scrutiny due to their material impact on the Base capex proposal. To limit the numbers of projects and programmes identified, an agreed set of categories or criteria will be used.

5.2.4 The regulatory templates will set out the categories, definitions and extent of the quantitative Base capex information to be provided by Transpower. The templates will also set out the criteria for identifying which projects and programmes may be subject to individual review.

5.2.5 Agreeing the form and nature of the content of the information to be provided in the regulatory templates well in advance of the deadline for submitting the Base capex proposal is efficient and cost effective as it signals the likely review approach and thereby provides certainty to Transpower as to the information it will need to provide the Commission. It also helps to ensure useful and robust information is provided by Transpower, in a form that the Commission can effectively analyse. In addition, it allows tools and processes to be developed for reviewing the data supplied.

5.2.6 In order to provide a workable basis for the agreement of criteria for the identified programmes, the Capex IM specifies guidance on categories or criteria that will be used to define identified programmes. Examples of the criteria include:

a. base capex categories

b. a classification by way of a maximum cost or expenditure threshold or another related financial measure

c. a ranking system, such as the five highest cost programmes or projects

d. distinguishing characteristic or measure applicable to types of programmes or projects undertaken by Transpower.

5.2.7 Setting the regulatory templates immediately prior to the RCP, as opposed to defining them in the Capex IM, will enable the Commission and Transpower to effectively develop the way information will be collected, recognising there will be improvements over time.

Implementation - Process for agreeing the quantitative information requirements

Implementation: Process for agreeing the quantitative information requirements	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Commission and Transpower to commence pre-proposal process on the first working day of November, one year in advance of the December when the Base capex proposal is due for submission.	Clause 2.2.1(1)		
Commission and Transpower use reasonable endeavours to agree regulatory templates by the last working day of February prior to the December when the Base capex proposal is due for submission.	Clause 2.2.1(1)(a)		
Commission and Transpower must use reasonable endeavours to agree criteria to identify the projects and programmes for review, by the last working day of February prior to the December when the Base capex proposal is due for submission.	Clause 2.2.1(1)(b)		
For the purpose of agreeing criteria, identified programmes are to be defined by reference to specified categories and limitations.	Schedule F, clause F2		
Where no agreement is reached on regulatory templates or criteria for identifying projects and programmes, Commission may specify those matters after taking into account Transpower's views.	Clause 2.2.1(2)		
Commission to notify Transpower of matters that are specified where there is no agreement by the last working day of March prior to the December when the Base capex proposal is due for submission.	Clause 2.2.1(2)		
Key definitions			
Base capex	Clause 1.1.5	To apply from RCP2	
Base capex categories	Clause 1.1.5		

Implementation: Process for agreeing the quantitative information requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Identified programmes	Clause 1.1.5 and Schedule F, clause F2		
Regulatory period	Clause 1.1.5	Part 2	
Regulatory templates	Clause 1.1.5		

5.3 Timing and content requirements for each Base capex proposal

Decisions - Timing and content requirements for each Base capex proposal

5.3.1 Transpower must submit to the Commission a Base capex proposal by the first working day of December, 16 months prior to the start of the RCP.

5.3.2 The Base capex proposal must:

a. contain completed regulatory templates

b. contain the required qualitative information (refer paragraph 5.4.1 below)

c. contain the required certificates (refer Chapter 9 of this Reasons Paper)

d. be provided in the specified technical formats.

Reasons - Timing and content requirements for each Base capex proposal

5.3.3 Sixteen months are required to provide sufficient time for the Commission to assess, consult, and determine the base capex allowance, and for the forecast MAR to be calculated and set, and for prices to be calculated and announced three months before those prices take effect. This provides certainty to Transpower and the Commission on both process and timing regarding the submission of a Base capex proposal.

5.3.4 The completed regulatory templates and qualitative information are required to allow the Commission to fully review and evaluate Transpower's proposed expenditure proposal, taking into account the nature, current state, and long-term performance objectives of the grid.

5.3.5 The reasons for the certification requirements are set out in Chapter 9 of this Reasons Paper.

Implementation - Timing and content requirements for each Base capex proposal

Implementation: Timing and content requirements for each Base capex proposal	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
A Base capex proposal must be submitted by Transpower to the Commission by the first working day of December 16 months prior to commencement of the regulatory period	Clause 2.2.1(3)		

Implementation: Timing and content requirements for each Base capex proposal	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex proposal to be in the required document formats and must identify confidential information	Clauses 7.1.1 and 7.1.2		
Base capex proposal to contain completed regulatory templates	Clauses 7.3.1(1)(a) and 7.3.1(2)		
Base capex proposal must comply with the qualitative information requirements of the Capex IM Determination (refer to detailed specifications later in this section)	Clause 7.3.1(1)(b) and Schedule F		
Base capex proposal must include certifications required by the Capex IM	Clauses 7.3.1(1)(c) and 9.1.1		
Omission of required information must be explained, and Commission may accept as compliant	Clause 7.1.3		
Key definitions			
Base capex proposal	Clause 1.1.5		
Regulatory period	Clause 1.1.5	Part 2	
Base capex category	Clause 1.1.5		
Input methodology	Clause 1.1.5		
Regulatory templates	Clause 1.1.5		

5.4 Base capex - Qualitative information requirements

Decisions - Qualitative information requirements

5.4.1 Transpower will be required to provide qualitative information when submitting a Base capex proposal. Schedule F of the Capex IM Determination sets out the required information. Those information requirements, in summary, involve Transpower providing the Commission:

a. a detailed overview and commentary on the strategic vision and long-term role of the grid

b. detail as to how the proposed projects and programmes contribute to achieving the specified goals

c. copies of policies, processes and consultant reports relating to Base capex

d. evidence of appropriate least-whole of life cost approaches and cost reduction strategies

e. detailed information on projects and programmes, including information on the aims and objectives of the programmes, cost-benefit analysis, an explanation of how the indentified programme will be delivered, description of the methodology

and assumptions used to forecast the Base capex involved, and the approach to prioritising projects[54]

f. an overview of relevant procurement processes, including an explanation of the extent to which the processes were competitive, significant components of outsourced services, relevant procurement documents, and outsourced services that have a material effect on Base capex

g. a description of plans for resourcing and delivering the proposed Base capex projects, identification of the key risks and how Transpower plans to manage those risks

h. a description of escalation factors and the rationale for their use, including the underlying methodology, the weighting applied to each escalation factor, and the method for assigning those weightings

i. the foreign exchange rates used to prepare the proposed Base capex allowance, as well as an estimate of the exposure to each foreign currency, and a description of how these estimates were produced

j. a list of all proposed grid performance measures, asset performance measures, asset capability grid output measures, asset health grid output measures, and any other grid output measure[55]

k. detail for all grid output measures Transpower proposes be linked to revenue, including justification for the proposed grid output targets, caps, collars, and grid output incentive rates.

Reasons - Qualitative information requirements

5.4.2 The information requirements are consistent with the Base capex evaluation criteria determined by the Commission. They include requirements for policy and process information and a detailed review of a sample of Base capex projects.

Implementation - Qualitative information requirements

Implementation: Qualitative information requirements	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Qualitative information to be included in the Base capex proposal is specified in the Capex IM	Schedule F		
Key definitions			
Asset capability grid output measure	Clause 1.1.5		
Asset health grid output measure	Clause 1.1.5		
Base capex	Clause 1.1.5	To apply from RCP2	
Base capex allowance	Clause 1.1.5	To apply from RCP2	

[54] Identified programmes are Base capex programmes as defined in Schedule F, clause F2 of the Capex IM Determination.

[55] Refer Section 3.4.

Implementation: Qualitative information requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex category	Clause 1.1.5		
Base capex proposal	Clause 1.1.5		
Cap	Clause 1.1.5		
Capital expenditure	Clause 1.1.5		
Collar	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Grid output target	Clause 1.1.5		
Identified programmes	Clause 1.1.5		
Integrated transmission plan	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Operating expenditure	Clause 1.1.5		
Opex proposal	Clause 1.1.5		
Performance-based measure	Clause 1.1.5		
Policies	Clause 1.1.5		
Regulatory templates	Clause 1.1.5		
Revenue-linked grid output measure	Clause 1.1.5		

5.5 Commission's Base capex determination and process requirements

Decisions - Commission's Base capex determination and process requirements

5.5.1 The Commission may require Transpower to provide in a time that is reasonable any additional information we consider necessary for determining an appropriate Base capex allowance.

5.5.2 No later than the last working day in the August of the year before the start of a regulatory period, the Commission will determine in respect of that regulatory period:

a. Base capex allowances for each year of the RCP

b. the quantum of the Base capex incentive rate

c. the following revenue-linked grid output measures:

i. one or more asset performance measure

ii. one or more measure of grid performance

iii. at Transpower's request, one or more asset capability grid output measure

iv. at Transpower's request, one or more asset health grid output measure, and

v. at Transpower's request, any other grid output measure.

d. in respect of each revenue-linked grid output measure, a:

   i. cap

   ii. collar

   iii. grid output incentive rate

   iv. grid output target, and

e. none, one or more, as appropriate, of each of the following grid output measures to which the grid output mechanism will not apply:

   i. measures of grid performance

   ii. asset performance measures

   iii. asset capability grid output measures

   iv. asset health grid output measures

5.5.3 The Commission will also specify:

a. the forecast CPI used to determine the Base capex allowances

b. the forecast FX rates used to determine the Base capex allowances, and

c. the amount or percentage of the Base capex allowances to which the forecast FX rates may apply.

5.5.4 As part of the process for evaluating a Base capex proposal Transpower or the Commission may request that the proposal be updated or amended.

Reason - Commission's Base capex determination and process requirements

5.5.5 The parameters set out above are all required in respect of base capex either for calculating the forecast MAR, or to give effect to the incentive and output measures.

5.5.6 The August timeframe requirement for determining the Base capex allowance and the grid output measures is to allow sufficient time for the allowance to be included in the calculation of the forecast MAR. The deadline for the forecast MAR is the 30 November prior to the start of the next regulatory period.

Implementation - Commission's Base capex determination and process requirements

Implementation: Commission's Base capex determination and process requirements	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Commission may request reasonable further information if required for its decision	Clause 2.2.2 (3)		
Commission may only make its decision after consulting interested persons	Clause 2.2.2(4)(a)		
Commission may only make its decision after evaluation of the Base capex proposal and any additional information	Clause 2.2.2(4)(b) and Part 6		
Commission to make Base capex allowance decision not later than last working day of August prior to the commencement of the regulatory period	Clause 2.2.2(1)		
Commission to determine Base capex allowances	Clause 2.2.2(1)(a)		

Implementation: Commission's Base capex determination and process requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission to determine Base capex incentive rate	Clause 2.2.2(1)(b)		
Commission to determine revenue-linked grid output measures	Clauses 2.2.2(1)(c)(i) and 2.2.2(1)(c)(ii), and Schedule A, clauses A4 and A5		
Commission may determine at Transpower's request other revenue-linked grid output measures	Clauses 2.2.2(1)(c)(iii) to 2.2.2(1)(c)(v), and Schedule A, clauses A4 and A5		
Commission to determine for each revenue-linked grid output measure a cap, collar, a grid output incentive rate and a grid output target	Clause 2.2.2(1)(d) and Schedule A, clause A6		
Commission to determine extent, if any, that the grid output mechanism will not apply to grid output measures	Clause 2.2.2(1)(e) and Schedule A, clause A4		
Draft forecast MAR to be calculated by Transpower for each year of the regulatory period by end of third working week of October prior to the RCP		To apply from RCP2	
Commission to set forecast MAR for each year of the regulatory period by last working day of November prior to the RCP		To apply from RCP2	
Requirement to specify forecast CPI used to determine Base capex allowances	Clause 2.2.2(2)(a)		
Requirement to specify forecast FX rates and amount/percentage of Base capex allowances that forecast FX rates apply to	Clauses 2.2.2(2)(b) and 2.2.2(2)(c)		
Commission to publish its Base capex allowance decision	Clause 2.2.2(5)		
Key definitions			
Asset capability grid output measure	Clause 1.1.5		
Asset health grid output measure	Clause 1.1.5		
Asset performance measure	Clause 1.1.5		
Base capex	Clause 1.1.5	To apply from RCP2	
Base capex allowance	Clause 1.1.5	To apply from RCP2	
Base capex incentive rate	Clause 1.1.5		
Base capex proposal	Clause 1.1.5		

Implementation: Commission's Base capex determination and process requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Cap	Clause 1.1.5		
Collar	Clause 1.1.5		
Consumers	Clause 1.1.5		
Electricity transmission services	Clause 1.1.5		
Forecast CPI	Clause 1.1.5		
Forecast FX rates	Clause 1.1.5		
Grid output	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Grid output mechanism	Clause 1.1.5		
Grid output target	Clause 1.1.5		
Measure of grid performance	Clause 1.1.5		
Operating expenditure	Clause 1.1.5		
Performance-based measures	Clause 1.1.5		
Revenue-linked grid output measures	Clause 1.1.5		

5.6 Commission's consultation obligations

Decisions - Commission's consultation obligations

5.6.1 After receiving a Base capex proposal, the Commission:

a. must:

i. publish the proposal

ii. publish its draft decision or decisions

iii. seek the written views of interested persons on anything so published

iv. seek the written views of interested persons on others' submissions, and

b. may:

i. seek the views of any person the Commission considers has expertise on a relevant matter, and

ii. hold a conference at which the views of some or all interested persons may be sought orally or in other forms of presentation.

5.6.2 Where we take any of the actions referred to in paragraph 5.6.1 above, we may do so in accordance with such timeframes and processes as we consider appropriate.

Reasons - Commission's consultation obligations

5.6.3 The Commission acknowledges that stakeholders, including Transpower, have a strong interest in the Commission's evaluation of Base capex proposals and that enabling stakeholder input will likely lead to more informed and robust evaluation outcomes.

The mandatory obligations described above are the minimum that the Commission considers necessary to achieve this. These are prescribed in the Capex IM to provide stakeholders with the certainty that these steps will be undertaken by the Commission.

Implementation - Commission's consultation obligations

Implementation: Commission's consultation obligations	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission's mandatory actions for consultation on Base capex proposal	Clauses 2.2.2(4)(a), 8.1.1(1)(a) and 8.1.1(3)		
Commission's optional actions on Base capex proposal	Clauses 2.2.2(4)(a), 8.1.1(1)(b) and 8.1.1(4)		
Commission may set timeframes and processes for consultation that we consider appropriate	Clause 8.1.1(5)		
Key definitions			
Base capex proposal	Clause 1.1.5		

5.7 Criteria for evaluating and approving Base capex

Decisions - Criteria for evaluating and approving Base capex

5.7.1 The Commission's evaluation criteria for the Base capex are set out in Part 6 and Schedule A of the Capex IM Determination. In summary, the criteria set out in Schedule A specify that the Commission will have regard to the following factors when evaluating a Base capex proposal:

a. the level of focus directed towards achieving cost-effective and efficient solutions

b. Transpower's process, including its use of cost-benefit analyses, to determine the identified programme's reasonableness and cost-effectiveness

c. the reasonableness of the key assumptions relied upon, and the adequacy of any asset replacement models used to prepare the proposed Base capex allowances

d. 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

e. Transpower's approach to prioritisation and risk-based asset management practice

f. the overall deliverability of the Base capex proposal

g. Transpower's internal processes for assessing the need for an identified programme and the possible alternative solutions

h. the dependencies between the proposed grid output targets and the proposed Base capex allowances, and the extent to which the grid output targets were met in the previous regulatory period

i. how grid outputs, key drivers, assumptions, and cost modelling were used to determine forecast capital expenditure

j. mechanisms for controlling actual capital expenditure for the proposed Base capex allowances and ensuring performance of proposed grid output targets.

5.7.2 In undertaking its evaluation, the Commission may undertake high level governance and process reviews, benchmarking, process or functional modelling, trending or time-series analysis, project and programme sampling, or any other technique or approach that the Commission considers appropriate in the circumstances to make an evaluation against the specified criteria.

5.7.3 When considering Transpower's proposed grid output measures, the Commission will take into account matters such as:

a. the extent to which a measure is widely recognised, the relationship between a measure, Base capex, Major capex and operating expenditure, and the extent to which the measure aligns with the business processes used by Transpower in its supply of electricity transmission services

b. the extent to which revenue-linked grid output measures are recognised measures of grid outputs that are valued by consumers, and the strength of the relationship between each measure and Base capex, and whether a measure is quantifiable, controllable by Transpower, auditable and replicable over time.

Reason - Criteria for evaluating and approving Base capex

5.7.4 A process review, together with the more detailed examination of a sample of Base capex projects, provides the Commission with sufficient understanding and knowledge of Transpower's Base capex requirements to set the Base capital allowance for a regulatory period.

5.7.5 One of the key advantages of applying the approach set out above, such as that in paragraph 5.7.2, is that it provides flexibility on the approach used when reviewing the Base capex. This is necessary to ensure the type of review remains appropriate, given the targeted nature of the review, and the changing types and levels of expenditure. This avoids the need for the Commission to undertake detailed technical and economic reviews of a large number of individual Base capex projects.

Implementation - Criteria for evaluating and approving Base capex

Implementation: Criteria for evaluating and approving Base capex	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Commission's evaluation may take into account results of consultation and any relevant information	Clause 6.1.1(1)(a)		
Commission may engage appropriately qualified assistance with its evaluation	Clause 6.1.1(1)(b)		
Commission to consider consistency with input methodologies in the Capex IM and in the IM Determination	Clause 6.1.1(2)(a)		

Implementation: Criteria for evaluating and approving Base capex	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission to consider whether the Base capex proposal promotes the purpose of Part 4 of the Act	Clause 6.1.1(2)(b)		
Commission to consider whether the Base capex proposal is fit for purpose of the Commission exercising its powers under Part 4 of the Act	Clause 6.1.1(2)(c)		
Commission to evaluate Base capex proposal in accordance with Schedule A of Capex IM	Clause 6.1.1(3)		
Commission evaluation to include required general evaluation factors	Schedule A, clause A1		
Commission to review each identified programme	Schedule A, clause A2		
Commission may apply a variety of evaluation techniques	Schedule A, clause A3		
Commission evaluation to include required evaluation criteria for grid output measures and revenue-linked grid output measures	Schedule A, clauses A4 and A5		
Commission evaluation to include required evaluation criteria for revenue-linked grid output measures (caps, collars, Base capex incentive rate and grid output targets)	Schedule A, clause A6		
Key definitions			
Base capex	Clause 1.1.5	From RCP2	
Base capex allowance	Clause 1.1.5	From RCP2	
Base capex category	Clause 1.1.5		
Base capex proposal	Clause 1.1.5		
Cap	Clause 1.1.5		
Collar	Clause 1.1.5		
Consumer	Clause 1.1.5		
Electricity transmission services	Clause 1.1.5		
Grid output	Clause 1.1.5		
Grid output incentive rate	Clause 1.1.5		
Grid output measure	Clause 1.1.5		
Grid output target	Clause 1.1.5		
Identified programmes	Clause 1.1.5		
Input methodology	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Policies	Clause 1.1.5		
Revenue-linked grid output measure	Clause 1.1.5		

CHAPTER 6: MAJOR CAPEX – APPROVAL PROCESS

6.1 Introduction

6.1.1 This chapter explains the process that must be followed when preparing, submitting and assessing any Major capex proposals. It sets out the information that must be provided to the Commission, and the steps that Transpower and the Commission must follow to ensure appropriate consultation is undertaken.

6.1.2 The investment test and its application is explained in Chapter 7.

6.2 Major capex pre-proposal process requirements

Decisions - Pre-proposal processes

6.2.1 Transpower must notify the Commission of its intention to plan a Major capex project that Transpower considers may become a proposed investment.

6.2.2 In the two-month period following such notification, the Commission and Transpower must use reasonable endeavours to agree, for that Major capex project:

a. an approach to ensure appropriate consideration of non-transmission solutions, consistent with the requirements specified in Section 6.3

b. a consultation programme for the transmission investment or non-transmission solution, consistent with the requirements specified in Section 6.4

c. timeframes for the Commission to make a decision on a Major capex project.

6.2.3 The Commission will decide and specify those matters where no agreement is reached. In forming its decision, the Commission will having regard to the views expressed by Transpower. Decisions will be provided no later than one week after the end of the two month period.

6.2.4 To assist interested persons, the Commission may include in the consultation programme, the processes we intend to follow. However, Transpower is not required to agree to the consultation processes that the Commission itself will follow.

6.2.5 The Commission and Transpower must both publish the consultation programme, the approach and timeframes, as soon as reasonably practicable.

6.2.6 The Commission and Transpower are to regularly review the consultation programme, the approach and timeframes. The Commission may amend one or more decisions to ensure these remain appropriate and reasonable.

6.2.7 Transpower must consult interested persons in accordance with the consultation programme and follow the approach for consideration of non-transmission solutions.

6.2.8 None of the Commission's functions or decisions described in the Capex IM Determination are invalidated on account of any Commission failure to meet any of the timeframes or process requirements agreed.

Reasons - Pre-proposal processes

6.2.9 The Commission considers that early signalling of Transpower's intent to plan a Major capex project and the consultation process is critical to interested persons who may be affected by the project. This is also important for those who may be potential proponents of non-transmission solutions. Similarly, interested persons need timely information about the consultation process, the approach to considering non-transmission solutions and the Commission's approval timeframes. This will enable interested persons to meaningfully participate in the process and enable better decisions and outcomes.

6.2.10 Given the size and unique nature of Major capex projects, the Commission considers that there is no 'one-size-fits-all' approach to these matters that can meaningfully and practically be applied. For this reason, the Commission has required that these processes be agreed, up front, on a case-by-case basis.

6.2.11 The requirement to regularly review the consultation programme, approach and timeframes, is to ensure these decisions remain appropriate and reasonable. This is necessary because changing circumstances, given the potential length and magnitude of some projects, may affect the published timetable, consultation process or approach. We consider it necessary to keep interested persons advised of any amendments.

Implementation - Pre-proposal processes

Implementation: Pre proposal processes	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower to notify its intention to plan a Major capex project	Clause 3.3.1(1)		
Commission and Transpower to use reasonable endeavours over two month period to agree a consultation programme, approach for consideration of non-transmission solutions and approval timeframes	Clause 3.3.1(2)		
Commission may include its own consultation processes without requiring agreement from Transpower	Clause 3.3.1(3)		
Commission to specify any steps not agreed	Clause 3.3.1(4)		
Commission and Transpower to publish conclusions on consultation, consideration of non-transmission solutions and approval timeframes	Clause 3.3.1(5)		
Commission and Transpower to regularly review to ensure process remains appropriate	Clause 3.3.1(6)		
Transpower to consult interested persons in accordance with agreed programme and approach for consideration of non-transmission solutions	Clause 3.3.1(7)		
Commission decisions not invalidated by failure to meet timeframes	Clause 5.1.1(1)		
Key definitions			
Approval timeframes	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		

Implementation: Pre proposal processes	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Proposed investment	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

6.3 Approach to considering non-transmission solutions

Decisions - Approach to considering non-transmission solutions

6.3.1 In accordance with the pre-proposal approach agreed with the Commission (refer paragraph 6.2.2), and prior to submitting a Major capex proposal for approval, Transpower must consider non-transmission solutions.

6.3.2 The approach for considering 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

b. the likelihood that non-transmission solutions could reasonably meet it.

6.3.3 The approach must enable the:

a. reasonable information needs of interested persons, including potential proponents of non-transmission solutions to be met

b. views of interested persons, including potential proponents of non-transmission solutions to be expressed and taken into account.

6.3.4 As a minimum, the approach must include the requirements that:

a. when consulting on an investment need, Transpower must invite interested persons to provide views or information on or relevant to possible non-transmission solutions to meet that need

b. when developing its longlist of options to consult on, Transpower must take those views and information into account, including pro-actively engaging with the parties providing them, where appropriate

c. when consulting on a shortlist of investment options that includes a non-transmission solution, Transpower must invite interested persons to provide more comprehensive proposals for that type of non-transmission solution.

6.3.5 The invitation described in paragraph 6.3.4a must grant interested persons six weeks to respond, although the approach may specify a longer or shorter period where appropriate, in light of the factors specified in paragraph 6.2.2.

Reasons - Approach to considering non-transmission solutions

6.3.6 Early consultation on the need for investment, actively engaging with interested persons, and inviting proposals for non-transmission solutions, is important to ensure transparency and to ensure appropriate solutions are considered. The consultation framework established in the Capex IM will encourage full consideration of non-transmission solutions at an early stage in Transpower's Major capex proposal development. These requirements are consistent with promoting innovation and

investment and encouraging the provision of services that reflect consumer demands (s 52A(1) and (b)).

6.3.7 The nature of possible non-transmission solutions can vary significantly with the nature of the investment need. For this reason, a degree of flexibility is needed to accommodate different circumstances. Furthermore, the time allowed to respond should be sufficient to enable meaningful responses to be prepared. The approach adopted strikes an appropriate balance between prescribing the process in detail and allowing flexibility to adapt to specific circumstances.

6.3.8 Appropriate consideration of non-transmission solutions is an important element of the Commission being satisfied that a proposal meets the investment test. Transpower must follow the prescribed consultation process and adequately address all submissions for an approval to be provided. The requirement for Transpower to provide sufficient information on its consideration of non-transmission solutions is necessary for the Commission to be confident that these criteria have been met.

Implementation - Approach to considering non-transmission solutions

Implementation: Approach to considering non-transmission solutions	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Transpower must consider non-transmission solutions	Clause 3.3.1(2)(a)(ii)		
Transpower consultation on non-transmission solutions prior to submitting a Major capex proposal to cover relevant parts of investment test in Schedule I	Clause 8.1.3 and Schedule I, Division 2		
Consideration of non-transmission solutions must take into account the size of investment need and likelihood that non-transmission solutions could meet the need	Schedule D and Schedule I, clause I5(1)		
Approach must take into account information needs and views of interested persons	Schedule I, clause I5(2)		
Transpower to invite interested persons to provide views and information on possible non-transmission solutions when consulting on an investment need	Schedule G, clauses G2(c) and G8(b), and Schedule I, clause I5(3)(a)		
Transpower to consult with and proactively engage with interested persons on its longlist of options	Schedule I, clauses I2 and I5(3)(b)		
Transpower to invite interested persons to provide more comprehensive proposals on its shortlist of options	Schedule I, clauses I3 and I5(3)(c)		
Interested persons to generally have six weeks to respond	Schedule I, clauses I5(4) and I5(5)		
Key definitions			
Commissioned	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5		

Implementation: Approach to considering non-transmission solutions	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Investment test	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Proposed investment	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

6.4 Transpower's consultation requirements

Decisions - Transpower's consultation requirements

6.4.1 In accordance with the consultation programme agreed with the Commission (refer paragraph 6.2.2), and prior to submitting a Major capex proposal for approval, Transpower must consult with interested parties.

6.4.2 The requirement to consult applies both to transmission investments and non-transmission solutions.

6.4.3 Each consultation programme must have regard to:

a. the complexity, nature and amount of expenditure proposed

b. 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

c. the urgency of the investment need, including the time available until a decision to proceed with options to address the investment need is required

d. co-ordination between the consultation programme and the approach to considering non-transmission solutions

e. the extent and nature of any relevant prior consultations.

6.4.4 Transpower's consultation obligations are set out in Schedule I of the Capex IM Determination.

6.4.5 The consultation programme and approach need not cover a matter specified in Schedule I of the Capex IM Determination where, on account of the investment need in question, the Commission is satisfied that its inclusion would be unreasonable in the circumstances.

6.4.6 In summary, the Schedule I consultation obligations set out that Transpower must consult on its investment needs. Transpower must also consult on any market development scenario variation it is considering using to carry out its investment test analysis, key assumptions, and create both a longlist of options as well as a shortlist of investment options to meet each investment need.

6.4.7 Consultation on a shortlist may only occur after consulting on those matters referred to in paragraph 6.4.6.

Longlist consultation requirements

6.4.8 Only options that meet the investment need may be contained on the longlist for consultation.

6.4.9 When consulting on the longlist of options, Transpower must:

a. provide a description of the relevant investment need, and the key assumptions and demand and generation scenarios being developed

b. specify any non-standard values, qualitative assessment approaches, and any discount rate if different to 7%

c. if it is a non-transmission solution, describes its type and features.

Shortlist consultation requirements

6.4.10 When consulting on a shortlist of investment options, Transpower must:

a. provide information on, and describe, its proposed demand and generation scenarios and the weightings of those scenarios, the relevant key assumptions, and any variable that is material to the application of the investment test

b. for each investment option, as a minimum, describe the features of the investment option, including matters such as its type, location, and anticipated duration of the works required, address submission points raised, estimate the likely quantified electricity market benefit and cost element and project cost, specify unquantified benefits and costs, as well as provide the methodology used to quantify benefits and costs

c. demonstrate that the options are appropriate, and describe the outcome of a preliminary application of the investment test

d. where the option Transpower considers satisfies the investment test is not the option with the highest net electricity market benefit, explain with reasons how the option satisfying the investment test was selected, specifying the approach taken to sensitivity analysis, qualitative assessment approaches, and any non-standard values or amounts.

Reasons - Transpower consultation requirements

6.4.11 The consultation process is a critical aspect of the Capex IM for Major capex proposals. Effective consultation is likely to result in a more comprehensive and robust investment proposal and better-informed stakeholders, and will assist to promote the Part 4 Purpose.

6.4.12 Consultation is also an important aspect of the approach to non-transmission solutions. This is because early signalling of the investment need and of the longlist of possible options enables potential proponents of non-transmission solutions to identify opportunities.

6.4.13 The consultation process is closely linked to other key aspects of the framework. This includes the respective roles of Transpower and the Commission, information

requirements for proposals, approval criteria and the investment test. The consultation process needs to support the other aspects of the overall framework.

6.4.14 The Commission considers that a level of prescription is required in the Capex IM to ensure that Transpower's consultation meets the requirements of the Commission and of stakeholders more generally. The Commission acknowledges that consultation can be resource-intensive, can lengthen the investment proposal timetable, and that an appropriate balance must be achieved. As the nature of Major capex proposals can vary significantly with the nature of the investment need, we have maintained a degree of flexibility to accommodate different circumstances. We consider that the appropriate balance is achieved through the combined effect of the following provisions in particular:

a. the inclusion of the factors the Commission and Transpower must have regard to when agreeing a consultation programme

b. the detailed set of consultation requirements

c. the flexibility for the Commission to allow Transpower to omit certain aspects of the consultation if it considers that its inclusion would be unreasonable in the circumstances.

6.4.15 Requiring Transpower to publish the agreed consultation programme early in the Major capex investment proposal process ensures transparency and allows appropriate consideration of investment options.

6.4.16 The ongoing monitoring obligation on Transpower and the Commission ensures the consultation programme remains reasonable.

Implementation - Transpower consultation requirements

Implementation: Transpower consultation requirements	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Mandatory guidance when devising consultation programme or approach	Clause 8.1.3(2)(a)		
Transmission investment consultation requirements	Clause 8.1.3(1)(a) and Schedule I		
Commission may allow certain matters to be excluded from consultation is considered unreasonable	Clause 8.1.3(2)(b)		
Specified matters to consult on for transmission investments	Schedule I, clause I1(1)		
Required order of consultation on transmission investments	Schedule I, clauses I1(2) and I1(3)		
Longlist options must be solutions to meet the investment need	Schedule I, clause I2(1)		
Specified information requirements for longlist of options	Schedule I, clause I2(2)		
Specified information requirements for shortlist of investment options to meet each investment need	Schedule I, clause I3(1)		

Implementation: Transpower consultation requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Specified key assumptions to be consulted on for shortlist consultation	Schedule I, clause I4		
Non-transmission solution consultation requirements	Clause 8.1.3 (1)(b) and Schedule I, Division 2		
Consideration of non-transmission solutions must consider size, nature, and likelihood of the solution meeting the investment need	Schedule I, clause I5(1)		
Approach to consideration of non-transmission solutions must take account of information needs and views of interested persons	Schedule I, clauses I5(2) and I5(3)		
Approach to consideration of non-transmission solutions must generally allow six weeks for interested persons to respond	Schedule I, clauses I5(4) and I5(5)		
Key definitions			
Calculation period	Clause 1.1.5		
Demand and generation scenario	Clause 1.1.5		
Discount rate	Clause 1.1.5		
Electricity market benefit or cost element	Clause 1.1.5		
Integrated transmission plan	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5		
Investment test	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Market development scenario variation	Clause 1.1.5		
MED scenario variation	Clause 1.1.5		
Net electricity market benefit	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Project cost	Clause 1.1.5		
Sensitivity analysis	Clause 1.1.5		
Transmission investment	Clause 1.1.5		
Value of expected unserved energy	Clause 1.1.5		

6.5 Commission's consultation obligations

Decisions - Commission's consultation obligations

6.5.1 The Commission's consultation obligations are set out in the Capex IM Determination. In summary, the Commission must, after receiving a Major capex proposal, and in accordance the timeframes and processes as it considers appropriate, publish the proposal, publish a draft decision or decisions, and consult on the information published.

6.5.2 The Commission may also seek expert advice and hold a conference.

Reasons - Commission's consultation obligations

6.5.3 Stakeholders, including Transpower, have a strong interest in the Commission's evaluation of Major capex proposals. Enabling stakeholder input will likely lead to more informed and robust evaluation outcomes, and for this reason, we have set an obligation to publish and consult.

6.5.4 The obligations described above are the minimum necessary. Prescribing these in the Capex IM will provide stakeholders with the certainty that these steps will be undertaken by the Commission.

Implementation - Commission's consultation obligations

Implementation: Commission's consultation obligations	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission's mandatory actions for consultation on Major capex proposal	Clauses 3.3.3(3)(a), 8.1.1(1)(a) and 8.1.1(3)		
Commission's optional actions on Major capex proposal	Clauses 3.3.3(3)(a), 8.1.1(1)(b) and 8.1.1(4)		
Commission may set timeframes and processes for consultation that it considers appropriate	Clause 8.1.1(5)		
Key definitions			
Major capex proposal	Clause 1.1.5		
Proposed investment	Clause 1.1.5		

6.6 Rules for submitting a proposal

Decisions - Rules for submitting a proposal

6.6.1 A Major capex project must be approved by the Commission before Transpower can recover that capital expenditure under an IPP.

6.6.2 Approval for a Major capex project will only be considered where Transpower has prepared and submitted a proposal to the Commission.

6.6.3 Transpower may submit a Major capex proposal at any time during a regulatory period.

6.6.4 A Major capex proposal must:

a. comply with the information requirements set out in Schedule G of the Capex IM Determination

b. contain the certificate specified clause 9.2.1 of the Capex IM Determination.

6.6.5 The number of investment options contained in a Major capex proposal must be appropriate given the magnitude of the proposed investment.

6.6.6 For each investment option, the information, rigour and amount of analysis must be appropriate for the size and complexity of the investment option.

Reasons - Rules for submitting a proposal

6.6.7 Under an IPP Transpower is effectively able to recover only approved Major capex. If Transpower, for any reason, wishes to recover its costs outside the IPP, it is not required to submit a proposal to the Commission for approval. Likewise, Transpower is not required to submit applications for approval of expenditure in excess of an approval if Transpower does not intend to recover those costs.

6.6.8 Accurate and robust information is critical to enabling the Commission to properly evaluate a proposal. Stakeholders also require accurate information to meaningfully participate in consultation processes relating to the proposal. For this reason, the Commission has set minimum information requirements for each Major capex proposal, as well as provisions for the care to be taken in its preparation.

6.6.9 CEO certification has been required to ensure good processes have been followed in preparing the proposal. Being able to rely on the information provided saves review and assessment time and costs. More detail on certification is provided in Chapter 9.

6.6.10 During the process of evaluating a proposed Major capex project (refer Section 6.10), the Commission or Transpower may identify a need for the proposal to be updated or amended, eg, an arithmetical error or inconsistency in supporting documentation. As a practical matter, the proposal may be updated or amended during the course of the evaluation. The Commission's obligation to publish a draft decision in relation to the outcome of the evaluation process (refer Section 6.5) then ensures that interested persons will be aware of the update and, if necessary, can provide their views.

Implementation - Rules for submitting a proposal

Implementation: Rules for submitting a proposal	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex project must be approved by the Commission in order for Transpower to recover the capex under the IPP	Clause 3.3.2(1)	Clause 1.6	Clauses 2.2.3(4), 2.2.7 and 3.3.1
Transpower must submit a Major capex proposal for a proposed investment	Clause 3.3.2(2)		
Transpower may submit a Major capex proposal at any time in the RCP	Clause 3.3.2(3)		

Implementation: Rules for submitting a proposal	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex proposals must comply with the information requirements	Clause 7.4.1(1)(a) and Schedule G		
Major capex proposals must meet the certification requirements	Clauses 7.4.1(1)(b), 7.4.1(4) and 9.2.1		
Investment options in a proposal must be appropriate	Clause 7.4.1(2)		
Information and rigour of analysis in proposal must be commensurate with size of expenditure	Clause 7.4.1(3)		
Key definitions			
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Proposed investment	Clause 1.1.5		
Unallocated closing RAB value			Clause 1.1.4
Value of commissioned asset	Clause 1.1.5		Clause 1.1.4

6.7 Rules for approving or rejecting a Major capex proposal

Decisions - Rules for approving or rejecting a Major capex proposal

6.7.1 The Commission will either approve or reject a Major capex proposal. The Commission will publish its decision as soon as reasonably practicable.

6.7.2 The Commission may require further information from Transpower than that provided in a Major capex proposal. In such cases, the Commission will specify a reasonable time within which Transpower must supply the specified information.

6.7.3 The Commission may only approve a proposed investment after consulting on, and evaluating the proposal, in accordance with the requirements set out in the Capex IM Determination. The Commission may reject a Major capex proposal if the Commission is not satisfied with a proposed investment having regard to the evaluation criteria in Schedule C of the Determination.[56]

6.7.4 The Commission may also reject a Major capex proposal where:

a. Transpower has not complied with the consultation requirements, approach to considering non-transmission solutions, or approval timeframes

b. The proposal does not comply with the prescribed information and certification requirements.

[56] Refer Section 6.10 for decisions on the evaluation criteria.

6.7.5 Where an investment is approved by the Commission, the following components of the approval are those specified in the proposal:

a. Major capex allowance

b. Maximum recoverable costs

c. Recovery scheme

d. Approved Major capex project outputs

e. Approval expiry date

f. P50 (relevant to the forecast MAR calculation)

g. Commissioning date assumption

h. Completion date assumption

Reasons - Rules for approving or rejecting a Major capex proposal

6.7.6 We consider it appropriate that the responsibility to determine the needs, deliverables and grid outputs remains with Transpower. For this reason, we have limited the process to either approving the proposed investment or rejecting the Major capex proposal (and associated approval parameters) as a whole. This ensures that the accountability for delivering the Major capex project outputs, within the expenditure allowance, and expiry date, remains with Transpower, and that it is comfortable with and committed to delivering those specified outputs.

6.7.7 The P50 is Transpower's expected final cost of a project. This is used when setting the forecast MAR. The approval of a Major capex project will also set a maximum level of approved capital expenditure and recoverable cost. This may, for example, be set using a P90, to take into account identified risks and uncertainty associated with the project.[57] Transpower must provide the P50 and the assumptions and evidence supporting its proposed expenditure caps (ie, which may be different to the P50). Recovery, after project completion, is based on actual costs, up to the maximum approved level. We consider that, as part of its proposal, allowing Transpower to propose a P value different to the P50 for setting project caps, is appropriate and pragmatic because the level of uncertainty and risk will differ by project. However, using the P50 in the forecast MAR is considered most appropriate because is the best estimate of likely outturn costs.

6.7.8 Certain parameters of the proposal are critical to defining a project. These have been specified as 'approval components'. Transpower must separately identify and specify each component within its proposal. The Commission must either accept these, or reject the entire proposal. As set out in paragraph 6.6.10, however, the Commission and Transpower may agree updates or amendments to the proposal prior to a decision.

6.7.9 The Commission considers it necessary that Major capex project outputs are set for each Major capex project. This will require Transpower to clearly specify the physical outputs that will be delivered, for which consumers will be paying.[58] The Major capex

[57] P90 is where there is a 90% probability of project costs being lower than the specified value.

[58] Grid output measures are physical measures, similar to those set out by the Electricity Commission's project approvals.

project output measures will allow the Commission to measure, post-commissioning, whether the agreed outputs were delivered, as well as provide incentives to Transpower to deliver the agreed outputs.

6.7.10 The rationale for including an approval expiry date is explained in Section 6.9.

6.7.11 While an expenditure cap is set in the form of the Major capex allowance (using a proposed P value which may be different to the P50 (refer paragraph 6.7.7)), the Commission sees value in setting a P50 as part of the approval. The P50 values will be reviewed annually throughout the course of the project and submitted via the annual reporting. The P50 value will be used by Transpower and the Commission to calculate the updates to the forecast MAR during the RCP. This reporting will provide useful information for post-project review, and assessment of efficiencies achieved. This will, therefore, assist to encourage efficient investment.

6.7.12 Non-transmission solutions may involve Transpower incurring non-asset related expenditure. These costs are incremental to the operating expenditure allowance (ie, were not provided for in the allowance), and are an appropriate cost that Transpower should be able to recover. Transmission alternative operating costs, approved by the Commission, are classified by the 2010 TP IM Determination to be 'recoverable costs'. The IPP Determination enables Transpower to build these recoverable costs into its forecast revenue.[59] Setting maximum recoverable costs within the Major capex approval allows the recovery of appropriate operating expenditure costs.

6.7.13 Non-transmission solution operating expenditure incurred by Transpower that has not been approved by the Commission is not recoverable under the IPP.

Implementation - Rules for approving or rejecting a Major capex proposal

Implementation: - Rules for approving or rejecting a Major capex proposal	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Commission may request further information from Transpower	Clause 3.3.3(2)		
Commission may only make its decision after consulting interested persons	Clauses 3.3.3(3)(a) and 8.1.1		
Commission may only make its decision after evaluation of the proposal and any additional information	Clause 3.3.3(3)(b)		
Commission to either approve proposed investment or reject Major capex proposal	Clauses 3.3.3(1) and 3.3.3(4)		
Approved proposed investment must set out components of approval	Clause 3.3.3(5)		
Commission to publish its decision	Clause 3.3.3(6)		

[59] Schedule D of the IPP Determination shows that the calculation of forecast revenue is the forecast MAR plus pass-through costs and recoverable costs.

Implementation: - Rules for approving or rejecting a Major capex proposal	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Key definitions			
Major capex proposal	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Proposed investment	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

6.8 Content requirements for a Major capex proposal

Decisions - Major capex proposal requirements

6.8.1 The Major capex proposal must be provided in the format specified in the Capex IM Determination.

6.8.2 Each Major capex proposal must include the information listed or described in Schedule G. In summary, Schedule G requires the following:

a. an explanation of the need for investment, including information on its nature, extent, location and timing, how the need is consistent with the most recent integrated transmission plan, and an overview of the consultation undertaken and its impact

b. information on relevant demand and generation scenarios, market development scenario variations, and the relative weighting of each, and consultation undertaken

c. a description of each investment option, including discussion on the net electricity market benefit under each demand and generation scenario, costs and inputs for calculating each net electricity market benefit, as well as the methodology and key assumptions used

d. identification of the proposed investment option, including:

   i. a detailed description of its components, including a summary of requirements for completion, the proposed Major capex allowance, commissioning dates, proposed maximum recoverable costs, completion date assumption, approval expiry date, and the estimated P50

   ii. sensitivity analysis and a description of the methodology used

e. explanation as to how robust the proposed investment is to sensitivity analysis

f. a plan for monitoring costs, project milestones and deliverables

g. detailed information on the proposed Major capex project outputs for each investment option, as well as the rationale for those proposed outputs, and identification of any factors that may affect Transpower's ability to achieve each approved outputs that are proposed

h. where the identified project is a non-transmission solution, Transpower must propose a recovery scheme, and explain the relationship between any proposed

Major capex allowance and any proposed maximum recoverable costs, provide a description of the transmission investment it avoids in terms of both assets and expected costs avoided

i. a description of the consultation programme undertaken, including the consultation steps, a description the issues raised by interested persons, the matters raised and Transpower's response

j. additional supporting material Transpower considers relevant.

6.8.3 The number of investment options included in each proposal must be appropriate for the amount of estimated capital expenditure and the complexity of the investment need.

Reasons - Major capex proposal requirements

6.8.4 In formulating its decision, the Commerce Commission considered the required contents of a grid upgrade proposal under the previous regulatory regime, and the conventions established by the Electricity Commission's reviews of proposals. The content requirements are strongly dependent on other key aspects of the Capex IM, including, in particular, the investment test methodology, the consultation process and the approach for considering non-transmission solutions.

6.8.5 The Major capex proposal information requirements have been developed, taking account of the information requirements of the Commission, given the following roles and responsibilities:

a. Transpower's role is to identify potential investment needs and propose solutions. Transpower will undertake the necessary analysis to select the most appropriate investment, demonstrate that it satisfies the investment test, and meets all its obligations under the grid investment processes. An investment proposal submitted by Transpower must include all information reasonably required to demonstrate these matters

b. The Commission's role is to consider investment proposals submitted by Transpower. The Commission will assess whether the necessary tests have been met and whether the required processes have been adequately followed. The Commission will then publish a draft decision and invite submissions before finalising its decision. The information requirements above will provide the Commission sufficient information to fulfill this role

6.8.6 Information collation and provision can be resource intensive. The associated costs need to be weighed against the benefits. The balance will vary for different types of investment proposal, and we believe the information requirements need to be sufficiently flexible to allow this. For this reason, Transpower is able to apply a level of detail and diligence that is commensurate with the size and complexity of the proposal

6.8.7 The investment test methodology provides flexibility for Transpower to depart from using certain prescribed inputs. Examples include the MED scenarios,[60] the expected value of unserved energy, the discount rate and the calculation period. Where a variation is used, the proposal must include information relating to this variation to

[60] Refer paragraph 7.4.40.

enable the Commission and stakeholders to understand the nature, rationale and reasonableness of the variation.

Implementation - Major capex proposal requirements

Implementation: Major capex proposal requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex proposal to include information specified in Schedule G of the Capex IM	Clause 7.4.1(1)(a) and Schedule G		
Major capex proposal must be in the specified format	Clause 7.1.1		
Number of investment options to reflect magnitude of proposed investment and complexity of investment need	Clause 7.4.1(2)		
Transpower may provide additional information it considers relevant to the Major capex proposal	Schedule G, clause G9		
Key definitions			
Input methodology	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment options	Clause 1.1.5 and Schedule D, clause D2		
Major capex project	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Proposed investment	Clause 1.1.5		

6.9 Project approval expiry date

Decision - Project approval expiry date

6.9.1 Transpower must include in each Major capex proposal, an approval expiry date assumption (refer paragraph 6.7.5e).

6.9.2 Where an investment is approved by the Commission, the approval expiry date will be that specified in the proposal (refer paragraph 6.8.2(d)(i)).

Reasons - Project approval expiry date

6.9.3 A project approval expiry date is necessary to recognise that that significant delays in undertaking a project may affect the benefits delivered by the project. After a significant delay it may be necessary to reconsider the options available to address the identified investment need because the assumptions in the original cost/benefit test may have become out-of-date. As the benefits of the project being continued need to be assessed after such delays, Transpower must propose, in each Major capex investment proposal, an approval expiry date that it considers appropriate for this purpose (refer paragraph 6.7.5e).

6.9.4 Transpower may apply for extensions to the approval expiry date (refer paragraphs 8.2.6e and 8.2.10) but it will need to reapply the investment test to determine if it continues to be economic to continue with the project. If the Commission rejects an

extension application, Transpower will bear any costs incurred after the approval expiry although Transpower may be eligible for a sunk costs adjustment (refer Section 4.5).

Implementation - Project approval expiry date

Implementation: Project approval expiry date	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower to include in Major capex proposal a proposed expiry date and rationale for it	Schedule G, clause G5(2)((j)		
Commission approval of Major capex proposal to include approval expiry date specified by Transpower	Clause 3.3.3(5)(e)		
Commission publishes its decision	Clause 3.3.3(6)		
Transpower may apply for amendment to approval expiry date not later than six weeks before the existing approval expiry date	Clauses 3.3.4(1)(e), 3.3.4(2)(a) and 7.4.2(2)		
Commission may request further information in support of application by date specified by Commission	Clause 3.3.4(6)		
Approval expiry date amendment may only be approved prior to the existing expiry date	Clause 3.3.4(3)(a)		
Commission approval of amendment to be approval expiry date specified in application by Transpower	Clause 3.3.4(4)(e)		
Commission publishes its amendment decision	Clause 3.3.4(7)		
Key definitions			
Approval expiry date	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Proposed investment	Clause 1.1.5		

6.10 Criteria for evaluating Major capex proposals

Decisions - Criteria for evaluating Major capex proposals

6.10.1 The Commission will evaluate each Major capex proposal in accordance with Schedule C of the Capex IM Determination. The evaluation criteria is summarised below.

6.10.2 When evaluating a Major capex proposal, the Commission may take into account the views of any person or any other information we consider relevant, and engage any appropriately qualified person to assist with our evaluation.

6.10.3 Where applicable, the Commission will evaluate the proposed components of a proposal, such as the Major capex allowance, maximum recoverable costs and recovery scheme, the proposed Major capex project outputs, and all other relevant assumptions.

6.10.4 The Commission may not approve a proposed investment if we are not satisfied with:

a. any one or more of the proposed components in paragraph 6.10.3

b. the proposed investment in whole or in part, or

c. if the investment test is not satisfied.

6.10.5 In evaluating the components in paragraph 6.10.3, the Commission will apply the evaluation criteria discussed below.

General evaluation of Major capex proposal

6.10.6 The Commission's general evaluation approach is set out in clause C2 of Schedule C of the Capex IM Determination. In summary, when considering the proposed investment options, the Commission must have regard to at least one of the following:

a. whether:

i. the options reflect good electricity industry practice

ii. the options are technically feasible

iii. they are able to be implemented in terms of the statutory planning process under the Resource Management Act 1991, any other regulatory consents required, and obtaining any required property or access rights

iv. can be integrated into system and market operations

b. whether the estimated time required for construction, consultation, 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 the agreed consultation programme or the approach for consideration of non-transmission solutions, Transpower has had regard to the views of interested persons

e. the impact of the sensitivity analysis on electricity market benefit or cost elements of the proposed investment and investment options.

Evaluation of Major capex allowance and maximum recoverable costs

6.10.7 The Commission must have regard to at least one of the following factors when evaluating the Major capex allowance and maximum recoverable costs for proposed investments and investment options:

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. what key assumptions were made regarding cost uncertainty in moving from a P50 forecast to the proposed Major capex allowance or maximum recoverable costs

c. 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

d. the impact of forecast costs on other costs of Transpower, including the relationship with operating expenditure

e. mechanisms for controlling actual capital expenditure

f. the efficiency of the proposed approach to procurement of goods and services.

Evaluation of approval expiry date

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

a. the effect 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 net 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

f. sensitivity analysis.

Evaluation of Major capex project outputs

6.10.9 The Commission must have regard to at least one of the following factors when evaluating proposed Major capex project outputs (refer Section 4.3):

a. the extent to which the Major capex project outputs reflect the nature, quantum, or 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 investment

c. consistency with key assumptions used to determine the Major capex allowance or maximum recoverable costs

d. the nature of the electricity market benefit or cost elements taken into account in applying the investment test

e. in the case of a non-transmission solution, the extent to which the Major capex project outputs reflect any product or service provided to Transpower, and reflect the change in the functional capability of the grid.

Evaluation techniques

6.10.10 In undertaking the evaluations described in the clauses in this schedule, the Commission may analyse power-flow and dynamics in the grid, undertake detailed critiques of conceptual designs, review of the calculation of costs and benefits, assess market development scenarios, undertake unit rate benchmarking, or any other technique or approach that the Commission considers appropriate in the circumstances.

Reasons - Criteria for evaluating Major capex proposals

6.10.11 The Commission role in evaluating Transpower's Major capex proposals could potentially range from:

a. a relatively narrow 'process review', looking at whether Transpower has followed the required processes and applied the investment test reasonably, to

b. a 'merits review' approach, involving much more stringent review of the application of the investment test. This would include considering the information and options in more detail, and may involve requesting that additional options or input information be considered and/or information provided.

6.10.12 The Commission's long-term objective for the Major capex approval regime is to limit its review to whether or not Transpower has adhered to the stipulated processes. Not replicating Transpower's planning function will minimise regulatory costs and reinforce Transpower's role as the primary grid planner and ensure. The Commission will, however, in testing adherence to the stipulated process, review and challenge Transpower's application of the process, the investment test, and any assumptions used to develop its proposal. The Commission will need to be fully satisfied by the evidence provided by Transpower.

6.10.13 Once the Commission and Transpower's views about what constitutes a high quality and robust capex proposal are aligned, the depth of analysis by the Commission could be expected to reduce. It is likely that this may take some time. Irrespective of the maturity of the evaluation regime, we consider it necessary to retain the flexibility to undertake an in-depth review of the merits of any investment proposal (or parts thereof) where we consider this to be in the interests of consumers. This is because of the importance, magnitude and unique nature of Major capex projects. Such reviews can be conducted efficiently and in a manner that neither undermines nor duplicates the role of Transpower.

6.10.14 In reaching this conclusion, the Commission considered guidance provided by the Part 4 Purpose, and reviewed existing processes in the New Zealand electricity sector. We also examined the grid upgrade and investment processes and regulatory test in place in Australia, and considered how those have evolved over recent years. We have sought to develop a process that is relevant across all investments, utilises relevant aspects of the current processes where possible, and has flexibility to respond to changing circumstances.

6.10.15 The Commission must not only concern itself with the process used to develop, analyse and present the proposal, but with the outcome itself. We must be satisfied that the proposed investment satisfies the investment test and promotes the long term benefits of consumers. We consider that the extent of our review should reflect the complexity of the issues and options associated with each particular investment, as well as the quality of the grid investment proposals submitted by Transpower.

Implementation - Criteria for evaluating Major capex proposals

Implementation: Criteria for evaluating Major capex proposals	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission may take into account the results of its consultation and any other information	Clause 6.1.1(1)		
Commission will evaluate a Major capex proposal in accordance with Schedule C of the Capex IM	Clause 6.1.1(4) and Schedule C		
Consideration of whether the proposed investment passes the Major capex investment test in Schedule D	Schedule C, clause C1(2)(c) and Schedule D, Division D1		
Key definitions			
Approval expiry date	Clause 1.1.5		
Approved Major capex project outputs	Clause 1.1.5		
Commissioned	Clause 1.1.5		
Commissioning date	Clause 1.1.5		
Commissioning date assumption	Clause 1.1.5		
Completion date	Clause 1.1.5		
Completion date assumption	Clause 1.1.5		
Demand and generation scenario	Clause 1.1.5		
Electricity market benefit or cost element	Clause 1.1.5		
Electricity transmission services	Clause 1.1.5		
Expected net electricity market benefit	Clause 1.1.5		
Good electricity industry practice	Clause 1.1.5		
Investment option	Clause 1.1.5		
Investment test	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Major capex allowance	Clause 1.1.5		
Major capex project outputs	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Maximum recoverable costs	Clause 1.1.5		
Modelled project	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Operating expenditure	Clause 1.1.5		
P50	Clause 1.1.5		
Proposed investment	Clause 1.1.5		
Recovery scheme	Clause 1.1.5		
Sensitivity analysis	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

CHAPTER 7: MAJOR CAPEX - INVESTMENT TEST

7.1 Introduction

7.1.1 Transpower applies the investment test to identify a preferred investment option (the proposed investment) from a number of investment options for Major capex. The investment test uses a cost-benefit analysis using discounting of relevant costs and benefits in the electricity market.

7.1.2 This chapter sets out:

a. the form and scope of the investment test

b. the application of the investment test, and

c. the implementation of the investment test.

7.2 Form and scope of the investment test

Decision - Form and scope of the investment test

7.2.1 The investment test uses a cost-benefit analysis using discounting of relevant costs and benefits in the electricity market over a defined calculation period to identify a preferred investment option. It is set out in Schedule D of the Capex IM.

7.2.2 The costs and benefits to be included in the investment test are those accruing to participants in the electricity market. Accordingly, the investment test is called a 'net electricity market benefit test'. Focusing the test on participants in the electricity market is consistent with standard cost-benefit analysis because that approach does capture any relevant impacts in all other markets that are workably competitive as discussed in paragraph 7.2.9. A list of the costs and benefits accruing to participants in the electricity market is set out in section 7.4.

7.2.3 Transpower must estimate the expected monetary value of the net electricity market benefit of each investment option using the expected value approach described in paragraph 7.4.18.

7.2.4 Where investment options have a similar quantified net electricity market benefit, Transpower may identify the investment option with the highest expected net electricity market benefit using both:

a. estimates of the expected monetary value of the electricity market costs and benefits

b. a qualitative assessment of the unquantified electricity market costs and benefits for which Transpower has not provided an expected monetary value.

Reasons - Form and scope of the investment test

Scope of costs and benefits to be included in the investment test

7.2.5 Section 52C of the Act defines a consumer as 'a person that consumes or acquires regulated goods or services'. In the context of investment in electricity transmission services and the Part 4 Purpose, the Commission considers that this definition can include electricity retailers, electricity distribution businesses, generators and end users of electricity.

7.2.6 The product consumed by end users is delivered electricity, i.e. electricity that is delivered to end users where they wish to use it (homes, factories etc). Delivered electricity embodies the services provided by generators, Transpower, distributors and retailers. End users consume transmission services when they use delivered electricity. Generators, distributors, and retailers need access to Transpower's grid to deliver electricity to end users. The delivery of electricity to end users consumes the services of Transpower's grid. Generators, distributors and retailers are all consumers of electricity transmission services because the services they provide only have value because the grid can be used to convey electricity.

7.2.7 End users are concerned about the cost of delivered electricity, not just the cost of electricity lines services. Transmission line investments can affect the delivered cost of electricity, by influencing outcomes in the electricity market. For example, building transmission lines may connect lower cost generation plant to the grid or remove constraints so that out-of-merit order plant can be replaced with lower cost plant in dispatch.

7.2.8 The Commission considers that all of the effects a transmission investment has on either the cost or price of delivered electricity need to be taken into account by Transpower in assessing its investment options.[61] Therefore, in proposing Major capex under the Capex IM, Transpower must assess the likely costs and benefits of different investment options for all participants in the electricity market. The list of costs and benefits that can be included in the investment test are set out in paragraph 7.4.2 below.

7.2.9 Transmission investments may also produce market costs or benefits that accrue to consumers outside the electricity market. To the extent that the markets in which such impacts arise are competitive, an analysis that focuses solely on the electricity market will give the same end result as an analysis that explicitly accounts for the cost and benefits that arise in other markets.[62] This means that an analysis focusing on the electricity market can be regarded as including the relevant impacts in all other markets that are workably competitive. This is the analytical basis of the standard practice in cost benefit analysis of focusing on the costs and benefits arising in the market directly affected by an intervention, in this context, a proposed transmission investment.

7.2.10 Transmission investment proposals may also produce effects on the environment. Consideration of these effects is covered through the Resource Management Act 1991

[61] The Commission considers this is also consistent with the promotion of incentives for suppliers of electricity line services to invest in energy efficiency and demand side management (s 54Q).

[62] For an explanation of the relevant microeconomic theory applied to cost benefit analysis refer to Boardman A., Greenberg D.H., Vining A. R., Weimer D. L., Cost-Benefit Analysis: Concepts and Practice, Prentice Hall, 4th Edition, 2011.

(RMA).[63] We consider that the process Transpower must go through to obtain a consent addresses environmental factors. Transpower is to include, as part of the project costs in its investment analysis, the costs of gaining consent and complying with RMA requirements.

7.2.11 The environmental costs of carbon emissions are internalised in the generation market through carbon pricing under the New Zealand Emissions Trading Scheme (ETS). For example, if an investment option reduces the carbon emissions from generation, the lower emissions reduce ETS costs. This results in a lower total cost of generation. Therefore, the value of any changes in carbon emissions arising from transmission investments is captured in the investment test through the modelling of the relevant generation costs

Taking account of risk and uncertainty of an investment option

7.2.12 The investment test involves estimating the costs and benefits of the options in a Major capex proposal. Any appraisal has risks and uncertainties associated with it. There will therefore always be some differences between the expected costs and benefits, and the actual costs and benefits. The expected value approach explained in paragraph 7.4.18 sets out how Transpower must allow for uncertainty in calculating the net electricity market benefit of each investment option.

7.2.13 The Capex IM also requires the use of scenarios (paragraphs 7.4.40 to 7.4.48) and sensitivity analysis (paragraphs 7.4.49 to 7.4.51). These are additional approaches to dealing with the inherent uncertainty in the investment test.

The role of unquantified electricity market costs and benefits

7.2.14 We expect that in most instances Transpower will be able to clearly identify the proposed investments using only 'quantified electricity market costs and benefits' i.e. where an expected monetary value has been estimated. Transpower must allow for the uncertainty in estimating the monetary amount of costs and benefits, including those that are difficult to calculate, by using an expected value approach as described in paragraph 7.4.18.

7.2.15 There may be some additional effects that are 'unquantified'. By unquantified electricity market benefits and costs we mean electricity costs and benefits where the cost of quantifying the effect would be disproportionately large relative to the likely size of the effect, or where the expected value cannot be calculated with an appropriate level of certainty. Transpower may consider unquantified costs and benefits in limited circumstances where investment options of a given investment proposal have a similar quantified net electricity market benefit. Refer to paragraphs 7.3.25 and 7.3.26 for the circumstances in which options are considered to be similar.

7.2.16 This treatment of unquantified costs and benefits emphasises the importance of attempting to quantify all benefits and costs, while providing Transpower flexibility to take account of costs or benefits in the electricity market for which a quantification would not be cost effective but which may have a material impact on the outcome of the investment test.

[63] For instance, a resource consent may be required to permit the building of particular towers as part of an investment proposal.

Implementation - Form and scope of the investment test

Implementation: Form and scope of investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
The investment test is a cost-benefit analysis using discounting of relevant costs and benefits in the electricity market over a defined calculation period	Schedule D, clause D1(1)		
The investment test includes estimates of quantified costs and benefits, including where an expected monetary value can be calculated allowing for uncertainty	Schedule D, clause D1(1)(c)(i)		
Where the estimates for two investment options give a similar result after taking into account quantified costs and benefits, Transpower may choose the investment option that gives the highest result including a qualitative assessment to take account of unquantified costs and benefits	Schedule D, clause D1(1)(c)(ii)		
Key definitions			
Ancillary services	Clause 1.1.5		
Calculation period	Clause 1.1.5		
Code	Clause 1.1.5		
Commissioned	Clause 1.1.5		
Commissioning date	Clause 1.1.5		
Committed project	Clause 1.1.5 and Schedule D, clause D9(1)		
Competition effect	Clause 1.1.5 and Schedule D, clause D6		
Completion date	Clause 1.1.5		
Consumer	Clause 1.1.5		
Decommissioned assets	Clause 1.1.5 and Schedule D, clause D9(2)		
Demand and generation scenario	Clause 1.1.5 and Schedule D, clauses D4(1), D4(2) and D4(4)		
Discount rate	Clause 1.1.5 and Schedule D, clause D7(3)		

Implementation: Form and scope of investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), D5(3), D5(4), D7(2) and D7(4)		
Electricity transmission services	Clause 1.1.5		
Existing asset	Clause 1.1.5 and Schedule D, clause D9(3)		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Generator	Clause 1.1.5		
Good electricity industry practice	Clause 1.1.5		
Grid reliability standards	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Investment test	Clause 1.1.5 and Schedule D, clause D1		
Major capex allowance	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Major capex project outputs	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Market development scenario	Clause 1.1.5 and Schedule D, clause D4(1)(a)(i)		
Market development scenario variation	Clause 1.1.5 and Schedule D, clause D4(1)(a)(ii)		
MED scenario	Clause 1.1.5 and Schedule D, clause D4(1)(b)		
MED scenario variation	Clause 1.1.5 and Schedule D, clause D4(1)(c)		

Implementation: Form and scope of investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Modelled project	Clause 1.1.5 and Schedule D, clause D9(4)		
Net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(2)		
New investment contract	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Operating expenditure	Clause 1.1.5		Clause 1.1.4
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D5(5), D7(1), D7(4), D7(5) and D7(7)		
Proposed investment	Clause 1.1.5		
Relevant demand and generation scenario	Clause 1.1.5 and Schedule D, clause D4(3)		
Sensitivity analysis	Clause 1.1.5 and Schedule D, clause D8		
System operator	Clause 1.1.5		
Value of expected unserved energy	Clause 1.1.5		

7.3 Application of the investment test

7.3.1 This section covers:

a. the calculation of expected net electricity market benefit using scenarios

b. investment options

c. satisfying the investment test

Calculation of expected net electricity market benefit using scenarios

Decision - Calculation of expected net electricity market benefit using scenarios

7.3.2 The expected net electricity market benefit is the aggregated quantum of electricity market costs and benefits, less the aggregated quantum of project costs.

7.3.3 As part of the investment test, Transpower needs to estimate the expected net electricity market benefit of each investment option under each of a number of scenarios.

7.3.4 The expected net electricity market benefit for each investment option is calculated by combining the net electricity market benefit for each investment option for each scenario, consistent with the scenario weightings.

7.3.5 Scenarios are given 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.

Reasons - Calculation of expected net electricity market benefit and use of scenarios

7.3.6 Using scenarios in the quantitative investment test accounts for the uncertainty in the future development of the electricity sector, particularly given the long life of transmission assets. The Commission considers a multi-scenario approach using weightings is the most practical way of taking account of the range of possible, but uncertain, futures.

7.3.7 The Commission understands that the multi-scenario approach worked satisfactorily under the EGRs. We therefore have adopted a similar approach in the Major capex investment test.

7.3.8 The use of scenarios is one way of dealing with the inherent uncertainty in the investment test. The other approach to account for uncertainty in the process of identifying a preferred investment option is through sensitivity analysis. The decision and reasons regarding sensitivity analysis are set out in paragraphs 7.4.49 to 7.4.51.

Implementation - Calculation of expected net electricity market benefit and use of scenarios

Implementation: Calculation of expected net electricity market benefit using scenarios	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Net electricity market benefit is the aggregate of the electricity market costs and benefits less the project costs	Schedule D, clause D3(2)		
Expected net electricity market benefit of each investment option must be evaluated under a number of scenarios	Schedule D, clause D3(1) and Schedule I, clauses I1(1)(e) and I3(1)(a)		
Expected net electricity market benefit of each investment option is calculated taking into account the scenario weighting assigned to the scenario by the party who developed the scenario unless Transpower consults on the variation in weighting	Schedule D, clause D3(1) and Schedule I, clause I3(1)(a)		
Key definitions			
Demand and generation scenario	Clause 1.1.5 and Schedule D, clauses D4(1), D4(2) and D4(4)		

Implementation: Calculation of expected net electricity market benefit using scenarios	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), D5(3), D5(4), and D7(2) to D7(6)		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Investment test	Clause 1.1.5 and Schedule D, clause D1		
Net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(2)		
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D5(5), D7(1), D7(4), D7(5) and D7(7)		
Relevant demand and generation scenario	Clause 1.1.5 and Schedule D, clause D4(3)		

Investment options

Decision - Investment options

7.3.9 Transpower must develop a number of investment options.

7.3.10 An investment option means a Major capex project:

a. designed to meet a particular investment need

b. that is technically feasible

c. that is materially different to another Major capex project designed to meet the same investment need, at least in respect of its proposed commissioning date or completion date or date for proposed delivery of grid outputs, as the case may be.

7.3.11 Investment options do not include transmission investments that will be fully funded under a new investment contract.

7.3.12 The number of investment options considered under the investment test must be appropriate given the magnitude of the estimated capital expenditure and the complexity of the investment need associated with the proposed investment.

7.3.13 The investment options may include both transmission investments and non-transmission solutions. In deciding the investment options to be subjected to the investment test, Transpower must demonstrate that it has considered potential non-transmission solutions.[64]

Reasons - Investment options

7.3.14 The process of defining the investment options starts with Transpower identifying a 'longlist' of options. The options on the longlist are evaluated at a high level using a series of criteria determined by Transpower. After consultation,[65] Transpower must identify a limited number of investment options to which the investment test is applied (the shortlist). The longlist and proposed shortlist must be subjected to consultation with stakeholders.

7.3.15 The number of investment options should be commensurate with the magnitude of the estimated capital expenditure and reflect the range of investments options that could address the investment need. In some cases, the complexity of the investment need may limit the number options that are technically feasible.

7.3.16 The Commission considers that the process set out above, including the consultation requirements and the requirement to consider non-transmission solutions will result in an appropriate set of investment options, consistent with promoting the objectives in s 52A.

Implementation- Investment options

Implementation: Investment options	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower to develop investment options	Clause 8.1.3(1)(a) and Schedule I, clause I3		
Investment option is a feasible Major capex project, other than a new investment contract, that is materially different to another Major capex project that meets the same investment need	Schedule D, clause D2		
Transpower to consider size and complexity when deciding number of investment options	Clause 7.4.1(2), and Schedule I, clause I3(3)(a)		

64 Non-transmission solutions are discussed in section 6.3.

65 Further options may be added during this process.

Implementation: Investment options	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Investment options may include transmission investments and non-transmission solutions	Schedule D, clause D2 and clause 1.1.5, definition of 'Major capex project'		
Transpower must consider non-transmission solutions as part of the investment test	Clause 8.1.3(1)(b) and Schedule I, clause I5		
Key definitions			
Commissioning date	Clause 1.1.5		
Completion date	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Major capex project	Clause 1.1.5		
Major capexproject outputs	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
New investment contract	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Proposed investment	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

Satisfying the investment test

Decision - Satisfying the investment test

7.3.17 A proposed investment option must satisfy the investment test.

7.3.18 For a proposed investment to satisfy the investment test it must:

- have a positive expected net electricity market benefit unless it is designed to meet an investment need generated by a deterministic requirement of the grid reliability standards, and
- be sufficiently robust under sensitivity analysis.

7.3.19 In addition, the proposed investment must have the highest expected net electricity market benefit, having regard only to quantified electricity market costs and benefits.

7.3.20 Alternatively, if investment options have similar expected net electricity market benefits, Transpower may identify the proposed investment as that with the highest expected net electricity market benefit by having regard to quantified electricity market

costs and benefits, and a qualitative assessment of any unquantified electricity market costs and benefits.

7.3.21 Investment options are regarded as having similar expected net electricity market benefits if the difference in the expected net electricity market benefit is 10% or less of the project cost of the investment option that has the highest expected net electricity market benefit before accounting for unquantified electricity market costs and benefits.

7.3.22 Transpower may request the Commission to allow it to use an alternative percentage to 10% for particular projects. Transpower's request must be backed up by evidence that demonstrates the need for an alternative rate.

Reasons - Satisfying the investment test

7.3.23 The investment options for an investment required to satisfy a deterministic requirement of the grid reliability standards[66] may have a negative expected net electricity market benefits. In this case, the proposed investment must be the one with the least negative expected net electricity market benefit.

7.3.24 The requirements that an investment option needs to fulfill, to satisfy the investment test and to be put forward by Transpower as the preferred option, are set out following paragraph X27. However, there are certain situations where Transpower may propose an investment option that does not have the highest expected net electricity market benefit. Such situations arise when an option may have the highest expected net electricity market benefit, but the sensitivity analysis shows that an option is significantly more risky and uncertain than the next best option.[67]

7.3.25 Transpower may have regard for unquantified electricity market costs and benefits in its analysis when it regards investment options to be similar.[68] We consider that 10% is a pragmatic threshold to determine whether investment options are similar. We understand that under the EGRs the investment options that Transpower had considered to be similar were within this threshold.

7.3.26 There may be situations where the unquantified electricity market costs and benefits could alter the outcome of the investment test even though the 10% threshold is exceeded. Transpower may ask the Commission to increase the threshold above 10%. In such a situation, Transpower must provide evidence that it is appropriate to depart from the 10% threshold for the particular proposal.

Implementation - Satisfying the investment test

Implementation: Satisfying the investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs

66 As set out in the Electricity Code.

67 For example, sensitivity analysis may show that small changes in assumptions have a significant impact on the expected electricity market benefit relative to other options.

68 The reasons for taking account of unquantified electricity market benefits or costs are set out in paragraph 7.2.14.

Implementation: Satisfying the investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
The Commission may not approve a proposed investment where it is not satisfied that the investment satisfies the investment test criteria specified in the Capex IM	Clause 6.1.1(4), Schedule C, clause C1(2)(c) and Schedule D, clause D1(1)		
Unquantified electricity market costs or benefits can only be considered if investment options otherwise have similar outcomes	Schedule D, clauses D1(1)(c)(ii) and D1(2)(b)		
Similar outcomes means difference in outcome is measured as 10% or less of the aggregate project costs	Schedule D, clauses D1(2)(a)		
Transpower may request Commission approval to adopt an alternative percentage to 10% when considering whether outcomes of investment options are similar	Schedule D, clause D1(3)		
Key definitions			
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), D5(3), D5(4), and D7(2) to D7(6)		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Grid reliability standards	Clause 1.1.5		
Investment need	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Investment test	Clause 1.1.5 and Schedule D, clause D1		
Major capex proposal	Clause 1.1.5		
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D5(5), D7(1), D7(4) , D7(5) and D7(7)		
Proposed investment	Clause 1.1.5		

Implementation: Satisfying the investment test	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Sensitivity analysis	Clause 1.1.5 and Schedule D, clause D8		

7.4 Implementation of the investment test

7.4.1 This section sets out the decision and reasons covering the key inputs and calculations that are used in the investment test. This section includes:

a. costs and benefits included in the net electricity market benefit test

b. quantification of the expected values of costs and benefits

c. discount rate

d. calculation period and discounting

e. demand and generation scenarios

f. sensitivity analysis

g. value of expected unserved energy

Costs and benefits

Decision - Costs and benefits

7.4.2 When calculating the expected net electricity market benefits, the costs and benefits are limited to:

a. costs and benefits accruing to participants in the electricity market, and

b. the project costs of the investment option.

7.4.3 Costs and benefits accruing to participants in the electricity market are any of the following:

a. fuel costs incurred by generators in relation to existing assets, committed projects and modelled projects[69]

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

[69] Existing assets, committed projects and modelled projects are defined in Schedule D, clause D9 of the Capex IM determination.

h. any real option value

i. the value of any benefit associated with any financial contribution that a third party has committed to make towards the costs of the project (the value of any such benefit may not exceed the amount of the contribution committed by the third party)

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; and

k. competition effects (in the electricity market); and

l. any other benefit or cost occurring in the electricity market that is proposed by Transpower prior to its consultation on the shortlist of investment options and agreed to by the Commission.

7.4.4 'Project cost' means any of the following:

a. capital expenditure incurred, including for strategic land, prior to the commissioning date of assets associated with the investment option

b. amounts payable to a third party in relation to 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 applicable existing and reasonably anticipated legislation relating to the approval of, and undertaking of, an investment option

f. reasonable costs of complying with or arising pursuant to administrative requirements relating to the approval of, and undertaking of, an investment option, including costs relating to the preparation of a Major capex proposal

g. any other reasonable costs incurred by Transpower associated with the investment option.

7.4.5 The land referred to in 7.4.4a is land that has been purchased but not yet used to provide transmission line services as part of any other project.

Reasons - Costs and benefits

7.4.6 The costs and benefits set out above are consistent with the decision set out in paragraph X27 that only project costs and costs and benefits accruing to participants in the electricity market are to be included in the test.

7.4.7 We consider that it is appropriate to take account of third party (i.e. parties that are not participants in the electricity market) contributions and subsidies that offset costs to the participants in the electricity market.

7.4.8 While the lists in paragraphs 7.4.2, 7.4.3, and 7.4.4 are intended to be exhaustive, if Transpower identifies other costs and benefits that accrue to participants in the

electricity market, it may include them in the shortlist consultation, following agreement by the Commission.

Competition Effects

7.4.9 A Major capex investment project may have an effect on competition among participants in the electricity market, which in turn affects the price of electricity charged to end users. To determine the extent to which an investment is likely to produce competition effects, Transpower needs to identify which participants are affected, for example generators or electricity retailers.[70]

7.4.10 Transpower then needs to assess the possible ways in which the investment may affect competition and how this affects economic surplus.[71] To measure the effect of competition on economic surplus, Transpower first has to estimate the expected change in price due to the competition effect and translate this into an expected change in economic surplus. To avoid double counting, the expected change in economic surplus needs to be calculated net of changes in economic surplus due to changes in other electricity market costs or benefits.

7.4.11 For example, a transmission upgrade that reduces capacity constraints may allow some out-of-merit order generation plant to be replaced with lower cost generation plant. This may bring about fuel cost reductions and other benefits. A competition benefit arises if the upgrade also reduces the market power of electricity generators in the electricity market by introducing competition between generators in different geographic regions.[72] A reduction in market power should lead to lower prices and an expansion in electricity sales.

Real option value

7.4.12 Real option values may arise from the ability to undertake phased investment decisions, and from the flexibility that this may bring. Real option valuations take into account the value of the ability to reduce costs by changing future investment decisions based on information that will be available in the future, but is uncertain now, i.e. it values the flexibility that is inherent in many investment projects.

7.4.13 The real option value is more likely to be significant where a project exhibits certain characteristics, including in particular:

a. the ability to make phased investments, with several alternative paths to completing a project i.e. there is the ability to make subsequent additional investment decisions depending on how the future unfolds; and

[70] These examples are not exhaustive and there may be other electricity market participants among whom competition is affected by a transmission investment. An example might be hedge providers or suppliers of services associated with the hedge market.

[71] For example, an investment might have an effect on the number of participants in the market, affect the ability of participants to compete, or affect participants' incentives to compete vigorously. These effects may be pro or anti competitive.

[72] In this example a profit maximising generator can exercise market power in a given trading period if by varying its offer (i.e. of volume and price), it affects the market price.

b. a significant level of uncertainty around possible future outcomes which materially affect the costs/benefits of the additional investment.

7.4.14 We have indentified examples of transmission investments in the New Zealand system that have real option values. Examples include:

a. a 220kV transmission line that could be approved and constructed now but which has the ability to be upgraded to 400kV if required at a later date as part of a separate and subsequent investment approval; or

b. the purchase of land that assists in securing a transmission corridor for a possible future transmission investment and associated approval.

7.4.15 Since there appear to be actual examples of the benefit of considering real option values, we consider that it is appropriate to allow the value of real options to be considered as part of the investment test. We consider this to be consistent with promoting the long term interests of consumers and the objective set out in the Part 4 Purpose.

7.4.16 Further details on the quantification of the expected value of cost and benefits are set in paragraphs 7.4.17.

Implementation - Costs and benefits

Implementation: Costs and benefits	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Costs and benefits accruing to consumers in the electricity market, excluding Transpower project costs, are included in the investment test	Schedule D, clauses D3, D5(1), paragraphs (a) to (h) and (k), D5(3), D5(4) and D7(2)		
Consumer costs are to take into account third party contributions or subsidies	Schedule D, clauses D5(1), paragraphs (i) and (j), and D5(5)		
Transpower may agree with the Commission to include other electricity market costs and benefits in its shortlist consultation	Schedule D, clause D5(1)(l)		
Project costs of each investment option are included in the investment test	Schedule D, clauses D3, D5(2), D7(1) and D7(6)		
Key definitions			
Ancillary services	Clause 1.1.5		
Calculation period	Clause 1.1.5		
Code	Clause 1.1.5		
Commissioning date	Clause 1.1.5		

Implementation: Costs and benefits	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Committed projects	Clause 1.1.5 and Schedule D, clause D9(1)		
Competition effect	Clause 1.1.5 and Schedule D, clause D6		
Consumer	Clause 1.1.5		
Demand and generation scenario	Clause 1.1.5 and Schedule D, clauses D4(1), D4(2) and D4(4)		
Discount rate	Clause 1.1.5 and Schedule D, clause D7(3)		
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), D5(3), , and D7(2) to D7(6)		
Existing asset	Clause 1.1.5 and Schedule D, clause D9(3)		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Generator	Clause 1.1.5		
Good electricity industry practice	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Major capex project	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Modelled project	Clause 1.1.5 and Schedule D, clause D9(4)		
Net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(2)		

Implementation: Costs and benefits	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D7(1), D7(4), D7(5) and D7(7)		
System operator	Clause 1.1.5		

Quantification of the expected values of costs and benefits

Decision - Quantification of the expected values of costs and benefits

7.4.17 Transpower must calculate the expected net electricity market benefit using the expected values of the project costs, and the electricity market costs and benefits.

7.4.18 The expected value is the probability-weighted average of the possible values that a cost or benefit may take (i.e. the P50). The probability weightings must reflect the uncertainty in the underlying assumptions and calculation approaches.

7.4.19 Transpower has flexibility to determine the appropriate method for estimating the expected value of each cost and benefit although project costs must be calculated using good electricity industry practice.

7.4.20 An electricity market cost or benefit may be treated as unquantified where the cost of calculating the expected value (as set out in paragraph 7.4.18) would be disproportionate relative to the size of the cost or benefit or the expected value cannot be calculated with an appropriate level of certainty.

Reasons - Quantification of the expected values of costs and benefits

7.4.21 The use of a probability-weighted average expected value is consistent with standard cost benefit analysis. Using the average value (i.e. the P(50)) reflects the most likely outcome.

7.4.22 We consider that developing a list of the costs and benefits associated with a project is a relatively straightforward process. However, the actual estimation of many costs and benefits is likely to be involved and complex.

7.4.23 Given the likely complexities we do not consider it is cost effective for the Commission to be prescriptive in the Capex IM about how these expected costs and benefits are estimated. We expect that Consultation will give stakeholders the opportunity to provide feedback on the methodology for estimating costs and benefits (e.g., modelling approaches, assessment of competition effects and assumptions such as fuel prices, generator offer behaviour or demand responsiveness). We expect that this will improve the analysis under the investment test.

7.4.24 In some cases, due to the complexities involved, the cost of estimating the expected value of a cost or benefit may be disproportionately large relative to the likely net

electricity market benefit or the expected value cannot be calculated with an appropriate level of certainty. In such cases, Transpower may treat the cost or benefit as unquantified. As set out in paragraph 7.2.15 Transpower can consider unquantified costs and benefits where investment options have a similar quantified expected net market benefits.

Implementation - Quantification of the expected values of costs and benefits

Implementation: Quantification of the expected values of costs and benefits	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Costs and benefits are to be calculated using expected values	Schedule D, clauses D7(4) and D7(5)		
Costs and benefits may be treated as unquantified if the cost of calculating the expected value is disproportionate to the size of the effect or the expected value cannot be calculated with an appropriate level of certainty	Schedule D, clause D1(2)(b)		
Project costs are to be calculated using expected values	Schedule D, clause D7(4)		
Project costs are to be calculated using good electricity industry practice	Schedule D, clause D7(6)		
Expected value is probability-weighted average of possible values, also reflecting uncertainty of assumptions and calculation approaches	Schedule D, clause D7(4)		
Key definitions			
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), D5(3), and D7(2) to D7(6)		
Good electricity industry practice	Clause 1.1.5		
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D7(1), D7(4) and D7(6)		
Value of expected unserved energy	Clause 1.1.5		

Discount rate

Decision - Discount rate

7.4.25 The discount rate to be used by Transpower by default in all discounting as part of investment tests must be a pre-tax real rate of 7%. The Commission may change the default discount rate following consultation with interested parties.

7.4.26 Transpower may apply an alternative discount rate if it considers the default rate value is not appropriate. Transpower must set out and consult on its reasons for the selected discount rate. If the default value of 7% is not used, for comparability with other investments the range used in the sensitivity analysis must include the default discount rate.

Reason - Discount rate

Default discount rate of 7%

7.4.27 The cost and benefits of different investment options usually occur in different time periods. Cost-benefit analysis uses discounting to enable comparisons of costs and benefits at different times on a like-for-like basis.

7.4.28 For private investments, the choice of discount rate is straightforward—it is the relevant cost of capital. There are conceptually different approaches to setting discount rates in the context of public sector or public interest cost-benefit analyses. Each type of discount rate has its proponents.[73]

7.4.29 Under the EGRs, Transpower used a pre-tax real discount rate of 7% (i.e. tax is not considered in the investment test). The discount rate is a long-term rate that is used to assess long-lived investment projects. While it is broadly consistent with Transpower's WACC, it does not reflect shorter term capital market conditions, which influence Transpower's WACC. For comparison:

- Transpower's post-tax nominal WACC as of 1 July 2011 is 6.90% (75th percentile estimate).[74] The equivalent pre-tax real discount rate would be around 6.6%.[75]
- The Treasury's (pre-tax real) discount rate for infrastructure is 8%.

7.4.30 We have no evidence to support changing the pre-tax real discount rate of 7% which has been used by Transpower to date in its cost benefit analysis under the EGRs.

7.4.31 Over time, the appropriate default discount rate might change. The Commission will review the discount rate when it reviews the input methodologies (it is required to do this at least every seven years).

Use of alternative discount rates

7.4.32 Transpower, following consultation with relevant stakeholders, may propose an alternative discount rate. The Commission considers that the use of an alternative discount rate would rarely be justified.

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73 For a discussion of different approaches see Treasury NZ, *Public Sector Discount Rates for Cost Benefit Analysis*, July 2008. www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/discountrates/discount-rates-jul08.pdf

74 This rate is the information disclosure WACC for the five year period from 1 July 2011 consistent with the cost of capital IM.

75 Assuming reasonable time profiles of net benefits over realistic project lives, a commercial project appraisal at the current post-tax nominal WACC would be equivalent to the investment test at a discount rate of around 6.6%.

Implementation - Discount rate

Implementation: Discount rate	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Discount rate for investment test is default rate of 7%	Schedule D, clause D7(3)(b)(i)		
Transpower may apply alternative discount rate if default rate not appropriate	Schedule D, clause D7(3)(a)		
Transpower's consultation must include the reasons for the alternative discount rate	Schedule I, clauses I3(3)(d)(ii) and I4(b)		
If default rate not used, Transpower must also use default rate as part of sensitivity analysis	Schedule D, clause D8(3)		
Key definitions			
Discount rate	Clause 1.1.5 and Schedule D, clause D7(3)		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Investment test	Clause 1.1.5 and Schedule D, clause D1		
Sensitivity analysis	Clause 1.1.5 and Schedule D, clause D8		

Calculation period and discounting

Decision - Calculation period and discounting

7.4.33 The calculation period is a 20-year period starting from the base year unless varied by Transpower after consultation.

7.4.34 The base year is the year in which the last asset to be delivered by the proposed investment is commissioned.

7.4.35 All project costs prior to the base year are compounded forward at the discount rate to the base year. All subsequent costs and benefits occurring in the calculation period are discounted back at the discount rate to the base year.

Reasons - Calculation period and discounting

Calculation period

7.4.36 We consider that Transpower should use as the default a calculation period of 20 years as in the most of cases this will capture the majority of costs and benefits that impact on the expected net market benefit of the investment option.

7.4.37 There may be situations where significant costs and benefits occur beyond the default calculation period of 20 years such that a longer calculation period may be appropriate. To allow for such situations Transpower has flexibility to carry out the appraisal over a different calculation period,[76] but Transpower must clearly set out and consult on the proposed approach.

Discounting

7.4.38 Discounting costs and benefits to obtain a present value at a defined base year is consistent with standard cost benefit analysis.

7.4.39 Almost all the projects costs will be incurred prior the commissioning of the investment option and therefore the calculation period. As a result, project costs need to compounded (using the discount rate) to a give a present value as at the base year.

Implementation - Calculation period and discounting

Implementation: Calculation period and discounting	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower must consult on calculation period and must specify if a non-standard period has been used	Clause 8.1.3(1)(a) and Schedule I, clauses I3(1)(b), I3(3)(d)(ii) and I4(c)		
Standard calculation period is 20 years from the last date of asset commissioning under the proposed investment	Clause 1.1.5, definition of 'calculation period'		
Calculation period is reduced from standard when significant market benefit or cost elements and project costs are expected to cease prior to end of standard 20 years period	Clause 1.1.5, definition of 'calculation period', paragraph (a)		
Calculation period is extended from standard when significant market benefit or cost elements and project costs are expected to arise after the end of standard 20 years period	Clause 1.1.5, definition of 'calculation period', paragraph (b)		

[76] Transpower may also use a shorter calculation period in order to reduce the modelling requirements where all the significant costs and benefits occur before the default period of 20 years.

Implementation: Calculation period and discounting	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Benefits and costs arising or incurred in the calculation period are discounted (by applying the discount rate) back to the start of the calculation period	Schedule D, clause D7(2)		
Project costs incurred prior to the start of the calculation period are compounded (by applying the discount rate) from the date incurred to start of calculation period	Schedule D, clause D7(1)		
Key definitions			
Calculation period	Clause 1.1.5		
Commissioning date	Clause 1.1.5		
Discount rate	Clause 1.1.5 and Schedule D, clause D7(3)		
Electricity market benefit or cost element	Clause 1.1.5 and Schedule D, clauses D5(1), and D7(2) to D7(6)		
Key assumptions	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		
Project	Clause 1.1.5		
Project cost	Clause 1.1.5 and Schedule D, clauses D5(2), D5(5), D7(1), D7(4), D7(5) and D7(7)		
Proposed investment	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

Demand and generation scenarios

Decision - Demand and generation scenarios

7.4.40 After Ministry of Economic Development scenarios (MED scenarios) are published, Transpower must use the MED scenarios in its investment analysis[77] or those published by any other agency, which subsequently assumes this responsibility, should the MED

[77] Transition provisions for any proposals under development when the MED scenarios are first published will be agreed on a project-by-project basis.

stop producing the scenarios. Until scenarios are published by the MED Transpower must apply the scenarios specified as 'market development scenarios' in the statement of opportunities published by the Electricity Commission in 2010.

7.4.41 Transpower may vary the MED scenarios or market development scenarios after having reasonable regard to the views of interested persons.

7.4.42 A variation must:

a. contain at least as much detail as each market development scenario or MED scenario, as the case may be, and

b. be feasible and reasonable with regard to at least the following factors:

i. existing and forecast demand

ii. the grid reliability standards

iii. the value of expected unserved energy

iv. transfer capacities and capabilities of the grid

v. the cost of supplying sufficient ancillary services

vi. the cost of losses necessarily incurred in efficiently meeting demand

vii. operating expenditure incurred in efficiently meeting demand by means of existing assets, committed projects, decommissioned assets and modelled projects[78]

viii. the capital cost of efficiently meeting demand by means of modelled projects

ix. the timing of decommissioning an asset or removing or re-rating a decommissioned asset,[79] and

x. likely range of investment options to which the investment test relates.

Reasons - Demand and generation scenarios

7.4.43 Independent demand and generation forecasts and scenarios are a key reference point for the purpose of preparing plans for, and assessing, Major capital expenditure scenarios.

7.4.44 The Commission's view is that using scenarios and forecasts prepared by the MED for the purposes of preparing and assessing Major capital expenditure plans, provides a common and transparent starting point. This approach should limit the level of analysis required by the Commission when assessing investment proposals. This is because the Commission is likely to focus on understanding any variation from the MED forecasts, rather than having to assess individual demand and generation forecasts from the bottom up. The Commission has discussed the preparation of demand and generation forecasts and scenarios with MED in some detail, and the parties have agreed that MED will take the lead role.

[78] Existing assets, committed projects and modelled projects are described in Schedule D, clause D9 of the Capex IM determination.

[79] Decommissioned asset is described in Schedule D, clause D9 of the Capex IM determination.

7.4.45 The MED expects to produce the first MED scenarios by August 2012.[80] Until then, the scenarios specified as 'market development scenarios' in the statement of opportunities published by the Electricity Commission in 2010 are most appropriate (updated, where necessary, by Transpower after having regard to the views of interested persons). This is because these are independent demand and generation forecasts that were developed in a transparent manner and subject to industry consultation.

7.4.46 Variations to the demand forecasts prepared by MED (or another party) may be required. In such instances, Transpower will utilise the prescribed forecasts to the extent possible, but where this is insufficient, Transpower will produce its own forecasts and will consult on them either prior to, or as part of, its investment test consultation.

7.4.47 In some instances, only one scenario may be required. In others, many more may be needed to cover the multitude of possibilities, for example, where there is considerable uncertainty around new generation investment.

7.4.48 Transpower may amend the scenarios (including the SOO scenarios) by adding, removing, or altering scenarios (and associated probabilities), including further developing scenarios or adding, amending or removing projects to ensure feasibility or to incorporate new information. This should improve the appropriateness of the scenarios for the investment need that is being considered.

Implementation - Demand and generation scenarios

Implementation: Demand and generation scenarios	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower must use the MED demand and generation scenarios when published	Schedule D, clauses D4(1)(b) and D4(3)(b)		
Electricity Commission market development scenarios apply until MED scenarios published	Schedule D, clauses D4(1)(a)(i) and D4(3)(a)		
Reasonable and feasible variations based on specified factors may be used after considering views of interested persons	Schedule D, clauses D4(1)(a)(ii), D4(1)(c) and D4(2), and Schedule I, clauses I1(1)(b), I2(2)(b) and I3(1)(a)		

[80] http://www.med.govt.nz/sectors-industries/energy/energy-modelling/modelling/electricity-demand-and-generation-scenarios

Implementation: Demand and generation scenarios	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Key definitions			
Ancillary services	Clause 1.1.5		
Committed project	Clause 1.1.5 and Schedule D, clause D9(1)		
Decommissioned asset	Clause 1.1.5 and Schedule D, clause D9(2)		
Demand and generation scenario	Clause 1.1.5 and Schedule D, clause D4(1)		
Existing asset	Clause 1.1.5 and Schedule D, clause D9(3)		
Grid reliability standards	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Investment test	Clause 1.1.5 and Schedule D, clause D1		
Market development scenario	Clause 1.1.5 and Schedule D, clause D4(1)(a)(i)		
Market development scenario variation	Clause 1.1.5 and Schedule D, clause D4(1)(a)(ii)		
MED scenario	Clause 1.1.5 and Schedule D, clause D4(1)(b)		
MED scenario variation	Clause 1.1.5 and Schedule D, clause D4(1)(c)		
Modelled project	Clause 1.1.5 and Schedule D, clause D9(4)		
Operating expenditure	Clause 1.1.5		Clause 1.1.4

Implementation: Demand and generation scenarios	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Relevant demand and generation scenario	Clause 1.1.5 and Schedule D, clause D4(3)		
Statement of opportunities	Schedule D, clause D4(4)		
Value of expected unserved energy	Clause 1.1.5		

Sensitivity analysis

Decision - Sensitivity analysis

7.4.49 To demonstrate that a proposed investment is sufficiently robust under sensitivity analysis, Transpower must undertake and report the results of its sensitivity analysis. This must quantify the expected impact on the outcome of the quantitative investment test of reasonable variations in key variables.

7.4.50 To assess whether an investment test result is sufficiently robust, sensitivity analysis must cover a broad range of variables that might reasonably be expected to materially affect the relative expected net market benefit of the investment options. Reasonable variations in key variables include the following:

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. 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

j. any other variables that Transpower considers to be relatively uncertain.

Reasons - Sensitivity analysis

7.4.51 We consider that the expected net market benefit cannot be considered in isolation from the sensitivity assessment. This principle was reflected in the GIT under the EGRs which required that a proposed investment not only have the highest expected net market benefit of the alternatives considered, but that this result be robust with regard to sensitivity analysis. We consider that an investment option should only become the

proposed investment if it is robust to reasonable changes in key inputs which included those detailed in paragraph 7.4.50 above.

Implementation - Sensitivity analysis

Implementation: Sensitivity analysis	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Investment test only satisfied if the proposed investment is robust under a sensitivity analysis	Schedule D, clause D1(1)(a)		
Transpower must undertake and report on its sensitivity analysis	Schedule D, clause D8, and Schedule G, clauses G5(8) to G5(11)		
Sensitivity analysis to include specified variables to demonstrate robust result	Schedule D, clause D8		
Variables may be excluded if not reasonably practicable or not reasonably necessary	Schedule D, clause D8(1)		
Key definitions			
Calculation period	Clause 1.1.5		
Committed project	Clause 1.1.5 and Schedule D, clause D9(1)		
Competition effect	Clause 1.1.5 and Schedule D, clause D6(1)		
Decommissioned asset	Clause 1.1.5 and Schedule D, clause D9(2)		
Discount rate	Clause 1.1.5 and Schedule D, clause D7(3)		
Existing asset	Clause 1.1.5 and Schedule D, clause D9(3)		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Major capex allowance	Clause 1.1.5		

Implementation: Sensitivity analysis	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Modelled project	Clause 1.1.5 and Schedule D, clause D9(4)		
Proposed investment	Clause 1.1.5		
Relevant demand and generation scenario	Clause 1.1.5 and Schedule D, clause D4(3)		
Sensitivity analysis	Clause 1.1.5 and Schedule D, clause D8(1)		
Value of expected unserved energy	Clause 1.1.5		

Value of expected unserved energy

Decision - Value of expected unserved energy

7.4.52 The Commission requires Transpower to use, in the investment test analysis, a value of expected unserved energy (VoEUE) for the purpose of quantifying reliability benefits associated with transmission investments. The VoEUE to be used is that determined by the Authority as recorded in clause 4 of Schedule 12.2 of the Code. Currently this is $20,000 per MWh.

7.4.53 Transpower may use an alternative VoEUE if it considers that the VoEUE set by the Authority is not appropriate for a particular transmission investment.

7.4.54 Regardless of the VoEUE value used, Transpower must clearly set out its reasons in support of the value, and consult on this. If a value other than the VoEUE set by the Authority is applied, the VoEUE set by the Authority must be included in sensitivity analysis of the Major capital expenditure proposal.

Reasons - Value of expected unserved energy

7.4.55 The VoEUE is used to estimate the economic impact of planned and unplanned outages and therefore is a key input to the calculation of cost and benefits to end users of electricity through changes in the levels of reliability provided by the grid.

7.4.56 The application of VoEUE as part of the investment test and as required under the Code are for similar purposes related to grid reliability and the enhancement/replacement of assets, and the same value should generally be applied in both cases. Therefore the default VoEUE used for the purpose of quantifying reliability benefits associated with transmission investment should be the same as that determined by the Authority.

7.4.57 Where Transpower considers that the application of the VoEUE set by the Authority is not appropriate for a particular investment need and applies an alternative figure for the VoEUE, clear reasons must be provided in support of an alternative value. Interested persons should have an opportunity to provide submissions on the appropriate VoEUE at an early stage in the consultation process.

7.4.58 Furthermore, to enable the Commission and stakeholders to understand the implications of the alternative VoEUE, Transpower must include the VoEUE set by the Authority in its sensitivity analysis for the Major capital expenditure investment proposal.

Implementation - Value of expected unserved energy

Implementation: Value of expected unserved energy	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Value of expected unserved energy to be as determined by Electricity Authority in Schedule 12.2, clause 4 of the Code	Clause 1.1.5, definition of 'value of expected unserved energy', paragraph (a)		
Transpower may apply an alternative value if the Electricity Authority value not appropriate for a particular transmission investment	Clause 1.1.5, definition of 'value of expected unserved energy', paragraph (b)		
Where an alternative value is used, Transpower must carry out the sensitivity analysis on both the Electricity Authority value and the alternative value	Schedule D, clause D8(2)		
Transpower must consult on and report on the value used	Schedule G, clause G4(5)(c), and Schedule I, clauses I2(2)(b), I2(2)(c) and I3(3)(d)		
Key definitions			
Code	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Sensitivity analysis	Clause 1.1.5 and Schedule D, clause D8(1)		
Value of expected unserved energy	Clause 1.1.5		

CHAPTER 8: AMENDMENTS TO MAJOR CAPEX APPROVALS

8.1 Introduction

8.1.1 We are of the view that it is important to allow Transpower to apply for amendments to previously approved Major capex projects. An initial Major capex project approval may be provided well in advance of construction, and that construction, in some cases, may span a number of years. The potentially large lead times can create uncertainty in the costs and timing of an investment. Likewise, given the nature of Major capex projects, there will likely be factors that are outside Transpower's control.

8.1.2 Where these uncertainties become reality, the Commission considers it may be reasonable to amend the parameters of an approval.

8.1.3 This chapter provides the Commission's decision for the process and evaluation of Major capex amendment applications.

8.2 Process requirements for amendment applications

Decisions - Process requirements for amendment applications

8.2.1 All Major capex amendment applications must comply with the timing and information requirements specified in clause 7.4.2 of the Capex IM Determination.

8.2.2 An application for an amendment to the approval expiry date must be received by the Commission no later than 6 weeks before the original approval expiry date. Any associated amendment must be made prior to the existing approval expiry date which governs the Major capex project.

8.2.3 Applications for an amendment to a Major capex allowance, maximum recoverable costs, recovery scheme or approved Major capex project outputs must be received by the Commission by the last working day of the September after the disclosure year in which the project in question is first commissioned. Any associated amendment must be made no later than the last working day of the first November after the disclosure year in which the commissioning date or completion date occurs. This requirement applies, unless, at the request of Transpower, the Commission is satisfied that not all information relevant to an amendment is, or will be, available within this timeframe.

8.2.4 The Commission will evaluate each application in accordance with Part 6 of the Capex IM Determination.

8.2.5 The Commission and Transpower must use reasonable endeavours to agree approval timeframes for the application. Where no agreement is reached within two weeks of receiving the application, the Commission will, having regard to the views expressed by Transpower, specify the approval timeframes.

8.2.6 Transpower may only apply to the Commission for an amendment to one or more of the following components of an approved Major capex project:

a. Major capex allowance.

b. Maximum recoverable costs.

c. Recovery scheme.

d. Approved Major capex project outputs.

e. Approval expiry date.

8.2.7 If the Commission receives an amendment application from Transpower, we may amend any of the approval components mentioned in paragraph 8.2.6, as well as other consequential amendments considered necessary, such as the:

a. P50

b. commissioning date assumption

c. completion date assumption.

8.2.8 Where an amendment is made by the Commission, to the extent relevant to the application in question:

a. the amended Major capex allowance, maximum recoverable costs or recovery scheme are those specified by the Commission

b. the amended approved Major capex project outputs or approval expiry date are those proposed by Transpower in the relevant application.

8.2.9 The Commission will publish its decision as soon as reasonably practicable.

Reasons - Process requirements for amendment applications

8.2.10 As the P50 commissioning date and commissioning date assumptions are used in the forecast MAR calculations, these also need to be amended, consistent with any amendments to the components specified in paragraph 8.2.6. As these components are washed-up for actual expenditure, actual completion or actual commissioning date, they do not do impact on any of the Major capex adjustments.

8.2.11 Amending the project expiry date is likely to be more complex than the other components because deferring an investment beyond the expiry date may mean the assumptions on which the investment was premised may no longer be valid. Transpower may need to reapply the investment test to determine if it is economic to continue with the project. In applying the investment test for extensions to the approval expiry date, sunk costs are treated as sunk, and will not be included in the assessment.

8.2.12 When considering amendments to a project expiry date, the Commission will take into account capital expenditure incurred by Transpower up to the point it could have foreseen that the project would not be commissioned prior to the approval expiry date. We consider this is appropriate to properly reflect that Transpower is subject to an individual price-quality path and will assist to promote the Part 4 Purpose.

Implementation - Process requirements for amendment applications

Implementation: Process requirements for amendment applications	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Transpower may apply for amendment to components of approved Major capex project	Clause 3.3.4		
Application must meet application requirements	Clauses 3.3.4(2)(a)		
Commission and Transpower to agree approval timeframe	Clause 3.3.4(2)(b)		
Commission may request additional information	Clause 3.3.4(6)		
Commission may consult with interested persons on the application and may engage expert assistance	Clauses 6.1.1(1) and 8.1.1(2)		
Commission to evaluate the application and any additional information	Clause 3.3.4(2)(c)		
Approval expiry date may only be approved prior to previous expiry date	Clause 3.3.4(3)(a)		
Other components of approved Major capex must be approved by first November after the disclosure year of commissioning or completion	Clauses 3.3.4(3)(b) and 3.3.4(8)		
Commission may specify Major capex allowance, maximum recoverable costs or recovery scheme	Clauses 3.3.4(4)(a) to 3.3.4(4)(c)		
Commission adopts Transpower's proposed amended Major capex project outputs or approval expiry date	Clauses 3.3.4(4)(d) and 3.3.4(4)(e)		
Commission may make consequential amendments to P50, commissioning and completion date assumptions	Clause 3.3.4(5)		
Commission to publish its decision on the application	Clause 3.3.4(7)		
Key definitions			
Approval expiry date	Clause 1.1.5		
Approval timeframes	Clause 1.1.5		
Approved Major capex project outputs	Clause 1.1.5		
Commissioning date	Clause 1.1.5		
Commissioning date assumption	Clause 1.1.5		
Completion date	Clause 1.1.5		
Completion date assumption	Clause 1.1.5		
Major capex allowance	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Maximum recoverable costs	Clause 1.1.5		
P50	Clause 1.1.5		
Recovery scheme	Clause 1.1.5		

8.3 Information requirements for amendment applications

Decisions - Information requirements for amendment applications

General

8.3.1 All Major capex amendment applications must comply with the information requirements specified in clause 7.4.2(3) of the Capex IM Determination.

8.3.2 The information requirements set out in the Capex IM Determination are separately specified for amendments to the:

a. Major capex allowance (Schedule H, Division 1)

b. Maximum recoverable costs or recovery scheme (Schedule H, Division 2)

c. approved Major capex project outputs (Schedule H, Division 3)

d. approval expiry date (Schedule H, Division 4).

8.3.3 An overview of the type of information is provided below.

8.3.4 In addition to these requirements, the Commission may request that additional information be supplied by Transpower. Where additional information is required, the Commission will specify a date considered reasonable by which the information must be provided.

Summary of information requirements for amendment applications

8.3.5 Depending upon the nature of the application (refer paragraph 8.2.6), information will be required that:

a. identifies the relevant Major capex project, and provides information on the amendment sought, such as the proposed changes to the overall cost of the project, including capital expenditure and operating expenditure, supported by calculations, assumptions, and any necessary information to support those assumptions and calculations

b. describes progress made on the project, including on matters such as the planning processes undertaken, regulatory consents, obtaining of property rights and access rights, construction and testing

c. includes details of expenditure incurred to the date of the application, as well as updated forecasts

d. sets out the key reasons for the application, explaining the extent to which the cause for the application was within Transpower's control and was reasonably foreseeable by Transpower

e. describes the implications of the proposed amendment on the relevant approved Major capex project outputs, and if no changes are proposed, why the approved Major capex project outputs remain appropriate

f. identifies whether the net electricity market benefit of the Major capex project is materially lower than when it was approved, and if so, the current amount of the net electricity market benefit

g. explains why making the proposed amendment would promote the long-term benefit of consumers

h. describes the extent to which each proposed amendment reflects a change to the assets to be commissioned, functional capability of the grid, or changes to any relevant service provided by a third party (for non-transmission services)

i. describes the likely implications of the amendment on other approved Major capex projects.

Reasons - Information requirements for amendment applications

8.3.6 We consider that information is required in sufficient detail so that the evaluation of an application can be made in the context of the original approval. It must also take into account that the overall net benefit of the project may have changed. For this reason, a similar level of information is required to that of the original approval application.

Implementation - information requirements for amending decision components

Implementation: Information requirements for amendment applications	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Application for amendment to approval expiry date to be received six weeks or more before previous approved expiry date	Clause 7.4.2(2)		
Application for other components must be received by last working day of September following the disclosure year of first commissioning	Clause 7.4.2(1)		
Application must include information specified in Schedule H of the Capex IM	Clause 7.4.2(3) and Schedule H		
Key definitions			
Approval expiry date	Clause 1.1.5		
Approved Major capex project outputs	Clause 1.1.5		
Calculation period	Clause 1.1.5		
Commissioned	Clause 1.1.5		
Commissioning date assumption	Clause 1.1.5		
Completion date assumption	Clause 1.1.5		
Consumer	Clause 1.1.5		
Electricity market benefit or cost element	Clause 1.1.5		
Electricity transmission services	Clause 1.1.5		
Investment test	Clause 1.1.5		
IPP Determination	Clause 1.1.5		
Key assumption	Clause 1.1.5		
Major capex allowance	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Maximum recoverable costs	Clause 1.1.5		
Net electricity market benefit	Clause 1.1.5		
Non-transmission solution	Clause 1.1.5		

Implementation: Information requirements for amendment applications	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Operating expenditure	Clause 1.1.5		
P50	Clause 1.1.5		
Recoverable cost	Clause 1.1.5		
Recovery scheme	Clause 1.1.5		
Transmission investment	Clause 1.1.5		

8.4 Criteria for evaluating Major capex amendment applications

Decisions - Criteria for evaluating Major capex amendment applications

8.4.1 When evaluating a Major Capex amendment proposal, the Commission may take into account the views of any person or any other information we consider relevant, and engage any appropriately qualified person to assist with its evaluation.

8.4.2 In summary, the Commission will apply the following criteria in evaluating a Major capex amendment application:

a. whether the proposal is consistent with the Capex IM Determination and, where relevant, the 2010 TP IM Determination

b. the extent to which the proposal promotes the purpose of Part 4

c. whether the data, analysis, and assumptions underpinning the proposal are fit for the purpose of the Commission exercising its powers under Part 4, including consideration as to the accuracy and reliability of data and the reasonableness of assumptions and other matters of judgment

d. 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 the Commission

   ii. was or is within Transpower's control

e. for each key factor outside Transpower's control:

   i. the reasonableness of any applicable mitigation strategy devised by Transpower

   ii. the reasonableness and extent of mitigation actions taken by Transpower

f. the extent to which the expected net electricity market benefit would be materially lower as a result of the amendment than when it was approved

g. 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.

Reasons - Criteria for evaluating Major capex amendment applications

8.4.3 We consider that the evaluation approach and criteria should be similar to that used when reviewing a Major capex proposal for the first time. It must take into account changes to the project, but still evaluate the overall continuing benefit of the project.

This is considered to properly encourage efficient investment, reflecting the long-term needs of consumers.

Implementation - Criteria for evaluating Major capex amendment applications

Implementation: Criteria for evaluating amendment applications	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission may consult with interested persons on the amendment application	Clauses 3.3.4(2)(c) and 6.1.1(1)(a)(i)		
Commission may take into account information it considers relevant	Clauses 3.3.4(2)(c) and 6.1.1(1)(a)(ii)		
Commission may engage appropriately qualified person to assist with the evaluation	Clauses 3.3.4(2)(c) and 6.1.1(1)(b)		
Commission will include specified criteria in its evaluation of the amendment application	Clause 6.1.1(5)		
Key definitions			
Capital expenditure	Clause 1.1.5		
Expected net electricity market benefit	Clause 1.1.5 and Schedule D, clause D3(1)		
Major capex project	Clause 1.1.5		

8.5 Consultation requirements for amendment applications

Decisions - Consultation requirements for amendment applications

8.5.1 The Commission may take none, any or all of the actions listed below:

a. publish the relevant proposal or application

b. make and publish a draft decision or decisions

c. seek the written views of interested persons on anything published

d. seek the written views of interested persons on others' submissions

e. seek the views of any person the Commission considers has expertise on a relevant matter

f. hold a conference at which the views of some or all interested persons may be sought orally or in other forms of presentation.

8.5.2 Where the Commission takes any of the actions referred to above, the Commission may do so in accordance with such timeframes and processes as its considers appropriate.

Reasons - Consultation requirements for amendment application

8.5.3 As amendment applications are likely to vary significantly, we consider it appropriate to retain flexibility to undertake some, none or all of the consultation measures set out above. This means the consultation can be tailored to the particular situation, as appropriate.

Implementation - Consultation requirements for amendment applications

Implementation: Consultation requirements for amendment application	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Commission selects which consultation actions it will use in its evaluation of the amendment application	Clause 8.1.1(2)(a)		
Available consultation actions	Clauses 8.1.1(3) and 8.1.1(4)		
Commission may set its own consultation timeframes and processes	Clause 8.1.1(5)		

CHAPTER 9: CERTIFICATION REQUIREMENTS

9.1 Introduction

9.1.1 Section 54S(2)(a) requires the Capex IM Determination to include the extent of independent verification and audit that Transpower must provide with its capital expenditure proposals. The purpose of this chapter is to set out the extent of verification and audit requirements.

9.1.2 The Commission must be able to rely on the information provided by Transpower in its expenditure proposals and amendment applications. This is because the Commission relies on the information being accurate when making its decisions. Stakeholders also rely on the information. We also consider, in line with Transpower's role as grid planner, that it is appropriate to provide this level of certification.

9.1.3 Verification by senior officers or directors of Transpower in the form of certifications that the information provided complies with the requirements, helps to ensure the appropriate level of rigour and scrutiny has been applied in Transpower's approval processes. For this reason, we consider that all proposals require some form of certification before being submitted for approval.

9.1.4 Similarly, the annual information requirements have been developed to enable us to implement and operate the incentive mechanisms. The information allows us to monitor approved capital expenditure against actual expenditure, track actual performance for grid outputs listed in the IPP Determination, and determine the required incentive adjustments.

9.1.5 The Commission relies on three main forms of verification:

a. self-verification by an appropriate senior member of Transpower, eg, by directors or the CEO (referred to as 'certification')

b. independent audits (referred to as an 'audit')

c. independent expert opinions by a subject matter expert (referred to as 'independent verification').

9.1.6 All annual information requires an appropriate level of self-verification before being submitted to the Commission. Our decisions on this, and on the forms of verification that are required for each expenditure proposal, have taken into account how critical the information is, the amenability of the information to different types of verification, and our assessment of costs and burdens of each of the forms of verification.

9.2 Certification requirements for proposals and amendment applications

Decision - Certification requirements for proposals and amendment applications

9.2.1 There will be no requirement to obtain independent verification or audit. However there will be requirements for self-verification in the form of certification in respect of Transpower's directors and Chief Executive Officer.

9.2.2 Base capex proposals must be certified by two Transpower directors.

9.2.3 The directors must each certify in writing their belief, having made all reasonable enquiries, that the information was derived from and accurately represents the operations of Transpower and is provided in accordance with the relevant requirements of the Capex IM Determination, including:

a. the regulatory templates (historic and forecast quantitative information to be contained in a Base capex proposal)

b. Schedule F of the Capex IM Determination (qualitative information to be contained in a Base capex proposal).

9.2.4 Major capex proposals, Major capex project amendment applications, and sunk costs adjustment applications, as well as the supporting information, must be certified by Transpower's Chief Executive Officer.

9.2.5 Chief Executive certifications must state, in writing, his or her belief, having made all reasonable enquiries, that:

a. the information was derived from and accurately represents the operations of Transpower

b. the Major capex to which the proposal or application relates was approved in accordance with Transpower's management and Board approval policies

c. the proposal or application complies in all material respects with the requirements of the Capex IM.

Reasons - Certification requirements for proposals and amendment applications

9.2.6 Transpower's Base and Major capex requirements combined, during RCP2, could potentially be between two to three billion dollars. This large amount of capital expenditure will have a material impact on prices for RCP2 and beyond.

9.2.7 Base capex, over a five year regulatory period, may amount to between one to one-and-a-half billion dollars. As Base capex is set only once every five years, and considering the magnitude of this expenditure, we consider that director-level certification is appropriate.

9.2.8 We consider certification by Transpower's Chief Executive is sufficient for Major capex proposals. This is because of the detailed, technical and individual nature of Major capex proposals, and also that we have set an extensive and robust process, as well as consultation requirements, for all Major capex projects. Likewise, a number of Major capex projects may be submitted each year during any given five-year regulatory period. These may range in the order of materiality, from $20 million to hundreds of millions. Requiring director certification may place an unnecessary burden on directors to be involved in technical matters.

9.2.9 However, if questions arise regarding the quality of the information provided, or the sufficiency of oversight, the Commission may, for subsequent RCPs, change this Capex IM requirement and specify that director certification is necessary.

9.2.10 The Commission considers that the current combination of certification by Transpower's directors and its Chief Executive is relatively low-cost and flexible. We also consider it to be an appropriate way of assuring the accuracy and reliability of information in the Base and Major capex proposals.

9.2.11 The certification approach adopted avoids the need to specify criteria in the Capex IM Determination that may not prove sufficiently flexible to deal with the different circumstances that arise in practice. Imposing clear accountabilities on Transpower for certification should provide incentives to ensure systems and controls produce accurate and reliable information.[81]

9.2.12 Audits are not required for capex proposals. This is because audits are not as effective for forecasts or for non-financial information. Audit opinions tend to be restricted to assurance that a forecast has been properly compiled on the basis of relevant assumptions. This is because it is often not realistic for an auditor to provide an opinion on the reasonableness or appropriateness of assumptions.

9.2.13 Where auditors do not have the expertise to verify or provide an opinion on the subject matter, or the subject matter itself is not amenable to audit, an independent expert opinion may be more suitable. An expert opinion is likely to be of most value where judgment is required as to the reasonableness of the assumptions or practice used in developing the information, or where it is necessary to draw conclusions from that information.

9.2.14 Although we do not consider it necessary to specify the mandatory use of independent expert opinions in this case, the Capex IM provides the option to call for such opinions if we later wish to obtain greater assurance on selected information.

Implementation - Certification requirements for proposals and amendment applications

Implementation: Certification of proposals and applications	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Director certification of Base capex proposal	Clauses 7.3.1(1)(c) and 9.1.1, and Schedule F		
Chief Executive Officer certification of Major capex proposal	Clauses 7.4.1(1)(b) and 9.2.1, and Schedule G		
Chief Executive Officer certification of application for amendment to a Major capex project	Clauses 7.4.2 and 9.3.1, and Schedule H, Divisions 1 to 4		
Chief Executive Officer certification of application for sunk costs adjustment	Clauses 7.4.3 and 9.3.1, and Schedule H, Division 5		
Key definitions			
Approval expiry date	Clause 1.1.5		

[81] Commerce Commission, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper*, December 2010, paragraph 9.6.4.

Implementation: Certification of proposals and applications	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex	Clause 1.1.5		
Base capex category	Clause 1.1.5		
Base capex proposal	Clause 1.1.5		
Director	Clause 1.1.5		
Major capex	Clause 1.1.5		
Major capex project	Clause 1.1.5		
Major capex proposal	Clause 1.1.5		
Major capex sunk costs adjustment	Clause 1.1.5		
Regulatory templates	Clause 1.1.5		

Decision - Change of certification of opinion or matters of fact

9.2.15 Anyone who has provided certification must notify the Commission as soon as reasonably practicable if their opinion or a matter of fact has changed. This applies to any change of opinion or fact that is likely to be material to the Commission's decisions. This applies to all capital expenditure proposals, project amendment applications, or sunk costs applications while the Commission is considering such proposals or applications.

Reason - Change of certification of opinion or matters of fact

9.2.16 The Commission considers that certification carries with it a continuing duty. This means that where a fact or opinion has been certified, and the certifying person becomes aware of a change in material circumstance, an obligation should exist to update the certification of the proposal. This ensures that the Commission has the latest and most accurate information with which to make its decisions.

Implementation - Change of certification of opinion or matters of fact

Implementation: Change of certification of opinion or matters of fact	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Change in a director's or Chief Executive's certification of opinion	Clause 9.4.1(1)		
Change in a director's or Chief Executive's certification of fact	Clause 9.4.1(2)		

9.3 Certification of annual information

Decision - Certification of annual information

9.3.1 It is intended that the annual information requirements for Base and Major capex will be considered for inclusion in a future information disclosure determination. Until such

a determination is made, the following annual information will be specified in a s 53ZD notice.

9.3.2 Two Transpower directors will be required to certify the annual information requirements for Base and Major capex.

9.3.3 The directors will be required to certify that, having made all reasonable enquiries, to the best of their knowledge and belief, the annual information provided by Transpower for Base and Major capex complies with the annual information requirements.

9.3.4 From RCP2, for any project or programme that is forecast to cost more than $20 million, Transpower's Chief Executive Officer will be required to certify that Transpower:

a. undertook a cost-benefit analysis consistent with the investment test, as required under the Capex IM Determination

b. undertook consultation as required under the Capex IM Determination.

9.3.5 Transpower's Chief Executive Officer will be also be required to certify for each Base capex project or programme first commissioned in the disclosure year in question, that Transpower acted in accordance with each relevant policy and process as specified in its Base capex proposal.

Reasons - Certification of annual information

9.3.6 The Capex IM Determination sets out new disclosure requirements. These relate to rules for calculations and information to be provided about capital expenditure as part of its annual information requirements.[82]

9.3.7 The Commission is currently developing an information disclosure determination for Transpower. The new requirements will be set out in the information disclosure determination, or, if necessary, will be issued to Transpower in a Notice under s 53ZD of the Act. The annual information requirements for capital expenditure are currently specified in Part 5 of the IPP Determination.[83]

9.3.8 The level and nature of certification of the new information requirements is consistent with the certification required under the IPP Determination. It is consistent with certification required for the draft forecast MAR calculations,[84] and consistent with the requirements for the annual compliance monitoring statements.[85]

9.3.9 The Commission considers that certification of annual information relating to Base capex projects or programmes by the Chief Executive Officer is appropriate, as the certification relates to the carrying out of management processes.

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82 See for example, Schedule B of the Capex IM Determination.

83 Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, clause 5.2(4).

84 Commerce Commission, *Notice to Supply Information to the Commerce Commission Section 53ZD of the Commerce Act 1986*, 15 July 2011.

85 Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, Schedule B.

Implementation - Annual information

Implementation: Certification of annual information	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Director certification of current annual compliance monitoring statement under the IPP Determination		Clause 5.8(a) and Schedule B	
No fewer than two Transpower directors will be required to certify the annual information requirements.	New ID determination to apply		
Transpower's Chief Executive Officer will be required to certify each Base capex project or programme forecast to cost more than $20 million			
Transpower's Chief Executive Officer will be required to certify each Base capex project or programme first commissioned			
Key definitions			
Annual compliance monitoring statement		Part 2	
Directors' certificate		Part 2	

CHAPTER 10: ANNUAL REPORTING REQUIREMENTS

10.1 Introduction

10.1.1 The purpose of this chapter is to set out the reporting obligations required of Transpower in relation to the Capex IM. This chapter covers Transpower's regular reporting obligations, including certain information required for incentive adjustments, as well as formatting requirements.

10.1.2 The reporting requirements include annual information about Base capex and approved Major capex projects. This chapter also sets out the formatting requirements for all information provided to the Commission including proposals and applications.

10.2 Base capex annual reporting requirements

10.2.1 Requiring Transpower to report on an annual basis will transparently demonstrate actual performance and delivery of outputs, against the forecasts used when the Commission set the Base capex allowance. It will demonstrate performance against the grid output mechanism, and provide updates to any forecasts and timing matters.

Decision - Base capex annual reporting requirements

10.2.2 The Base capex annual reporting requirements to apply to Transpower for RCP1 are the Minor capital expenditure information requirements set out in Part 5 of the IPP Determination.

10.2.3 The Base capex annual reporting requirements to apply to Transpower from RCP2 will be set out by the Commission in a future information disclosure determination. Until then, the Commission will require, by way of notice under s 53ZD, the following information to be provided by the last working day of September each year:

a. actual Base capex compared against approved Base capex for the categories defined in the regulatory templates

b. actual performance for all grid output measures specified in the IPP Determination, including background information on the level of performance

c. information relevant to any determination of a Base capex policies and procedures adjustment, including for any Base capex projects over $20 million:

   i. a summary of the cost-benefit analysis undertaken, and evidence of consistency with the investment test under the Capex IM

   ii. a description of the consultation process undertaken in relation to each project, and summary of responses

   iii. identification of any projects for which a cost-benefit test and consultation consistent with that applied to Major capex projects was not undertaken

d. a list of any capital expenditure projects originally contained in the Base capex proposal that are now deemed Major capex

e. information relevant to any determination of a Base capex expenditure adjustment and a grid output adjustment, including:

i. the information, values or amounts used to determine the quantum of the adjustment, as specified in the Capex IM

ii. all calculations and assumptions used to obtain those values or amounts

iii. evidence in support of the actual FX rates.

Reasons - Base capex annual reporting requirements

10.2.4 The information provided through the Base capex annual reporting requirements will enable the Commission to implement and operate the various Base capex incentive mechanisms. This will allow the Commission to track approved Base capex against actual expenditure for each defined category, and track actual performance for all grid outputs listed in the IPP Determination.

10.2.5 The current information requirements set out under Part 5 of the IPP Determination are effective until the end of RCP1.[86] The Commission is currently considering setting information requirements for Transpower in an information disclosure determination. This is likely to replace those information requirements now set out in the IPP Determination. The Capex IM sets out the requirements necessary to make some of the calculations or to gather the information which is likely to be needed to be collected by the information disclosure determination.

Implementation - Base capex annual reporting requirements

<table>
<tr><th rowspan="2">Implementation: Base capex annual reporting requirements</th><th colspan="3">Determination References</th></tr>
<tr><th>Transpower Capex IM</th><th>Transpower IPP</th><th>Transpower IMs</th></tr>
<tr><td>Annual information requirements specified in ID Determination</td><td colspan="3" rowspan="2">New ID Determination to apply

The Base capex annual reporting requirements will be set out in a future ID Determination. Until then, reporting requirements will be specified in a s 53ZD Notice issued annually to Transpower by the Commission.</td></tr>
<tr><td>Base capex annual reporting deadline - report due by last working day each September</td></tr>
</table>

10.3 Major capex annual reporting requirements

10.3.1 Under the Major capex annual reporting requirements Transpower will transparently demonstrate:

a. progress on the delivery of each Major capex project that has yet to be commissioned or completed

b. actual cost, performance and delivery of outputs on each Major capex project that has been commissioned or completed

[86] Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, December 2010, clause 5.1.

c. for each Major capex project that has been commissioned or completed:

i. overspend adjustment calculations and supporting information

ii. output adjustment calculations and supporting information.

Decision - Major capex annual reporting requirements

10.3.2 The Commission is currently in the process of developing an information disclosure determination under s 52P. Until then, the Commission intends to specify the Major capex annual reporting requirements in a s 53ZD Notice issued annually to Transpower by the Commission.

10.3.3 Transpower will be required to report the following information to the Commission by the last working day of September each year:

a. information on uncompleted projects, including:

i. updates as to the expected Major capex project cost (ie, an updated P50) compared against the Major capex allowance (or maximum recoverable cost, in the case of non-transmission solutions), together with explanations for any variance between the updated P50 and the P50 value specified in the Major capex project approval

ii. forecast commissioning date or completion date, and explanations for any variance from the commissioning date assumption or completion date assumption specified in the Major capex project approval.

b. information for each commissioned or completed Major capex project, including:

i. commissioning dates of assets associated with the project, and explanations for variances between the actual commissioning date and any commissioning date assumption specified in the project approval

ii. in the case of a transmission investment, actual expenditure, and explanations of any variance from P50

iii. in the case of a non-transmission solution, the actual costs treated as recoverable costs, and explanations of any variance from P50

iv. the grid outputs achieved by the project and explanations for any variances from the approved outputs

v. analysis of lessons learned during and after the project

vi. an assessment of any cost efficiencies that Transpower considers it has achieved in the course of the project, including descriptions, explanations, and assumptions made

vii. any required adjustments resulting from project overspend relative to the Major capex allowances

viii. any required Major capex adjustments resulting from non-delivery of Major capex project outputs.

c. information for calculating the Major capex overspend adjustment and the Major capex project output adjustment, including:

i. the values or amounts for each term used to determine the quantum of the relevant adjustment, as specified in the Capex IM

ii. all calculations and assumptions used to obtain those values or amounts

iii. evidence in support of the actual FX rates.

10.3.4 Information submitted to the Commission will require appropriate certification. Certification requirements are discussed in Chapter 9.

Reasons - Major capex annual reporting requirements

10.3.5 The information specified in the Capex IM as to reporting requirements for Major capex is necessary for the Commission to be able to monitor Transpower's progress on Major capex projects. It is also required for calculating incentive adjustments. The Commission considers that stakeholders are likely to also be highly interested in this information.

10.3.6 The primary rationale for requiring reporting on completed projects is to:

a. assess whether individual projects deliver agreed Major capex project outputs

b. assess actual expenditure against forecast expenditure

c. enable the Commission to give effect to the incentives mechanisms that have been established

d. assist in providing an assessment as to how and why various assumptions and analysis turned out to be right or wrong. Assumptions and assessment of costs and benefits for future projects are likely to be more robust as a result of a post-project review.

10.3.7 The Commission also considers that providing greater transparency on tracking project costs and deliverables provides an incentive for Transpower to control those costs and influence the delivery of outputs against agreed targets.

Implementation - Major capex annual reporting requirements

Implementation: Major capex annual reporting requirements	**Determination References**		
	Transpower Capex IM	**Transpower IPP**	**Transpower IMs**
Major capex overspend adjustment annual calculation	Clause 3.3.7(3) and Schedule B, clause B4	Clause 5.3.4(e)	
Major capex project output adjustment annual calculation	Clause 3.3.7(3) and Schedule B, clause B5	Clause 5.3.4(e)	
Reporting requirements for uncompleted projects	New ID Determination to apply		
Reporting requirements for commissioned projects	New ID Determination to apply		
Key definitions			
Actual FX rate	Clause 1.1.5		
Adjusted Major capex allowance	Clause 1.1.5		
Approved Major capex project outputs	Clause 1.1.5		
Capital expenditure	Clause 1.1.5		
Closing RAB value	Clause 1.1.5		
ID determination	Clause 1.1.5		
Major capex project	Clause 1.1.5		

10.4 Formatting for reporting, proposals and applications

10.4.1 The following requirements apply to all information provided to the Commission including Base and Major capex annual reporting requirements as well as all proposals and amendment applications.

Decision - Formatting for reporting, proposals and applications

10.4.2 All significant financial and numerical data must be provided by Transpower to the Commission in electronic, Microsoft Excel format.

10.4.3 All other information must be provided by Transpower to the Commission in Microsoft Word, Microsoft Excel or Adobe PDF format.

10.4.4 All electronic data or information files must be capable of having a 'copy and paste' function applied.

10.4.5 All data or information provided to the Commission must include an index to each electronic file or document in that file that:

a. cross-references the data or information provided to the information requirement applicable

b. briefly describes the information requirement

c. identifies the location in the file or document where a response to the information requirement is provided.

10.4.6 Where data is provided in Microsoft Excel format, and that data has been computed or derived from other data in that file, using a formula or formulae, all underlying formulae must be either accessible by the Commission or otherwise provided to the Commission.

10.4.7 Any data or information provided to the Commission where Transpower wishes to retain a claim to confidentiality must be provided in an appendix or separate electronic file that is clearly marked as confidential.

10.4.8 Omissions of required data or information must be identified to the Commission with a reasonable explanation for omission.

Reasons - Formatting for reporting, proposals and applications

10.4.9 Requiring data and information to be provided in industry-standard electronic formats (ie, MS Excel, MS Word and PDF), with the capability to reformat that data or information, provides the Commission with greater flexibility to evaluate proposals and applications from Transpower. It also assists the Commission to make the information available on its website for the benefit of interested persons.

Implementation - Formatting for reporting, proposals and applications

Implementation: Formatting of information - Proposals, applications and information requirements	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Formatting - Base capex proposal information	Clauses 7.1.1 to 7.1.3, 7.3.1, 9.1.1 and Schedule F		
Formatting - Major capex proposal information	Clauses 7.1.1 to 7.1.3, 7.4.1, 9.2.1 and Schedule G		
Formatting - Major capex project amendment application information	Clauses 7.1.1 to 7.1.3, 7.4.2 and Schedule H Divisions 1 to 4		
Formatting - Major capex sunk costs application information	Clauses 7.1.1 to 7.1.3, 7.4.3 and Schedule H Division 5		
Formatting - Base capex annual information requirements	New ID Determination to apply		
Formatting - Major capex annual information requirements			
Formatting - Major capex RCP report			
Key definitions			
Approval expiry date	Clause 1.1.5		
Base capex category	Clause 1.1.5		
Base capex proposal	Clause 1.1.5		
Commissioned	Clause 1.1.5		
Disclosure year	Clause 1.1.5		
Document	Clause 1.1.5		
Input methodology	Clause 1.1.5		
Investment option	Clause 1.1.5 and Schedule D, clause D2		
Major capex proposal	Clause 1.1.5		
Regulatory template	Clause 1.1.5		

CHAPTER 11: TRANSITIONAL PROVISIONS

11.1 Introduction

11.1.1 The Capex IM sets new rules and processes that apply to capital expenditure and any associated approvals. Certain processes apply from, and during RCP1. Other processes apply from RCP2.

11.1.2 The purpose of this chapter is to set out, for the avoidance of doubt, the treatment of projects that have not been fully subject to the Capex IM approval process.

11.1.3 For Base capex, transitional provisions exist during RCP1 for the following:

a. the level of Base capex approved prior to the Capex IM
b. the grid outputs measures that will not apply
c. wording differences in definitions between the IPP and Capex IM Determination
d. certain obligations that will not apply.

11.1.4 For Major capex, the transitional provisions exist during RCP1 for the following:

a. the treatment of Major capex projects that were approved prior to the Capex IM Determination, but have not yet been commissioned
b. the approval processes for Major capex projects that were submitted for approval prior to the Capex IM Determination, and that are still being reviewed
c. the implementation of incentives for Major capex projects that were approved prior to the Capex IM Determination.

11.1.5 Where no transitional provisions exist, the full requirements for capex IM apply. For example:

a. because no transitional provisions apply specifically to the amendment process for Major capex projects that were approved prior to the Capex IM Determination, the normal process, set out in the Capex IM Determination, applies to any application by Transpower for amendments to such projects
b. because no transitional provisions apply to the Major capex incentive mechanisms, the incentives apply to all Major capex projects commissioned from the date of the Capex IM Determination.

11.1.6 No transitional provisions apply from RCP2.

11.2 Base capex transitional provisions

Decisions - Base capex transitional provisions

11.2.1 The process for approving Base capital expenditure allowances does not apply to RCP1. The allowance, provided under the IPP Determination will not be amended by the Capex IM.

11.2.2 The existing quality standards, set under the IPP Determination continue to apply during RCP1. The quality standards set under the IPP Determination will be replaced by the grid output measures in RCP2.

11.2.3 The Capex IM incentive mechanisms that apply to Base capex, including the Base capex expenditure adjustment, the grid output adjustment, and the Base capex policies and process adjustment, do not apply during RCP1.

11.2.4 The policies and process adjustment, set by the IPP Determination, continues to apply during RCP1.[87]

11.2.5 The obligations specified in clauses 3.2.1 and 3.2.2 of the Capex IM do not apply during RCP1.

11.2.6 A number of wording differences exist between the definitions in the IPP Determination and Capex IM Determination. Examples include the 'Major capex' versus 'Major capex' and 'Base capex' versus 'Minor capital expenditure'. The definitions are substantially the same, and will not be amended to reflect the new terms until RCP2.

Reasons - Base capex transitional provisions

11.2.7 The Minor capital expenditure allowances for RCP1 were determined by the Commission on 22 December 2010, for the Transition Year, and 1 November 2011, for the Remainder Period. These allowances were used when setting the price path for RCP1 and cannot be amended by the Capex IM during RCP1 (refer paragraph 1.2.18).

11.2.8 The process of setting the incentive mechanisms to apply to Base capex is part of the overall process for review and approving Transpower's proposal. The measures to apply under the Capex IM are firstly proposed by Transpower, then assessed by the Commission (refer Chapter 5). As Base capex was approved and set by the Commission prior to the Capex IM, and other incentives were applied for RCP1, these new provisions will not apply until RCP2.

11.2.9 The obligations specified in clause 3.2.1 do not apply in RCP1 because the Base capex projects have already been approved by the Commission. Likewise, the $20 million threshold does not apply until RCP2.

11.2.10 The obligations specified in clause 3.2.2 do not apply in RCP1 because similar requirements are already provided under the IPP Determination. The Capex IM obligations will apply from RCP2, and the corresponding obligation will be removed from the IPP Determination.

11.2.11 The policies and process adjustment, set by the IPP Determination, continues to apply during RCP1. This will be replaced by a similar policies and process adjustment mechanism in the Capex IM in RCP2. The IPP Determination will be amended to avoid duplication of these mechanisms prior to RCP2.

11.2.12 Wording differences of definitions exist due to changes to the existing definitions. These were not immediately aligned to avoid any potential implications for, or changes

[87] Commerce Commission, IPP Determination, 22 December 2010, clause 5.3(4)(d).

to the price path that has already been set for RCP1. Full alignment of the IPP Determination with the Capex IM Determination will be deferred until prior to RCP2, when a draft IPP determination for RCP2 will be issued for consultation.

Implementation - Base capex transitional provisions

Implementation: Base capex transition	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Base capex information requirement (regulatory templates, identified programmes and Base capex proposal) applies with effect from RCP2	Clauses 1.1.3(1), 1.1.4(3)(a) and 2.2.1		
Commission to make Base capex allowance decisions under the Capex IM with effect from RCP2	Clauses 1.1.3(1), 1.1.4(3)(a) and 2.2.2		
Base capex cost-benefit analysis and consultation requirements (as applicable) to apply from RCP2	Clauses 1.1.3(1), 1.1.4(4) and 3.2.1		
Base capex policies and processes requirement to apply from RCP2	Clauses 1.1.3(1), 1.1.4(4) and 3.2.2		
Base capex revenue adjustments to apply from RCP2	Clauses 1.1.3(1), 1.1.4(3)(b)(ii) and 3.2.3		

11.3 Major capex transitional provisions

Decisions - Major capex transitional provisions

11.3.1 Major capex projects that were approved prior to the Capex IM Determination will not be reassessed under the Capex IM. These projects will be treated as Major capex projects approved by the Commission under the Capex IM. The components of these project approvals will be considered to be the approved components under the Capex IM. For example, this will include approval components such as:

a. any date specified as the date the approval expires will become the 'approval expiry date'

b. the specified outputs or deliverables become 'approved Major capex project outputs'

c. forecast costs adopted, where the probability of the actual costs being lower than the forecast is 50%, becomes the 'P50'

d. any forecast commissioning date becomes the 'commissioning date assumption'

e. any forecast completion date becomes the 'completion date assumption'

f. any allocation of costs as recoverable costs, for non-transmission solutions, becomes the recovery scheme.

11.3.2 Major capex projects that were approved prior to the Capex IM Determination, but are not yet commissioned, are listed in Table 11.1.

Table 11.1 Major capex projects approved prior to the Capex IM Determination

GUP Code	Title	Approved expenditure ($million)	Forecast commissioning date
NIGUP	North Island Grid Upgrade	$824.00	May 2012
2007 GUP	West Coast Grid Upgrade	$19.00	September 2011
HVDC	HVDC Grid Upgrade	$672.00	February 2014
GUP2008 Part III	Wairakei Ring	$141.00	April 2013
GUP2008 Part IV	Maungatapere Bus Security	$4.10	March 2011
GUP2008 Part VI	Woodville-Mangamaire-Masterton Reconductoring	$17.40	May 2011
GUP2008 Part VIII	Redclyffe Bus Security	$1.90	January 2011
NAAN	North Auckland and Northland Grid Upgrade	$473.00	July 2013
GUP2008 Part VII	Bombay Bus Security	$4.70	February 2012
GUP2009 Part III	Wanganui-Stratford Transmission Investment Proposal	$44.10	June 2012
GUP2009 Part IV	Bay of Plenty Interconnection Capacity Upgrade2012	$21.50	2012
GUP2009 Part V	Lower South Island Renewables Investment Proposal	$197.00	2015
GUP2009 Part VI	Auto Synchronisation Points Investment Proposal	$9.50	2013
GUP2009 Part VII	Upper North Island Dynamic Reactive Support Investment Proposal	$110.20	2015
GUP2009 Part VIII	Lower South Island Reliability Transmission Investment Proposal	$62.40	2015
IGE – 1	HVDC IGE	$6.30	2012
IGE – 3	Upper South Island DSP trial for grid support contracts	$8.27	2013

11.3.3 Major capex projects that were submitted for approval prior to the Capex IM Determination and are still under review by the Commission will continue to be assessed under Part F of the Electricity Governance Rules in accordance with s 54R. These projects are listed in Table 11.2.

Table 11.2 Major capex projects submitted for approval prior to the Capex IM

GUP Code	Title	Transpower's proposed expenditure (million)	Transpower's proposed commissioning date
GUP209_Part X	Otahuhu land purchase	$6.73	Under discussion
GUP2009_Part Xl	Bunnythorpe-Haywards conductor replacement investment proposal	$130.50	2018

Reasons - Major capex transitional provisions

11.3.4 The approach adopted applies the incentive mechanisms to all projects that have not been commissioned. We consider this appropriate, especially considering the magnitude of the projects currently underway. Transpower should have incentives to make cost savings where appropriate, as well as be accountable for delivering the outputs assumed when each project was approved.

11.3.5 The Act is not prescriptive about the process to be followed where the Capex IM comes into force part way through the process of reviewing a proposal from Transpower. We are of the view, however, that such projects should be reviewed using the process in place at the time that project is submitted. This pragmatic solution allowed Transpower to continue to develop Major capex proposals while the Capex IM was being developed. If the Commission was to apply the Capex IM to a project submitted under the previous framework, it would be using new evaluation criteria, and applying this to a project developed under the previous criteria.

Implementation - Major capex transitional provisions

Implementation: Major Capex transitional provisions	Determination References		
	Transpower Capex IM	Transpower IPP	Transpower IMs
Major capex approved prior to the Capex IM will be treated as approved under the Capex IM.	Clauses 1.1.4(1)		
For projects approved prior to the Capex IM, the components of those project approvals will be considered to be the approved components under the Capex IM.	Clause 1.1.4(2)		
Application for approval of a Major capex project received before the date of commencement and where approval is not made at the time of commencement is to be decided in accordance with s 54R(3)(b) of the Commerce Act 1986	Clause 1.1.3(2)		
Key definitions			
Major capex	Clause 1.1.5		
Major capex project	Clause 1.1.5		