

Regulation Branch

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GLOSSARY OF TERMS, ABBREVIATIONS AND DEFINITIONS

Abbreviation	Definition
ACAM	Avoidable Cost Allocation Methodology
ACCC	Australian Competition and Consumer Commission
Act, The	Commerce Act 1986
AECT	Auckland Energy Consumer Trust
AER	Australian Energy Regulator
AIAL	Auckland International Airport Ltd.
Asset Valuation Report	Yarrow, G., Cave, M., Pollitt, M., Small, J., Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission, May 2010
Authority, The	Electricity Authority
BA	Benchmark Agreement
CAA	Commerce Amendment Act 2008
CAPM	Capital Asset Pricing Model
Capex	Capital Expenditure
CEG	Competition Economists Group
CIC	Customer Investment Contract
Code, The	Electricity Industry Participation Code 2010
Commission, The	Commerce Commission
CPI	Consumer Price Index
CPP	Customised Price-Quality Path
DHC	Depreciated Historic Cost
DPP	Default Price-Quality Path
Draft Expert Review	An individual independent expert review of the Commission's draft decisions for IMs as set out in the Draft Reasons Papers for EDBs and GPBs by the Commission's Experts
Draft IMs	Draft (Transpower Input Methodologies) Determination released on 5 July 2010
EC	Electricity Commission
EDBs	Electricity Distribution Businesses
EDS	Electricity Distribution Services
EGRs	Electricity Governance Rules
ELBs	Electricity Lines Businesses
Electricity Industry Act	Electricity Industry Act 2010
ENA	Electricity Networks Association
ESC	Essential Services Commission
Expert Panel	Cost of Capital Expert Panel
Experts	The Commission's independent expert economic advisors for IMs: Professor Martin Cave; Dr Michael Pollitt; Dr John Small; and Professor George Yarrow
EV	Economic Value

Abbreviation	Definition
FCM	Financial Capital Maintenance
Final Expert Review	An individual independent expert review of the Commission's updated draft decisions for IMs for EDBs and GPBs by the Commission's expert economic advisors prior to it determining the IMs
GAAP	Generally Accepted Accounting Practice
GPBs	Gas Pipeline Businesses
GFC	Global Financial Crisis
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAG	Industry Advisory Group
ID Discussion Paper	Information Disclosure Discussion Paper
IFRS	International Financial Reporting Standards
IM Discussion Paper	Input Methodologies Discussion Paper
IMs	Input Methodologies
IPP	Individual Price-Quality Path
IR	Instantaneous Reserves
IRD	Inland Revenue Department
IRIS	Incremental Rolling Incentive Scheme
IPP Determination	Commerce Commission, <i>Commerce Act (Transpower Individual Price-Quality Path) Determination</i> , 22 December 2010
LECG	Law and Economics Consulting Group LLC
MAR	Maximum Allowable Revenue
MED	Ministry of Economic Development
MEUG	Major Electricity Users' Group
MoU	Memorandum of Understanding
MRP	Market Risk Premium
NIC	New Investment Contract
NERA	National Economic Research Associates
NPV	Net Present Value
NZIER	New Institute of Economic Research
ODV	Optimised Deprival Valuation
OECD	Organisation for Economic Co-operation and Development
OP	Outage Protocol
Opex	Operating Expenditure
Paper, The	Commerce Commission, <i>Input Methodologies (Transpower) Reasons Paper</i> , 22 December 2010
Part 4 Purpose	Purpose of Part 4, set out in section 52A of the Act
Post-tax cost of capital	Where the cost of debt is adjusted down by an interest tax deduction and the company is remunerated for its (un-levered) tax liabilities through a cash flow allowance.

Abbreviation	Definition
Provisions Paper	Commerce Commission, Regulatory provisions of the Commerce Act 1986 – Discussion paper, 19 December 2008
PV	Present Value
PwC	PricewaterhouseCoopers
RAB	Regulatory Asset Base
RCP1	Regulatory Control Period 1
ROI	Return on Investment
S&P	Standard and Poors
SCADA/EMS	Supervisory Control and Data Acquisition/Energy Management System
Settlement agreement	Deed of settlement between the Commission and Transpower dated 24 June 2008 and the associated Commerce Act (Transpower Thresholds) Notice 2008
SOSPA	System Operator Service Provider Agreement
Submissions Review	Yarrow, G., Cave, M., Pollitt, M., Small, J., <i>Review of Submissions on Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission</i> , November 2010
TAMRP	Tax-adjusted market risk premium
Transpower	Transpower New Zealand Ltd
TPM	Transmission Pricing Methodology
Vanilla cost of capital	Where the corporate tax shield provided by debt capital is ignored in the cost of capital calculation, and firms are remunerated for their levered tax liabilities through a cash flow allowance.
WACC	Weighted average cost of capital
WIAL	Wellington International Airport Ltd.

EXECUTIVE SUMMARY

Introduction

Purpose of this Paper

X1 The Commerce Commission (Commission) has determined input methodologies (IMs) for electricity lines services under Part 4 of the Commerce Act 1986 (the Act). 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). IMs set out the rules, requirements and processes applying to the regulation of those services. In accordance with s 52W, the Commission's reasons for these IMs will be set out in the relevant Gazette notice that publishes the IMs. This Reasons Paper (Paper) expands on those reasons.

Regulated services discussed in this Paper

X2 This Paper discusses the IM determinations that have been made by the Commission in respect of electricity lines services supplied by Transpower ('electricity transmission services').

Part 4 Regulatory Framework

Purpose and application of IMs

X3 The purpose of IMs is to promote certainty for suppliers and consumers in relation to the rules, requirements and processes applying to the regulation, or proposed regulation, of goods and services under Part 4 (s 52R). IMs must include certain matters, to the extent applicable to the type of regulation (s 52T). The IMs that apply to electricity transmission services depend on the 'regulatory instruments' that apply to those services—i.e. information disclosure, and an individual price-quality path (IPP).

Purpose and application of types of regulation

X4 Transpower is subject to:

- information disclosure regulation—the purpose of which is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 is being met (s 53A); and
- individual price-quality regulation.

X5 The Commission has released a s 52P determination that gives effect to individual price-quality regulation for Transpower along with the IM Determination for electricity transmission services. The Commission intends consulting during 2011 on the information disclosure determination for Transpower.

Scope of IMs

- X6 In light of the purpose of the relevant regulatory instruments, and the purpose of Part 4, the Commission has determined IMs for:
- the allocation of costs to regulated services supplied by Transpower;
 - the valuation of assets that are used to supply electricity transmission services;
 - the treatment of tax costs for regulatory purposes;
 - estimating the cost of capital; and
 - rules and processes that set out how price-quality regulation operates, including:-
 - how price is specified;
 - circumstances in which the IPP may be reconsidered within a regulatory period; and
 - how a rolling incentive mechanism will operate under Transpower's IPP.
- X7 As a result of the recent passage of the Electricity Industry Act 2010, the Commission is also required to determine an IM for Transpower's capital expenditure (capex) proposals by 1 November 2011 (Capex IM). The Commission's preliminary views on the Capex IM are set out in a Discussion Paper being released shortly after this Paper.

Part 4 Purpose

- X8 The central purpose of Part 4 is to promote the long-term benefit of consumers in markets where there is little or no competition and little or no likelihood of a substantial increase in competition (s 52A(1)). To achieve this, the Commission must promote outcomes in regulated markets that are consistent with those produced in competitive markets, such that regulated suppliers:
- a. have incentives to innovate and to invest, including in replacement, upgraded, and new assets (s 52A(1)(a));
 - b. have incentives to improve efficiency and provide services at a quality that reflects consumer demands (s 52A(1)(b));
 - c. share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices (s 52A(1)(c)); and
 - d. are limited in their ability to extract excessive profits (s 52A(1)(d)).
- X9 'Competition' in Part 4, as in the rest of the Act, means 'workable or effective competition' (s 3(1))—hereafter 'workable competition'.
- X10 A discussion of the Part 4 Purpose in the context of regulating electricity lines services (including Transpower) is set out in the Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper (the EDB/GPB Reasons Paper). The EDB/GPB Reasons Paper explains that, in designing the regulatory instruments, the Commission needs to check that the IMs will promote outcomes consistent with those produced in workably competitive markets (to the extent relevant to markets with limited or no competition), and will promote outcomes such

that the regulatory objectives in s 52A(1)(a)-(d) are achieved, when applied to those instruments.

Application of IMs

- X11 It is in combination with each other, and with other requirements in a s 52P determination for information disclosure or price-quality regulation, that IMs provide incentives for Transpower to act in a manner consistent with the Part 4 Purpose. The IMs are key inputs to:
- the calculation or assessment of financial information disclosure requirements; in particular, the return on and of investment (ROI); and
 - the calculation of maximum allowable revenue under the IPP.
- X12 There are a number of factors relevant to Transpower that do not apply to other suppliers of electricity lines services. The step change in Transpower's investment needs, the proposed improvements to Transpower's forecasting systems, the transition from the existing settlement agreement with the Commission (which expires in June 2011), and the passage of the Electricity Industry Act, are all factors that in the short- to medium-term will likely affect the Commission's ability to design regulatory mechanisms that include the ideal incentives and processes for improving Transpower's performance.
- X13 The focus of the Part 4 Purpose is, however, on the *long-term* benefit of consumers. Improvements to the IMs can be introduced over time, as better information becomes available, and as Transpower's ability to respond to incentive mechanisms in an IPP improves.

Overview of the Input Methodologies

Cost Allocation IM

- X14 Transpower supplies a small proportion of unregulated services compared to many other regulated suppliers. Consequently, Transpower is not required to adjust the total costs associated with supplying electricity transmission services to take into account any costs that might be common to regulated and unregulated services. Transpower must, however, ensure that costs already explicitly or implicitly allocated under any agreement for the provision of system operator services, or under new investment contracts, are not recovered again through the charges for all other electricity transmission services.

Asset Valuation IM

Initial valuation

- X15 Under Part 4, the initial value of the regulatory asset base (RAB) will be established with reference to the regulatory values that have been permitted for each supplier in the past. In the case of Transpower, the existing regulatory asset value is based on that determined under the June 2008 administrative settlement agreement between the Commission and Transpower (settlement agreement).

Rolling forward the RAB value over time

- X16 The value of Transpower's RAB is 'rolled forward' each year for capital additions (i.e. the value of commissioned or acquired assets), asset disposals and depreciation. Transpower's capex is subject to *ex ante* approval processes, currently undertaken as part of determining the IPP rather than as part of the IMs. The asset valuation IM allows Transpower to roll its RAB value forward for capital additions at cost. Any capex spend in excess of approved levels during a regulatory period is dealt with through annual wash-ups, as explained in the IPP Reasons Paper.
- X17 No indexation is to be applied in rolling forward Transpower's RAB value. This contrasts with the approach the Commission is taking for other regulated suppliers, where the roll forward of RAB values year-on-year will be linked to the Consumer Price Index. This difference reflects, among other things, Transpower's high investment needs over the short- to medium-term compared to other regulated suppliers.
- X18 The value of Transpower's RAB will also be depreciated year-on-year, on a straight-line basis using physical asset lives. Unlike other regulated suppliers, alternative depreciation approaches are not provided for, given the cash flow advantages to Transpower of not indexing the RAB.

Tax IM

- X19 The treatment of taxation must be consistent with suppliers expecting to earn profits that are consistent with the profits that would be expected in a workably competitive market. In workably competitive markets, it is profits after tax that would on average be expected *ex ante* to be sufficient to reward investment, innovation and efficiency.
- X20 Compared to the alternatives, the tax payable approach comes closest to approximating the cash flows a supplier would need to meet their tax obligations for any given period, and this approach applies to Transpower.

Cost of Capital IM

- X21 The cost of capital reflects the cost of debt and the cost of equity. The cost of capital, in particular the cost of equity, cannot be observed directly. Rather the individual components of the cost of capital must be estimated. Judgement is required in determining what tools and techniques should be used, what the level of individual parameters should be, and what adjustments may be required to ensure the resulting estimate of the cost of capital is reasonable.
- X22 The cost of debt is estimated by reference to the risk-free rate (proxied by yields on Government bonds), plus margins on publicly traded bonds for the greater risk on corporate debt, and the costs of issuing debt.
- X23 The term of the risk-free rate is to match the length of the regulatory period (except in the first regulatory period), where it is set to five years for Transpower. This is to ensure that suppliers can expect (*ex ante*) to earn a normal return, consistent with outcomes in workably competitive markets, such that suppliers are compensated for the interest rate risks they bear and are not over- or under-compensated (depending on the shape of the yield curve), which could occur if a longer (or a shorter) term

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- was chosen. The alignment of the term of the risk-free rate with the regulatory period is compatible with other possible objectives such as longer term borrowing, given the availability and widespread use of interest rate swaps which allow suppliers to reset their interest rate re-pricing period to shorter terms (and the ability to match the regulatory period if desired), even if the supplier has issued debt with a long original maturity date (for example, 10 years). Allowance is made for those additional costs of issuing longer maturity debt (debt with an original term to maturity which exceeds five years) that cannot be managed through swaps, where Transpower has in fact issued such debt.
- X24 Confidential information provided by regulated suppliers with respect to their actual debt margins and costs has been used to confirm that the estimates of the cost of debt under the IM are a realistic estimate of the cost of debt finance for a regulated supplier.
- X25 The IM uses the simplified Brennan-Lally Capital Asset Pricing Model (CAPM) to estimate the cost of equity. This model best fits the particular features of the New Zealand taxation system, and is so widely used in New Zealand that there is currently no credible alternative.
- X26 The IM assumes that the tax-adjusted market risk premium for owning a portfolio of New Zealand equity investments of average risk will average 7%. This reflects estimates from a range of sources reflecting both historical and forecast estimates of the return on equity investments with average risk. It is consistent with the average assumption used by New Zealand investment banks. An uplift to 7.5% is proposed until 2011 to take into account the impacts of the global financial crisis.
- X27 Suppliers of services regulated under Part 4 have relatively lower exposure to market risk than most New Zealand companies because they are suppliers of essential services, which are less affected by the state of the economy. This relative risk relationship compared to the overall share market is represented by beta. Using data from listed utilities in New Zealand, Australia and the US, the Commission has estimated the asset beta for Transpower (as for EDBs) at 0.34. The Commission's estimate is in the middle of the range of asset betas adopted by other regulators for regulated energy utilities.
- X28 Leverage is 44%, in line with the average leverage of an international survey of 79 listed utility companies. (The result is the same whether the two listed New Zealand regulated energy entities are included or excluded from the sample.) Applying that leverage to the asset beta results in an equity beta of 0.61 for Transpower (as for EDBs).
- X29 For application to the IPP, the IM specifies that the 75th percentile of the estimated WACC distribution should be used. This is higher than the mid-point estimate of the cost of capital, but the Commission considers this choice is prudent to ensure, by allowing for possible errors in the estimation of WACC, that Transpower has incentives to invest, because efficient investment is to the long-term benefit of consumers.

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- X30 The Commission has tested the estimates of the cost of capital produced by the cost of capital IM to ensure it is reasonable and commercially realistic. In particular, the Commission has tested its estimate against independent estimates of the cost of capital in New Zealand, against regulatory decisions (especially in the UK and Australia), and against historic and expected returns for the New Zealand market.
- X31 These tests confirm that the IM provides estimates of the cost of capital that are expected to provide all suppliers of regulated services, including Transpower, with sufficient returns to incentivise innovation and investment, while ensuring suppliers are limited in their ability to extract excessive profits.

Rules and Processes IMs

Specification of price

- X32 The key component of the IM for the specification of price is the ‘form of control’ that is used to cap revenues or prices under price-quality regulation. For Transpower (where demand risk is largely outside Transpower’s control and costs are largely fixed), price is specified by a total revenue cap, net of pass-through costs and recoverable costs.
- X33 The IMs include a list of pass-through costs as well as a list of recoverable costs for each service. The main distinction between these two categories is the extent to which they are controllable by Transpower. Pass-through costs are those costs that are outside the control of Transpower. Recoverable costs may also be passed through to prices, but are subject to an approval process.
- X34 Pass-through costs include local authority rates and regulatory levies. New levies can be pass-through costs, subject to the criteria in the IM being satisfied. Recoverable costs include instantaneous reserves availability charges (with some exclusions), and the costs of developing and funding transmission alternatives under some conditions.

Circumstances in which price-quality paths may be reconsidered

- X35 The Commission sets an IPP for Transpower on an *ex ante* basis for a 4 to 5 year period. To maximise incentives for Transpower to behave efficiently, the rules on when an IPP may be reconsidered should where possible be clearly specified.
- X36 Transpower’s IPP may be reconsidered if a material error is discovered in the determination, or if Transpower has provided false or misleading information to the Commission, which the Commission has relied upon in making its determination. In addition, an IPP may be reconsidered if there is a catastrophic event that imposes material costs, or changes in legislative or regulatory requirements materially affect costs.
- X37 Transpower’s IPP will also be reconsidered annually to take account of the revenue impact of major capex approved by the Commission, and an economic (EV) adjustment.

Incremental rolling incentive scheme

- X38 To provide Transpower with incentives to pursue efficiency gains throughout the regulatory period, the Commission has decided to implement an incremental rolling incentive scheme under the IPP. The incremental rolling incentive scheme allows Transpower to retain efficiency gains in controllable operating expenditure for five years spanning regulatory periods.

CHAPTER 1: INTRODUCTION

1.1 Purpose of this Paper

- 1.1.1 The Commerce Commission (Commission) has determined input methodologies (IMs) for electricity lines services supplied by Transpower New Zealand Limited (Transpower) under subpart 3 of Part 4 of the Commerce Act 1986 (the Act).¹ Part 4 provides for the regulation of the price and quality ('economic regulation') 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).² IMs set out the rules, requirements and processes applying to the regulation of those services.
- 1.1.2 In accordance with s 52W, the Commission's reasons for these IMs will be set out in the relevant Gazette notices that publish the IMs.³ This Reasons Paper (Paper) expands on those reasons.

Regulated services discussed in this Paper

- 1.1.3 Subpart 9 of Part 4 sets out provisions specific to the regulation of electricity lines services, including how 'electricity lines services' is defined (s 54C).
- 1.1.4 The Commission has decided to make two separate IM Determinations in respect of regulated services supplied by electricity lines businesses (ELBs):
- i. electricity lines services that are supplied by Transpower (defined by the Commission as 'electricity transmission services');⁴ and
 - ii. all other electricity lines services (defined by the Commission as 'electricity distribution services'), which are currently supplied by 29 electricity distribution businesses (EDBs).⁵
- 1.1.5 This Paper only discusses the IM Determination that has been made by the Commission in respect of electricity transmission services supplied by Transpower. The IM Determinations made by the Commission in respect of other regulated services are discussed in separate papers.⁶

Structure of this chapter

- 1.1.6 The remainder of this chapter is structured as follows:

¹ Statutory references in this Paper are to the Act unless otherwise specified.

² A brief background to Part 4, to some of the key amendments made through the passage of the Commerce Amendment Act 2008 (CAA), and to the reasons for those amendments, is provided in Section 1.2 of the EDB/GPB Reasons Paper (Commerce Commission, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper*, 22 December 2010).

³ Section 52W requires the Commission to publish the IMs by way of notice in the Gazette within 10 working days after the Commission determines the IMs.

⁴ Commerce Commission, *Commerce Act (Transpower Input Methodologies) Determination*, 22 December 2010.

⁵ Commerce Commission, *Commerce Act (Electricity Distribution Services Input Methodologies) Determination*, 22 December 2010.

⁶ Commerce Commission, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper*, 22 December 2010; and Commerce Commission, *Input Methodologies (Airport Services) Reasons Paper*, 22 December 2010.

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- Section 1.2 provides a brief background to the regulation of Transpower under Part 4;
 - Section 1.3 describes the structure of this Paper; and
 - Section 1.4 gives an overview of the process that the Commission has followed in determining the IMs, including consultation undertaken with interested parties and expert advice it has received.

1.2 Background to the Regulation of Transpower under Part 4

- 1.2.1 Transpower is the sole owner and operator of the New Zealand national electricity transmission grid. To address aging transmission assets and low levels of investment in the transmission grid in the past, Transpower is currently undertaking an extensive capital expenditure (capex) programme.
- 1.2.2 On 13 May 2008, the Commission accepted an administrative settlement offer from Transpower in respect of breaches of the thresholds under Part 4A of the Act. Although Part 4A has now been repealed, under Part 4 of the Act Transpower continues to be subject to this administrative settlement until it expires, which occurs once the Commission has assessed Transpower's annual compliance statement for the period to 30 June 2011.
- 1.2.3 Transpower is subject to individual price-quality regulation under Part 4 of the Act, pursuant to an Order in Council made under s 52N of the Act.⁷ Unlike default/customised price-quality regulation, there is no specific purpose statement for individual price-quality regulation. The Commission has been given discretion and flexibility under individual price-quality regulation to set a price-quality path in any way it sees fit, as long as it applies relevant IMs (s 53ZC(1)):
- ...the Commission may set the price-quality path for that supplier using any process, and in any way, it thinks fit, but must use the input methodologies that apply to the supply of those goods or services.
- 1.2.4 Sections 53M and 53N of the Act (which relate to the content of price-quality paths) also apply, with all necessary modifications, as does s 53ZB (which sets out what happens to price-quality paths if IMs change as the result of an appeal). On 22 December 2010, the Commission made a s 52P determination setting out how individual price-quality regulation applies to Transpower.⁸
- 1.2.5 As a result of the passage of the Electricity Industry Act 2010 (Electricity Industry Act), which took effect on 1 November 2010, the Commission is required to determine an IM for Transpower's capital expenditure proposals (Capex IM) under s 54S of the Act by no later than 1 November 2011.⁹ The Commission's preliminary

⁷ Commerce (Part 4 Regulation—Transpower) Order 2010.

⁸ Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination*, 22 December 2010 (IPP Determination). The reasons for the IPP Determination are set out in Commerce Commission, *Individual Price-Quality Path (Transpower) Reasons Paper*, 22 December 2010 (IPP Reasons Paper).

⁹ Section 54S(3) provides that the Minister may, on the written request of the Commission, extend the deadline once by a period of up to 3 months.

views on the Capex IM for Transpower are set out in a Discussion Paper being released shortly after this Paper.

1.3 Structure of this Paper

1.3.1 As noted above, the Commission has made a separate IM Determination for EDBs, which is discussed in a separate Reasons Paper.¹⁰ Rather than repeat the detailed discussion of the regulatory and economic framework for determining IMs for electricity lines services in this Paper, the Commission cross-references the discussion in the EDB/GPB Reasons Paper. Furthermore, many of the parameters that make up the cost of capital IM are generic for all of the services regulated under Part 4. This Paper therefore draws heavily on the detailed discussion in the EDB/GPB Reasons Paper and should be read in conjunction with that Paper as relevant.

1.3.2 This Paper is structured as follows:

- in Chapter 2 the Commission discusses the regulatory framework for determining IMs for Transpower;
- each IM (or group of IMs) is then discussed in a separate chapter (Chapters 3-7); and
- in Appendix A, the Commission provides more detail on the consultation process it has undertaken to determine IMs for Transpower.

1.3.3 Where the discussion in the EDB/GPB Reasons Paper is relevant to later parts of this Paper, the relevant sections are identified throughout the rest of this Paper.

Response to submissions

1.3.4 The Commission's views on the appropriate IMs for Transpower have evolved during the consultation process, and it has responded to submissions from consultation rounds prior to the consultation on the draft IM Determination (Draft IMs) in its earlier papers (discussed further in Section 1.4 below). This Paper, therefore, primarily responds to submissions and cross-submissions received on the Draft IMs for Transpower.¹¹

1.3.5 Where submissions on the Draft IMs were addressed by changes to the Draft Determinations for the purpose of technical consultation, they are not discussed again in this Paper.¹²

¹⁰ Commerce Commission, EDB/GPB Reasons Paper, supra n 2.

¹¹ In making the IM Determination for Transpower, the Commission has also considered other relevant submissions on IMs, including those from interested parties submitting in respect of the IM Determinations for EDBs, GPBs and Airports.

¹² The reasons for changes to the draft determination were explained in a Consultation Update Paper released with the Revised Draft Determination for technical consultation. Commerce Commission, *Input Methodologies (Transpower) Consultation Update Paper*, 12 November 2010.

1.4 Process to Determine IMs

Statutory process for determining IMs

1.4.1 The statutory process for determining IMs is contained in s 52V, which provides that:

- (1) When the Commission begins work on an input methodology, it must publish a notice of intention to do so that –
 - (a) outlines the process that will be followed; and
 - (b) sets out the proposed time frames.
- (2) During the course of its work on an input methodology, the Commission –
 - (a) must publish a draft methodology; and
 - (b) must give interested persons a reasonable opportunity to give their views on that draft methodology; and
 - (c) may hold 1 or more conferences; and
 - (d) must have regard to any views received from interested persons within any time frames set.
- (3) Despite subsections (1) and (2), any work done or action taken (including any consultation) by the Commission on input methodologies before the commencement of this section may be treated by the Commission and any person consulted as work done or action taken under this section.
- (4) The Commission must consult with interested parties before deciding to treat earlier work or action as work or action done under this section.

Commission's process for determining IMs

1.4.2 In accordance with s 52V(1), on 11 December 2008 the Commission published a notice of intention (Intention Notice) advising that it had begun work on IMs.¹³ Since December 2008, the Commission has undertaken extensive consultation with interested parties. In addition to Transpower itself, the key submitters on the IMs for Transpower were the Major Electricity Users' Group (MEUG), the gentailers (Contact Energy, Genesis and Meridian) and some of the EDBs (e.g. Orion).¹⁴

1.4.3 The consultation process can be described in three broad phases:

- Phase I: Discussion (December 2008 to November 2009).
- Phase II: Draft Determinations (December 2009 to September 2010).

¹³ Further detail on the process for IMs was set out in the Commission's discussion paper on the new legislative provisions: Commerce Commission, *Regulatory provisions of the Commerce Act 1986 – Discussion paper*, 19 December 2008 (Provisions Paper). Throughout the process to determine IMs, the Commission kept interested parties up to date on the process and timing of consultation steps through media releases, updates on its website and email notifications.

¹⁴ As noted above (footnote 11), the Commission has also been able to take into account the views of interested parties from consultation on IMs for airports, EDBs and GPBs, to the extent that they have been relevant to Transpower.

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- Phase III: Determinations (October 2010 to December 2010).

1.4.4 A brief summary of the Commission's process is provided below. More detail on the papers released at each consultation step is set out in Appendix A.

Extension to the deadline for determining IMs

1.4.5 During the Discussion phase, a number of interested parties raised concerns about timeframes for consultation, and the need for engagement on the detailed implementation of IMs. In particular, a number of parties sought to engage with the Commission through workshops on detailed proposals for IMs specific to each type of regulated service.

1.4.6 In response to these concerns, the Commission sought an extension to the deadline for determining IMs for services regulated under subparts 9 to 11 of Part 4. On 10 December 2009, the Minister of Commerce (Minister) announced his decision to grant the Commission an extension under s 52U(2) of 6 months, to 31 December 2010. The extension allowed the Commission to undertake additional consultation during Phase II.

Phase I – Discussion

1.4.7 A discussion paper on the new legislative provisions (the Provisions Paper), including IMs, was released in December 2008.¹⁵ The Commission consulted on its preliminary views for IMs and how they would be applied for each of the regulated services under subparts 9-11 of Part 4 through its Input Methodologies Discussion Paper and associated reports (released in June 2009);¹⁶ and a workshop on the cost of capital in November 2009.¹⁷ Written submissions and cross-submissions from interested parties were received at each stage.

Phase II – Draft Determinations

1.4.8 The key consultation step in the process to determine IMs was the publication of the Draft IMs for each type of regulated service in accordance with s 52V(2)(a) (the Draft IMs). The Draft IMs for Transpower were released in July 2010.¹⁸ Prior to the release of the Draft IMs, the Commission held a workshop on Transpower with interested parties in March 2010.¹⁹ Written submissions and cross-submissions from interested parties were sought at each stage, including before and after the workshop.

¹⁵ Commerce Commission, Provisions Paper, supra n 13.

¹⁶ Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009.

¹⁷ In light of submissions and the more detailed nature of the issues relating to electricity transmission services, the Commission decided not to hold a session relating to Transpower at the Input Methodologies Conference in September 2009.

¹⁸ Commerce Commission, *Draft Commerce Act (Transpower Input Methodologies) Determination*, 5 July 2010. The Draft Reasons Paper setting out the Commission's draft decisions for Transpower's IMs was released on 25 June 2010. Commerce Commission, *Input Methodologies (Transpower) Draft Reasons Paper*, 25 June 2010.

¹⁹ Much of the discussion at the Transpower Workshop related to the setting of Transpower's individual price-quality path, which has been developed in parallel with IMs. An Emerging Views Paper was released prior to the workshop (Commerce Commission, *Transpower Workshop*, 17 February 2010).

Phase III – Determinations

1.4.9 In Phase III, the Commission released a Revised Draft Determination for consultation on the technical drafting of the determination.²⁰ Written submissions were sought to ensure that the drafting of the IM Determination properly gave effect to the intended approaches for Transpower's IMs.

Expert advice obtained by the Commission

1.4.10 The Commission has been assisted throughout the process to determine IMs by expert advice. An overview of the expert advice obtained by the Commission that is relevant to Transpower is provided below. The Commission has had regard to this advice in determining IMs for Transpower.

Economic advisors

1.4.11 The Commission's independent expert economic advisors for IMs (Experts) were:

- Professor Martin Cave of the London School of Economics; the Centre on Regulation in Europe; and Cambridge Economic Policy Associates;
- Dr Michael Pollitt of Cambridge University;
- Dr John Small of Covec Limited; and
- Professor George Yarrow of the Regulatory Policy Institute, Oxford.

1.4.12 The Experts prepared a joint report on asset valuation in workably competitive markets (Asset Valuation Report), which was released for consultation with the Draft IMs.²¹ Submissions from interested parties on the Asset Valuation Report were reviewed by the Experts (the Submissions Review).²² The Submissions Review was published on the Commission's website on 16 December 2010.²³

The cost of capital

1.4.13 Prior to the CAA being passed, the Commission had engaged a Cost of Capital Expert Panel (Expert Panel) to advise it in developing its generic Cost of Capital Guidelines to apply across all services it regulates. The Expert Panel has continued to advise the Commission in relation to the cost of capital for IMs (paragraphs 1.4.14 - 1.4.18).

1.4.14 The Expert Panel is comprised of:

²⁰ Commerce Commission, *Revised Draft Commerce Act (Transpower Input Methodologies) Determination*, 12 November 2010.

²¹ Yarrow, G., Cave, M., Pollitt, M., Small, J., *Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission*, May 2010 (Asset Valuation Report).

²² Yarrow, G., Cave, M., Pollitt, M., Small, J., *Review of Submissions on Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission*, November 2010 (Submissions Review).

²³ The Commission also published reports from Professor Yarrow and Dr Small (Small, J., *Response to CEG*, 23 November 2010; Yarrow, G. *Comments on a CEG memorandum of 17 November 2010*, 14 December 2010) responding to a memorandum from Competition Economics Group (CEG) on behalf of Vector (Competition Economics Group (on behalf of Vector), *Expert reports of Dr Small and Professor Yarrow*, 17 November 2010). The CEG memorandum commented on reports prepared by each Expert on behalf of Telstra, which were submitted to the Australian Competition and Consumer Commission (ACCC).

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- Professor Julian Franks of London Business School;
 - Dr Martin Lally of Victoria University of Wellington; and
 - Professor Stewart C. Myers of the MIT Sloan School of Management.
- 1.4.15 The Expert Panel's report was released for consultation as part of the Discussion phase (with the IM Discussion Paper and Revised Draft Cost of Capital Guidelines).²⁴
- 1.4.16 Dr Lally attended the Commission's Cost of Capital Workshop in November 2009 to hear the views of interested parties and provide comment during the proceedings.
- 1.4.17 Subsequent to the Cost of Capital Workshop, the Commission engaged the Expert Panel to provide independent advice on whether it should change its previous estimate of the tax-adjusted market risk premium (TAMRP) as a result of the recent global financial crisis (GFC).²⁵
- 1.4.18 The Expert Panel's joint report on the TAMRP was released for consultation with the Draft Reasons Papers for IMs.
- 1.4.19 Dr Lally has also reviewed certain submissions from PricewaterhouseCoopers (PwC) and Professor Guthrie on the Commission's draft decisions for the cost of capital IMs. These reports are:
- Comments on Input Methodologies (EDS) Draft Reasons Paper;²⁶ and
 - Comments on Measurement Error and Regulated Firms' Allowed Rates of Return.²⁷
- 1.4.20 Dr Lally's reports were published on the Commission's website on 16 December 2010.

²⁴ Franks, J., Lally M., & Myers S., *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology*, 18 December 2008.

²⁵ Franks, J., Lally, M., Myers, S., *Recommendation to the New Zealand Commerce Commission on whether or not it should change its previous estimate of the tax-adjusted market risk premium as a result of the recent global financial crisis*, 14 April 2010.

²⁶ Lally, M., *Comments on Input Methodologies (EDS) Draft Reasons Paper*, 3 September 2010.

²⁷ Lally, M., *Comments on Measurement Error and Regulated Firms' Allowed Rates of Return*, 13 September 2010.

CHAPTER 2: REGULATORY FRAMEWORK

2.1 Introduction

- 2.1.1 This chapter discusses the role of ‘input methodologies’ (IMs) within the context of the regulatory framework created by Part 4 of the Act.
- 2.1.2 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 are underpinned by a series of IMs that set out the rules, requirements and processes applying to the regulation of those services.
- 2.1.3 As noted in Chapter 1, the Commission has made a s 52P determination setting out how individual price-quality regulation applies to Transpower, and has also made an IM Determination containing all of the IMs that apply to the regulated services supplied by Transpower. The Commission intends consulting on a s 52P determination setting out how information disclosure regulation applies to Transpower in 2011.
- 2.1.4 This chapter is structured as follows:
- Section 2.2 provides an introductory overview of IMs;
 - Section 2.3 discusses the Part 4 Purpose and factors specifically relevant to Transpower; and
 - Section 2.4 sets out a number of additional statutory considerations relevant to setting IMs for Transpower.
- 2.1.5 This regulatory framework is applied in the analysis underpinning the IMs set out in the following chapters.

2.2 Introduction to IMs under Part 4

Purpose of IMs

- 2.2.1 Subpart 3 and s 52C of Part 4 of the Act set out what IMs are, how they are determined and how they apply. Section 52R provides that the purpose of IMs is:
- 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].
- 2.2.2 IMs will promote regulatory certainty for Transpower and consumers by setting out, as clearly as possible, a number of the key ‘inputs’, whether direct or indirect, to information disclosure regulation and individual price-quality regulation.

Definition of IMs

2.2.3 'Input methodology' is defined broadly in s 52C as:

a description of any methodology, process, rule, or matter that includes any of the matters listed in section 52T and that is published by the Commission under section 52W; and, in relation to particular goods or services, means any input methodology, or all input methodologies, that relate to the supply, or to suppliers, of those goods or services.

2.2.4 This definition is elaborated on in s 52T:

- (1) The input methodologies relating to particular goods or services must include, to the extent applicable to the type of regulation under consideration, –
 - (a) methodologies for evaluating or determining the following matters in respect of the supply of the goods or services:
 - (i) cost of capital:
 - (ii) valuation of assets, including depreciation, and treatment of revaluations:
 - (iii) allocation of common costs, including between activities, businesses, consumer classes, and geographic areas:
 - (iv) treatment of taxation; and
 - (b) pricing methodologies, except where another industry regulator (such as the Electricity Authority) has the power to set pricing methodologies in relation to particular goods or services; and
 - (c) regulatory processes and rules, such as –
 - (i) the specification and definition of prices, including identifying any costs that can be passed through to prices (which may not include the legal costs of any appeals against input methodology determinations under this Part or of any appeals under section 91 or section 97); and
 - (ii) identifying circumstances in which price-quality paths may be reconsidered within a regulatory period; and
 - (d) matters relating to proposals by a regulated supplier for a customised price-quality path, including –
 - (i) requirements that must be met by the regulated supplier, including the scope and specificity of information required, the extent of independent verification and audit, and the extent of consultation and agreement with consumers; and
 - (ii) the criteria that the Commission will use to evaluate any proposal.
- (2) Every input methodology must, as far as is reasonably practicable, –
 - (a) set out the matters listed in subsection (1) in sufficient detail so that each affected supplier is reasonably able to estimate the material effects of the methodology on the supplier; and

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- (b) set out how the Commission intends to apply the input methodology to particular types of goods or services; and
 - (c) be consistent with the other input methodologies that relate to the same type of goods or services.
- (3) Any methodologies referred to in subsection (1)(a)(iii) must not unduly deter investment by a supplier of regulated goods or services in the provision of other goods or services.

How IMs apply

2.2.5 Chapter 2 of the EDB/GPB Reasons Paper discusses the role of IMs in Part 4 in detail, including how IMs are relevant to different types of regulation (i.e. ‘regulatory instruments’).²⁸ The matters referred to in s 52T(1)(a) relate to a number of the key components generally included in the ‘building blocks approach’ to determining or assessing the revenues received from the supply of regulated services under price-quality regulation. The building blocks approach involves determining maximum allowable revenues that are expected to recover the ‘building block’ cost components faced by the regulated suppliers.²⁹

2.2.6 Each building block cost component is generally intended to reflect realistically achievable efficiencies for the particular component in question. Nevertheless, a more important consideration is to ensure that appropriate incentives for efficiency are provided by the application of the building blocks approach as a whole (i.e. in setting a price path for an entire regulatory period), rather than by any individual building block component. There are usually uncertainties involved in estimating each component. Consequently, regulators typically set each component mindful of the asymmetric consequences of achieving a return that is too low, which might discourage investment, or a return that is too high, which might result in excessive profits. Although lower prices will generally provide immediate benefits to consumers, consumers will only benefit in the long-term if regulated suppliers have incentives to make efficient investments such that regulated services can be provided at a quality that reflects consumer demands.

2.2.7 In the case of Transpower, under information disclosure regulation, the matters covered by IMs in s 52T(1)(a)³⁰ are most relevant to the disclosure and assessment of financial performance measures, as well as the financial statements and other information that supports those measures. The key financial performance measure is the return on investment (ROI), which is dependent on actual revenue received from the supply of regulated services. Under individual price-quality regulation, those IMs in s 52T(1)(a)—namely, cost allocation, asset valuation (including depreciation and revaluations), tax, and the cost of capital—are relevant to the setting of maximum allowable revenues for Transpower over the regulatory period, in the

²⁸ Commerce Commission, EDB/GPB Reasons Paper, supra n 2, Chapter 2.

²⁹ The building blocks cost components typically comprise non-capital costs (e.g. operating expenditure (‘opex’) and tax) and capital costs. The capital costs are made up of a ‘return on’ efficiently invested capital (i.e. on the Regulatory Asset Base (‘RAB’) multiplied by the cost of capital); and a ‘return of’ efficiently invested capital (i.e. depreciation).

³⁰ With the exception of those matters listed in s 52T(1)(a)(iii) that relate to cost allocation to consumer classes and geographic areas which the Commission considers are more relevant to pricing methodologies under s 52T(1)(b).

same way that they are relevant to a customised price-quality path for EDBs. These IMs are discussed in Chapters 3-6 of this Paper.³¹

- 2.2.8 The matters covered by IMs in s 52T(1)(b), and in parts of s 52T(1)(a)(iii), relate to the way in which prices for individual services, classes of services, or for different customer groups are set.³² The Electricity Industry Act has amended s 52T(1)(b) so that the Commission does not need to set IMs for pricing methodologies “where another industry regulator (such as the Electricity Authority) has the power to set pricing methodologies in relation to particular goods or services”. Given the responsibilities that the Electricity Authority (the Authority) has in respect of pricing methodologies for Transpower (and EDBs), and to ensure no overlap of the Commission’s role with the Authority, the Commission has decided not to set an IM for pricing methodologies for Transpower (or for EDBs).
- 2.2.9 Section 52T(1)(c), which relates to regulatory processes and rules, sets out only two examples of what these processes and rules might relate to, namely: the specification and determination of prices (including pass-through costs), and the identification of circumstances in which price-quality paths may be reconsidered under price-quality regulation. These matters, as they relate to Transpower, are discussed in Chapter 7.
- 2.2.10 The matters covered by IMs in s 52T(1)(d) specifically relate to customised price-quality paths only, and are therefore not relevant to Transpower.

2.3 Purpose of Part 4

- 2.3.1 Section 52A of the Act states that the purpose of 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.

- 2.3.2 A discussion of the Part 4 Purpose in the context of regulating electricity lines services (including Transpower) is set out in Chapter 2 of the EDB/GPB Reasons Paper.³³ The EDB/GPB Reasons Paper explains that, in designing the regulatory instruments, the Commission needs to check that the IMs will promote outcomes consistent with those produced in workably competitive markets (to the extent

³¹ The detailed discussion on the cost of capital is in Chapter 6 and Appendix H of the EDB/GPB Reasons Paper (supra n 2). Chapter 6 of this Paper cross-references the EDB/GPB Reasons Paper.

³² This is consistent with the definition of pricing methodologies in s 52C, which includes methodologies for setting different prices for different customer groups.

³³ Commerce Commission, EDB/GPB Reasons Paper, supra n 2, Chapter 2.

relevant to markets with limited or no competition), and will promote outcomes such that the regulatory objectives in s 52A(1)(a)-(d) are achieved, when applied to those instruments.

- 2.3.3 It is in combination with each other, and with other requirements in the s 52P determinations under Part 4 for price-quality regulation and information disclosure regulation, that IMs will provide incentives for regulated suppliers, including Transpower, to act in a manner consistent with the Part 4 Purpose.

Definition of consumer in Part 4 for Transpower

- 2.3.4 Section 52C of the Act defines the term ‘consumer’ as “a person that consumes or acquires regulated goods or services”. The use of both ‘consumes’ and ‘acquires’ suggests that the definition extends beyond end-use consumers and includes both direct and indirect acquirers of regulated services.
- 2.3.5 The Commission notes that in its Draft IMs for Transpower published in June 2010, the Commission took the view that ‘consumer’ should be defined with reference to the definition set out in s 54C of the Act, which defines electricity lines services (i.e. regulated services). ‘Consumer’ has the narrower meaning of end-use consumers (as provided in s 2(1) of the Electricity Act 1992) in s 54C.
- 2.3.6 No parties submitted on this view. However, on reflection the Commission considers that:
- the narrower definition in s 54C should only be used for the threshold tests in that section; and
 - the wider definition in s 52C is the appropriate definition of ‘consumer’ for the purposes of the IM Determinations.³⁴
- 2.3.7 The Commission has carefully reviewed its Determination to check that it is consistent with the wider definition of consumer in s 52C and confirms that no consequential changes to the Draft Determination were necessary as a result of this change in view.³⁵

Factors specifically relevant to Transpower

- 2.3.8 In determining Transpower’s IMs, the Commission has considered what guidance is provided by the Part 4 Purpose. The Commission has also considered any factors that could constrain the Commission’s ability to design IMs that, when applied to a particular instrument, will necessarily promote outcomes consistent with workably competitive market outcomes such that s 52A(1)(a)-(d) are achieved.
- 2.3.9 Chapter 2 of the EDB/GPB Reasons Paper highlights that the use of a building blocks approach to determine maximum revenues, which is applied for EDBs under

³⁴ In the IM Determination and in this Paper it is useful for practical purposes to refer to Transpower’s ‘customers’, given that the term is in common usage and that in the context where the term is applied, Transpower’s customers are the relevant consumers (e.g. generators, distributors and directly connected consumers, which directly pay transmission charges to Transpower, but not retailers or end-use consumers that are not directly connected to the national grid, which do not).

³⁵ The definition of ‘consumer’ in relation to electricity lines services is also discussed in the EDB/GPB Reasons Paper.

a customised price-quality path (CPP), as well as for Transpower under the IPP, allows regulated suppliers to recover their efficiently incurred costs. Doing so promotes investment, consistent with s 52A(1)(a), while ensuring that suppliers are limited in their ability to extract excessive profits, consistent with s 52A(1)(d).

- 2.3.10 The Commission considers, however, there are a number of factors in relation to Transpower (as discussed below) that do not apply in the case of EDBs. In particular, while CPPs (and DPPs) promote incentives for efficiency gains consistent with s 52A(1)(b), by allowing EDBs to retain efficiency gains until the end of the regulatory period, it is more difficult to provide the same kinds of incentives to Transpower through the IPP at this stage.³⁶
- 2.3.11 The first factor relevant to the design of Transpower's IM is that, to address aging transmission assets and low levels of investment in the transmission grid in the past, Transpower is currently undertaking a large capital expenditure programme. This investment includes large projects that are uncertain with respect to project costs and timing, with such projects currently subject to review and approval by the Commission under s 54R, applying (with any necessary modifications) the grid investment test that was set out in Schedule F4 of Part F of the Electricity Governance Rules (EGRs), as they were immediately before their revocation by the Electricity Industry Act.
- 2.3.12 Secondly, one of the key issues associated with allowing for Transpower's planned investment programme within a price-quality path is that Transpower has limited experience preparing and providing multi-year capital expenditure forecasts and complying with multi-year capital expenditure allowances set by the Commission. This issue was also identified by Transpower in its submission on the Commission's IM Discussion Paper, where Transpower stated that, for the first regulatory period that it is subject to price-quality regulation under Part 4, it would be developing its forecasting systems and this may result in some uncertainty with respect to its efficient capex profile (and possibly opex as well).³⁷
- 2.3.13 Third, Transpower is transitioning off an administrative settlement with the Commission that does not expire until 30 June 2011. The settlement was finalised after extensive consultation with Transpower and with other interested parties, and will likely have informed the expectations of Transpower and interested parties as to how the regulation of Transpower might be implemented under Part 4.
- 2.3.14 Finally, the legislative framework relating to Transpower, both under Part 4 and under the Electricity Industry Act, is in transition. One of the key requirements under the Electricity Industry Act is the shift in some responsibilities from the Electricity Commission to the Commission, particularly in respect of approving Transpower's major investment proposals both before and after the Capex IM is determined.

³⁶ Like CPPs for EDBs, the IPP does include, however, an Incremental Rolling Incentive Scheme, which will provide incentives for efficient operating expenditure, consistent with s 52A(1)(b).

³⁷ Transpower, *Submission to the Commerce Commission on Transpower process and recommendation discussion paper, Input Methodologies Discussion Paper*, August 2009, p. 33.

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- 2.3.15 The step change in Transpower's investment needs, the proposed improvements to Transpower's forecasting systems, the transition from the administrative settlement, and the recent legislative changes, are all factors that in the short- to medium-term will likely constrain the Commission's ability to design regulatory mechanisms that include the ideal incentives and processes for improving Transpower's performance in terms of the central purpose of Part 4 and the regulatory objectives in s 52A(1)(a)-(d).
- 2.3.16 Given, however, that the focus of the Part 4 Purpose is on the *long-term* benefit of consumers, the Commission considers that improvements to the IMs can be introduced over time, as better information becomes available, and as Transpower's ability to respond to incentive mechanisms in an IPP improves. Doing so is likely to be preferable to introducing such mechanisms too rapidly, as this may result in unintended consequences that are potentially inconsistent with the Part 4 Purpose. The Commission anticipates that the IMs will promote all the regulatory objectives in s 52A(1)(a)-(d) in the long-term, with the progression to the full operation of the capex forecast and quality aspects coming into force during the second regulatory period of the IPP.

2.4 Other Statutory Considerations

Electricity Industry Act

- 2.4.1 Section 54V sets out provisions relating to the interface with the Electricity Industry Act. It specifies matters which the Commission must take account of. These matters are identified as areas of common interest in a Memorandum of Understanding (MoU) between the Commission and the Authority, which coordinates their respective roles under the Electricity Industry Act and the Act. The MoU states that "the Commission will take into account, before exercising any of its powers under Part 4 of the Act, the matters specified in s 54V of the Commerce Act, and any Commission requirements relating to Transpower quality standards in a section 52P determination will be based on, and be consistent with, quality standards set by the Authority (as required under section 54V(6) of the Commerce Act)".³⁸ The Commission has considered its obligations under the Act and any relevant implications as expressed in the MoU when determining IMs for Transpower.

Energy efficiency

- 2.4.2 Section 54Q requires that the Commission, when applying regulation under Part 4, must 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.
- 2.4.3 The requirements set out in s 54Q apply to Part 4 regulation as a whole. As such, the Commission considers that the requirements under s 54Q are to be met through the combined application of the regulatory instruments under Part 4 that apply to Transpower.

³⁸ *Memorandum of Understanding between the Electricity Authority and the Commerce Commission*, 9 December 2010, available at <http://www.comcom.govt.nz/>.

CHAPTER 3: COST ALLOCATION

3.1 Introduction

IM for allocating costs

- 3.1.1 Section 52T(1)(a)(iii) of the Act requires that the IMs relating to a particular good or service must include, to the extent applicable to the type of regulation under consideration, an IM for allocating costs that are ‘common’, including ‘between activities, businesses, consumer classes and geographic areas’.
- 3.1.2 The Commission considers the allocation of costs between consumer classes and geographic areas is more relevant to pricing methodologies (i.e. s 52T(1)(b)) than to IMs for cost allocation (i.e. s 52T(1)(a)(iii)). As discussed in Chapter 2 (paragraph 2.2.8), given the Authority’s statutory role in setting Transpower’s pricing methodology, the Commission has decided not to set an IM for pricing methodologies for Transpower.
- 3.1.3 Apart from the transmission of electricity throughout the national grid, Transpower manages the operation of the national grid as the System Operator and has a number of subsidiaries providing services, being Energy Market Services Limited, d-cypha Trade and Risk Reinsurance Limited. Transpower provides the system operator services under the System Operator Service Provider Agreement (SOSPA) between Transpower and the Electricity Authority.³⁹
- 3.1.4 The existence of these different types of services and activities give rise to the sharing of operating costs (e.g. expenses related to head office functions) and assets between those activities, and therefore to common costs. Given the term ‘common costs’ is not defined in the Act, and it has a number of different meanings (including a specialised economic meaning), the Commission uses the term ‘shared costs’ instead.⁴⁰
- 3.1.5 In setting the cost allocation IMs for EDBs, GPBs and Airports, the Commission considered that the appropriate means to identify ‘shared costs’ is to distinguish between costs that are ‘directly attributable’ and costs that are ‘not directly attributable’.⁴¹ Directly attributable costs are those that can be wholly and solely associated with a single type of regulated service or activity, or wholly and solely associated with any unregulated service or activity. Costs not directly attributable are all other costs, namely those which cannot be wholly and solely associated with a single type of regulated service or activity (or wholly and solely associated with the unregulated services or activities).
- 3.1.6 Both operating costs and capital-related costs have the potential to be shared between different types of regulated and unregulated activities. Capital-related costs

³⁹ System operator service provider agreement dated 12 August 2009 between Transpower New Zealand Limited and (pursuant to s 134 of the Electricity Industry Act) the Electricity Authority.

⁴⁰ Refer Chapter 3 of the EDB/GPB Reasons Paper, supra n 2.

⁴¹ For this purpose, use of the term ‘directly’ is intended to mean wholly and solely. Use of the term ‘not directly’ accordingly means not wholly and solely. Also refer Chapter 3 of the EDB/GPB Reasons Paper (supra n 2).

relate to both a return *of* the value of assets (i.e. depreciation) and a return *on* the value of assets (i.e. a return on investment).

- 3.1.7 The cost allocation IM for Transpower differs in a number of respects from the cost allocation IMs for EDBs, GPBs and Airports. This is because Transpower supplies a small proportion of unregulated services compared to Airports and to many EDBs and GPBs, and also because the main cost allocation issue for Transpower is to appropriately take into account the way costs are already explicitly or implicitly allocated under any agreement for the provision of system operator services and under new investment contracts. Consequently, distinguishing costs between those that are ‘directly attributable’ or ‘not directly attributable’, which is required under the cost allocation IMs for EDBs, GPBs and Airports, is not necessary for Transpower.

Application of the cost allocation IM

- 3.1.8 The cost allocation IM provides the rules by which Transpower must decide what proportion of shared costs should be recovered, or disclosed as recovered, from the activities that it undertakes in supplying electricity transmission services. As with other IMs, these rules take effect through their application as part of individual price-quality regulation and/or information disclosure regulation.

Overview of the IM and structure of this chapter

- 3.1.9 This chapter provides an overview of, and reasons for, the IM for the allocation of costs between the activities undertaken by Transpower. The Commission notes that Transpower agrees with the Commission’s approach to the cost allocation IM,⁴² and no submitters have disagreed with the approach.
- 3.1.10 Table 3.1 sets out the components of the cost allocation IM for Transpower, and indicates where in this chapter each component is discussed.

Table 3.1 Overview of IM for the Allocation of Costs for Transpower

Approach in IM	Where discussed
Transpower is not required to adjust the total costs associated with supplying electricity transmission services to take into account any costs that might be common to regulated and unregulated services.	Section 3.3

⁴² Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, pp. 16-17.

Approach in IM	Where discussed
<p>System operator services are defined under Part 4 as electricity line services. Operating costs or asset values allocated to activities undertaken by Transpower to supply electricity transmission services other than system operator services, must be net of costs or asset values implicitly or explicitly recoverable by Transpower in respect of any agreement between it and the Electricity Authority in respect of the system operator services. In addition, fixed assets used solely for the purposes of supplying system operator services are to be excluded from Transpower’s RAB.</p> <p>Any costs recovered through such an agreement are to be excluded from any opex or capex forecasts used to determine Transpower’s IPP.</p>	<p>Section 3.3</p>
<p>Services provided by New Investment Contracts (NICs) fall under the Part 4 definition of electricity lines services as it involves the conveyance of electricity by line.</p> <p>Fixed assets associated with NICs are to be excluded from Transpower’s RAB. Any capex included in NICs is to be excluded from any capex forecasts used to determine Transpower’s IPP.</p> <p>Transpower should continue to include all operating costs associated with NICs within its total operating costs associated with providing regulated services.</p>	<p>Section 3.3</p>

3.1.11 The remainder of this chapter is structured as follows:

- Section 3.2 sets out the key considerations in determining the cost allocation IM; and
- Section 3.3 sets out the overall approach to allocating Transpower’s costs under Part 4 and the Commission’s reasons for this approach. It also describes the application of the cost allocation IM to information disclosure and individual price-quality regulation.

3.2 Key Considerations in Determining the IM

3.2.1 The guidance available to the Commission in setting an IM for cost allocation, and the Commission’s interpretation of what that guidance means in relation to allocating costs to electricity lines services, is set out in Chapter 3 of the EDB/GPB Reasons Paper.

3.2.2 As is discussed in Chapter 2 of this Paper, however, there are a number of factors relevant to Transpower that do not apply in the case of EDBs. In the case of the cost allocation IM, the Commission considers the key factors are that:

- Transpower supplies only one type of regulated service—i.e. electricity transmission services—and therefore the discussion in the EDB/GPB Reasons Paper relating to the allocation of costs between different types of regulated services is not relevant;
- in supplying electricity lines services, Transpower does, however, undertake system operator activities that are distinguishable from the other activities it

undertakes when supplying electricity lines services, and that an allocation of costs between these activities is required;⁴³ and

- although Transpower does supply some unregulated services, the revenue associated with these services, in the context of allocating shared costs, is not material. (This would be revisited if Transpower was to materially expand its unregulated activities.)

Implications for allocating costs under Part 4

- 3.2.3 Transpower's system operator activities are distinguishable from the other activities undertaken by Transpower in order to supply electricity lines services, as a result of the contractual arrangements associated with them. The Commission considers that it is appropriate to take into account the nature of those contractual arrangements in setting this cost allocation IM. The decision to treat the system operator activities separately to Transpower's other regulated activities means that costs need to be allocated between the different activities.
- 3.2.4 In the case of allocating costs between Transpower's regulated and unregulated services, the cost allocation chapter in the EDB/GPB Reasons Paper describes the process for deciding which of the cost allocation methodologies EDBs must use to allocate shared costs in different circumstances.⁴⁴ In instances where there is limited sharing of operating costs and assets with unregulated services mandating a particular cost allocation approach might not move outcomes materially closer to those in workably competitive markets. The process provides materiality screening tests that assess the materiality of unregulated revenue, and the sharing of operating costs and asset values between the regulated and unregulated services provided by EDBs.
- 3.2.5 The process allows EDBs to apply the avoidable cost allocation methodology (ACAM) to allocate operating costs or asset values that are not directly attributable to the regulated services if total unregulated revenue is less than 20% of total regulated revenue.
- 3.2.6 The materiality of shared costs between regulated and unregulated services is also relevant when considering Transpower's shared costs. In setting the cost allocation IM, the Commission has itself applied the same threshold for unregulated revenue as that in the EDBs' materiality screening tests to determine the cost allocation approach to apply to Transpower's costs and asset values for regulated and unregulated services as part of this IM.

3.3 Allocation of Costs under Part 4

- 3.3.1 This section describes the methodology for allocating Transpower's costs in the cost allocation IM and the Commission's reasons.

⁴³ The Electricity Industry Act has amended Part 4 of the Act to clarify that system operator services are electricity line services 54C(1)(b).

⁴⁴ Commerce Commission, EDB/GPB Reasons Paper, supra n 2, Chapter 3 and Appendix B-D.

Unregulated services

3.3.2 Transpower has a number of subsidiaries:

- Energy Market Services Limited, which provides data management, reconciliation and metering services for clients in New Zealand and Australia;
- d-cyphaTrade, which operates in Australia and provides services to the electricity derivatives market; and
- Risk Reinsurance Limited, which provides insurance services to the Transpower group of companies.⁴⁵

3.3.3 These services do not involve the conveyance of electricity or the provision of system operator services and are therefore not regulated services.

3.3.4 The Commission notes that the revenue associated with these services for the 2008/09 financial year are \$4.7m for Risk Reinsurance Limited and approximately \$10.9m for the sum of Energy Market Services Limited and d-cypha Trade, out of Transpower's total revenue for the same period of \$693.7 million (i.e. around 2.2% for these services).⁴⁶ Any shared costs between these services and the electricity lines services supplied by Transpower are likely to form only a small proportion of Transpower's total costs.

3.3.5 Transpower's revenue from unregulated services is less than 20% of total regulated revenue. Transpower is therefore not required to adjust the costs used to provide its regulated services. Should it become evident in future, however, that this threshold is likely to be exceeded, the Commission proposes consulting on including additional elements of the cost allocation IM for EDBs in the cost allocation IM for Transpower.

System operator activities and services

3.3.6 System operator services are defined as electricity lines services regulated under Part 4 of the Act (s 54C(1)(b)).

3.3.7 The system operator activities undertaken to supply system operator services are currently regulated under the existing administrative settlement. Transpower's system operator activities are subject to a separate threshold under the settlement agreement, set equal to the price under SOSPA between Transpower and the EC. Since the Electricity Industry Act was enacted in November 2010, the SOSPA is between the Electricity Authority and Transpower (pursuant to s 134 of that Act).

3.3.8 The IM provides that, where there is an agreement between Transpower and the Electricity Authority in respect of the system operator services, operating costs or asset values allocated to activities undertaken by Transpower to supply electricity transmission services other than system operator services, must be net of costs or

⁴⁵ Although Risk Insurance Ltd is not regulated under the Act, appropriate insurance costs associated with Transpower's regulated services would be considered for inclusion in any price-quality path.

⁴⁶ The Transpower 2008/09 Annual Report states the revenue for 'Other' is \$10.9m for the 2008/09 financial year and that 'Other' mainly consists of Energy Market Services Limited and d-cypha Trade revenue: Transpower, *Annual Report 2008/09*, pp. 46 and 47.

asset values implicitly or explicitly recoverable by Transpower in respect of system operator services.

- 3.3.9 The existing SOSPA contract sets out the base fee payable to Transpower and the individual component costs that make up the base fee including operating costs, IT operations, market systems support contract,⁴⁷ depreciation, post tax WACC, tax and pricing manager contribution. Transpower is required to keep its prices fixed in nominal terms unless a fee change event is triggered under clause 5 of the contract or the Electricity Authority and Transpower agree to amend prices set under the contract.⁴⁸
- 3.3.10 The revenue received by Transpower for system operator activities provided under the SOSPA for the period 1 July 2008 to 30 June 2009 was \$22.5 million, out of Transpower's total revenue for the same period of \$693.7 million (i.e. around 3.2%). The latest SOSPA dated August 2009 provides for a base fee payable to Transpower of \$25.1m and \$29.2m for the 2009/10 and 2010/11 financial years respectively, with the difference between the two years being driven by tax.⁴⁹
- 3.3.11 Given the relative level of revenue received for the system operator activities any shared costs between the system operator activities and Transpower's other activities are likely to form only a small proportion of Transpower's total costs.
- 3.3.12 Given the allowed operating costs for the system operator activities are set in the SOSPA and the likely low level of shared costs between Transpower's system operator activities and Transpower's other regulated activities, Transpower is not required to adjust the costs of providing its regulated services. Transpower is required to exclude the costs set out in the SOSPA from any opex or capex forecasts used to determine Transpower's IPP.

New Investment Contracts⁵⁰

- 3.3.13 As set out in Chapter 4 of this Paper, services provided under NICs fall under the Part 4 definition of electricity lines services because they involve the conveyance of electricity by line. However, the Commission will not interpose itself between Transpower and its contract counterparties by requiring the revenue associated with NICs to be subject to an IPP, provided certain conditions are met around workable competition.
- 3.3.14 Given the reasons above, the assets associated with NICs should be excluded from Transpower's RAB and any capex included in NICs is to be excluded from any

⁴⁷ Market systems support contract covers the costs payable by the Provider for third party support of the market systems software. The costs are set at \$1.651m for the 2010/11 year.

⁴⁸ System operator service provider agreement dated 12 August 2009 between Transpower New Zealand Limited and (pursuant to s 134 of the Electricity Industry Act) the Electricity Authority, pp. 9-13.

⁴⁹ System operator service provider agreement dated 12 August 2009 between Transpower New Zealand Limited and (pursuant to s 134 of the Electricity Industry Act) the Electricity Authority, schedule 1, pp. 33-34. The base fee breakdown in schedule 1 shows that the operating costs and IT operations fee components of the base fee are \$16.0m and \$4.7m for both the 2009/10 and 2010/11 year.

⁵⁰ Note that the terms 'new investment contract' and 'new investment agreement' are used interchangeably to refer to agreements established with customers prior to 7 May 2010 for the building and operation of specified assets. From that date, a new version of the NIC known as a Customer Investment Contract (CIC) has superseded previous versions. However, for reasons of simplicity, the term NIC is used generically to refer to all such contracts.

capex forecasts used to determine Transpower's IPP. This is further discussed in paragraphs 4.4.4 and 4.4.14 in Chapter 4.

- 3.3.15 The operating costs associated with NIC assets are included within Transpower's total opex for providing regulated services and are recovered through the Transpower pricing methodology. This is because it is more efficient for Transpower to use one allocation tool (Transpower pricing methodology) to allocate all of its operating and maintenance costs than to directly identify and allocate operating and maintenance costs to a number of individual NICs.
- 3.3.16 Transpower may continue to include all operating costs associated with NICs within its total operating costs associated with providing regulated services.

Application of the IM

Information disclosure

- 3.3.17 Pursuant to s 52S, the Commission must apply the cost allocation IM when setting information disclosure requirements under subpart 4 of Part 4. Transpower will be required to disclose information in accordance with these requirements.

Individual price-quality regulation

- 3.3.18 All figures included within capex and opex forecasts produced for the purpose of setting the IPP should be consistent with the cost allocation methodology.

CHAPTER 4: VALUATION OF ASSETS

4.1 Introduction

- 4.1.1 Amongst other things, Part 4 of the Act requires that the IMs relating to a particular good or service must include, to the extent applicable to the type of regulation under consideration, the “valuation of assets, including depreciation and treatment of revaluations” (s 52T(1)(a)(ii)).
- 4.1.2 The IM for the valuation of assets sets out the methodology that is to be used to determine the regulatory valuation of each supplier’s assets. The matters covered in the IM for the valuation of assets include:
- a. establishment of the initial regulatory value of each supplier’s asset base;
 - b. any revaluation of assets permitted in the future;
 - c. calculation of depreciation; and
 - d. treatment of asset acquisitions and disposals.
- 4.1.3 The reasoning for the Commission’s decisions in relation to the IM for the valuation of Transpower’s assets is addressed in this chapter.

IM for the valuation of assets

- 4.1.4 Usually, the value of an asset would depend on its expected profitability, which—in a workably competitive market—is constrained by competition. In markets that are regulated under Part 4, however, these pressures are absent, hence the need for regulation. There is little or no competition, and little or no likelihood of a substantial increase in competition. The unconstrained profitability of a regulated supplier would consequently provide an inappropriate reference point for establishing an asset value to be used for assessing returns, or for setting regulated prices, since it would be based on (and lead to) future monopoly pricing.
- 4.1.5 Regulatory asset values must instead be based on alternative valuation approaches. Rather than *reflecting* the profits that a supplier expects to earn, these approaches help *determine* the supplier’s profit expectations. In other words, in a regulatory context, the usual link between asset values and profitability is reversed.

Application of the IM for the valuation of assets

- 4.1.6 There are two main ways in which regulatory asset values apply to price setting and price monitoring. Firstly, the values provide the basis for determining the return *of* capital required by suppliers in each period (i.e. to cover depreciation in asset values). Secondly, they are used in conjunction with an estimate of the supplier’s cost of capital to determine the return *on* capital that suppliers require to cover their costs of obtaining capital. These elements together, the required return *on* and *of* capital, are known as a supplier’s capital costs.⁵¹

⁵¹ References to the ‘cost of capital’ in this IM and in general relate to the estimate of the required return *on* capital. The term ‘capital costs’ covers both the return *on* and return *of* capital.

- 4.1.7 Regulatory asset values—and the capital costs that they imply—help to determine, along with the other elements of the regulatory regime, the revenues that Transpower can expect to be:
- a. able to earn under information disclosure regulation (i.e. before profits appear excessive), and/or
 - b. allowable under individual price-quality regulation (i.e. each time an IPP is set).
- 4.1.8 Under information disclosure regulation, Transpower’s regulatory asset value, determined by applying the IM for the valuation of assets, directly affects the assessment of profitability (i.e. the calculation of the ROI) that may be undertaken by interested persons to assess whether the Part 4 Purpose is being met. The value of Transpower’s regulatory asset base (RAB value) is also a key input in the determination of maximum allowable revenue for Transpower under individual price-quality regulation.
- 4.1.9 In addition to the IM for the valuation of Transpower’s assets, as discussed in paragraph 1.2.5 s 54S of the Act requires the Commission to determine an IM for Transpower’s capex proposals by 1 November 2011. However, the Minister may, on the written request of the Commission, extend the deadline once by a period of up to three months. The Transpower capex IM determined by the Commission 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 customers;
 - b. the criteria the Commission will use to evaluate capex proposals; and
 - c. time frames and processes for evaluating capex proposals, including what happens if the Commission does not comply with those time frames.
- 4.1.10 The Commission’s preliminary views on the Capex IM for Transpower are set out in a Discussion Paper being released shortly after this Paper.

Overview of IM and structure of this chapter

- 4.1.11 Table 4.1 sets out the components of the IM for the valuation of assets for Transpower, and indicates where in this chapter each component is discussed.

Table 4.1 Overview of IM for the Valuation of Assets for Transpower

Approach in IM	Where discussed
Transpower must establish initial RAB values for its assets based on the values determined under the settlement agreement as at 30 June 2011.	Section 4.3
The initial value of the RAB should include the remaining value of the HVAC lines pseudo asset, established by the settlement agreement, as at 30 June 2011.	Paragraphs 4.4.25 - 4.4.30
<p>Transpower should exclude from its RAB value:</p> <ul style="list-style-type: none"> • any assets not used to provide electricity transmission services; • any asset that is part of a works under construction; • working capital; • goodwill; • easement land, that is land acquired for the purpose of creating an easement, and with the intention of on-selling the land; 	<p>Section 4.3</p> <p>Paragraphs 4.4.31 - 4.4.48</p> <p>Paragraphs 4.4.60 - 4.4.63</p> <p>Paragraphs 4.4.58 - 4.4.59</p> <p>Paragraphs 4.4.89 - 4.4.103</p>
Assets associated with delivering an agreement between Transpower and the Electricity Authority in respect of the provision of system operator services are excluded from the RAB value as the result of applying the cost allocation methodology.	Paragraphs 4.4.15 - 4.4.24
Assets provided under NICs are included in the RAB at zero value.	Paragraphs 4.4.4 - 4.4.14
Transpower may include in its RAB value finance leases and intangible assets provided that they are identifiable non-monetary assets that are not goodwill, consistent with the meanings under GAAP. Transpower must establish the value of permitted intangible assets added to the RAB value after 30 June 2011 using the cost model for recognition under GAAP. ⁵² Transpower may not include operating leases in its RAB value.	Paragraphs 4.4.49 - 4.4.57, 4.4.64 - 4.4.67
<p>No indexation is to be applied in rolling forward Transpower's RAB value.</p> <p>Transpower should include capital additions in its RAB value at cost in the year in which the asset is 'commissioned', that is when the asset is first 'used by Transpower to provide electricity transmission services'. In the case of (a) land that is not easement land, and (b) easements, whose acquisition has been approved under Part F of the Electricity Governance Rules (or under the capex IM once it comes into effect), 'commissioned' means 'first acquired by Transpower'.</p> <p>Where the cost of a network spare is treated as the cost of an asset under GAAP (wholly or in part), it may be added to the RAB value at the date on which it is 'commissioned'.</p> <p>Where Transpower disposes of an asset, the closing RAB value of that asset, for the disclosure year in which the disposal occurs, is nil.</p>	<p>Section 4.3</p> <p>Paragraphs 4.4.68 - 4.4.80</p>

⁵² See accounting standard NZ IAS 38, paragraph 24.

Approach in IM	Where discussed
<p>Transpower may include easements in its RAB value at cost in the year in which the rights are acquired, provided that:</p> <ul style="list-style-type: none"> • the investments have been approved under the grid investment test in Part F of the Electricity Governance Rules (or under the capex IM once it comes into force); and • where Transpower acquires land to create a new easement, the cost of the easement is limited to the sum of: <ul style="list-style-type: none"> ○ legal and administrative costs; ○ the detrimental impact on the value of the land, as determined by a valuer; and ○ the cost of holding the land, calculated as the financing cost on the purchase of the land from the date Transpower acquires the land until the date the easement is created. 	<p>Paragraphs 4.4.89 - 4.4.103</p>
<p>Transpower must remove assets recognised as lost from its RAB value in the disclosure year in which they are identified as lost, and should reduce the RAB value by the opening RAB value of the asset in that year. Once the initial RAB value has been established, lost assets that were in the initial RAB will be permitted to remain in the RAB value.</p> <p>Found assets are limited to assets commissioned after the 2011 disclosure year. Transpower should add found assets to the RAB value in the year in which they are found, and must establish the RAB value of found assets at cost, consistent with GAAP, where sufficient records exist. Where sufficient records do not exist, Transpower may assign the asset the same value as a similar asset in the RAB (where such an asset exists). If no such similar asset exists, Transpower must use the asset's market value at the time the found asset is added to the RAB value, as verified by an independent valuer.</p>	<p>Paragraphs 4.4.85 - 4.4.88</p>
<p>Where Transpower purchases an asset from another regulated supplier it must add the asset to its RAB value at the asset's equivalent value in the RAB of the seller.</p> <p>Where Transpower purchases an asset from a related party (provided the related party is not itself a regulated supplier), it must add the asset to its RAB value at depreciated historic cost where documentation is available to support this. Where sufficient records do not exist to establish depreciated historic cost, it must use the asset's market value as verified by an independent valuer. For this purpose a related party includes both:</p> <ul style="list-style-type: none"> • business units of Transpower that supply services other than electricity transmission services; and • a party that under GAAP is considered a related party (including any party that has conducted business either directly or indirectly with the supplier in the current financial year). 	<p>Paragraphs 4.4.81 - 4.4.84</p>
<p>Transpower must capitalise financing costs on works under construction in accordance with GAAP, at a rate no greater than the 75th percentile for the regulatory post-tax WACC determined under the cost of capital IM.</p> <p>When it commissions works under construction, Transpower must reduce the cost of the asset, established consistent with GAAP, by the amount of any revenue derived in relation to the assets while they were works under construction (where such a reduction is not already made under GAAP, and where the revenue has not already been reported as income under information disclosure).</p>	<p>Paragraphs 4.4.31 - 4.4.48</p>

Approach in IM	Where discussed
<p>Transpower must depreciate assets in its RAB using straight line depreciation. It may not depreciate land and easements (other than fixed life easements).</p>	<p>Paragraphs 4.4.104 - 4.4.108</p>
<p>Transpower must use the standard physical asset lives in Schedule A of the IM Determination, with the following exceptions:</p> <ul style="list-style-type: none"> • Transpower must depreciate fixed life easements over the expected term of the easement; • for dedicated assets, Transpower may assign an asset life equal to the life of the supporting customer contract; • Transpower may extend asset lives beyond those provided in the list of standard physical asset lives, and set asset lives for refurbished assets, without an independent engineer’s report; • Transpower may reduce an asset life, provided the reduced asset life is supported to an independent engineer’s report; • Transpower must determine when to start depreciating network spares consistent with GAAP; • where Transpower adds a found asset to the RAB value, and where Transpower’s RAB already contains a similar asset, the asset life of the found asset should be the asset life applying to the similar asset; • for assets are commissioned in the future that are not covered by the list of standard physical asset lives: <ul style="list-style-type: none"> ○ where an asset of the same type is already in the RAB, Transpower must use the same asset life as assigned to the existing asset; and ○ otherwise set asset lives for the assets, provided they are supported by an independent engineer’s report. • where an asset comprises a number of components with differing lives (a ‘composite asset’), Transpower must calculate the total asset life for the composite asset as a weighted average of the lives of those components. <p>Total (unallocated) depreciation over the lifetime of the asset, must not exceed the value at which the asset is first recognised in the RAB under Part 4 (after adjusting for the effects of revaluations).</p>	<p>Paragraphs 4.4.109 - 4.4.129</p>
<p>In the case of stranded assets, Transpower may apply accelerated depreciation in the year in which the asset becomes stranded, where the Commission approves this in accordance with the IPP Determination.</p>	<p>Paragraphs 4.4.130 - 4.4.139</p>
<p>For the purposes of individual price-quality regulation, system fixed assets in service at the start of a period of individual price-quality regulation should be deemed to have a remaining physical asset life equal to the duration of the regulatory period.</p>	<p>Paragraphs 4.4.140 - 4.4.143</p>
<p>Transpower must record the total (i.e. ‘unallocated’) value of an asset in the asset base and roll it forward (for depreciation, revaluations, additions etc) on an unallocated basis. The cost allocation IM is applied to this asset value whenever it is necessary to determine a specifically attributable (i.e. ‘allocated’) portion of the asset value for regulated activities (for example to calculated depreciation and revaluations).</p>	<p>Section 4.5, Chapter 3</p>

4.1.12 The structure of this chapter is:

- Section 4.2 sets out the key considerations in determining the IM for the valuation of assets;
- Section 4.3 sets out the Commission's overall approach to establishing the initial RAB value for Transpower and rolling the RAB value forward, and its reasons to support this approach;
- Section 4.4 sets out more detail on the components of the IM; and
- Section 4.5 provides more detail on the application of the IM to the relevant regulatory instruments (i.e. information disclosure regulation and individual price-quality regulation).

4.2 Key Considerations in Determining the IM

4.2.1 The decisions related to the valuation of assets can be thought of in two main parts. First, the 'initial' value of the RAB must be established at the start of the Part 4 regime; secondly, Transpower's RAB value must be 'rolled forward' over time (i.e. updated year-on-year). Both these elements of the asset valuation exercise must be determined in accordance with the relevant statutory requirements: the Part 4 Purpose and the purpose of IMs.

4.2.2 The guidance available to the Commission in setting an IM for valuation of assets, and the Commission's interpretation of what that guidance means in relation to valuing assets used in the supply of electricity lines services, is set out in Chapter 4 of the EDB/GPB Reasons Paper.

4.2.3 As is discussed in Chapter 2 of this Paper, however, there are a number of factors relevant to Transpower that do not apply in the case of EDBs. In the case of the IM for the valuation of assets, the Commission considers the key factors to take into account are that:

- a. Transpower is undertaking a substantial capex programme over the next few years;
- b. there are a number of provisions in the settlement agreement relating to asset valuation which are unique to Transpower (i.e. past regulatory arrangements have been different); and
- c. under s 54S of the Act (as substituted by s 155 of the Electricity Industry Act) the Commission is now required to determine an IM for Transpower's capex proposals by 1 November 2011.⁵³

⁵³ However, the Minister may, on the written request of the Commission, extend the deadline once by a period of up to three months.

4.3 Valuation of Assets under Part 4

- 4.3.1 Under the IM Determination, the initial RAB value for Transpower must be established and rolled forward as follows:
- a. the initial value of the RAB will be determined based on the values determined under the settlement agreement as at 30 June 2011, adjusted to remove any assets excluded under the IM Determination;⁵⁴
 - b. Transpower must allocate asset values to electricity transmission services using the process set out in the cost allocation IM. Chapter 3 of this paper explains the cost allocation IM for Transpower; and
 - c. Transpower must roll its RAB value forward for capital additions at cost. No indexation is to be applied in rolling forward the RAB value.
- 4.3.2 Section 2.3 of this Paper discusses the guidance provided by the Part 4 Purpose for determining IMs for Transpower. As that section notes, a number of factors will likely constrain the Commission's ability in the short- to medium-term to design regulatory mechanisms that include the ideal incentives and processes for improving Transpower's performance in terms of the Part 4 Purpose. Taking these factors into account, in particular the very high level of Transpower's investment needs over the short- to medium-term, it is appropriate for the IM for rolling forward the value of Transpower's RAB to require a different approach to the roll forward approach for EDBs, at least for the medium-term.
- 4.3.3 This section discusses the background to decisions on Transpower's RAB value, and the Commission's reasons for the overall approach described above.

Prior to settlement agreement

- 4.3.4 In the early 1990s and up until the implementation of the settlement agreement in 2008, Transpower applied an ODV approach in valuing its transmission assets. Use of this approach by Transpower also became mandated under the Electricity Information Disclosure Requirements 2004, and was an important aspect of Transpower's transmission pricing methodology as underpinned by the Electricity (Transpower's Pricing Methodology) Regulations 2004.⁵⁵
- 4.3.5 Following Transpower's breaches of its price path thresholds under Part 4A of the Act in 2003 and 2004, the Commission published its intention to declare control of electricity transmission services supplied by Transpower in December 2005. In January 2006, Transpower indicated its preference to resolve the Commission's post-breach inquiry with an administrative settlement. On 13 May 2008, the Commission accepted a settlement proposal from Transpower. The settlement agreement applies for the period commencing 1 July 2008, and sets out

⁵⁴ The IM Determination requires Transpower to exclude from its initial RAB value the value of any assets not used to provide electricity transmission services (as defined in the IM Determination) as part of the rules for determining the composition of the initial RAB. Other specific exclusions from the RAB value are discussed in Section 4.4.

⁵⁵ These Regulations were revoked by the Electricity (Transpower's Pricing Methodology) Regulations Revocation Order 2008).

Transpower's revenue requirement threshold in relation to the regulatory period ending 30 June 2011.

Transpower settlement agreement—move from ODV to DHC

4.3.6 As part of its administrative settlement proposal, Transpower proposed moving away from relying on on-going ODV valuations to update RAB values on an un-indexed basis.⁵⁶ For the purpose of implementing this approach, Transpower's offer for an administrative settlement proposed the following:

- a. all of Transpower's fixed assets as at 30 June 2006 are included in the asset base, except where they are part of the system operator or unregulated asset base;
- b. the ODV of Transpower's system fixed assets at 30 June 2006 is used as the basis for the purpose of calculating depreciation and the net book value of these transmission system fixed assets in the subsequent years; and
- c. all transmission system fixed asset additions subsequent to 30 June 2006 are recorded at cost in a manner consistent with GAAP and other principles of the proposed transmission (revenue requirement) threshold.⁵⁷

4.3.7 Transpower also proposed aligning the regulatory and financial accounting book asset values. In order to do this, it proposed creating five 'pseudo' assets that would be depreciated in an accelerated manner over a period of four to ten years. The value of the pseudo assets was the difference between the financial accounting book values and the regulatory values for transmission assets.

Implications of existing regulatory arrangements for the IM for the valuation of assets

4.3.8 During consultation on the settlement agreement, the Commission considered the implications of the existing regulatory arrangements at that time, as well as the planned step change in capex, on the way in which Transpower's assets should be valued. The Commission's decisions on the settlement agreement resulted in different approaches for establishing Transpower's initial RAB value under the settlement agreement, and for rolling that initial RAB value forward, from those applying to EDBs.

4.3.9 In its draft decision and reasons paper for not declaring control of Transpower⁵⁸ the Commission concluded that the higher cash flows that are associated with an un-indexed approach in the first years following an investment were better suited for Transpower's investment profile going forward than CPI-indexation would be.⁵⁹ This was particularly important given the magnitude of Transpower's proposed investments, and the fact that the associated capex would often span multiple years

⁵⁶ Table 4.2 in the EDB/GPB Reasons Paper describes various accounting-based valuation approaches that have been discussed during consultation on the IM for valuing assets, including ODV and DHC approaches.

⁵⁷ Transpower New Zealand Limited, *Formal settlement proposal*, 11 April 2008 (Settlement Proposal - Transpower) (Amended as at 12 May 2008), Schedule 1: Proposed Transmission (Revenue Requirement) Threshold, pp. 11-12.

⁵⁸ Commerce Commission, *Regulation of electricity lines businesses targeted control regime draft decision and reasons for not declaring control*, 5 October 2007 (Draft Reasons for not declaring control - Transpower).

⁵⁹ Commerce Commission, *Regulation of electricity lines businesses valuation of the regulatory asset base decision paper*, 13 October 2005, p. 7.

prior to commissioning. Based on these factors, and given the scrutiny of Transpower's investments under Part F of the Electricity Governance Rules (EGRs) by the EC and the magnitude and timing of proposed Transpower investments, the Commission accepted Transpower's settlement proposal.

- 4.3.10 For EDBs, the IM for the valuation of assets, requires that initial RAB values for each asset must be established with reference to existing regulatory valuations (i.e. by using the values provided in the 2009 annual disclosures under existing information disclosure requirements).⁶⁰ In general, EDBs are to calculate revaluations and depreciation by applying CPI-indexation and straight-line depreciation (i.e. this is the standard approach to depreciation and the treatment of revaluations). Chapter 4 of the EDB/GPB Reasons Paper discusses the Commission's rationale for this approach.
- 4.3.11 In developing its approach to the IM for the valuation of Transpower's assets, set out in this paper, the Commission has considered the extent to which the factors that warranted a different approach for Transpower at the commencement of the settlement agreement might still be relevant. This includes expectations Transpower and interested parties might have formed as to how the regulation of Transpower might be implemented by the Commission under Part 4, as well as consideration of Transpower's investment profile, and the role of capex approvals under Part F of the EGRs (and under the capex IM once it comes into effect).
- 4.3.12 The Commission considers that the initial RAB under Part 4 should be based on the RAB applying under the previous regulatory arrangements, consistent with the approach applying to all businesses regulated under Part 4. As set out above, initial RAB values for Transpower's assets must be established in accordance with the IM for the valuation of assets, by using the values determined under the settlement agreement as at 30 June 2011. This will include the remaining pseudo assets yet to be fully depreciated. The arguments in favour of an un-indexed approach for the roll-forward of the asset base still apply. Transpower should continue to value its RAB using an un-indexed approach under Part 4. No indexation will be applied. The Commission considers an un-indexed approach is appropriate for Transpower for the following reasons:
- Transpower is planning to invest over \$3 billion in upgrading and renewing the transmission network over the next five years, which will more than double the value of Transpower's RAB. This level of proposed investments is significantly larger than any of the EDBs in both an absolute and relative sense. In addition, unlike the EDBs, a significant portion of Transpower's planned investment programme involves expenditures being incurred a number of years in advance of commissioning. The level of Transpower's investments will result in it having, relative to other lines businesses, high investment programme funding requirements;
 - updating the RAB value using an un-indexed approach will, given the likely age structure of Transpower's asset base, be likely to lead to higher revenues

⁶⁰ Commerce Commission, EDB/GPB Reasons Paper, supra n 2.

for Transpower over the near term. This level of revenue will be likely to be better matched to Transpower's investment needs; and

- Transpower's capex is subject to *ex ante* and *ex post* approval processes. Where minor capex is above the *ex ante* approved level, or does not fully comply with Transpower's approval processes, Transpower will make a separate EV account adjustment to fully offset the revenue impact of the value of the excess expenditure over the life of those assets. Unapproved over-expenditure on a major capex project must be excluded from each annual calculation of *ex post* economic gain or loss. Transpower will similarly make a separate EV account entry to fully offset the revenue impact of the value of the excess expenditure over the life of the project assets.

- 4.3.13 Some of the above factors might be more relevant over the short to medium term than over the long-term (e.g. because of Transpower's current tranche of investment). In the case of EDBs, the Commission considers the greater protection against inflation risk that is afforded by CPI-indexation is sufficient reason to prefer such an approach over an un-indexed approach. In Transpower's case this factor is currently outweighed by the factors discussed above. In the longer term, some of the differences between Transpower and EDBs might become less significant, in which case consideration of greater alignment in some of the approaches for electricity distribution services and electricity transmission services might be warranted.
- 4.3.14 Given that an un-indexed approach is already implemented under the terms of the settlement agreement, changing valuation approaches may incur additional compliance costs. Continuation of an un-indexed approach would prolong the benefits associated with aligning the regulatory and financial accounting records.
- 4.3.15 The Commission has considered a range of options for calculating regulatory depreciation. The Commission set out its assessment of the available options in the IM Discussion Paper. Based on this assessment, the Commission's view is that the standard form of regulatory depreciation applied by all suppliers under Part 4 should be straight-line depreciation based on the asset life of the underlying asset. In the case of Transpower, the Commission considers that, given the cash flow benefits provided by an un-indexed DHC approach already, an alternative approach to depreciation, along the lines of that provided for EDBs,⁶¹ is not required. In the longer term, after the current tranche of investment comes to an end, moving to a CPI-indexed approach, consistent with the other sectors regulated under Part 4, may be appropriate.
- 4.3.16 Requirements in the IM Determination in relation to depreciation for Transpower are discussed in more detail in Section 4.4 below (see paragraphs 4.4.104 to 4.4.129).
- 4.3.17 The FCM concept, applied on an *ex ante* basis, implicitly underpins the settlement agreement. The principle that revaluation gains (or losses) should be treated as income (or an expense) was embodied in the Electricity Information Disclosure Requirements 2004 and subsequent requirements for disclosing Transpower's annual ROI. In addition, as part of its pricing methodology, Transpower itself implemented

⁶¹ Commerce Commission, EDB/GPB Reasons Paper, supra n 2, Appendix E.

this principle through its use of economic value (EV) accounts. Any *ex post* economic gains (or losses) in relation to the provision of transmission services are allocated to an EV account for Transpower's customers (or to its shareholders) at the end of each financial year. Transpower then returns to, or recovers from, its customers, the balances in the EV customer accounts over a number of years going forward. This practice will continue on a modified basis under Part 4. (For more detail on the EV framework for Transpower see Section 3.10 of the IPP Reasons Paper.)

Submissions on establishing the initial RAB value for Transpower

4.3.18 Transpower and MEUG agreed that the initial value of the RAB under Part 4 of the Act should be based on Transpower's regulatory asset value under the settlement agreement, as at 30 June 2011.⁶² In submissions on the IM for the valuation of assets, Transpower and MEUG expressed support for the continued use of an un-indexed approach.⁶³ Transpower has stated this approach is appropriate because it:⁶⁴

- a. allows Transpower to invest with certainty and facilitates the monitoring of financial and economic performance;
- b. is administratively simple and transparent;
- c. best matches cash flows to the need to fund Transpower's major investments; and
- d. reduces Transpower's exposure to the risk of regulatory change over the life cycle of its assets.

4.4 Components of the IM

4.4.1 This section discusses detailed components of the IM for the valuation of assets that specifically relate to Transpower.

4.4.2 Under s 54R of the Act the Commission is required to apply the grid investment test and related processes in Part F of the EGRs, as those rules were immediately prior to their revocation by the Electricity Industry Act 2010, until the Commission has determined its capex IM in November 2011. Accordingly the discussion below refers to Part F of the EGRs in a number of instances, even though the EGRs, and Part F, are no longer in force. References in this section to capex approvals under Part F of the EGRs also include capex approvals made under the capex IM once it comes into effect.

⁶² Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 18; Major Electricity Users' Group, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, Appendix, p. 5.

⁶³ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 18; Major Electricity Users' Group, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, Appendix, p. 5.

⁶⁴ Transpower New Zealand Limited, *Submission on Input Methodologies Discussion Paper*, August 2009, p. 28.

4.4.3 The key components of the IM for the valuation of assets are:

- New investment contracts (NICs);
- System operator services;
- Pseudo assets;
- Works under construction;
- Intangible assets (including goodwill, working capital, and finance leases);
- Additions and disposals;
- Sale and purchase of assets;
- Lost and found assets;
- Easements;
- Depreciation;
- Asset lives;
- Stranded assets;
- Fully depreciated assets under an IPP.

New Investment Contracts

Approach

4.4.4 The IM Determination provides that:

- a. the assets covered by NICs are included in Transpower's RAB at zero value, and, therefore, no compensation for the return on or of those assets are included in the determination of revenue associated with electricity transmission services that is recovered through the Transmission Pricing Methodology (TPM). Accordingly, transmission charges received by Transpower for NICs are excluded from forecast and actual revenue under the IPP Determination; but
- b. assets covered by NICs will be included in the RAB value at zero value only if the other party to the new investment contract agrees in writing that the terms and conditions are reasonable or reflect workable or effective competition for the provision of the goods and services.⁶⁵

Reasons

4.4.5 Under the settlement agreement, specified services are defined as all goods and services, provided by Transpower in New Zealand, that are electricity transmission

⁶⁵ This treatment has been in place since 2003, and specifically has applied to all NICs entered into since 5 June 2003. The treatment is included in the settlement agreement, and has been carried over to the asset valuation IM under Part 4.

goods or services or are directly related to the provision of electricity transmission. However the specified services exclude (among other things):⁶⁶

- a. goods and services provided by Transpower under NICs but, in the case of NICs entered into after 5 June 2003, only if the other party agrees in writing that the terms and conditions are reasonable or reflect workable or effective competition for the provision of the goods and services; or
- b. goods and services provided by Transpower as a result of new investment, if Transpower demonstrates beyond reasonable doubt that the new investment was approved under a process (whether regulatory or otherwise) that provides for affected customers to make and approve price-quality trade offs and opportunity for competitive provision of new investment by parties other than Transpower.

4.4.6 The formal grid upgrade process, including the application of the grid investment test in Part F of the EGRs does not apply where Transpower has directly agreed a NIC with one (or more) of its customers.⁶⁷ Consequently, charges to recover the capital costs of connection assets included in a new investment contract do not need to accord with the TPM in the Electricity Industry Participation Code.⁶⁸

4.4.7 Therefore, NICs are not currently subject to the grid upgrade process, and the capital components of NICs are not subject to the settlement agreement thresholds. Some regulatory oversight is provided under Part F of the EGRs but this focuses primarily on quality.⁶⁹

4.4.8 The Commission's preliminary view (June 2009) was that while goods and services provided under a NIC are regulated under the Act, the Commission should not interpose itself between Transpower and its contract counterparties by requiring the revenue associated with the capital components of NICs to be subject to an IPP, provided certain conditions are met around workable competition.⁷⁰ Submissions did not oppose this approach.

4.4.9 The Commission considered whether there would be value in the Commission having some regulatory oversight of the negotiation process (as in the AER model), by for example, requiring Transpower to provide assurance that it targeted appropriate least cost, efficient objectives when budgeting, procuring and implementing new investment projects, and setting out its approach to dealing with variations against budget.

4.4.10 A new version of the NIC came into effect on 7 May 2010.⁷¹ Transpower has indicated in discussions with the Commission that it proposes undertaking a formal

⁶⁶ Commerce Act (Transpower Thresholds) Notice 2008, definition of 'specified services'.

⁶⁷ Electricity Governance Rules, Part F, Section III, rule 12.2.2, which continues in force pursuant to s 54R of the Act.

⁶⁸ Electricity Industry Participation Code 2010, Part 12, Schedule 12.4, clause 26.

⁶⁹ Electricity Governance Rules, Part F, Section III, rule 8.

⁷⁰ Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009, p. 393.

⁷¹ The terms 'new investment contract' and 'new investment agreement' are used interchangeably to refer to agreements established with customers prior to 7 May 2010 for the building and operation of specified assets. From that date, a new version of the NIC known as a Customer Investment Contract (CIC) has superseded previous versions. However, for reasons of simplicity, the term NIC is used generically to refer to all such contracts.

review of the agreement, including seeking feedback, in 2011, once it has been in use for a period.

- 4.4.11 Given its engagement with customers and the improvements Transpower has made in the new investment agreement to date, the Commission has maintained the approach taken under the settlement agreement in the IM Determination. That is, under the IM Determination goods and services provided under NICs are excluded from the RAB value provided the counterparty agrees in writing that the terms and conditions are reasonable or reflect workable or effective competition for the provision of the goods and services.⁷² The provision for counterparty agreement provides some assurance that services provided under NICs will be provided on terms and conditions that are consistent with the Part 4 Purpose. If the customer does not consider the terms and conditions to meet this test, they can choose to propose the investment under the grid investment test in which case, once commissioned, the asset would be included in the RAB value.
- 4.4.12 The Commission notes that, in the event Transpower and a customer are unable to reach agreement regarding a new investment in connection assets, Transpower may ask the Commission to request Transpower to submit a grid upgrade plan containing the proposed investment under clause 12.44 of Part 12 of the Electricity Industry Participation Code.
- 4.4.13 The Commission sought industry participants' views on the need to include regulation around the negotiating framework for NICs applied by Transpower. MEUG submitted that the Commission should consider providing back-stop regulation.⁷³ The Commission's view is that the need for back-stop regulation is negated by the provision that if Transpower and the customer fail to negotiate a contract then Transpower has the option of asking the Commission to consider the new investment under the grid upgrade proposal.⁷⁴ For this reason, the Commission's decision is that it will not interpose itself between Transpower and its customers during contract negotiations.
- 4.4.14 Finally, the Commission notes that questions have been raised around whether separate contracts will continue to be utilised for new connection asset investments. Transpower has advised that it has, and will continue to consider alternate options that would negate the need for a NIC. For instance, it has considered whether the Benchmark Agreement (BA) in the Electricity Industry Participation Code could be amended in such a way that it was as legally robust as a NIC and permitted flexibility in contract terms. The Commission notes that no rule changes have been proposed to date.

System operator services

Approach

- 4.4.15 Where the Electricity Authority and Transpower have an agreement in respect of the provision of system operator services, the assets associated with delivering the

⁷² Note that, as per the settlement agreement, this applies only to NICs entered into after 5 June 2003.

⁷³ Major Electricity Users' Group, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, Appendix, p. 5.

⁷⁴ Electricity Industry Participation Code 2010 Part 12 clause 12.44.

agreement will be excluded from Transpower's RAB value, as a result of applying the cost allocation IM.

Reasons

- 4.4.16 Under s 8 of the Electricity Industry Act, Transpower is the system operator. The SOSPA under which Transpower currently performs this role continues in effect between the Electricity Authority and Transpower pursuant to s 134 of the Electricity Industry Act.⁷⁵
- 4.4.17 Under the SOSPA, Transpower is required to provide system operator services, which are primarily defined as the duties and obligations of the system operator under the former Electricity Governance Regulations and Rules.⁷⁶ The system operator's principal performance obligations are set out in the Electricity Industry Participation Code, and require that the system operator avoid cascade failure, maintain frequency in a defined manner, and so on. Both the SOSPA and the Electricity Industry Participation Code include arrangements for reviewing system operator performance and addressing any performance issues that may arise.⁷⁷
- 4.4.18 Services provided under the SOSPA are primarily on a fixed fee basis. Transpower is required to keep the non-capital components of the SOSPA fees fixed in nominal terms unless a fee change event is triggered under clause 5 of the agreement. In contrast, the capital components of the fee (depreciation, return on capital and tax) are amended periodically to reflect changes in the value of the system operator capital base.⁷⁸ However, changes in the capital base are not unfettered, as the agreement also sets out requirements on Transpower to consult with the Electricity Authority on its capex plans (including both new investments and transfers from non-system operator parts of the business), and report on time or cost variations relative to the plan and on progress with major projects.
- 4.4.19 Transmitting electricity throughout the national grid and the system operator activities are currently regulated under the settlement agreement. Transpower's system operator activities are subject to a separate threshold under the settlement agreement, which is set equal to the price under SOSPA between Transpower and the Electricity Authority.⁷⁹
- 4.4.20 Section 54C of the Act includes system operator services within the definition of electricity lines services, with respect to services performed by Transpower. Hence the system operator services performed by Transpower are regulated under Part 4 of the Act.

⁷⁵ System Operator Service Provider Agreement dated 12 August 2009, supra n 39. The SOSPA was most recently updated in October 2010, see Electricity Commission, *Variation to System Operator Service Provider Agreement*, 29 October 2010.

⁷⁶ The SOSPA has not yet been updated to reflect the passage of the Electricity Industry Act. However, the relevant obligations are now set out in Part 7 of the Electricity Industry Participation Code. The SOSPA also requires Transpower to meet some additional obligations and duties that are not set out in the Code.

⁷⁷ For example: System Operator Service Provider Agreement dated 12 August 2009, supra n 39, clauses 11 (meeting and audits) and 13 (termination for breach), and Schedule 1 paragraph 2.4 (fee at risk); Electricity Industry Participation Code Part 7.

⁷⁸ System Operator Service Provider Agreement dated 12 August 2009, supra n 39, Schedules 1 and 4.

⁷⁹ Commerce Act (Transpower Thresholds) Notice 2008, clause 7.

- 4.4.21 The Commission's view is that where there is an agreement in respect of the provision of system operator services (such as the SOSPA between the Electricity Authority and Transpower) it should not interpose itself between the parties by requiring the revenue associated with the agreement to be included in the IPP. In reaching this view, the Commission has considered the following factors:
- a. the Electricity Industry Act confirms that contracting for system operator services is a function of the Electricity Authority,⁸⁰ hence the regulated revenue for the system operator services will continue to be set via the system operator services contract administered by the Electricity Authority through the SOSPA;
 - b. changes to system operator arrangements enacted by the Electricity Industry Act 2010 are not material in terms of this decision; and
 - c. the 2009 SOSPA has changed substantially from the 2003 agreement which it supplanted, but having reviewed the terms of the 2009 SOSPA, including the fee arrangements and regulatory oversight of capex, the Commission considers that the new agreement includes adequate safeguards and regulatory oversight of system operator services.
- 4.4.22 Submissions from Transpower⁸¹ and MEUG⁸² support the Commission's approach.
- 4.4.23 The Commission notes that the system operator owns and uses grid investment-specific tools purely for the purpose of assessing the impact of proposed grid investments on system behaviour. The Commission agrees with Transpower's submission that the costs of procuring or upgrading any grid investment-specific system operator tools required solely for the purpose of evaluating grid investments will be recovered through the regulatory asset base.⁸³
- 4.4.24 Transpower noted in submissions that, while SCADA is a grid asset, the SCADA EMS software system is a system operator asset and therefore is outside the RAB value.⁸⁴ The Commission agrees that this is the correct treatment of such assets.

Pseudo assets

Approach

- 4.4.25 Under the IM Determination, the remaining pseudo assets created under the settlement agreement (the HVAC lines pseudo asset) will continue to be depreciated over the period to 30 June 2016.

⁸⁰ Electricity Industry Act 2010, section 16(1)(h).

⁸¹ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 18.

⁸² Major Electricity User's Group, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, Appendix, p. 5.

⁸³ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 18.

⁸⁴ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 18.

Reasons

- 4.4.26 As part of the settlement agreement, Transpower moved from using an ODV approach to valuing its fixed system assets to a DHC approach. The 2006 ODV value was deemed to be the DHC value as at the start of the settlement period.
- 4.4.27 However, because of a difference between the ODV valuation in the regulatory accounts and the DHC valuations in the financial accounts—the former being greater by approximately \$112 million—five ‘pseudo assets’ were created. These assets were to be depreciated at an accelerated manner over a period of four to ten years,⁸⁵ at which time the financial and ODV registers would be aligned.
- 4.4.28 With the exception of the ‘HVAC lines pseudo asset’, the pseudo assets were depreciated over a four year period, such that they were fully depreciated (and removed from the RAB value) by 30 June 2010. The remaining pseudo asset has a further six years of accelerated depreciation before it will reach a zero value and be removed from the RAB value.⁸⁶
- 4.4.29 The Commission’s overall approach to setting Transpower’s initial RAB value is that the initial RAB value under Part 4 should be consistent with the RAB values arising from the implementation of the settlement agreement. Therefore, the initial value of the RAB under Part 4 of the Act will be Transpower’s RAB value determined under the Transpower settlement agreement as at 30 June 2011. For consistency, the initial RAB value should include the remaining HVAC lines pseudo asset yet to be fully depreciated.
- 4.4.30 Transpower⁸⁷ and MEUG⁸⁸ support this approach.

Works under construction

Approach

- 4.4.31 Transpower must exclude any asset that is part of works under construction from its RAB value. Transpower must capitalise the financing costs attributable to the construction of an asset in accordance with GAAP,⁸⁹ and cease capitalising financing costs at the point at which the asset is commissioned.⁹⁰ Consistent with GAAP, Transpower must suspend capitalising financing costs during periods in which it suspends construction of the asset.
- 4.4.32 Transpower must calculate the financing costs by applying to the amounts expended on the construction of the asset a rate no greater than the regulatory post-tax weighted average cost of capital (post-tax WACC), specifically the 75th percentile

⁸⁵ Commerce Commission, *Decision and Reasons for Not Declaring Control of Transpower New Zealand Limited and Decision to Reset Transpower’s Thresholds*, 13 May 2008.

⁸⁶ Transpower New Zealand Limited, *Commerce Act (Transpower Thresholds) Notice 2008 Compliance Statement*, 30 June 2009, p. 16.

⁸⁷ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 19.

⁸⁸ Major Electricity Users’ Group, *Submission on the Input Methodologies Discussion Paper*, 31 July 2009, p. 5.

⁸⁹ The relevant accounting standard is New Zealand Equivalent to International Accounting Standard 23 Borrowing Costs as updated from time to time, or any equivalent standard that replaces that standard under Generally Accepted Accounting Practice.

⁹⁰ Paragraph 4.4.68 sets out the definition of ‘commissioned’ under the IM for the valuation of assets.

for the post-tax estimate of WACC, published by the Commission, determined under the cost of capital IM.

- 4.4.33 When works under construction are commissioned, the RAB value of the asset must be net of any revenue earned. That is, Transpower must reduce the cost of the asset, established consistent with GAAP, by the amount of any revenue derived in relation to the assets while they were works under construction (where such a reduction is not already made under GAAP and where the revenue has not already been reported as income under information disclosure).

Reasons

- 4.4.34 In reaching its conclusions about the treatment of works under construction the Commission has considered the following key issues:
- a. the timing of the inclusion of capital and financing costs in the RAB value; and
 - b. how to quantify financing costs.

Timing of inclusion of financing costs

- 4.4.35 Transpower⁹¹ submitted that, while it would be happy to continue with the approach taken under the settlement agreement, it would prefer to record the timing of capex on an ‘as incurred’ basis (reflecting the time at which Transpower pays for a particular project). This is because of the impact on cash-flows, especially at a time of significant capital investment. Harding Katz (in a report for Transpower)⁹² also submitted that the Commission should consider whether the cash flow and forecasting benefits of an ‘as incurred’ approach outweigh the theoretical purity of an ‘as commissioned’ approach.

- 4.4.36 In workably competitive markets, assets that have not been commissioned would not normally be expected to earn a return on the capital expended.⁹³ The Commission’s approach is therefore to allow Transpower to include capex along with financing costs incurred during construction in the RAB value from the time the asset is commissioned. This approach is consistent with GAAP. Under GAAP (NZ IAS 23),⁹⁴ finance costs are calculated from the ‘commencement date’ to the date at which ‘substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete’.⁹⁵

- 4.4.37 Accordingly, the Commission has adopted the ‘commissioning’ date as the appropriate point to allow capitalised financing costs for assets under construction to

⁹¹ Transpower New Zealand Limited, *Submission on Input Methodologies Discussion Paper*, August 2009, p. 32.

⁹² Transpower New Zealand Limited, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers, Attachment: Harding Katz, Comparison of New Zealand and Australian regulation: a report prepared for Transpower New Zealand Limited*, August 2010, p. 3, paragraph 2(b).

⁹³ Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009, paragraph 6.222.

⁹⁴ New Zealand Equivalent to International Accounting Standard 23 Borrowing Costs as updated from time to time, or any equivalent standard that replaces that standard under Generally Accepted Accounting Practice.

⁹⁵ Paragraph 17 of NZ IAS 23 defines the commencement date for capitalisation as ‘the date when the entity first meets all of the following conditions: (a) it incurs expenditures for the asset; (b) it incurs borrowing costs; and (c) it undertakes activities that are necessary to prepare the asset for its intended use or sale.’

enter the RAB value as part of the total cost of the commissioned asset.⁹⁶ However, the IM Determination provides that Transpower may include easements in the RAB value before an active line uses them, provided their purchase has been approved under the grid investment test in Part F of the EGRs, or under the capex IM (paragraphs 4.4.89 - 4.4.103 discuss easements in more detail). The Commission considers that this provides an incentive to invest at the appropriate time and therefore promotes the long-term benefit of consumers.

Quantification of financing costs

- 4.4.38 The financing of assets under construction contributes to Transpower's overall costs of creating or replacing the assets used to provide electricity transmission services. For regulatory purposes, financing costs are usually conceived of as constituting the costs of both debt and equity financing (the firm's cost of capital), with the cost of debt being calculated on a post-tax basis.
- 4.4.39 In workably competitive markets, firms have incentives to complete capital works in a timely and efficient manner. This includes minimising the costs (including financing costs) of completing the works on time, and to a given standard. Promoting improved efficiency is one of the regulatory objectives set out in the Part 4 Purpose (at s 52A(1)(b)). After due consideration, the Commission has concluded that the best option to quantify financing costs is to apply GAAP – specifically NZ IAS 23 with the minor modifications discussed below.
- 4.4.40 Adopting GAAP ensures that the regulatory value of newly commissioned assets is consistent with the financial reporting treatment of those assets, thereby reducing compliance costs for suppliers. NZ IAS 23 allows debt costs that are directly attributable to the construction or production of an asset to be capitalised as part of the asset cost.⁹⁷ Where debt is specifically acquired for an asset then the borrowing costs are readily identifiable. Where Transpower borrows generally (for example, from a central pool of funding) then NZ IAS 23 allows the weighted average of the debt cost to be used for that portion of the funding.
- 4.4.41 The Commission considers NZ IAS 23 has the following drawbacks in a regulatory context:
- a. eligibility to capitalise finance costs under GAAP depends on the way that capital works are funded (through debt or equity); and
 - b. adopting an NZ IAS 23 treatment, under which actual debt costs are capitalised, may in fact encourage Transpower to find the 'easiest' sources of funds to finance new works, irrespective of whether the funds are priced on the most competitive terms.
- 4.4.42 The Commission has mitigated these drawbacks by adapting the approach in NZ IAS 23. Transpower must use a financing rate that is no greater than the regulatory

⁹⁶ New capex must also be added to the RAB value on the commissioning date, see the discussion of capital additions in paragraphs 4.4.68 to 4.4.80.

⁹⁷ New Zealand Institute of Chartered Accountants, *Borrowing Costs (NZ IAS 23)*, paragraphs 10-15. Paragraph 11 defines debt costs that are 'directly attributable to the acquisition, construction or production of a qualifying asset' as 'those borrowing costs that would have been avoided if the expenditure on the qualifying asset had not been made.'

post-tax WACC, specifically the 75th percentile for the post-tax mid-point estimate of WACC, published by the Commission. Where no WACC has been published with respect to the relevant date, Transpower may use a rate no greater than Transpower's own estimate of its post-tax WACC, as at the relevant date.

4.4.43 Transpower does not support modifications to GAAP with respect to permitted financing costs, on the basis that it:

creates a perverse incentive to reduce economic investment by, in some circumstances, exposing Transpower to negative cash flow in order to enable investment expenditure to continue.⁹⁸

4.4.44 Transpower also considered that it would add to compliance costs for no economic benefit.

4.4.45 While the treatment outlined above may diverge from a strict GAAP application under NZ IAS 23 (and could produce a difference in the cost of new assets in some fixed asset registers), the Commission is not persuaded that it will substantially increase compliance costs. Transpower will have the flexibility to use actual debt costs, consistent with the standard, provided these costs do not exceed the regulatory post-tax WACC figure. The Commission would not expect Transpower's debt costs to exceed the allowed WACC. The WACC will be readily available to Transpower and the capitalisation methodology—being substantially similar to that contained in NZ IAS 23—should be well understood. This should limit the extent of compliance costs.

4.4.46 Further, the Commission's approach to financing costs will:

- a. allow a full economic cost of financing to be capitalised by Transpower (not just the cost of debt) thereby providing a more accurate assessment of profitability;
- b. incentivise Transpower to obtain the most efficient form of debt and equity financing in the circumstances; and
- c. remove the opportunity for Transpower to attribute specific tranches of high cost debt to capital projects.

4.4.47 NZ IAS 23 includes a 'suspension' rule under which capitalisation of finance costs is suspended during periods in which active development of the asset is suspended, if these periods are 'extended periods' (i.e. do not involve substantial technical and administrative work and are not a temporary delay necessary for getting the asset ready for use). This 'suspension' rule provides an incentive for Transpower to limit construction time to that strictly necessary for construction. The Commission has adopted this approach.⁹⁹

⁹⁸ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 20.

⁹⁹ The suspension rule would not address situations where Transpower progresses work, but slowly so as to draw out the period over which financing costs accrue. However, the Commission considers that transparency around capex plans and actual capex compared to forecasts should provide interested persons with sufficient information to

4.4.48 The IM Determination provides that any income earned in relation to assets while they are works under construction must be deducted from the cost of the asset (where such a reduction is not already made under GAAP, and where the revenue has not otherwise been reported as income under information disclosure) for the purpose of establishing its RAB value. This will ensure that the cost of the asset that enters the RAB value on commissioning fully reflects the actual (net) cost to the regulated supplier.

Intangible assets

Approach

4.4.49 Transpower may include in the RAB value finance leases and intangible assets, provided that they are identifiable non-monetary assets that are not goodwill, consistent with the meanings under GAAP. Accordingly, Transpower must exclude working capital, operating lease costs, and goodwill from its RAB value.

4.4.50 Transpower must establish the value of permitted intangible assets as follows:

- a. for intangible assets in the initial RAB value, using the value ascribed to those assets in the RAB value arising from the implementation of the settlement agreement as at 30 June 2011; and
- b. for intangible assets added to the RAB value after 30 June 2011 using the cost model for recognition, under GAAP.¹⁰⁰

Reasons

4.4.51 Intangible assets are best defined as “identifiable non-monetary assets without physical substance”.¹⁰¹ Examples include computer software, patents, copyrights, and franchises. Transpower may expend resources on acquiring or developing, maintaining or enhancing such assets, and should be able to earn a return of and on that investment where:

- a. this is consistent with the Part 4 Purpose; and
- b. the assets are used to supply electricity transmission services (it is not sufficient for intangible assets to merely be associated with Transpower).

4.4.52 GAAP (through the accounting standard NZ IAS 38) provides that an intangible asset can only be recognised if, and only if, it meets the following criteria:¹⁰²

- a. it is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, asset or liability, or arises from contractual or other legal rights; and
- b. it is probable that future economic benefits that are attributable to the asset will flow to the entity and the cost of the asset can be measured reliably.

identify this type of behaviour. The Commission will be consulting in more detail on information disclosure requirements, including any requirements in relation to capex plans, in 2011.

¹⁰⁰ See accounting standard NZ IAS 38, paragraph 24.

¹⁰¹ NZ IAS 38, paragraph 8.

¹⁰² NZ IAS 38, paragraphs 12 and 21-22.

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- 4.4.53 NZ IAS 38 requires intangible assets to be measured initially at cost. The standard prohibits the recognition of internally generated brands, publishing titles, customer lists and items similar in substance from being recognised as intangible assets. In these cases, there is no reliable way of measuring the costs (if any) to the supplier of investing in these items.
- 4.4.54 The Commission considers that the criteria set out in paragraph 4.4.52 are consistent with the Part 4 Purpose, specifically s 52A(1)(d). By applying these criteria in establishing and rolling forward its RAB value, Transpower can expect to earn normal economic returns which reflect the actual costs (identifiable and measured reliably) of providing services to its customers. The criteria set out in the standard therefore provide a useful guide in determining the value of the intangible assets that should be permitted to enter the RAB value under Part 4.
- 4.4.55 The IM Determination implements the approach described in this section by requiring Transpower to exclude intangible assets (as defined under GAAP) from its initial RAB value and from additions in rolling the RAB value forward. The IM Determination allows the following specific exceptions to these exclusions:
- a. finance leases; and
 - b. intangible assets that are identifiable and not monetary.
- 4.4.56 This provision requires Transpower to exclude from its initial RAB value, and from the roll forward, monetary intangible assets such as operating leases and working capital. In establishing its initial RAB value, Transpower must make an adjustment to exclude operating lease assets capitalised to the RAB under the settlement agreement. In accordance with GAAP, these must be excluded from the RAB value with effect from 1 July 2011, as at when the initial RAB value is established.
- 4.4.57 The sections that follow discuss the required treatment of specific categories of intangible asset—goodwill, working capital, and finance leases.

Goodwill

- 4.4.58 Goodwill arises from business acquisitions, where a business is acquired from another supplier for a price which is greater than the fair value of the assets of the business at the time of the acquisition. The difference is usually attributed to ‘goodwill’ and is recognised in the financial statements of the acquirer as an asset.¹⁰³ Goodwill is an intangible item and represents the acquirer’s anticipation of future economic benefits from assets where such benefits are not capable of being individually identified and separately recognised.
- 4.4.59 In markets subject to workable competition suppliers are generally unable to earn an additional rate of return simply as the result of the goodwill included in their payments to acquire assets. Further, the inclusion of goodwill in the RAB value may encourage inefficient consolidations. Excluding goodwill from the RAB value will

¹⁰³ It is important to distinguish between the ‘fair value’ of the assets of the business, and the ‘fair value’ of the business enterprise as a whole (that is the price a purchaser is willing to pay for the business), which may be greater. Accounting Standard NZ IFRS 3 provides guidance on the recognition of goodwill for ‘business combinations’, paragraphs 51-55.

accordingly promote the long-term benefits of consumers and will help to produce outcomes consistent with those observed in workably competitive markets. Transpower must therefore exclude goodwill from its RAB value.

Working capital

4.4.60 In considering whether to include working capital in the RAB value, the Commission has defined working capital as the liquidity a business needs to meet its short-term obligations. This is net working capital, i.e. current assets less current liabilities. Overall, including working capital in the RAB value is unlikely to have a material impact on the ROI, and therefore is unlikely to have a substantial benefit in terms of meeting the Part 4 Purpose, or the purpose of information disclosure. The Commission's reasons for this view are:

- a. For consistency with the Part 4 Purpose (in particular s 52A(1)(b)), the IM for the valuation of assets should preserve Transpower's incentives to manage its working capital efficiently. The Commission's approach retains incentives to manage working capital efficiently, as it will not be compensated where working capital is unduly high (and conversely will not be penalised if working capital is low or negative);
- b. Working capital is concerned with the timing of cash flows required to provide the regulated services. Transpower will, in effect, be compensated for the effects of cash flow shortfalls, if any, during capex programmes which involve periods of intensive cash usage.¹⁰⁴ This reduces the impact of excluding working capital from the RAB value—even if working capital were included in the RAB value, it would be net of this large sum; and
- c. Excluding working capital prevents Transpower from including current assets in the RAB value, but also excludes the offsetting effect of current liabilities.

4.4.61 While businesses may already have their own processes in place for measuring working capital, there is no specific GAAP definition or treatment of working capital. For example, current liabilities included in working capital are a subset of term liabilities which are defined under GAAP. Further, in practice businesses share working capital across all of their operations. If Transpower were permitted to include working capital in its RAB values, it would need to allocate it between regulated services and other parts of the business. Thus in order to provide certainty for Transpower, and other interested persons, the Commission would need to develop rules for defining and allocating working capital.

4.4.62 The above drawbacks are not insurmountable. However, it is difficult to justify the added regulatory costs of including working capital in the RAB value, as the benefit from doing so, in terms of the Part 4 Purpose and the purpose of information disclosure, is likely to be immaterial.

4.4.63 As noted above, the exclusion of working capital is implemented in the IM Determination by excluding intangible assets from the RAB value, unless they are

¹⁰⁴ The IM Determination allows Transpower to capitalise the cost of finance during the construction of new assets and to include this in the RAB value once new works are commissioned. This allows Transpower to earn a return on the cash payments made to suppliers when constructing new assets (see paragraphs 4.4.38 to 4.4.47).

both identifiable and non-monetary. As working capital is an intangible asset that is monetary, Transpower must exclude working capital from its RAB value.

Finance leases

- 4.4.64 GAAP (accounting standard NZ IAS 17) provides for ‘finance leases’ to be treated in a similar way to fixed assets and corresponding term liabilities even though the recognised finance lease asset can arguably remain an intangible. In this context, ‘finance leases’ are leases where substantially all the risks and rewards incidental to ownership are passed to the lessee for the term of the lease.¹⁰⁵
- 4.4.65 There is potential benefit in allowing Transpower to recognise finance leases, in accordance with the standard. It can be efficient for Transpower in planning future additions, to choose leases over the option of owning the asset, where this minimises costs over the asset’s life. This outcome is consistent with what would be expected in a workably competitive market, and with s 52A(1)(b) of the Act. Failing to recognise finance leases in the RAB value could penalise Transpower for such efficiency enhancing behaviour. The Commission therefore considers it appropriate to apply the treatment under NZ IAS 17 for finance leases. Hence Transpower is permitted to include finance leases in the RAB value, consistent with GAAP (specifically NZ IAS 17).
- 4.4.66 The IPP will require Transpower to treat operating leases as opex. Accordingly, operating leases are not permitted to enter the RAB value under the IM Determination.
- 4.4.67 While the proposed treatment in the IPP differs from the settlement agreement, it is consistent with GAAP. This approach should therefore reduce compliance costs going forward by enabling Transpower to apply a consistent treatment in its regulatory and financial reporting accounts. Introducing a GAAP treatment for operating leases will require an adjustment to the transition year opex allowance when undertaking the Transition Year wash-up. This is to reflect that the Transition Year forecast maximum allowable revenue (MAR) was largely set using the approach in the settlement agreement (which includes operating leases in the RAB value), whereas, the wash-up will be on the basis of such costs being opex.

Additions and disposals

Approach

- 4.4.68 The IM Determination provides that:
- a. subject to any other decisions on specific types of transaction, capital additions must be included in the RAB value at cost in the year in which they are ‘commissioned’;
 - b. where the cost of a network spare is treated as the cost of an asset under GAAP (wholly or in part), it may be added to the RAB value at the date on which it is ‘commissioned’; and

¹⁰⁵ A finance lease may provide for ownership of the asset to pass to the lessee at the end of that period. The term ‘finance’ reflects the fact that this type of lease is essentially a financing arrangement that may lead to the acquisition of an asset. Vehicles and IT equipment are examples of assets where such leases might be used.

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- c. for this purpose the term ‘commissioned’ for new capex means ‘first used by Transpower to provide electricity transmission services’. In the case of (a) land that is not easement land, and (b) easements, whose acquisition has been approved under Part F of the EGRs (or under the capex IM once it comes into effect), ‘commissioned’ means ‘first acquired by Transpower’.
- 4.4.69 Where Transpower disposes of an asset, the closing RAB value of that asset, for the disclosure year in which the disposal occurs, is nil.
- 4.4.70 As noted above, capex enters the RAB value at actual cost. The Commission notes that the control on the potential of capex spend in excess of pre-approved levels during a regulatory period is dealt with through an adjustment made during annual wash-ups to zero out future recovery on the excess expenditure, as explained in the IPP Reasons Paper.¹⁰⁶

Reasons

- 4.4.71 Transpower agreed, in principle that capital additions should be included in the RAB at cost in the year of purchase (or commissioning, for constructed assets). However, Transpower submitted this may result in under-recovery of a WACC return on assets commissioned part-way though the year. Transpower recommended an adjustment to the customer’s EV account for any under-recovery for assets commissioned during a year.¹⁰⁷ The treatment of assets commissioned part-way through a year, for the purpose of establishing Transpower’s permitted revenue, is set out in the IPP Determination, and discussed in the IPP Reasons Paper.¹⁰⁸
- 4.4.72 Transpower is planning to invest over \$3 billion in upgrading and renewing the transmission network over the next five years. Transpower’s major investments are subject to approvals of transmission investment proposals. These approvals were previously by the EC, and are provided by the Commission from 1 November 2010. The scrutiny applied through approvals of major transmission capex focuses on ensuring only prudent and efficient expenditure is recovered and therefore limits the risk to consumers that Transpower will over-invest.
- 4.4.73 Transpower should only be allowed to add assets to the RAB value when those assets are used to provide electricity transmission services (which would be consistent with outcomes observed in competitive markets).
- 4.4.74 Whether an asset is ‘used’ is a purely factual matter within the knowledge of Transpower. The requirement that a new asset must be ‘used’ in the definition of ‘commissioned’ is a practical way of ensuring that only assets that are used to provide electricity transmission services are included in the RAB value.
- 4.4.75 Transpower agreed with the Commission’s definition of ‘commissioned’, provided that ‘electricity transmission services’ is interpreted broadly enough to include those assets which are not directly used in the transmission of electricity. In the IM

¹⁰⁶ The treatment of capex in excess of pre-approved levels for major and minor capex is addressed in the IPP Reasons Paper, supra n 8, Chapter 3.

¹⁰⁷ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 22.

¹⁰⁸ Commerce Commission, IPP Reasons Paper, supra n 8, Section 3.9.

Determination, ‘electricity transmission services’ is defined as electricity lines services (as ‘electricity lines services’ is defined in s 54C of the Act) supplied by Transpower. The Commission does not consider it necessary to provide guidance in the IM Determination on how s 54C should be interpreted.

- 4.4.76 Transpower submitted that the IM Determination should recognise that it is common for Transpower to partially commission assets.¹⁰⁹ The Commission agrees that a staged commissioning approach is appropriate. The IM Determination permits Transpower to include in the RAB value a portion of a constructed asset as soon as it is used to provide electricity transmission services, with the further expenditure permitted to be added to the RAB value once it is both incurred and commissioned. Transpower may not have costs relating to a particular asset simultaneously earning capitalised interest and included in the RAB.¹¹⁰
- 4.4.77 The Commission considers that permitting Transpower to include as additions network spares, once eligible to be capitalised under GAAP, will provide appropriate incentives for Transpower to hold sufficient spares to enable it to respond to unplanned outages and to undertake maintenance efficiently.
- 4.4.78 Transpower agrees that additions and disposals of assets in the RAB value should result in an adjustment to the RAB value for information disclosure purposes. However, it considers that providing this information in the compliance statement should be sufficient and that duplicating the information in a separate information disclosure is inefficient and a poor use of resources.¹¹¹ The Commission is required to develop information disclosure requirements for Transpower under Part 4. It anticipates that it will consider the merits of separate information disclosure in relation to additions and disposals when it consults in more detail on information disclosure requirements in 2011.
- 4.4.79 Harding Katz (in a report for Transpower)¹¹² submitted that Transpower’s actual capex should be included in the RAB value, even if it exceeds the amount approved by the Commission. They consider that this will prevent Transpower from suffering a permanent capital loss in the event that the amount approved by the Commission is not sufficient for Transpower to recover the costs of its efficient investment. Otherwise, they consider that the level and timing of new investment will be sub-optimal.
- 4.4.80 As discussed in Chapter 2, in the short to medium term, a number of factors will constrain Transpower’s ability to respond to regulatory incentives for efficient investment. The Commission has considered the appropriate balance between the risk that Transpower could include inefficiently high capex in its RAB value, and the risk identified by Harding Katz of sub-optimal investment. The Commission’s

¹⁰⁹ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 19.

¹¹⁰ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 19.

¹¹¹ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 21.

¹¹² Transpower New Zealand Limited, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers, Attachment: Harding Katz, Comparison of New Zealand and Australian regulation: a report prepared for Transpower New Zealand Limited*, August 2010, p. 3, paragraph 2(a).

approach is to include all capex in Transpower's RAB value, once commissioned. Where Transpower commissions capital additions that have not received appropriate regulatory approval, it must undertake an EV adjustment that offsets the revenue impact over the life of the asset, as discussed in Section 3.11 of the IPP Reasons Paper.

Sale and purchase of assets

- 4.4.81 Transactions for the sale and purchase of assets that are used to supply regulated services may occur between Transpower and other entities that are not regulated under Part 4, other entities that are related parties (including other parts of Transpower's business),¹¹³ and other regulated suppliers.¹¹⁴
- 4.4.82 Such transactions should be treated consistent with GAAP, unless this is inconsistent with the Part 4 Purpose. The GAAP approach raises no concerns for arm's length transactions between Transpower and an unregulated entity. Where an asset is purchased by Transpower from an entity not regulated under Part 4, the asset must be included in the RAB value at cost in the year of purchase, where cost is the purchase price of the asset. When an asset is sold, the RAB value should be reduced by the RAB value of that asset in the year in which the disposal occurs.
- 4.4.83 The IM Determinations implement the above approach, with the following exceptions:
- a. where Transpower purchases an asset from another regulated supplier, it must add the asset to its RAB value at the asset's equivalent value in the RAB value of the seller, i.e. at its most recent RAB value. This requirement overrides the requirements governing transactions between related parties, discussed below; and
 - b. where Transpower purchases an asset from a related party (provided the related party is not itself a regulated supplier, see above), it must add the asset to its RAB value at depreciated historic cost where documentation is available to support this, or where sufficient records do not exist to establish depreciated historic cost, at the asset's market value as verified by an independent valuer. For this purpose a related party includes both:
 - i. business units of Transpower that supply services other than electricity transmission services; and
 - ii. a party that under GAAP is considered a related party (including any party that has conducted business either directly or indirectly with the supplier in the current financial year).
- 4.4.84 The EDB/GPB Reasons Paper discusses the Commission's reasons for the above approach in Appendix E (see Section E8). The Commission considers these reasons apply equally to Transpower.

¹¹³ The IM Determination defines a related party to include any person that in accordance with GAAP is related to Transpower, or any part of Transpower that does not supply electricity transmission services.

¹¹⁴ Other regulated suppliers may be EDBs, GPBs, or suppliers of other services regulated under Part 4.

Lost and found assets

- 4.4.85 A lost asset is an asset that was included in Transpower's opening RAB value in a disclosure year, but is subsequently determined by Transpower to never have been used to provide electricity transmission services. Transpower must remove lost assets from the RAB value in the disclosure year in which they are identified as lost, and must reduce the RAB value by the asset's opening RAB value in that year. After 30 June 2011, lost assets that were in the initial RAB value will be permitted to remain in the RAB value
- 4.4.86 A found asset is an asset that has not previously been included in the RAB value but is found by Transpower to have been used to provide electricity transmission services in a previous disclosure year, and was commissioned after the 2011 disclosure year. Transpower must add found assets to the RAB value in the year in which they are found, and must establish the RAB value of found assets at cost, consistent with GAAP, where sufficient records exist. Where sufficient records do not exist, Transpower may assign the asset the same value as a similar asset (where such an asset exists) that is:
- a. of a similar asset type and age; and
 - b. in the RAB value at the beginning of that disclosure year.
- 4.4.87 If no such similar asset exists, Transpower must verify the asset's value based on an independent valuer's report confirming the asset's market value at the time the found asset is added to the RAB value.
- 4.4.88 The EDB/GPB Reasons Paper discusses the Commission's reasons for its approach to lost and found assets in Appendix E (see Section E9).

Easements

Approach

- 4.4.89 Transpower may include easements in the RAB value at cost in the year in which the easement is acquired (i.e. Transpower may include the cost of the easement in the RAB value prior to an active line using it), provided that:
- a. the investment was approved under Part F of the EGRs, or under the capex IM once it comes into force; and
 - b. where Transpower acquires land to create a new easement, the cost of the easement is limited to the sum of:
 - i. legal and administrative costs Transpower incurs in order to create the easement;
 - ii. the detrimental impact on the value of the land, equivalent to the amount that would otherwise be payable to a third party owner of the land as compensation for injurious affection, as determined by a valuer; and

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- iii. the cost of holding the land, calculated as the financing cost on the purchase of the land from the date Transpower acquires the land until the date the easement is created.¹¹⁵
- 4.4.90 Where Transpower acquires land to create a new easement, with the intention of on-selling the land, it may only include the cost of the easement (as set out in paragraph 4.4.89(b) above) in the RAB value. It may not include the full value of the land in the RAB value, nor any gain or loss on sale of the land.
- 4.4.91 The value of existing easements will be the value for those easements included in the RAB value determined under the settlement agreement as at 30 June 2011.
- 4.4.92 Transpower may depreciate easements only where they have a limited life or are required for a known, limited period of time (this applies to existing as well as new easements).

Reasons

- 4.4.93 An easement is a property right to do something, or to prevent someone else from undertaking certain activities, usually in a particular geographic area. The costs of creating or acquiring easement rights can form part of the costs of the assets necessary for Transpower to provide regulated services to consumers.
- 4.4.94 Transpower should be entitled to recover reasonable costs of establishing new easements for the purpose of providing electricity transmission services. The Commission has carefully considered how these costs should be established in situations:
- a. where Transpower negotiates with the land owner, at arm's length, to acquire an easement; and
 - b. where Transpower purchases land itself, in order to create an easement.

Cost of an easement where Transpower negotiates with the land owner

- 4.4.95 Where Transpower negotiates a compensation payment at arm's length, this is essentially no different to any other arm's length transaction (for example payments to contractors, or to acquire network equipment). The Commission has concluded that there is no reason to require a different treatment for easements acquired through an arm's length negotiation, compared to other additions to the RAB.
- 4.4.96 The IM Determination thus allows Transpower to bring easements into the RAB value at cost in accordance with GAAP, where Transpower does not own the land. The cost of the easement includes the amount paid to compensate the land owner for the creation of the easement, together with any legal and administrative costs incurred to create the easement. These costs are subject to the existing Part F or non-Part F capex approval processes applying to Transpower, or capex approval processes under the Capex IM once it comes into force.

¹¹⁵ At the time an easement is created the land will thus be used to determine the costs of works under construction. Under the IM Determination, revenue derived from easement land during the period the land is held reduces the cost of the easement for the purpose of establishing the RAB value.

4.4.97 Transpower may face other legitimate costs associated with the construction of new assets. For example, where Transpower pays compensation to land owners for disruption to their business resulting from construction, it should be able to recover these costs. However, the Commission considers such costs would generally be a cost of construction, not a cost of the easement. As such they should be included in works under construction, and would be capitalised when the newly constructed transmission asset is commissioned. Consistent with GAAP, Transpower should only include costs that are a direct cost of establishing the easement in the value of the easement.

Cost of an easement where Transpower owns the land

4.4.98 In the second situation, where Transpower purchases land itself in order to create an easement, the costs of the easement can be quantified as the detrimental impact on the value of the easement land, any legal and administrative costs incurred to create the easement, and the costs of financing the land purchase ('holding costs').

4.4.99 If Transpower owns the land over which it is establishing an easement, an objective approach is needed to establish the detrimental impact on the value of the easement land, in the absence of an arm's length transaction. In this case, an independent valuer must determine the notional value of compensation to Transpower for 'injurious affection', arising from the creation of the easement. This is an estimate of the amount Transpower would otherwise need to pay to an arm's length land owner to compensate for permanent and material reduction in the value of the land or for disruption due to the creation of the easement.

4.4.100 With respect to holding costs, the IM Determination allows Transpower to capitalise financing costs on all monies paid to purchase land for the purposes of creating an easement, up to the date that the easement is created. As discussed above, (paragraphs 4.4.32 and 4.4.38 - 4.4.47) such financing costs may be calculated at a rate no higher than the regulatory post-tax WACC, that is the 75th percentile for the post-tax mid-point estimate of WACC, published by the Commission.

4.4.101 Transpower submitted that "the full value of the property purchased should be able to be included in the RAB value, and any profit or loss made on the ultimate sale of the balance of the property should be to the cost of the customer. The rationale for this treatment is that such a property purchase is undertaken in order to secure the easement and enable the investment to proceed efficiently, and maximise the overall net benefit of the investment to transmission customers". Transpower also submitted that "if other forms of payment are utilised to acquire the necessary property rights, then these should be recoverable, subject to the necessary regulatory approval of the project as the project that delivers the greatest net benefits for consumers".¹¹⁶

4.4.102 Timing is an important factor affecting the costs of land and easement purchase and, therefore, Transpower should have some flexibility around the timing of easement investments. The Commission considers that allowing easements to be included in the RAB value before an active line uses them, provided their acquisition has been

¹¹⁶ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, pp. 22-23.

approved under Part F of the EGRs, would provide an incentive to invest at the appropriate time consistent with s 52A(1)(a).

- 4.4.103 Under the IM Determination, Transpower is able to include the actual cost of a purchased easement. This cost may include ‘other forms of payment’ subject to applicable capex approvals. Where Transpower purchases land to create an easement, the underlying easement land never enters the RAB value. Instead, the cost in terms of the detrimental impact on the value of the land is objectively determined by a valuer. As a result consumers will not be exposed to risk of the eventual profit or loss made on the sale of the easement land, which is dependent, to some extent, on decisions by Transpower as to when and for how much to sell the land, and what changes are made to the property prior to that time. Such decisions are not subject to approvals by the Commission, nor necessarily subject to scrutiny by interested persons.

Depreciation

Approach

- 4.4.104 Transpower must use straight line depreciation based on the physical life of the underlying asset.
- 4.4.105 Transpower may not depreciate land or easements, unless the easement has a limited legal life or is to be held by Transpower for a known and limited period of time, in which case the economic life is the legal life or limited period as the case may be.
- 4.4.106 Treatment and depreciation of stranded assets is covered in paragraphs 4.4.130 - 4.4.139.

Reasons

- 4.4.107 Under the settlement agreement Transpower receives a return of capital through a depreciation charge based on the life of the underlying asset. The Commission considers that it is appropriate that Transpower continues to receive a return of capital through a depreciation charge.
- 4.4.108 The Commission has allowed for EDBs to use alternative approaches to depreciation under CPPs. In Transpower’s case, however, given the cash flow benefits provided by an un-indexed DHC approach already, an alternative approach to depreciation is not required for Transpower. Moreover, Transpower has submitted that additional provisions for alternative depreciation schedules (i.e. other than those relating to asset stranding) are not required.¹¹⁷

Asset lives

Approach

- 4.4.109 In calculating depreciation, Transpower must use the standard physical asset lives provided in Schedule A of the IM Determination, with the following exceptions:¹¹⁸

¹¹⁷ Transpower New Zealand Limited, *Submission on Input Methodologies Discussion Paper*, August 2009, pp. 14-15.

¹¹⁸ Clause 2.2.6 of the IM Determination sets out the requirements around establishing asset lives for Transpower, including the circumstances in which physical asset lives may vary from the standard lives set out in Schedule A of the Determination.

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- a. Transpower must depreciate fixed life easements over the expected term of the easement;
 - b. for dedicated assets,¹¹⁹ Transpower may assign an asset life equal to the life of the supporting customer contract. This applies both to existing dedicated assets in the initial RAB value, and new dedicated assets commissioned in the future. Once Transpower has set the asset life for an existing dedicated asset it may not subsequently change the asset life, unless there is a corresponding change in the contract, or a change in other relevant circumstances (e.g. it becomes apparent that the assets will continue to be used at the end of the contract);
 - c. Transpower may extend asset lives beyond those provided in the list of standard physical asset lives, without the need for an independent engineer's report. Similarly, Transpower may set asset lives for refurbished assets, without an independent engineer's report;
 - d. Transpower may reduce an asset life, provided the reduced asset life is supported by an independent engineer's report;
 - e. Transpower must determine when to start depreciating network spares consistent with GAAP;
 - f. where Transpower adds a found asset to the RAB value, and where Transpower's RAB value already contains a similar asset, the asset life of the found asset should be the asset life applying to the similar asset. For this purpose 'similar' means similar in terms of asset type and age. Where no such similar asset exists, Transpower must assign an asset life in line with remaining provisions for setting asset lives;
 - g. where assets are commissioned in the future that are not covered by the list of standard physical asset lives, Transpower must set asset lives as follows:
 - i. where an asset of the same type is already in the RAB value, use the same asset life as assigned to the existing asset; and
 - ii. otherwise set asset lives for the assets, provided they are supported by an independent engineer's report; and
 - h. where an asset comprises a number of components with differing lives (a 'composite asset'), Transpower must calculate the total asset life for the composite asset as a weighted average of the lives of those components.

4.4.110 In establishing asset lives, consistent with the provisions on the IM Determination, total 'unallocated' depreciation (i.e. depreciation prior to the application of the cost allocation IM) over the lifetime of an asset must not exceed the value at which the asset is first recognised in Transpower's RAB under Part 4 (after adjusting for the effects of revaluations). The value at which an asset is first recognised in the RAB is

¹¹⁹ The IM Determination defines a dedicated asset as "an asset operated for the benefit of a particular customer pursuant to a fixed term agreement for the supply of electricity transmission services between Transpower and that customer".

its initial RAB value (for assets in the initial RAB) or, for assets subsequently added to the RAB, the value at which they enter the RAB.¹²⁰

Reasons

- 4.4.111 Some regulatory regimes in overseas jurisdictions specify standard asset lives. Standard asset lives ensure that depreciation in each period is appropriately allocated over the expected useful economic life of an asset. A standard list of asset lives may also reduce regulatory costs and provide more certainty for Transpower and its customers. The IM Determination therefore provides a list of standard asset lives, based on that provided in the Commission's 2004 ODV Handbook for electricity lines businesses.
- 4.4.112 Transpower agrees with the underlying principle that for an asset that comprises part of the initial RAB value, it must use the remaining life applying in respect of the thresholds RAB value determined under the settlement agreement as at 30 June 2011. However Transpower submitted that it should use the asset lives that it already uses for financial reporting purposes, consistent with GAAP.¹²¹
- 4.4.113 The Commission considers that Transpower should have the flexibility to apply non-standard asset lives in certain circumstances, subject to a number of limitations. Among other things, such flexibility will help to reduce compliance costs. The following paragraphs discuss the different circumstances in which Transpower may apply non-standard asset lives, and reasons.

Fixed life easements

- 4.4.114 Although easements usually do not suffer physical deterioration or obsolescence, it is possible for them to be established with a limited legal life or acquired by a supplier for a known, limited period of time. Where this is the case, regulated suppliers must depreciate the easement over its lifetime.

Dedicated assets

- 4.4.115 A number of submitters proposed that assets constructed in order to meet a fixed-term contract with a specific customer ('dedicated assets') should be depreciated over the life of that contract, if there is limited scope for reuse.¹²² For example, Vector submitted that suppliers should be entitled to accelerate depreciation of dedicated assets consistent with the contractual arrangements with those customers, including the timeframe. This would ensure that regulatory arrangements match up with contractual arrangements with customers using dedicated assets, thus avoiding the potential for cross-subsidies.¹²³
- 4.4.116 In a workably competitive market, if a supplier constructs a long-lived asset for a particular customer under a long-term contract, the supplier is likely to depreciate the asset over the term of the contract. This is because, once the contract expires,

¹²⁰ In most cases this value will be the 'value of commissioned asset' as determined pursuant to the IM Determination. For found assets, this value will be the 'value of found asset' as determined pursuant to the IM Determination.

¹²¹ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 23.

¹²² See for example: PricewaterhouseCoopers on behalf of 19 Electricity Distribution Businesses, *Submission on the Input Methodologies Discussion Paper*, 14 August 2009, p. 12.

¹²³ Vector Limited, *Post-Workshop response to Commission Questions*, 15 March 2010, Appendix 2, p. 11, Q. 30.

the supplier may have no realistic expectation of earning future revenue from that asset, and so must achieve a return of capital during the contract term.

- 4.4.117 There is no reason to treat existing dedicated assets differently to dedicated assets that may be commissioned in the future, with respect to depreciation. This view was supported by submitters.¹²⁴ Thus the IM Determination applies the same treatment to dedicated assets in the initial RAB value, and those commissioned in the future.

Extended life assets and refurbished assets

- 4.4.118 Transpower submitted that GAAP should apply to any asset life extension. It does “not believe that having an independent engineer sign off any extension to an asset life is practical or necessary”. The Commission notes that, in principle, extending asset lives is an NPV-equivalent adjustment that would imply lower prices for Transpower’s customers. The Commission has therefore determined, after due consideration, that the IM Determination should not constrain regulated suppliers from extending physical asset lives beyond those specified in the list of standard physical asset lives. Accordingly, the IM Determination permits Transpower to extend asset lives beyond those provided in the standard list, without an independent engineer’s report.

- 4.4.119 Transpower submitted that, where an asset life is subsequently increased by refurbishment work, this should be reflected in the remaining useful life under Part 4.¹²⁵

- 4.4.120 Where an asset is nearing the end of its useful life, Transpower may have the option of refurbishing the asset, rather than replacing it. Refurbishment can be an efficient option where it extends the life of an existing asset at a lower cost than replacement, and for a similar level of service. Consistent with s 52A(1)(b), the regulatory rules under Part 4 should encourage such efficiency enhancing behaviour. Thus, Transpower should be able to adjust asset lives where it refurbishes an existing asset. This recognises the value the asset can continue to create, and provides some incentive for Transpower to refurbish existing assets, rather than replacing them. Transpower may adopt an asset life for refurbished assets equal to or greater than the original remaining asset life.

Reduced life assets

- 4.4.121 While changes in asset lives should be NPV neutral over time, reductions in asset lives can bring forward cash flows, and thus have the potential to increase prices to current customers. The Commission therefore considers some independent verification is needed where regulated suppliers seek to reduce physical asset lives below those in the standard list. Reduced asset lives will need to be justified by an independent engineer’s report assessing the expected physical lifetime of the assets

¹²⁴ PricewaterhouseCoopers on behalf of 20 Electricity Distribution Businesses, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 19 August 2010, p. 28, paragraph 90; Electricity Networks Association, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers, Roll Forward*, 20 August 2010, p. 27, paragraph 106; GasNet Limited, *Submission on the Draft Input Methodologies (Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 9 August 2010, pp. 14-15, paragraph 56.

¹²⁵ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 23.

concerned. To reduce compliance costs, the IM Determination provides that a single engineer's report may apply to a class of assets of the same type.

Network spares

4.4.122 GAAP requires depreciation of an asset to begin when it is available for use, i.e. “when it is in a location and condition necessary for it to be capable of operating in a manner intended by management”.¹²⁶

4.4.123 Submissions from ENA,¹²⁷ PwC on behalf of 20 EDBs,¹²⁸ and GasNet¹²⁹ interpret GAAP as requiring assets, including network spares, to be depreciated from when they are physically put into service. PwC¹³⁰ stated that spares do not start to use their service potential until they have been installed on the network and commissioned.¹³¹

4.4.124 As submitters on this point have noted, it is essential that suppliers have ready access to spares to allow timely maintenance and repairs in order to meet quality of service expectations. Taking this into account, the Commission considers that suppliers, including Transpower, should be permitted to determine when to start depreciating spares, provided this is consistent with GAAP.

Found assets

4.4.125 Establishing asset lives for found assets with reference to a similar asset already in the RAB, where such an asset exists, is consistent with provisions for establishing the value of found assets (see paragraph 4.4.86), and with the treatment of non-standard assets (see paragraphs 4.4.126 to 4.4.128 below). This treatment should ensure similar assets are treated on the same basis—thereby assisting interested parties in monitoring asset related information disclosures—and should reduce compliance costs.

Non-standard assets (not covered by the standard list of physical asset lives)

4.4.126 Where an asset is not covered by the standard list of physical asset lives, regulated supplier must establish the asset's life. The Commission considers some independent check or verification of such asset lives is required, to ensure they reflect the asset's expected physical lifetime. ENA and Vector submitted that requiring lives for non-standard assets to be established by an independent engineer in all cases would impose unnecessary compliance costs.¹³² Vector proposed that

¹²⁶ NZ IAS 16, paragraph 55.

¹²⁷ Electricity Networks Association, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers, Roll Forward*, 20 August 2010, p. 26, paragraphs 100-101.

¹²⁸ PricewaterhouseCoopers on behalf of 20 Electricity Distribution Businesses, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 19 August 2010, p. 28, paragraph 89.

¹²⁹ GasNet Limited, *Submission on the Draft Input Methodologies (Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 9 August 2010, p. 14, paragraph 54.

¹³⁰ PricewaterhouseCoopers on behalf of 20 Electricity Distribution Businesses, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 19 August 2010, p. 28, paragraph 89.

¹³¹ NZ IAS 16, paragraph 55, requires depreciation of an asset to begin when it is available for use, i.e. “when it is in a location and condition necessary for it to be capable of operating in a manner intended by management”.

¹³² Electricity Networks Association, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers, Roll Forward*, 20

an independent engineer's report should only be required where there are no comparable assets in the RAB, otherwise the EDB can establish a life (which is not to exceed the asset life for comparable assets).

4.4.127 Similarly, PwC, on behalf of 20 EDBs¹³³ proposed that an independent engineer's report should only be required where an asset of the same type is not already included in the asset register or where the asset life proposed differs from the life assigned to a similar asset which already exists in the asset register. As well as managing compliance costs this would ensure similar assets are treated on the same basis, which should assist interested parties in monitoring asset related information disclosures.

4.4.128 Where an asset of the same type is already in the RAB, it makes sense to use the same asset life, unless there are good reasons to use a different life (such as environmental or usage differences). PwC's proposal is sensible and will encourage consistency between assets in the RAB, as well as reducing compliance costs. These benefits apply equally to Transpower. Commission has therefore incorporated this treatment in the IM Determination for Transpower.

Composite assets

4.4.129 This treatment is consistent with existing requirements, where these exist (for example the 2004 ODV Handbook). No parties have raised concerns with this proposed approach in submissions.

Stranded assets

Approach

4.4.130 The Commission considers that Transpower should be compensated for impaired or stranded assets, when the stranding is caused by factors that are outside of its control, such as changes in user consumption, by allowing accelerated depreciation of those assets, in the year in which assets become stranded where the Commission approves this in accordance with the IPP Determination. The onus is on Transpower to provide evidence to the Commission to validate claims that assets will become stranded during a regulatory period, and that they have taken adequate steps to mitigate this risk. Transpower may not earn a return on capital for stranded or impaired assets after this accelerated depreciation is allowed. The assets must instead be written out of the RAB value at that time.

4.4.131 As set out in paragraph 4.4.70, capex in excess of the Commission's approved levels may enter the RAB value, but recovery on the excess expenditure is addressed under the IPP Determination through the annual wash-ups. This prevents Transpower from recovering the costs of unapproved projects that become impaired or stranded.

4.4.132 As discussed in paragraph 4.4.4, capex associated with NICs will not be entered into the asset base. In the event of stranding or impairment of these assets the treatment will be as specified in the contract for those assets.

August 2010, p. 26, paragraph 102; Vector Limited, *Submission on EDBs and GPBs (Input Methodology) Reasons Paper, Asset Valuation*, 23 August 2010, p. 81, paragraphs 246-248.

¹³³ PricewaterhouseCoopers on behalf of 20 Electricity Distribution Businesses, *Submission on the Draft Input Methodologies Asset Valuation (Electricity Distribution Businesses and Gas Pipeline Businesses) Determinations and Draft Reasons Papers*, 19 August 2010, p. 27, paragraph 85.

Reasons

- 4.4.133 Under the settlement agreement Transpower receives a return of capital through a depreciation charge. The depreciation charge and any asset write-off calculated must be consistent with GAAP and DHC.¹³⁴
- 4.4.134 With respect to impaired or stranded assets, Transpower adjusts its cash flows using accelerated depreciation to achieve a return of capital as asset stranding and impairment becomes apparent. Transpower does not earn a return on capital for stranded or impaired assets.¹³⁵
- 4.4.135 If assets are stranded, or are likely to become stranded soon, for reasons beyond the control of a business, a regulator will usually attempt to ensure the firm is compensated for any losses they incur. This is because stranding prevents the investor from fully recovering its costs and therefore may deter future investment that might likewise be potentially subject to stranding risk.
- 4.4.136 In instances in which assets have or will become stranded for reasons beyond the control of a business, there are a number of ways in which they may be compensated for their loss. The first is to provide a higher regulated rate of return in recognition of the risk the firm bears. The second would be to allow the business to recover the costs of (i.e. a 'return of') its investment from customers by allowing the asset to remain in the RAB value. The third is to allow accelerated depreciation on assets as soon as it becomes apparent that the asset may become stranded for reasons outside the control of the business.
- 4.4.137 Allowing the asset to remain in the asset base would lead, over time, to a divergence between what customers pay for, and what services they are being provided with. It would also result in a divergence between the statutory accounts and the RAB value, as assets that have been reduced in value or excluded from the statutory accounts as a result of an impairment test will continue to be recorded at full value in the RAB.
- 4.4.138 Transpower agrees that accelerated depreciation should apply to assets that are stranded. However, it suggests that there should be an adjustment to the WACC, based on the actuarial risk of assets being stranded without compensation.¹³⁶ The Commission disagrees with Transpower's position and considers that allowing accelerated depreciation, while also allowing for an adjustment to be made to WACC would be compensating Transpower twice.
- 4.4.139 Transpower agreed that, in the event of the stranding or impairment of new investment contract assets, the treatment will be as specified in the contract for the asset.¹³⁷

¹³⁴ Commerce Act (Transpower Thresholds) Notice 2008, Schedule 1, clause (7)(1).

¹³⁵ Commerce Act (Transpower Thresholds) Notice 2008, Schedule 1, clause (7)(2).

¹³⁶ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 24.

¹³⁷ Transpower New Zealand Ltd, *Part 1 Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Paper*, 9 August 2010, p. 24.

Fully depreciated assets under an IPP

Approach

- 4.4.140 For the purposes of individual price-quality regulation, no system fixed assets will be written off during a regulatory period. All such assets in service at the start of a period of individual price-quality regulation should be deemed to have a remaining physical asset life equal to the duration of the regulatory period.
- 4.4.141 Under information disclosure, fully depreciated assets must be written off at the time they become fully depreciated.

Reasons

- 4.4.142 In some cases assets may be depreciated too quickly, to the extent that they are fully depreciated before the end of their economic lives. As a result, the value to the business of any additional service would not be recognised, and the business may even have little incentive to keep the assets in service rather than replacing them.
- 4.4.143 System fixed assets tend to be long-lived and so, if they are in service at the beginning of a regulatory period, the majority are likely to continue in use throughout the period. Where an asset is due to become fully depreciated during a regulatory period, Transpower should continue to be entitled to earn a return on that asset throughout the regulatory period, to recognise the value it provides.

4.5 Application of the IM for the Valuation of Assets

4.5.1 This section discusses the application of the IM to:

- information disclosure regulation; and
- individual price-quality regulation.

Application of the IM for the valuation of assets to information disclosure

Role of the RAB value under information disclosure

- 4.5.2 The Commission is required to set information disclosure requirements for Transpower under Part 4. The purpose of information disclosure is to ensure sufficient information is readily available to interested persons to assess whether the Part 4 Purpose is being met (s 53A). To this end, the Commission anticipates that, among other things, it will require Transpower to disclose its return on investment (ROI). As is discussed in Chapter 2, the ROI is expected to be a key component of information disclosure regulation, as it will inform interested parties' assessment, and the Commission's analysis, of whether Transpower is limited in its ability to earn excessive profits (s 52A(1)(d)).
- 4.5.3 The IM for the valuation of assets is a key input into the calculation of the ROI measure, as it determines:
- the level of depreciation charges; and
 - the total value of the RAB.

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- 4.5.4 The ID requirements will set out in more detail the mechanics of how the IM for the valuation of assets will apply to information disclosure.

Asset allocations in establishing and rolling forward the RAB value

- 4.5.5 As discussed elsewhere in this chapter, Transpower must establish unallocated initial RAB values for each asset in its initial RAB based on the values determined under the settlement agreement as at 30 June 2011. Transpower must then apply the cost allocation IM to the unallocated initial RAB values to establish the initial RAB value for each asset.
- 4.5.6 The roll forward of the asset values in the RAB for a disclosure year must reflect the changes occurring in that year in the allocation of assets between all regulated and unregulated activities Transpower supplies. In particular, asset values and related information (e.g. depreciation) applied to regulatory instruments under Part 4 should reflect changes over time in the allocation of assets between system operator services and other electricity transmission services.
- 4.5.7 This IM achieves this by requiring Transpower to record the total (i.e. 'unallocated') value of an asset in the RAB, and roll it forward (for depreciation, revaluations, additions etc). The cost allocation methodology described in Chapter 3 is applied to this asset value whenever it is necessary to determine a specifically attributable (i.e. 'allocated') portion of the asset value for regulated activities.
- 4.5.8 The 'allocated' RAB value is used to calculate depreciation and revaluations in respect of that asset for that year. As the opening RAB value for any asset in a disclosure year is simply the closing RAB value for the preceding disclosure year, the cost allocation methodology need only be applied once in any disclosure year (to the unallocated closing RAB value) in order to produce an allocated closing RAB value.
- 4.5.9 This process should ensure that as the RAB value is rolled forward it continues to reflect an up-to-date allocation of asset values. It is simpler and easier to implement than the approach proposed in the Draft Determinations.

Application of the IM for the valuation of assets to individual price-quality regulation

- 4.5.10 The IPP applying to Transpower has been set based on a building blocks calculation of Transpower's required revenue over the regulatory period. Key components of the building blocks calculation include:
- required return on capital over the period, calculated using the projected RAB value for each financial year under an IPP;
 - required return of capital, that is projected depreciation, over the period; and
 - projected capex over the period.
- 4.5.11 Transpower will need to provide projections of the above information, estimated in accordance with the IM for the valuation of assets where applicable. These projections will be subject to the Commission's review, as well as consultation, as set out in the IPP Determination. Chapter 3 of the IPP Reasons Paper explains in

more detail how the Transpower's RAB value is incorporated into the revenue calculation under the IPP.¹³⁸

¹³⁸ Commerce Commission, IPP Reasons Paper, supra n 8, Section 3.6.

CHAPTER 5: REGULATORY TAX

5.1 Introduction

5.1.1 The IMs relating to regulated electricity lines services provided by Transpower must include, to the extent applicable to the type of regulation under consideration, the “treatment of taxation” (s 52T(1)(a)(iv)). The IM for the treatment of taxation sets out the methodology that is to be used to determine the regulatory tax allowance for Transpower. This chapter sets out the Commission’s decisions on, and reasons for, the treatment that is to apply. This chapter should be read alongside Chapter 5 of the EDB/GPB Reasons Paper.

IM for the treatment of taxation

- 5.1.2 Tax costs are one of the main types of costs facing all regulated suppliers. They are therefore a key part of any assessment of Transpower’s profitability. Compensation for these costs must also be provided when IPPs are set.
- 5.1.3 In practice, the task of determining the tax costs associated with the supply of a particular type of regulated service is not a straightforward one. This is because, as is discussed in the cost allocation chapter (Chapter 3), many regulated suppliers supply more than one type of regulated service as well as a range of other services that are not regulated under Part 4. Tax is paid to the Inland Revenue Department (IRD) on a whole-of-business basis, and therefore the tax costs associated with the supply of a particular regulated service are not directly observable.
- 5.1.4 The tax costs associated with electricity transmission services could be determined in the same manner as other operating costs, i.e. by applying the cost allocation IM to the tax costs associated with all of Transpower’s activities. However, tax costs arise as a consequence of many other operational and capital decisions made by Transpower. Therefore, it is possible that applying a tax cost allocation methodology in its own right could result in an allocation of tax costs that is inconsistent with the other costs allocated to the regulated activities.
- 5.1.5 The tax costs associated with the regulated services supplied by Transpower will therefore be calculated by applying the corporate tax rate to the regulatory taxable income. The regulatory taxable income is the total regulatory income less expenses associated with the regulated services supplied by Transpower, allocated to the regulated services by applying the cost allocation IM, adjusted for any revenue or expenses not recognised as assessable or deductible under tax legislation (e.g. revaluation gains or losses).

5.1.6 Thus, the generic expression for estimating tax costs, subject to potential adjustments, will be:

Total Regulatory Income

– Depreciation deduction for regulatory tax purposes

– Other deductions and adjustments for regulatory tax purposes (e.g. deductible opex, interest)

= **Regulatory Taxable Income**

× **Corporate Tax Rate**

= **Regulatory Tax Allowance**

5.1.7 The overall approach to taxation primarily requires definition of the appropriate depreciation deductions for regulatory tax purposes in the formula given in paragraph 5.1.6 above (i.e. a tax expense—with or without a deferred tax balance—or a ‘tax payable’ approach).¹³⁹

Application of the IM for the treatment of taxation

5.1.8 Under information disclosure regulation, the IM for the treatment of taxation only applies to the way in which profitability is reported. Interested persons require this information to assess whether the Part 4 Purpose is being met. It is therefore a key part of satisfying the purpose of information disclosure regulation set out in s 53A. Transpower will need to provide sufficient information on the assumptions which underpin the tax calculation.

5.1.9 Under individual price-quality regulation, the IM for the treatment of taxation will be used to determine the level of remuneration Transpower is likely to require for its tax costs over the regulatory period.

Overview of IM and structure of this chapter

5.1.10 Table 5.1 sets out the components of the IM for the treatment of taxation for Transpower, and indicates where in this chapter each component is discussed.

¹³⁹ An explanation of the main approaches can be found in: Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009, Chapter 7, Section 7.3.

Table 5.1 Overview of IM for the Treatment of Taxation for Transpower

Approach in IM	Where discussed
Transpower's tax obligations should be estimated using a 'tax payable' approach.	Section 5.3
The cost allocation IM is to be applied, and tax legislation is to be applied (to the extent practicable and subject to other relevant provisions in the IMs), to calculate the regulatory taxable income.	Section 5.3 Paragraph 5.4.3
Tax deductible debt interest should be calculated using a notional leverage that is consistent with the cost of capital IM	Paragraphs 5.4.4 - 5.4.7
Tax losses in Transpower's wider tax group should be ignored when estimating tax costs, and any tax losses generated in the supply of regulated services should be notionally carried forward to the following disclosure year.	Paragraphs 5.4.9 - 5.4.12
The regulatory tax asset value of assets acquired from a supplier of another type of regulated service should remain unchanged in the event of an acquisition of assets used to supply services under Part 4.	Paragraphs 5.4.13 - 5.4.17
The initial regulatory tax asset value should be the lesser of that recognised by the IRD for the relevant assets or share of assets used by Transpower to supply regulated electricity lines services, and the initial RAB value.	Paragraphs 5.4.18 - 5.4.20

5.1.11 The chapter is structured as follows:

- Section 5.2 sets out the key considerations in setting the IM for the treatment of taxation;
- Section 5.3 sets out the Commission's decisions and reasons for the overall approach to the IM for the treatment of taxation, which is primarily affected by the depreciation deduction that is used for regulatory tax purposes;
- Section 5.4 sets out the key components of the IM, including:
 - deductions for regulatory tax purposes;
 - the treatment of tax losses in the wider tax group;
 - the tax treatment of acquisitions; and
 - establishing the initial regulatory tax asset value.
- Section 5.5 outlines the way in which the IM applies to information disclosure and individual price-quality regulation.

5.2 Key Considerations in Determining the IM

- 5.2.1 The statutory guidance available to the Commission in setting an IM for the treatment of taxation, and the Commission's interpretation of what that guidance means in relation to the treatment of taxation in respect of the supply of electricity lines services, is set out in Chapter 5 of the EDB/GPB Reasons Paper.
- 5.2.2 However, there are two key factors relevant to Transpower that do not apply in the case of EDBs. In particular, when considering taxation, the following points are relevant:
- Transpower will apply an un-indexed approach to update the value of the RAB. This is important because an un-indexed approach results in relatively high initial cash flows on any investments that Transpower makes in future. Thus, the case for a deferred tax approach on the grounds that it results in higher initial cash flows is weaker for Transpower; and
 - the existing administrative settlement provides for a tax payable approach, which Transpower continues to support. By contrast, there is strong and unanimous support from EDBs for the application of a deferred tax approach.

5.3 Treatment of Taxation IM

- 5.3.1 Transpower's tax obligations are to be estimated using a 'tax payable' approach. This corresponds to the use of regulatory tax depreciation as a deduction for regulatory tax purposes (as opposed to regulatory depreciation). This form of depreciation is conceptually similar to the allowable deduction for depreciation used in calculating the tax payable to the IRD. Rather than calculating regulatory tax depreciation with reference to the value recognised under tax rules for the relevant assets, however, a 'regulatory tax asset value' is used instead.¹⁴⁰
- 5.3.2 When compared to the other main approaches (discussed further below), the tax payable approach comes closest to approximating the cash flows Transpower would need to meet its tax obligations to the IRD for any given period. As noted above, this approach—consistent with that used under the existing administrative settlement—is also supported by Transpower.¹⁴¹
- 5.3.3 The tax payable approach is consistent with Transpower expecting to earn profits at least sufficient to reward innovation, investment and efficiency, while also being limited in its ability to extract excessive profits. In addition:
- the tax payable approach is consistent with a flatter pricing profile in real terms over time when compared to the alternatives considered by the

¹⁴⁰ The regulatory tax asset value may differ from the value recognised under tax rules. For example, as discussed further in paragraphs 5.4.18 to 5.4.20, the initial regulatory tax asset value under Part 4 will equal the lesser of the value recognised under tax rules for the relevant assets or share of assets used to supply the regulated services, and the initial RAB value.

¹⁴¹ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 26.

Commission, while also being consistent with Transpower expecting to have appropriate cash flows to finance its investments;

- the tax payable approach ensures that interested persons are able to assess whether Transpower is receiving appropriate compensation for its tax costs in each period (i.e. consistent with s 53A);
- the tax payable approach is consistent with Transpower having incentives to pursue overall improvements in efficiency, whilst not disincentivising any improvements in tax efficiency that would not be to the long-term benefit of consumers;
- the approach is relatively simple to understand and implement; and
- as discussed below (paragraphs 5.4.13 - 5.4.17), a tax payable approach can be implemented in a way that Transpower retains the net tax benefits (or costs) of any transaction, thereby promoting incentives for efficiency-enhancing trades, while protecting consumers from the downside of transactions that do not achieve the expected gains.

Alternatives considered by the Commission

5.3.4 The main alternative to a tax payable approach considered by the Commission in forming its draft decision was the tax expense approach, which has two variants:

- without a deferred tax balance adjustment to the RAB value (i.e. ‘tax expense’); and
- with a deferred tax balance adjustment to the RAB value (i.e. ‘deferred tax’).

Tax expense approach

5.3.5 The most material way that a ‘tax expense’ approach to measuring tax costs differs from a tax payable approach is in the depreciation deduction for regulatory tax purposes. An implicit assumption in the tax expense approach is that the depreciation for regulatory tax purposes is the same as regulatory depreciation, rather than approximating the tax deduction actually allowed under tax rules (which is found by applying tax depreciation rules to the regulatory tax asset value of the regulated supplier). Thus, a tax expense approach corresponds to the use of regulatory depreciation as a deduction for regulatory tax purposes (as opposed to regulatory tax depreciation). It therefore is not a good estimate of the actual tax obligations faced by the regulated supplier in present value (PV) terms.

5.3.6 The tax expense approach is slightly simpler than a tax payable approach to implement, as it does not require information about the regulatory tax asset value to be maintained separately from information on the RAB. This benefit is unlikely to be sufficient to outweigh the fact that the tax expense approach is not consistent with suppliers being limited to an expectation of earning a normal return. This is because the tax expense approach is not equivalent in PV terms to a tax payable approach, and the tax payable approach better reflects the actual tax costs faced by a regulated supplier. The Commission has rejected the tax expense approach for this reason.

'Deferred tax' approach

- 5.3.7 For regulatory purposes, a deferred tax approach is intended to adjust the tax expense approach to be consistent with suppliers expecting to earn normal profits over time. A deferred tax adjustment—which is applied to the RAB value—corrects for the over-compensation for tax costs in PV terms that would otherwise be implied by the tax expense method. However, although for regulatory purposes any deferred tax approach is intended to be NPV-equivalent to the tax payable approach, such is not the case for the deferred tax approach used for financial reporting purposes. Also, any deferred tax approach implies a different distribution of tax costs across time to that of a tax payable approach; deferred tax approaches tend to lead to increased cash flows in the earlier years of an asset's lifetime.
- 5.3.8 Relative to tax payable approaches, deferred tax approaches are less consistent with a flat aggregate pricing profile in real terms over time, and are more difficult for interested persons to understand when assessing the performance of Transpower. Given an un-indexed approach will be used to roll forward the RAB value, there is little reason for thinking that Transpower would need even higher initial cash flows as a result of the treatment of taxation. Consequently, the Commission has rejected the deferred tax approaches when coming to its decision on the overall approach for the IM for the treatment of taxation, and has adopted the tax payable approach favoured by Transpower instead.

5.4 Key Components of the IM for the Treatment of Taxation

Overview

- 5.4.1 The key components of the decisions relating to the IM for the treatment of taxation are:
- deductions for regulatory tax purposes;
 - the treatment of tax losses in the wider tax group;
 - the tax treatment of acquisitions; and
 - establishing the initial regulatory tax asset value.

Deductions for regulatory tax purposes

- 5.4.2 When calculating regulatory taxable income, the cost allocation IM and tax rules are to be used, to the extent practicable and subject to other relevant provisions in the IMs. Debt interest should be calculated using a notional leverage consistent with that used in the cost of capital IM, and a deduction in respect of the term credit spread differential under the cost of capital IM should also be made.
- 5.4.3 An issue for regulators lies in identifying the proportion of the annual tax liability that is attributable to the provision of regulated services. Under Part 4, this can be difficult where regulated suppliers also supply services that are not regulated under Part 4. To address this complicating factor, an estimate of tax costs can be derived by applying tax legislation to the regulatory accounts of the regulated part of the business, to the extent practicable, and subject to other relevant provisions in the IMs (i.e. the IMs have precedence). The regulatory accounts, and the revenue and

expenses used to derive regulatory net income, are found by applying the cost allocation IM to the operating costs and asset values associated with electricity transmission services supplied by Transpower.

- 5.4.4 Given that the allocation of debt costs is not covered by the cost allocation IM, and tax is not to be treated as a pass through cost,¹⁴² a similar decision is also required on the way in which, and thus how much, debt interest should be allocated to Transpower's regulated activities when making an assessment of regulatory net income. This is because debt is typically issued on a consolidated (i.e. whole group) basis. A simple way to address this allocation problem is to also use a proxy deduction for interest—found by multiplying the interest rate on debt capital by a 'benchmark' leverage ratio and by the value of the RAB.
- 5.4.5 It is appropriate that the level of debt attributed to the regulated part of the business should be based on the level of leverage used in calculating the WACC. Transpower agrees that the approach to taxation should be consistent with that used to estimate the WACC. That said, Transpower does not agree with the level of leverage that is to be used to estimate the WACC. Under the approach used to estimate the cost of capital, a notional level of leverage is to be used rather than Transpower's actual level of leverage. The reasons for adopting a notional level of leverage when estimating the WACC is discussed further in Chapter 6 (Section 6.6) and Appendix H of the EDB/GPB Reasons Paper.
- 5.4.6 Since tax costs facing Transpower are estimated in a way that recognises that it realises tax benefits through leverage (i.e. by estimating the 'levered tax liability', which is an estimate of tax costs after the tax deduction for interest is taken into account), Transpower's rate of return would need to be compared to a cost of capital that is free of any tax adjustments to the cost of debt. The resultant WACC is consequently known colloquially (in New Zealand) as a 'vanilla WACC', i.e. a weighted combination of the pre-tax cost of debt and the post-tax cost of equity.¹⁴³
- 5.4.7 Typically, however, interested persons in New Zealand are likely to be more familiar with a post-tax WACC than a vanilla WACC. In the post-tax formulation of the WACC, the tax deduction for interest is already included in the WACC formula. To avoid double-counting of the tax deduction for interest, this amount (i.e. the interest tax shield) must be added to the levered tax liability where a ROI value is being compared to the post-tax WACC. To ensure comparability, the leverage assumption in this interest tax shield calculation must match the leverage assumption in the post-tax WACC calculation. This may require that the ROI value be calculated with and without the inclusion of the interest tax shield, as appropriate.

¹⁴² The reason that tax is not treated as a pass through cost relates to incentives. Because tax obligations are likely to rise in line with profits, treating tax as a pass through cost would imply that Transpower should receive greater compensation for its tax costs when profits rise. This treatment would not appear to be necessary since Transpower already has an incentive to improve its profitability. Similarly, if Transpower was making a loss, treating tax as a pass through cost would require that the compensation for its tax costs would need to fall – i.e. treating tax as a pass through cost would exacerbate any losses.

¹⁴³ One option would be to assess regulatory returns on a pre-tax basis, i.e. by including the estimate of tax costs in the cost of capital. It is, however, more transparent to separate out these two types of cost, i.e. by treating tax as a separate building block.

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- 5.4.8 In addition, given it relates to debt interest costs, a deduction in respect of the term credit spread differential under the cost of capital IM (refer Chapter 6) should also be made.

Treatment of tax losses in the wider tax group

- 5.4.9 Tax losses in Transpower's wider tax group should be ignored when estimating tax costs. Any tax losses generated by Transpower in the supply of electricity transmission services should be notionally carried forward to the following disclosure year.
- 5.4.10 Among other reasons, ignoring tax losses in the wider tax group prevents the attribution of tax benefits to a regulated part of the tax group when they have already been attributed and used up by another regulated part of the wider tax group.
- 5.4.11 In addition, there is not a clear cut case for requiring Transpower to share with consumers the benefits that can be achieved by utilising tax losses in the wider tax group. It is not obvious, for example, that an issue of allocative or dynamic efficiency is at stake.
- 5.4.12 It is important that tax benefits are not allocated to more than one business unit, as this could potentially disadvantage suppliers of multiple services regulated under Part 4. Although this is not currently the case for Transpower, it is still appropriate to recognise this possibility by ignoring the position of the wider tax group. For the avoidance of doubt, subvention payments should also be ignored when calculating tax costs facing Transpower.

Tax treatment of acquisitions

- 5.4.13 Like the RAB value, the regulatory tax asset value of acquired assets is to remain unchanged in the event of an acquisition of assets used to supply services under Part 4 (i.e. from another supplier of services regulated under Part 4).
- 5.4.14 To implement the proposed tax payable approach, Transpower will need to calculate regulatory tax depreciation by applying depreciation rules specified under tax rules to the regulatory tax asset value of its investments. In the event of future asset acquisitions, the Commission considers that, like the RAB value, the regulatory tax asset value of the acquired assets should remain unchanged (i.e. not be adjusted to reflect the transaction price, which is how the tax asset value would be recognised under tax rules in most cases).¹⁴⁴
- 5.4.15 Although this departs from the approach under tax legislation, the merits of this modified tax payable approach are that:
- Transpower retains the net tax benefits of the transaction, but also bears any subsequent costs (i.e. should the IRD revisit the tax consequences of the transaction);

¹⁴⁴ This is consistent with the tax treatment employed by the Essential Services Commission when regulating electricity distribution services in Victoria, Australia. See: ESC, *Electricity distribution price review 2006-10, Final decision Volume 1, Statement of purpose and reasons*, October 2005, pp. 331-332, and 398-399.

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- excessive profits and incentives to pay a significant premium over RAB are still limited by ignoring any acquisition premium (i.e. post-sale RAB is equal to pre-sale RAB, which is the same as under the unmodified tax payable approach); and
 - incentives are retained to make efficiency gains to cover any acquisition premium over RAB, and these efficiency gains would still be shared with consumers over time.
- 5.4.16 An alternative approach would be to set the regulatory tax asset value to the acquisition cost of the assets, consistent with recognition under tax rules in most cases. This would, however, require providing the regulated supplier that purchases the assets with an NPV-adjustment to the RAB value to compensate the buyer for any premia it paid as a result of the tax depreciation claw-back consequences of the acquisition. In its submission on the IM Discussion Paper, Transpower considered that an NPV-adjustment to the RAB value would be an appropriate approach.
- 5.4.17 This option was rejected on the basis that it would not be consistent with Transpower retaining the same amount of the net tax benefits of an acquisition (where such benefits arise). This may have the effect of not promoting some efficiency enhancing trades, consistent with s 52A(1)(a), as effectively as the approach set out in the IM Determination.

Establishing the initial regulatory tax asset value

- 5.4.18 An appropriate starting point for establishing the initial regulatory tax asset value is to use the equivalent actual tax book value for the same assets as recognised under tax rules. However, the initial regulatory tax asset value will not exceed the initial RAB value. This is because the way the initial regulatory tax asset value is established should not be inconsistent with the way in which it is rolled forward.
- 5.4.19 Given the way that the regulatory tax asset value is rolled forward, this implies that it would never (in aggregate) exceed the RAB value (in aggregate). This condition should therefore arguably also be met when the initial values of the regulatory tax asset value and the RAB value are established. Transpower supports this approach.
- 5.4.20 Although it is appropriate for the initial regulatory tax asset value of Transpower to be capped at the RAB value, the Commission has not explicitly included a provision to ensure this in the IM Determination, as it considers that the actual tax book values for Transpower will already be below the initial RAB value.

5.5 Application of the IM for the Treatment of Taxation

- 5.5.1 This section outlines the way in which the IM for the treatment of taxation is to apply to:
- information disclosure regulation; and
 - individual price-quality regulation.

Application under information disclosure

- 5.5.2 The purpose of information disclosure is to ensure sufficient information is readily available to interested persons to assess whether the Part 4 Purpose is being met (s 53A).
- 5.5.3 The Commission is required to set information disclosure requirements for Transpower under Part 4. Among other things, Transpower will be required to disclose its ROI. The ROI is expected to be a key component of information disclosure regulation, as it will inform interested persons' assessment, and the Commission's analysis, of whether Transpower is limited in its ability to earn excessive profits (s 52A(1)(d)).
- 5.5.4 The ROI may be compared to Transpower's WACC under Part 4, to assess profitability over time. The IM for the treatment of taxation is a key input into the calculation of the ROI measure.

Application under individual price-quality regulation

- 5.5.5 IPPs for Transpower will be set based on a building blocks calculation of Transpower's required revenue over the regulatory period. Tax is one of the main building blocks. Each IPP will therefore need to be informed by projections of the regulatory tax allowance over the regulatory period, estimated in accordance with the IM for the treatment of taxation.

CHAPTER 6: COST OF CAPITAL

6.1 Introduction

IM for estimating the cost of capital

- 6.1.1 Section 52T(1)(a)(i) of the Act requires that the IMs relating to a particular good or service must include, to the extent applicable to the type of regulation under consideration, an IM for ‘the cost of capital’.
- 6.1.2 In relation to the IM for the cost of capital, the Commission considers that as a regulated supplier of electricity lines services, Transpower is subject to similar risks, and similar expectations as to the required rate of return, as a regulated supplier of electricity distribution services. The cost of capital IM for Transpower is therefore very similar to that for EDBs.
- 6.1.3 The EDB/GPB Reasons Paper sets out in detail the Commission’s decisions and reasons for the cost of capital IM as they relate to EDBs. With the exception of the difference in the next paragraph, the reasoning in that document as it relates to EDBs also applies to Transpower. Rather than substantively duplicate that reasoning in this document, the reader is instead referred to the EDB/GPB Reasons Paper.
- 6.1.4 The key difference between the cost of capital IM for Transpower and that for EDBs relates to the form of regulation for Transpower. Unlike EDBs, which are subject to default/customised price-quality regulation, Transpower is subject to individual price-quality regulation and an IPP. This has some similarities with a CPP for EDBs and the rationale in the EDB/GPB Reasons Paper as it relates to the cost of capital IM for EDBs under a CPP, is similar to that which relates to Transpower under an IPP.

Overview of the IM and structure of this chapter

- 6.1.5 The remainder of this chapter:
- provides an overview of the cost of capital IM for Transpower (Table 6.1 below); and
 - discusses the application of the cost of capital IM for Transpower to information disclosure and individual price-quality regulation (Section 6.2).
- 6.1.6 There are many complex and technical issues in developing a methodology for determining the cost of capital. These issues are discussed in detail in the EDB/GPB Reasons Paper, which should be read together with this chapter.
- 6.1.7 Table 6.1 below sets out the components of the IM for the cost of capital for Transpower and indicates where in the EDB/GPB Reasons Paper each component is discussed.

Table 6.1 Overview of IM for the Cost of Capital for Transpower

Approach in IM	Where discussed
<p>The cost of capital is an estimate of the weighted average cost of capital (WACC) which reflects the cost of debt and the cost of equity used to fund investment. The WACC will apply in respect of the supply of regulated services by Transpower.</p>	<p>Section 6.1, H1, H2</p>
<p>The Commission will:</p> <ul style="list-style-type: none"> • publish annually a mid-point estimate of the five-year vanilla and post-tax WACC, as well as 25th and 75th percentile estimates of vanilla and post-tax WACC, to apply under information disclosure regulation; and • determine, as at 7 months prior to the start of the regulatory period, an estimate of a five-year vanilla WACC at the 75th percentile to apply in setting the IPP for Transpower. The Commission will publish this WACC no later than one month after estimating it. <p>For RCP1, the Commission will determine the WACC to apply as soon as practicable after the IM comes into force.</p>	<p>Section 6.7 Section 6.2 of this Paper</p>
<p>The methodology for estimating a vanilla WACC is: <i>cost of debt × leverage + cost of equity × (1- leverage)</i></p> <p>The methodology for estimating a post-tax WACC is: <i>cost of debt (after corporate tax) × leverage + cost of equity × (1- leverage)</i></p>	<p>Sections 6.7, H2</p>
<p>For all regulated suppliers, cost of debt is estimated as: <i>risk free rate + debt premium + debt issuance costs</i></p> <ul style="list-style-type: none"> • the risk free rate of return is estimated by the Commission as part of publishing annual WACCs for all regulated suppliers. The risk free rate is estimated from the observed market yield to maturity of vanilla NZ Government NZ\$ denominated nominal bonds with a term to maturity that matches the term of the regulatory period (five years); • the debt premium is also estimated by the Commission as part of publishing annual WACCs for all regulated suppliers as the difference between the risk free rate and the yield on publicly traded corporate bonds for EDBs and GPBs with a BBB+ S&P long-term credit rating and a term to maturity which matches the regulatory period (five years); and • debt issuance costs are 35 basis points (0.35%) p.a. 	<p>Sections 6.3, H2 Sections 6.3, H4 Sections 6.3, H5 Sections 6.3, H5</p>
<p>A separate term credit spread differential is calculated for qualifying suppliers reflecting additional costs associated with holding a longer-term debt portfolio. The term credit spread differential is used to adjust cash flows in information disclosure and individual price-quality regulation and is applied to allowable revenue calculations in the IPP. Qualifying suppliers have a debt portfolio with a weighted average original tenor exceeding the regulatory period (five years).</p>	<p>Sections 6.1, 6.3, H6</p>
<p>Cost of equity is estimated using the Simplified Brennan-Lally CAPM as: <i>risk free rate × (1- investor tax rate) + equity beta × TAMRP</i></p> <ul style="list-style-type: none"> • the risk free rate is the same as for the cost of debt; • the equity beta for Transpower is 0.61, derived from: 	<p>Sections 6.4, 6.5, H2 Section 6.5 Sections 6.5, H8</p>

Approach in IM	Where discussed
<ul style="list-style-type: none"> ○ an asset beta for Transpower of 0.34; and ○ leverage of 44% for Transpower; ● the investor tax rate is the maximum prescribed investor tax rate under the PIE tax regime, which is 30% up until 30 September 2010 and 28% thereafter. Changes in the prescribed rate will flow through to future WACC estimates automatically; and ● the TAMRP is 7.5% until 30 June 2011 and 7% thereafter. The TAMRP is expressed as a five-year composite rate (to match the term of the regulatory period), hence the TAMRP estimated for the five year period which commences on 1 July 2010 is 7.1% and for the five year period which commences on 1 July 2011 is 7%. 	<p>Sections 6.5, H8 Sections 6.6, H3 Sections 6.5, H10</p> <p>Sections 6.5, H7</p>
<p>The corporate tax rate is 30% up until the end of the 2011 tax year, and 28% thereafter. Changes in the corporate tax rate will flow through to future post-tax WACC estimates automatically.</p>	<p>Sections 6.5, H10</p>
<p>To incentivise investment in regulated services (given the possibility of error in estimating the WACC) the 75th percentile estimate of the vanilla WACC will be applied under the IPP.</p>	<p>Sections 6.7, H11</p>
<p>The Commission has compared the expected WACC outputs against a range of other financial and economic information in order to check that commercially realistic estimates of WACC for EDBs and Transpower will be produced by the IM.</p>	<p>Sections 6.8, H13</p>

6.2 Application of the Cost of Capital IM

Information disclosure

6.2.1 The Commission's decision is that it will estimate Transpower's vanilla and post-tax cost of capital on an annual basis as follows:

- the Commission's parameter estimates of leverage, the TAMRP, betas, and debt issuance costs, will be fixed in the IM Determination and will not be updated on a regular basis;
- the formula for corporate and investor tax rates in the Determination is linked to certain statutes and can change in line with changes in those statutes;
- the Commission will update its estimates of the risk-free rate of return and the debt premium annually for each cost of capital estimation;
- the Commission's estimates of the risk-free rate of return and the debt premium will be for a five-year period;
- the Commission's methodology for updating its estimates of the risk-free rate of return and the debt premium is set out in the IM Determination;
- the cost of capital estimates for Transpower for information disclosure will be calculated as at the first working day of each disclosure year. So if

Transpower's regulatory period commences on 1 April, the WACC will be estimated as at that date; and

- Transpower can calculate and disclose the amount of the term credit spread differential (including the costs of entering an interest rate swap) in respect of debt issues with a term which exceeds five years where Transpower's overall debt portfolio has an original tenor which exceeds five years. This is a separate allowance and is not included in the WACC estimate.

6.2.2 The Commission's estimates will be in the form of a cost of capital range for each of the vanilla and post-tax cost of capital. In the case of Transpower this range will be from the 25th to 75th percentile. These ranges will be estimated in accordance with the methodology set out in the IM Determination. The Commission will determine its annual estimates within one month of the start of the disclosure year.

Individual price-quality regulation

6.2.3 For the purposes of the IPP, the IM provides for substantially the same methodology for estimating the vanilla cost of capital as applies to estimating the vanilla cost of capital for information disclosure purposes.

6.2.4 The term credit spread differential (including the costs of entering an interest rate swap) will be considered when setting an IPP where Transpower's overall debt portfolio has an original tenor which exceeds five years.

6.2.5 The cost of capital estimates for Transpower for the IPP will be calculated as at the first working day of the month that is seven months prior to the start of the regulatory period. So if Transpower's regulatory period starts on 1 April 2011, the cost of capital will be estimated as at 1 September 2010.

6.2.6 Unlike information disclosure, instead of selecting an upper and a lower bound for the cost of capital (as in the context of information disclosure), the Commission will select a single point estimate for the purposes of individual price-quality regulation. This point estimate will be at the 75th percentile as it is for EDBs under DPPs and CPPs. The reasons for this are set out in the EDB/GPB Reasons Paper.

CHAPTER 7: RULES AND PROCESSES

7.1 Introduction

- 7.1.1 Section 52T(1)(c) provides that IMs relating to particular goods or services must include, to the extent applicable to the type of regulation under consideration, regulatory processes and rules, such as:
- i. the specification and definition of prices, including identifying any costs that can be passed through to prices;¹⁴⁵ and
 - ii. identifying circumstances in which price-quality paths may be reconsidered within a regulatory period.
- 7.1.2 This chapter provides an overview of the rules and processes IMs to apply to individual price-quality regulation of Transpower and the Commission's reasons for those decisions.

IMs for rules and processes

- 7.1.3 Section 52T(1)(c) lists two types of rules and processes that must be included in IMs. Section 52T(1) is not limiting; the Commission may include other matters in this IM. The Commission has considered whether any other 'rules and processes' would assist in promoting the purpose of Part 4.
- 7.1.4 The Commission has decided that IMs for Transpower will also include rules on how an incremental rolling incentive scheme (IRIS) would operate.¹⁴⁶
- 7.1.5 Including an IRIS in IMs will promote the Part 4 Purpose by promoting certainty for Transpower and its customers as to how efficiency gains made by Transpower will be treated. Transpower will therefore face incentives to make efficiency gains in the supply of regulated services (s 52A(1)(b)) and, over time, share those efficiency gains with consumers (s 52A(1)(c)).
- 7.1.6 Transpower, Genesis and MEUG supported the inclusion of an IRIS in the IMs, although MEUG noted design difficulties in identifying genuine gains as opposed to business-as-usual gains and determining how and when benefits are realised by consumers.¹⁴⁷
- 7.1.7 In summary, the rules and processes IMs for Transpower are:
- the specification of price;

¹⁴⁵ Which may not include the legal costs of any appeals against input methodology determinations under Part 4 or of any appeals under s 91 or s 97.

¹⁴⁶ The Commission has previously described a rolling incentive mechanism as an efficiency carryover mechanism. There is no substantive difference in what the Commission means by these terms; rolling incentive mechanism is preferred as it is more commonly used internationally.

¹⁴⁷ Genesis Energy Limited, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 6 August 2010, pp. 4-5; Major Electricity Users' Group, *Submission on GPBs (Input Methodology) Draft Determination and Reasons Paper, Cost Allocation, Treatment of Taxation, Pricing Methodologies, Rules and Processes and Transpower asset value*, 9 August 2010, pp. 4-5; Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 38.

- circumstances in which price-quality paths may be reconsidered within a regulatory period; and
- how a rolling incentive mechanism will operate.

Application of IMs for rules and processes

7.1.8 The rules and processes IMs will apply to individual price-quality regulation for Transpower. These IMs are not relevant to information disclosure as they relate to how price-quality regulation operates.

Overview of the IMs and structure of this chapter

7.1.9 Table 7.1 provides an overview of the rules and processes IMs. The key features of these IMs for Transpower are discussed in the rest of this chapter, with additional detail on some of the components of the IMs provided in the EDB/GPB Reasons Paper.

Table 7.1 Overview of the Rules and Processes IMs

Approach in IM	Where discussed
Specification of Price	Section 7.3
Price for Transpower will be specified by a total revenue cap. The IM includes a list of pass-through costs and recoverable costs and a process for adding new pass-through costs and recoverable costs. The list of pass-through costs includes local authority rates and regulatory levies. Recoverable costs include instantaneous reserves availability charges (with some exclusions), the costs of developing and funding transmission alternatives under some conditions, and the net incremental carry forward amount under IRIS.	
Circumstances in which price-quality paths may be reconsidered	Section 7.4
Transpower’s IPP may be reconsidered if one of the following events has occurred: <ul style="list-style-type: none"> • a catastrophic event, for which the costs of rectifying the impact of the event is material; or • a material error is discovered in the determination; or • Transpower has provided false or misleading information, which the Commission has relied upon in making its determination; or • a change in legislative or regulatory requirements that has a material impact on Transpower’s costs. 	
In this context, material means that the total effect of the event on the price path is at least 1% of the aggregated forecast MARs for the years in which the costs associated with the event are incurred.	
Transpower’s IPP will also be reconsidered annually to take account of the revenue impact of major capex approved by the Commission; and an EV adjustment.	

Approach in IM	Where discussed
Incremental Rolling Incentive Scheme (IRIS)	Section 7.5
The Commission will implement an IRIS under an IPP. The efficiency gain or loss for a particular year will be calculated as the difference between actual and forecast controllable operating expenditure for the current year, minus the difference in the preceding year, the result of which provides the incremental gain / loss for that year.	
While both incremental gains and losses will be carried forward to the subsequent five years, only positive net balances of such gains and losses in years in the next regulatory period will be treated as recoverable costs (i.e. only net rewards will be recognised).	
The length of time Transpower is allowed to retain the efficiency gain is five years.	
In the first year of RCP1 no IRIS will be implemented.	

7.1.10 The remainder of this chapter is structured as follows:

- Section 7.2 discusses the considerations the Commission has had regard to in setting the rules and processes IMs;
- Section 7.3 discusses the specification of price;
- Section 7.4 discusses the circumstances in which price-quality paths may be reconsidered within a regulatory period; and
- Section 7.5 discusses how a rolling incentive mechanism will operate for Transpower.

7.2 Key Considerations in Determining the IM

7.2.1 The guidance available to the Commission under the Act in setting IMs for the rules and processes specified in paragraph 7.1.7, and the Commission's interpretation of what that guidance means in relation to those rules and processes, is set out in Section 8.2 of the EDB/GPB Reasons Paper.¹⁴⁸ The discussion in that paper is generally relevant to Transpower as well.

7.2.2 The EDB/GPB Reasons Paper explains that incentive-based price-quality regulation, such as that under Part 4, attempts to provide some of the incentives that rivalry exerts in workably competitive markets, for the long-term benefit of consumers. Although setting any incentive-based price-quality path will provide incentives for suppliers to improve efficiency, the detailed design of the regulatory instruments (in particular, how cost and demand uncertainty are addressed) will affect the strength of any incentives to achieve the objectives in s 52A(1)(a)-(d).

7.2.3 Although these considerations are equally applicable to Transpower, as discussed in Chapter 2 of this Paper, there are a number of additional factors relevant to Transpower that do not apply in the case of EDBs or GPBs. The key factors that

¹⁴⁸ Commerce Commission, EDB/GPB Reasons Paper, supra n 2.

have constrained the Commission in designing regulatory mechanisms to provide the best possible incentives and processes for improving Transpower's performance, in terms of the regulatory objectives in s 52A(1)(a)-(d), are:

- the step change in Transpower's investment needs;
- the need to accommodate proposed improvements to Transpower's forecasting systems;
- the transition from the administrative settlement; and
- the recent legislative changes brought about by the Electricity Industry Act.

Implications for setting IMs for rules and processes under Part 4

7.2.4 Incentive-based price-quality regulation, such as that under Part 4, attempts to provide some of the incentives that rivalry exerts in workably competitive markets, for the long-term benefit of consumers.

7.2.5 In determining the rules and processes IMs for Transpower, the Commission has taken into account the following:

- Transpower should have incentives to manage its controllable costs efficiently and to seek efficiencies continuously (s 52A(1)(b)). These incentives can be enhanced where an effective rolling incentive mechanism can be designed;
- Transpower should bear the risks that it is best placed to manage, including risks of any cost variations and output risk (s 52A(1)(b) and (d)); and
- There are a range of mechanisms of varying complexity possible under individual price-quality regulation that can be tailored to allocate risk and uncertainty—i.e.:
 - the extent of exposure of Transpower to demand risk can be varied through the appropriate design of the price or revenue cap in the price-quality path;
 - changing circumstances can, in some cases, be appropriately addressed by allowing certain costs to adjust on an annual basis, without requiring a change to the way the price-quality path has been determined; and
 - significant and largely unpredictable events can, in some cases, trigger a partial or full reconsideration of the price-quality path.

7.3 Specification of Price under Part 4

7.3.1 This section sets out the key components of the specification of price IM, namely:

- a. the form of control; and
- b. the costs that can be passed through to consumers, which are specified in two categories:

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- i. pass-through costs; and
 - ii. recoverable costs.

7.3.2 Detail on the application of the specification of price IM is also provided in this section.

Form of control

Introduction

7.3.3 The key component of the specification of price IM is the ‘form of control’ that is used to cap revenues or prices under individual price-quality regulation. As discussed in Chapter 2 of the EDB/GPB Reasons Paper, Part 4 provides the Commission with a broad discretion to shape the form by which revenues or prices are capped under price-quality regulation. Section 53M(1) allows price-quality paths to be specified in terms of maximum revenues and/or prices, and the definition of ‘price’ (in s 52C) itself means any one or more of individual prices, aggregate prices, or revenues (whether in the form of specific numbers or in the form of formulae by which specific numbers are derived).¹⁴⁹

7.3.4 The form of control should provide incentives for efficient behaviour by a regulated supplier (consistent with s 52A(1)(b)) and, depending on the mechanism used, will have different effects on a supplier’s incentives and the allocation of risk between the supplier and consumers. For services subject to price-quality regulation under Part 4, the Commission has primarily considered whether to apply a form of total revenue cap/path or a weighted average price cap/path (introduced in Chapter 2 of the EDB/GPB Reasons Paper).

7.3.5 Total revenue caps are generally considered appropriate where demand risk is largely outside the control of the supplier. Conversely, weighted average price-caps are generally preferred where multiple services (within the same regulated supplier) are supplied and where demand can be influenced to a reasonable extent by the supplier.

7.3.6 In deciding whether the supplier or consumers are best placed to bear demand and cost risks, the following factors are relevant:

- the nature and size of the customer base;
- the extent to which a supplier can control or predict a cost;
- the extent of contracting undertaken between suppliers and their customers;
- the volatility of demand; and
- the extent to which costs are fixed or variable.

¹⁴⁹ Under s 53M(1)(a), every price-quality path must specify, in relation to prices, the maximum price or prices that may be charged by a regulated supplier; and/or the maximum revenues that may be recovered by a regulated supplier, with respect to a specified regulatory period.

Form of control for Transpower

- 7.3.7 For Transpower (where demand risk¹⁵⁰ is largely outside Transpower's control), price is specified by a total revenue cap, net of pass-through costs and recoverable costs.
- 7.3.8 A total revenue cap has a number of features that make it appropriate for the regulation of electricity transmission services, particularly with regard to the allocation of demand risk and the significant proportion of costs that are fixed.
- 7.3.9 Transpower and MEUG submitted that a total revenue cap is appropriate for Transpower under an IPP.¹⁵¹ Contact disagreed with a single revenue cap and considered that separate accounts for HVDC and HVAC opex (with their own individual CPI caps) should be created and maintained, with disclosure of cost allocation methodologies to those accounts being to a standard required by electricity distribution businesses.¹⁵²
- 7.3.10 The Commission's response to this is provided in more detail in the IPP Reasons Paper.¹⁵³ In summary, the decision is that only one revenue cap should be applied. This is because setting of separate HVAC and HVDC forecast MARs (or separate HVAC and HVDC opex allowances) has an effect similar to setting pricing methodologies for Transpower. The amendments to the Act remove the requirement for the Commission to set pricing methodologies where these are set by an industry-specific regulator (such as the Electricity Authority).¹⁵⁴ It also provides that it is the role of the Electricity Authority to set pricing methodologies for Transpower.¹⁵⁵

Costs that can be passed through to prices

Introduction

- 7.3.11 The specification and definition of price IM must include the costs that can be passed through to prices. The types of costs that are typically allowed to be passed through during a regulatory period, once the actual amount is known, are those costs that are outside the control of a regulated supplier and are uncertain in terms of the amount.
- 7.3.12 There are, however, some partially controllable costs that may be appropriate to allow Transpower to fully recover from its customers. In particular, this is the case where the costs associated with applying a mechanism to provide incentives for Transpower to manage the risk are likely to outweigh the benefits to consumers of

¹⁵⁰ Demand risk refers to the risk that actual demand turns out to be different to that forecast when setting a price-quality path. Depending on how this risk is addressed under the regulatory regime, a supplier may under- or over-recover its allowed revenue.

¹⁵¹ Major Electricity Users' Group, *Submission on GPBs (Input Methodology) Draft Determination and Reasons Paper, Cost Allocation, Treatment of Taxation, Pricing Methodologies, Rules and Processes and Transpower asset value*, 9 August 2010, p. 2; Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 27; Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 30.

¹⁵² Contact Energy Ltd, *Cross Submission on the Draft Input Methodologies (Transpower) Determinations*, 25 August 2010, p. 8.

¹⁵³ Commerce Commission, IPP Reasons Paper, supra n 8, Section 3.7.

¹⁵⁴ Electricity Industry Act 2010, s 147, which amends section 52T(1)(b) of the Commerce Act.

¹⁵⁵ Refer, for example, to s 32(2)(b) of the Electricity Industry Act.

doing so, based on currently available information. As better information becomes available, it may be cost-effective for such incentive mechanisms to be developed for future regulatory periods. For instance, Transpower's price-quality path is set in advance for four to five years and forecasting some costs over such a period may be very difficult, particularly where there is significant inherent variability in the cost and there is limited information currently available about the extent of that variability. Such costs may also only be controllable by Transpower at the margin.

- 7.3.13 There are some circumstances under which a broader reconsideration of the price-quality path may be required and simply passing through costs is not appropriate. These circumstances are discussed further in Section 7.4.

Categories of costs that can be passed through

- 7.3.14 The Commission has decided to allow a range of costs for Transpower to be passed through to prices, specified in two categories. The first category is called 'pass-through costs' and the second is called 'recoverable costs'. The main distinction between these two categories is the extent to which they are controllable by Transpower. Pass-through costs are those costs that are outside the control of Transpower and can be passed through to customers without the Commission needing to undertake any assessment of these costs.
- 7.3.15 Practically speaking, there is little difference between the categories because:
- the mechanism for recovering the pass-through and recoverable costs is the same, i.e. they are netted off notional revenue in assessing compliance annually;
 - unless specified otherwise in the IM (as is the case for IR availability charges, discussed further in paragraphs 7.3.26 - 7.3.64 below), the full amount of the cost can be passed through to customers; and
 - the IM does not provide the Commission with the discretion to simply amend the list of pass-through costs or recoverable costs, nor the proportion that can be passed through. The Commission must follow the process for amending an IM set out in ss 52X and 52V.
- 7.3.16 The main difference between pass-through and recoverable costs is that recoverable costs are not completely outside the control of Transpower and there may be judgement involved as to how much should be passed through.
- 7.3.17 The remainder of this section sets out:
- a. the pass-through costs for Transpower;
 - b. the recoverable costs for Transpower;
 - c. the addition of new pass-through or recoverable costs during a regulatory period; and
 - d. discussion of specific recoverable costs, namely:

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- i. instantaneous reserves (IR) availability charges; and
 - ii. transmission alternative operating costs.
- 7.3.18 Further discussion on pass-through costs and recoverable costs are provided in Section 8.3 of the EDB/GPB Reasons Paper,¹⁵⁶ including:
- a. other costs submitters sought to be passed through (Section 8.3);
 - b. the proportion of costs to be passed through (Appendix J2); and
 - c. adding new pass-through costs and recoverable costs (Appendix J2).

Pass-through costs

- 7.3.19 The pass-through costs that apply to Transpower are:
- a. local authority rates, meaning rates on system fixed assets paid or payable by Transpower to a local authority under the Local Government (Rating) Act 2002;
 - b. Commerce Commission levies paid and payable under s53ZE of the Commerce Act; and
 - c. levies paid or payable under the Electricity Industry Act.
- 7.3.20 Transpower supported the pass-through costs listed above.¹⁵⁷ However, MEUG did not agree that rates or levies should be included as pass-through costs because they are not entirely outside the control of the supplier (as the supplier can and should make submissions to rating authorities), are relatively small and there would be benefits in simplifying the calculation and reporting.¹⁵⁸
- 7.3.21 The Commission has decided that it is appropriate for such rates and levies to be passed through to Transpower's customers, because these costs may be material and are reasonably incurred in the supply of regulated services. In addition, as Transpower is not the only ratepayer, its specific ability to control or influence these costs is limited.

Recoverable costs

- 7.3.22 The recoverable costs that apply to Transpower are:
- a. IR availability charges allocated to Transpower under clause 8.59 of the Electricity Industry Participation Code (Code), with the following exclusions:
 - i. where the charges are capitalised in accordance with GAAP, in relation to the control systems integration of Pole 2 and the commissioning of Pole 3 of the HVDC link;

¹⁵⁶ Commerce Commission, EDB/GPB Reasons Paper, supra n 2.

¹⁵⁷ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 27.

¹⁵⁸ Major Electricity Users' Group, *Submission on GPBs (Input Methodology) Draft Determination and Reasons Paper, Cost Allocation, Treatment of Taxation, Pricing Methodologies, Rules and Processes and Transpower asset value*, 9 August 2010, pp. 2-3.

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- ii. where the charges were inefficiently incurred (as per GAAP); and
 - iii. subject to the exception for Pole 1 decommissioning (noted below), where the charges relate to outages of more than fourteen days duration, fifty percent of the IR availability charges allocated to Transpower between day 15 and when the defined cap is reached are not recoverable costs. The cap is reached when the total amount attributed to Transpower for an outage is equal to 1% of Transpower's forecast MAR for the financial year in which the event commences. The other 50% of the charges during the period until the cap is reached are recoverable costs, together with all additional IR availability charges incurred after the cap is reached. The exception to this is any IR availability charges incurred as a direct result of Pole 1 decommissioning, which are not subject to this rule (costs are fully recoverable),
- b. the operating costs of developing and funding transmission alternative services where the costs:
 - i. are opex in addition to the opex forecasts approved by the Commission prior to the regulatory period; and
 - ii. have been approved by the Electricity Commission or the Commission under Part F of the Electricity Governance Rules 2003 or the Commission's capex IM; and
 - c. any positive net incremental balances under the incremental rolling incentive scheme (IRIS) (discussed in Section 7.5 below).

Adding new pass-through and recoverable costs

7.3.23 Adding new pass-through or recoverable costs during a period is generally undesirable, as regular applications from suppliers would increase the costs of regulation and suppliers may be less certain as to which of their costs can be passed-through and which they should be required to manage. Nevertheless, some new costs that meet the definition of pass-through costs may arise during a regulatory period and these should be recovered during the period.

7.3.24 The IMs provide for a new levy (in addition to those listed in paragraph 7.3.19 above) to be allowed as pass-through costs where it has been specified by way of amendment to an IPP determination and the cost meets the following criteria, namely it must be:

- a. associated with the provision of electricity transmission services;
- b. outside the control of Transpower;
- c. not a recoverable cost;
- d. not already provided for in an IPP; and
- e. appropriate to be passed through to customers.

7.3.25 Other amendments to the list of pass-through costs will only become effective from the beginning of the next regulatory period.

Instantaneous reserves availability charges

Introduction

- 7.3.26 IR are an ancillary service purchased by the system operator (Transpower) in accordance with Parts 8 and 13 of the Code. Reserves are procured to enable the system operator to arrest a fall in frequency following a contingent event (fast or 6 second instantaneous reserves), and subsequently return frequency to within allowable limits (sustained or 60 second IR).
- 7.3.27 Reserves are procured through IR markets which are co-optimised with the energy market. The system operator is the sole purchaser of reserves, which may be supplied by loads or generators. The required quantity of reserves for each island is a function of the largest single contingent event that could occur in a particular trading period in that island, i.e. the loss of the single largest generating unit or one pole of the HVDC link. The direction and quantity of flow on the HVDC link is therefore an important determinant of reserve requirements.
- 7.3.28 Because a party cannot both generate electricity and provide reserves using the same capacity, a co-optimisation of energy and reserves allows the market dispatch model to select the combination of resources to meet energy and reserve requirements that best meets the dispatch objective. As a result, the cost of reserves are strongly influenced by generator offers into both the energy and reserves markets, which are in turn driven by wind and hydrological conditions, demand, generator and transmission availability, and so on. Similarly, offers into the reserves markets will impact the dispatch and price of generation in the energy market.
- 7.3.29 The allocation of IR costs is set out in the Code. Two charges are used:
- Availability charges are charged to those parties deemed to have caused the need to procure IR. The total cost of procuring reserves in each island is allocated, on a trading period basis, between all generators bigger than 60 MW and the HVDC link. The sharing formula is based on generator injection quantity, or in the case of the HVDC, what is known as the ‘at risk HVDC transfer’. The ‘at risk HVDC transfer’ depends on the configuration of the link (i.e. which poles or half-poles are in use) and the level of transfer.
 - Event charges are charged to those parties that cause reserves to be activated, i.e. the causers of contingent events (including the HVDC owner). Event charges are rebated to the payers of availability charges.
- 7.3.30 The HVDC owner is therefore liable for both availability and event charges. Transpower’s opex allowance for the Transition Year includes a provision for event charges and the IPP Determination envisages that this will continue to be the case in future years.¹⁵⁹

Previous treatment

- 7.3.31 The treatment of IR availability charges and, specifically, whether Transpower should be allowed to pass them through to its customers, has been considered by the Commission previously. In August 2008, Transpower sought an amendment to the

¹⁵⁹ Discussed in the IPP Reasons Paper, supra n 8, Section 4.2.

administrative settlement to remove its exposure to IR availability charges by allowing Transpower to pass these costs through, rather than them being included in Transpower's own operating costs which were subject to a cap.

- 7.3.32 On 22 June 2009, following consultation, the Commission published its final decision to decline Transpower's proposal. It did not accept that the proposed amendment would better promote the Part 4 Purpose than the existing settlement.¹⁶⁰ This decision was largely based on the context at that time. The decision paper noted that the circumstances were not sufficiently extraordinary to warrant reopening a binding (and carefully balanced) agreement; nor were IR availability charges entirely consistent with the nature of pass-through costs.¹⁶¹

Approach for IMs

- 7.3.33 It is appropriate to consider this decision afresh in the light of developing individual price-quality regulation for Transpower under Part 4 of the Act. Specifically, IR availability charges over each of the past three years have significantly exceeded the provision made for them in the settlement. Transpower has been unable to commensurately decrease other operating costs to absorb this increased cost, and has exceeded its opex allowance as a result.¹⁶²
- 7.3.34 Meridian submitted that the Commission's decision to treat IR availability charges as a recoverable cost was inconsistent with the purpose of Part 4 and was a complete reversal of its previous decision to treat such costs as part of opex.¹⁶³
- 7.3.35 As noted in paragraph 7.3.32 above, one of the reasons for the Commission declining Transpower's proposed change to the settlement agreement was that the circumstances were not sufficiently extraordinary to warrant reopening a binding (and carefully balanced) agreement. In setting IMs, the Commission has no such constraint.
- 7.3.36 Another reason for the Commission's decision of 22 June 2009 was that IR availability charges are not entirely consistent with the nature of pass-through costs. This is still the case. However, in setting IMs, the Commission has developed the concept of recoverable costs, which provides the Commission with scope to reconsider how to deal with costs that are not entirely in the nature of pass-through costs. Even though IR availability charges are not consistent with the nature of pass-through costs, they are consistent with the nature of recoverable costs.
- 7.3.37 In deciding whether and, if so, how IR availability charges should be passed through—including whether this should be qualified or limited in some way—the Commission considered the degree of control Transpower has over the quantum of

¹⁶⁰ Commerce Commission, *Decision and Reasons for not amending Transpower's administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs*, 22 June 2009.

¹⁶¹ Commerce Commission, *Decision and Reasons for not amending Transpower's administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs*, 22 June 2009, paragraphs 68-71, 130.

¹⁶² The approach to opex under the settlement agreement is that any gains or losses relative to the opex allowance are to the benefit or detriment of Transpower. As Transpower has not increased its revenue to recover these additional costs, it has complied with the settlement terms.

¹⁶³ Meridian Energy Ltd., *Submission on Transpower (Input Methodologies) Determination and Draft Reasons Paper*, 9 August 2010, pp. 24-27, paragraphs 101-109.

the charges, the extent to which the charges can be forecast, and the incentives and requirements provided by other elements of the regulatory framework.

7.3.38 In its June 2009 decision not to allow Transpower to pass IR charges through to customers, the Commission noted that:¹⁶⁴

...it has, since the inception of the Part 4A framework, been consistently reluctant to allow costs to be passed through to consumers where exogenous costs can be managed by the regulated entity, even if only at the margin.

7.3.39 In general, the Commission continues to support this approach. However, where a supplier's ability to control costs is at the margin and the cost is substantial, the costs and benefits of passing the costs through to consumers versus including them in an opex allowance should be taken into account.

7.3.40 The Commission considered controllability of the charges over investment (medium to long-term), maintenance (medium-term) and real-time operation (short-term) timeframes. While Transpower has some ability to mitigate IR availability charges in the maintenance and investment timeframes (through scheduling of HVDC maintenance outages and appropriate maintenance to avoid outages, and decisions around removal of assets from service, respectively), it has little ability to manage real-time exposure to IR availability charges. The control it does have primarily relates to timing and duration of outages or removal of assets from service.

7.3.41 The Commission also considered the tools available to Transpower to mitigate IR availability charges. Transpower has provided information on its experience with hedging for this purpose, noting that it did not find this to be a useful approach in most instances.

7.3.42 If Transpower were to seek further physical reserve contracts over a long timeframe, it is possible that additional reserve capacity would be made available to meet that demand. However, as the system operator only purchases the quantity of reserve justified by the level of 'risk' (as set out in the Code at Part 13), it is reasonable to expect that the market for IR will return, after any additions, to an equilibrium quantity justified by reserve prices and demand, i.e. unless the Code alters the underlying 'risk' that reserve is procured to cover, the quantity of reserve made available will not increase on average over time.¹⁶⁵ For example, physical contracts may encourage more investment in interruptible load, but as the proportion of reserve provided by interruptible load increases, reserve clearing prices are likely to fall for some time, suppressing further investment.

7.3.43 In terms of financial contracts, it is reasonable to expect that the prices of such contracts will reflect those available in the reserve markets, so the use of such contracts to manage variability are unlikely to provide cost savings for consumers.

7.3.44 In summary, Transpower has some degree of control over IR availability charges over the investment timeframe, particularly with regard to removal of assets from

¹⁶⁴ Commerce Commission, *Decision and Reasons for not amending Transpower's administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs*, 22 June 2009, paragraph 67.

¹⁶⁵ This assumes that, as under the arrangement it is currently pursuing, Transpower does not procure additional reserves on an on-going basis outside the market, but rather requires providers to offer the capacity into the reserve markets.

service. However, long-term hedges do not appear to provide a viable cost management solution.

- 7.3.45 In terms of ability to forecast the charges (which would enable inclusion of the charges as an opex item without significant additional cost relating to the risk of variability), it is not possible to forecast these charges in advance with a sufficient degree of certainty, given that hydrological conditions (and the resulting generator offers) are the main driver of IR availability costs. While timing and duration of planned outages is known, the prevailing instantaneous reserves prices could not be accurately forecast.
- 7.3.46 In contrast, Transpower has a greater degree of control over event charges and including these as a component of the capped opex allowance ensures that appropriate incentives exist for Transpower to minimise the number of events it causes.
- 7.3.47 While there would be some benefit from Transpower bearing IR availability charges (to the extent Transpower can mitigate or minimise IR availability charges), this is likely to be outweighed by the unmanageable costs that would be imposed on Transpower. Thus in general, IR availability charges are appropriately included as a recoverable cost rather than as an opex item. How this is implemented – including whether the charges should be fully or partially recoverable – is discussed further below.
- 7.3.48 The exception to this is where IR availability charges are required to be capitalised in accordance with GAAP. These charges are excluded from the recoverable cost definition, which is discussed below.

Capitalised IR availability charges

- 7.3.49 Generally accepted accounting practices influenced the Commission's decision on the treatment of IR availability charges. NZ IAS 16 in particular is relevant to the decision, requiring that IR availability charges that are incurred as a direct result of HVDC Pole 3 commissioning and the HVDC Pole 2 control systems integration are capitalised. Thus, these IR availability charges will be specifically excluded from the definition of recoverable costs.¹⁶⁶ This approach was supported by Meridian Energy and Contact Energy.¹⁶⁷ However, IR availability charges arising as a result of Pole 1 decommissioning are not part of the upgrade project and are not therefore capitalised under GAAP.¹⁶⁸
- 7.3.50 The Commission considered the impact of this approach on incentives for Transpower to efficiently manage outages relating to the HVDC projects. NZ IAS16

¹⁶⁶ Note that as HVDC Pole 1 is due for replacement, IR availability charges in the period following removal from service of Pole 1 are not a direct Pole 3 cost and will not be capitalised to the HVDC upgrade Project.

¹⁶⁷ Contact Energy Ltd., *Cross Submission on the Draft Input Methodologies (Transpower) Determinations*, 25 August 2010, p. 7; Meridian Energy Ltd, *Cross Submission on IPP and Draft Input Methodologies (Transpower) Reasons Paper*, 25 August 2010.

¹⁶⁸ Contact Energy considered that IR availability charges arising as a result of Pole 1 decommissioning should also be capitalised to the HVDC project, on the basis that Pole 1 needs to be decommissioned to allow for Pole 3. Refer: Contact Energy Ltd., *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, pp. 18-21; Contact Energy Ltd, *Cross Submission on the Draft Input Methodologies (Transpower) Determinations*, 25 August 2010, p. 7.

provides for inefficiently incurred costs to be excluded from capitalisation to the HVDC projects.¹⁶⁹ Such inefficiently incurred IR availability charges will also be specifically excluded from the definition of recoverable costs.

- 7.3.51 In addition, the Outage Protocol (as discussed further below) requires Transpower to ‘give effect to’ the net benefits principle in determining the timing and duration of planned outages required to give effect to investments approved under Part F of the EGRs.¹⁷⁰ The HVDC upgrades were approved by the Electricity Commission under these rules on 25 September 2008.
- 7.3.52 Transpower also established an Industry Advisory Group (IAG) in January 2010 for the purpose of co-ordinating with industry on outage and commissioning requirements for the HVDC upgrade projects. This provides a layer of industry co-ordination, advice and support on commissioning issues.¹⁷¹ Industry input has been sought via the IAG on minimising system impact and cost of outages to participants and maximising HVDC capacity and availability.
- 7.3.53 Based on this assessment, the Commission is satisfied that Transpower faces sufficient incentives to efficiently manage outages required as a result of the HVDC upgrade works.

Non-capitalised IR availability charges

- 7.3.54 With regard to IR availability charges that are not capitalised, the Commission considered whether costs should be fully recoverable from customers or whether recovery should be only partial. In reaching its decision, the Commission considered— in addition to controllability of charges as discussed above—what other elements of the regulatory framework provide incentives for Transpower to avoid (or minimise the duration of) forced outages, and undertake planned outages as efficiently as possible. These are:
- a. the Outage Protocol (OP) incorporated by reference in the Code, which provides for efficient scheduling of planned outages and management of all outages;
 - b. the quality performance framework set out in the Transpower IPP which provides some financial incentive for Transpower to avoid unplanned outages and minimise the duration of any that do occur; and
 - c. the IR event charges allocation contained in the Code, which provides some financial incentive to avoid occurrence of forced outages.
- 7.3.55 The OP sets out the circumstances in which Transpower may temporarily remove any assets forming part of the grid from service or reduce the capacity of assets to efficiently manage the operation of the grid, and the procedures and policies that will be used by Transpower to plan for and carry out outages.

¹⁶⁹ Any such inefficiently incurred costs would be identified by Transpower, with sign-off that GAAP and IFRS had been complied with provided by its auditors.

¹⁷⁰ Outage Protocol, clause 3.3.8 (incorporated by reference in the Code at clause 12.150 in accordance with s 32 of the Electricity Industry Act).

¹⁷¹ www.gridnewzealand.co.nz/hvdc-industry-participation.

7.3.56 The OP obliges Transpower to make existing transmission assets available at service levels (including capacity) specified in transmission agreements unless taking an outage. All outages¹⁷² are subject to the OP, which requires the following, for outages of interconnection assets (including HVDC):¹⁷³

- a. for planned outages, Transpower must consult with interested participants and carry out a net benefits test (as specified in the OP) if a participant considers the outage does not meet the net benefits principle;
- b. for planned outages required to give effect to investments approved under Part F of the EGRs, Transpower must 'give effect to' the net benefit principle in determining timing and duration of the outage;¹⁷⁴
- c. for unplanned outages,¹⁷⁵ which Transpower may only take in specified circumstances (e.g. asset failure, system operator request), Transpower must undertake the outage in accordance with policies and procedures specified in the OP. These include having in place processes and plans which staff and contractors must endeavour to observe in the event of an unplanned outage; requirements to maintain spares (in accordance with Good Electricity Industry Practice¹⁷⁶) for use in restoration of the power system; to have contracts in place with experienced personnel to assist with the work; and communication requirements; and
- d. for variations to planned outages, Transpower must do so in accordance with processes contained in the OP.

7.3.57 The quality performance framework includes an 'HVDC bi-pole unavailability (unplanned)' measure. However, any performance incentive provided by this measure will be limited as:

- a. no performance parameters have been set for this measure for RCP1, and as one of a number of measures, the financial performance incentive provided by this particular measure will be relatively small; and
- b. the measure includes only unplanned outages (timing and duration), therefore provides incentives for appropriate maintenance and efficient return to service of assets, but not around management of planned outages.

7.3.58 Finally, the event charge mechanism¹⁷⁷ is intended to provide some further incentive to maintain assets in a manner which avoids forced outages.¹⁷⁸ Event charges are

¹⁷² The definition of outage excludes where an asset is permanently decommissioned and replaced with another asset which meets the service levels in the interconnection rules, i.e. Pole 1 decommissioning is not an outage and is not therefore covered by the OP (Definition set out in Code, clause 12.130(2)).

¹⁷³ Outage Protocol, clauses 3.2 and 3.3, 3.3.8, 9.2.

¹⁷⁴ Note that while Part F of the EGRs has been superseded by the Code, the Outage Protocol, which was incorporated into the Code by reference, retains references to the EGRs.

¹⁷⁵ Outages with less than 24 hours notice.

¹⁷⁶ As Good Electricity Industry Practice is defined in Part 1 of the Code.

¹⁷⁷ Discussed in the IPP Reasons Paper, supra n 8, Section 4.4.

¹⁷⁸ Concept Consulting Group, *Review of Instantaneous Reserves Event Charge*, August 2004, p.13-14 states that, "...in addition to recovering costs, the instantaneous reserves cost allocation methodology aims to provide appropriate signals

allocated to the causers of under frequency events as defined in the Code. The charge is based on occurrence and magnitude of a forced outage, but not duration of the outage.¹⁷⁹

- 7.3.59 Together, these elements of the framework provide a small financial incentive for Transpower to avoid forced outages and for efficient return to service of assets after a forced outage. However, incentives around timing and duration of planned outages are limited to those provided by the OP, which have no direct financial impact.
- 7.3.60 Transpower is the only party that can plan to minimise or avoid high cost low probability outages of its HVDC assets, for example, through maintaining spares, outage planning and maintenance. Therefore, in a workably competitive market, Transpower would bear at least some of the costs arising from any events. However, Transpower has a lesser ability to manage the actual IR availability charges it incurs as a result of the outage, as this is primarily driven by generator offer behaviour (as well as outage duration).
- 7.3.61 It is, therefore, appropriate that Transpower face a financial incentive to minimise the length of extended outages, whether planned or unplanned, in addition to existing incentives. However, Transpower should not bear all the costs.
- 7.3.62 Despite a number of submitters preferring options other than the recoverable costs mechanism, most submitters (with the exception of Transpower¹⁸⁰) agreed that a financial incentive to maintain assets in a manner that avoids extended outages should be applied to Transpower.¹⁸¹ The Commission assessed the other options proposed by submitters, but has decided that the approach set out here is the most appropriate in the circumstances. Transpower submitted that the OP provided the appropriate incentives for efficient outage management and did not agree that it should bear IR availability charges relating to extended outages.¹⁸²

to asset owners about the impacts their decisions can have on system costs...". Concept go on to explain that the impact can be in both the long-run (i.e. investors face signals that allow them to trade off plant size against the costs they impose on the system for reserve procurement and in the event of plant failure) and short-run (i.e. trade off between plant maintenance and plant reliability).

¹⁷⁹ Rule 8.64 of the Code.

¹⁸⁰ Transpower expressed strong disagreement regarding the proposed 14 day 'qualification' for outages beyond which IR availability charges allocated to Transpower would not qualify as recoverable costs. It considered the limitation to be impractical, unworkable and inadequately justified. Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, pp. 28-29.

¹⁸¹ Meridian noted that while its preference was to include IR costs in opex, the proposed 14 day limit on recovery included in the Commission's proposed approach was the one remaining incentive on Transpower to avoid prolonged outages under a recoverable costs approach. Refer: Meridian Energy Ltd, *Cross Submission on IPP and Draft Input Methodologies (Transpower) Reasons Paper*, 25 August 2010, p. 8.

MEUG noted that - while it did not support the recoverable costs approach - it considered 14 days was far too generous to Transpower, i.e. the period during which costs are fully recoverable should be shortened. Refer: MEUG, *Submission on Transpower Individual Price-Quality Path Draft Reasons Paper*, 9 August 2010, Appendix p. 4.

Contact Energy expressed strong disagreement regarding having a 14 day 'grace period' in favour of Transpower. It suggested that without this 'grace period' there is a strong commercial quality measure on Transpower to manage risks appropriately, similarly to other asset owners. It did not consider the approach to be unworkable or impractical as submitted by Transpower. Refer: Contact Energy Ltd, *Cross Submission on the Draft Input Methodologies (Transpower) Determinations*, 25 August 2010, p. 7.

¹⁸² Transpower New Zealand Ltd., *Submission on Transpower (Input Methodologies) Draft Reasons Paper and Individual Price-Quality Path*, August 2010, pp. 9, 28-29.

- 7.3.63 The appropriate approach, consistent with outcomes expected of a workably competitive market, will expose Transpower to some financial risk relating to the IR costs associated with extended outages for which the costs are not capitalised. As the risk to Transpower could be substantial, and the reopening provisions do not apply, the Commission has capped Transpower's potential liability at 1% of annual revenue per event, in line with the materiality threshold for reconsidering the IPP.
- 7.3.64 The sharing of costs between Transpower and transmission customers (via the recoverable costs mechanism) is based on the principle that the risk should be shared rather than any analysis of which parties have capability to influence the costs. This provides appropriate incentives for both Transpower and its customers (who will have some ability to influence IR procurement costs) to act in a manner which minimises their costs.

Transmission alternative operating costs

- 7.3.65 MEUG supported the inclusion of transmission alternatives as a recoverable cost.¹⁸³ Transpower submitted, however, that it should be allowed to seek re-approval of approved transmission alternative operating costs if the initial approval is likely to be exceeded.¹⁸⁴
- 7.3.66 While transmission alternative operating costs do not meet the pass-through cost criteria, the Commission considers that Transpower should be able to recover the transmission alternative operating costs in the year they are incurred.
- 7.3.67 The Commission's decision is that transmission alternative operating costs are included as a recoverable cost because:
- there are circumstances when investment in transmission alternatives, such as demand-side management, is a more efficient solution than investment in transmission assets and would be consistent with s 54Q;
 - costs approved either by the Electricity Commission (prior to its dissolution) or by the Commission under Part F of the Electricity Governance Rules (before it determines the capex IM) or by the Commission under the Transpower capex IM (once it is determined) could include operating costs associated with transmission alternatives;
 - Transpower is unlikely to be able to accurately forecast RCP1 transmission alternative operating costs prior to RCP1 as the costs will have been subject to Electricity Commission or Commission assessment and approval during RCP1;
 - Transpower should be allowed to recover the transmission alternative operating costs during RCP1 once the costs have been approved by the Electricity Commission or the Commission and incurred by Transpower;

¹⁸³ Major Electricity Users' Group, *Submission on GPBs (Input Methodology) Draft Determination and Reasons Paper, Cost Allocation, Treatment of Taxation, Pricing Methodologies, Rules and Processes and Transpower asset value*, 9 August 2010, p. 4.

¹⁸⁴ Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 29.

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- using the wash-up at the end of RCP1 to allow Transpower to recover any transmission alternative operating costs incurred during RCP1 would result in a timing difference between Transpower incurring the operating costs and Transpower recovering those costs; and
 - the inclusion of transmission alternative operating costs as a recoverable cost in RCP1 would allow Transpower to recover the costs in the year the costs are incurred rather than waiting for the wash-up at the end of the regulatory period.

7.4 Reconsideration of Price-Quality Paths under Part 4

7.4.1 Chapter 8 (Section 8.3) of the EDB/GPB Reasons Paper discusses reconsiderations of price-quality paths. Transpower's IPP is set on a similar basis to a CPP. The circumstances in which Transpower's IPP may be reconsidered are therefore largely the same as for an EDB or GDB on a CPP. Discussion of the circumstances under which price-quality paths may be reconsidered, and how these should be specified in the IM (including the materiality threshold) are provided in the EDB/GPB Reasons Paper (paragraphs 8.4.5 – 8.4.8). The remainder of this section sets out the circumstances under which a price-quality path may be reconsidered for Transpower.

IM for Transpower

7.4.2 Transpower's IPP may be reconsidered under the IM for reconsideration of price-quality paths if:

- a catastrophic event occurs, for which the costs of rectifying the effect of the event are material; or
- a material error is discovered in the determination; or
- Transpower has provided false or misleading information to the Commission, which the Commission has relied upon in making its determination; or
- a change in legislative or regulatory requirements has a material effect on costs.

7.4.3 Similar to the IM for EDBs and GPBs, 'material' means the total effect of the event on the price path is at least 1% of the aggregated forecast MARs for the affected years.¹⁸⁵

7.4.4 Transpower's IPP will be reconsidered annually to take account of the effect on forecast MAR of:

¹⁸⁵ Submitters were supportive of the approach to defining circumstances for reconsideration, including the materiality threshold of 1% revenue per annum (for example: Transpower New Zealand Limited, *Tabular Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 34; Vector, *Submission in response to the Commerce Commission's Input Methodologies Draft Reasons and Determinations for Electricity Distribution Businesses and Gas Pipeline Businesses Cost Allocation, Regulatory Tax, Pricing Methodology, Rules and Processes*, 9 August 2010, p. 54, paragraph 208).

-
- major capex approved by the Commission;
 - an EV adjustment resulting from the annual wash-up process under the IPP.

7.4.5 The IPP that applies to Transpower for the first regulatory control period (RCP1) provides for the allowable revenue to be reconsidered to reflect new approvals of major capex¹⁸⁶ and to net-out the impact of annual EV adjustments. This approach has been adopted to avoid the deferral of cash flows, in the case of Transpower, due to the current intensive investment period. Although reopening a total revenue cap is not commonly adopted in overseas jurisdictions, the Commission considers that these incremental adjustments are necessary for at least RCP1 given the lack of robustness of Transpower's capex forecasts in the short-term. Capex wash-ups and updates to Transpower's allowable revenue are discussed further in the Form of Control chapter in the Commission's IPP Reasons Paper.¹⁸⁷

7.5 Incremental Rolling Incentive Scheme under Part 4

7.5.1 The EDB/GPB Reasons Paper sets out:

- a. discussion of the rationale for including an IRIS in the IM (Section 8.5)
- b. why the IRIS is limited to controllable opex (Section 8.5);¹⁸⁸ and
- c. discussion of the carryover period (Appendix J3).

The discussion in the EDB/GPB Reasons Paper is also relevant to Transpower.

7.5.2 This section sets out:

- a. the key components of the IM for Transpower;
- b. the Commission's response to submissions on defining controllable opex within the IM; and
- c. detail on the application of the IRIS.

IM for Transpower

7.5.3 The efficiency gain or loss for a particular regulatory year will be calculated as the difference between actual and forecast controllable operating expenditure (see Appendix J3 of the EDB/GPB Reasons Paper) for the current year, minus the difference in the preceding year, the result of which provides the incremental gain/loss for that year.

7.5.4 While both incremental gains and losses will be carried forward to the subsequent five years, only positive net balances in the next regulatory period of those amounts carried forward will be treated as recoverable costs.

¹⁸⁶ Commerce Commission, IPP Reasons Paper, supra n 8, Section 3.8.

¹⁸⁷ Commerce Commission, IPP Reasons Paper, supra n 8, Chapter 3.

¹⁸⁸ The possibility of introducing incentives for capex will be considered in the development of the capex IM.

7.5.5 The length of the carryover period (i.e. the length of time Transpower is allowed to retain the efficiency gain before it is shared with consumers) is five years.

7.5.6 In the first year of RCP1 no IRIS will be implemented.¹⁸⁹

Defining controllable opex

7.5.7 As discussed in Section 8.5 of the EDB/GPB Reasons Paper, in order to reward only genuine efficiencies, the IRIS should apply to efficiencies in controllable costs only. As such, it is appropriate to exclude certain costs, and the IRIS will be based solely on controllable opex. Transpower agreed with this approach.¹⁹⁰ Transpower also submitted that it considered that non-controllable opex include pass-through costs (including instantaneous reserves), operating lease costs (which have been capitalised to the RAB in the past under the settlement agreement) and grid support costs (for transmission alternatives).¹⁹¹

7.5.8 Rather than define controllable opex within the IM, the Commission's decision is that Transpower will be required to submit an opex proposal for each year of the regulatory period, including both controllable and uncontrollable costs, prior to the revenue determination. The Commission will undertake an *ex ante* assessment of the opex forecasts, including assessing the extent to which the opex is controllable and should qualify for the IRIS, and will determine opex allowances, including the level of opex that is controllable, for each year of the regulatory period.

7.5.9 Due to the transition year, separate revenue cap determinations (and, hence, opex allowances) will be required for year 1 (i.e. the transition year) and years 2-4 (i.e. the remaining period of RCP1). Due to the transitional nature of RCP1, it is appropriate that no opex incentive mechanism be implemented in the first year (transition year) of RCP1.

Application of the IRIS

Determination of the opex allowance subject to the scheme

7.5.10 Prior to the setting of the revenue cap determination for each year, Transpower will submit an opex proposal for each year of the regulatory period, which will propose both controllable and uncontrollable costs.

7.5.11 The Commission will undertake an *ex ante* assessment of the forecasts, including assessing the extent to which the opex is controllable and should qualify for the IRIS, and will determine opex allowances for each year of the regulatory period.

Calculation of incentive-based rewards

7.5.12 The aim of the IRIS is to ensure that Transpower has equal incentives to reduce costs that are within its control year-on-year relative to the allowance for those costs. It is therefore necessary to assess the extent to which Transpower has responded to the scheme in each year and carry forward this information beyond the date at which the IPP period comes to an end.

¹⁸⁹ The first year in RCP1 is a transition year and only requires Transpower to forecast opex allowance for one year.

¹⁹⁰ Transpower, *Electricity Transmission Post Workshop Submission*, 24 March 2010, p. 11.

¹⁹¹ Transpower, *supra* n 190, p. 26.

7.5.13 As shown in the illustrative example in Figure 7.1 below, Transpower’s response to the scheme is measured by the amount by which it out- or under-performs its opex allowance in comparison to the previous year. The incremental gain or loss for a year is therefore calculated as the difference between Transpower’s actual and allowed opex for the year less the difference in the previous year.

Figure 7.1 Calculation of Incremental Gains and Losses

Regulatory year		← IPP regulatory period →					← 5-year period following IPP →				
		1	2	3	4	5	6	7	8	9	10
Opex subject to IRIS											
a	Opex allowance	101	99	99	100	99					
b	Actual opex	99	98	100	102	98					
c	Incremental gain/loss in year	2	-1	-2	-1	3					
Incremental gains/losses carried forward											
d	Year 1	-	2	2	2	2					
e		2	-	-1	-1	-1	-1	-1			
f		3		-2	-2	-2	-2	-2	-2		
g		4			-1	-1	-1	-1	-1	-1	
h		5					3	3	3	3	3
i	Net balance	-	-	-	-	-	1	-1	0	2	3
j	Net balances carried forward (i.e. Recoverable Costs)						1	0	0	2	3

The incremental change is calculated by measuring performance against the allowance in one period relative to performance against the allowance in the previous period. Here the supplier has out-performed in Year 5 by \$1m (\$99m - \$98). This represents an incremental gain of \$3m on the previous year, since the supplier exceeded their allowance by \$2m in Year 4 (\$100m - \$102m).

All values are illustrative only and expressed in real terms

7.5.14 Each incremental gain or loss is ‘carried forward’ for five years from the date at which it is realised (lines ‘d’ to ‘h’ in Figure 7.2 below). Transpower automatically retains the benefits of these efficiency gains, or suffers losses, within the IPP regulatory period because prices are not reset¹⁹² (i.e. between years 1 and 5). There will, however, be a number of incremental gains and losses at the end of the period that Transpower will not yet have been exposed to for a full five year period (these are shown by the amounts appearing in lines ‘d’ to ‘h’ in years 6 to 10).

7.5.15 For example, Transpower will only have been exposed to the gain or loss occurring in year 5 for a single year by the time that prices are reset (i.e. in year 5, the year in which the change occurs). This gain/loss must therefore be carried forward for a full five years after the end of the IPP period. In the example below, this is shown by the ‘3s’ that appear in line ‘h’.

¹⁹² These will be inflation adjusted.

Figure 7.2 Incremental Gains and Losses Carried Forward

Regulatory year	← IPP regulatory period →					← 5-year period following IPP →					
	1	2	3	4	5	6	7	8	9	10	
Opex subject to IRIS											
a	Opex allowance	101	99	99	100	99					
b	Actual opex	99	98	100	102	98					
c	Incremental gain/loss in year	2	-1	-2	-1	3					
Incremental gains/losses carried forward											
d	Year 1	-	2	2	2	2					
e	2		-	-1	-1	-1	2				
f	3			-	-2	-2	-1	-1			
g	4				-	-1	-2	-2	-2		
h	5					-	-1	-1	-1	-1	
i	Net balance	-	-	-	-	-	1	-1	0	2	3
j	Net balances treated as Recoverable Costs						1	0	0	2	3

The green shaded cells represent incremental gains and losses that the supplier is exposed to within the regulatory period.

The cells circled in red represent the incremental gains and losses that the supplier has not yet been exposed to for a full 5 year period.

7.5.16 The net balances in line ‘j’ represent the cumulative amount of incremental over- and under-performance that has occurred in the five years prior to the year in question. As noted above, these net balances are only treated as recoverable costs if they constitute a reward for Transpower. Any negative net balances are therefore set to zero for the purposes of determining recoverable costs (line ‘j’ in Figure 7.3 below). Transpower is rewarded for any positive net balances carried forward by higher permissible prices in the next regulatory period. The positive net balance is included in the respective compliance formula, as appropriate, in the recoverable cost term (Section 7.3 above).

Figure 7.3 Treatment of net balances

Regulatory year	← IPP regulatory period →					← 5-year period following IPP →					
	1	2	3	4	5	6	7	8	9	10	
Opex subject to IRIS											
a	Opex allowance	101	99	99	100	99					
b	Actual opex	99	98	100	102	98					
c	Incremental gain/loss in year	2	-1	-2	-1	3					
Incremental gains/losses carried forward											
d	Year 1	-	2	2	2	2					
e	2		-	-1	-1	-1	2				
f	3			-	-2	-2	-1	-1			
g	4				-	-1	-2	-2	-2		
h	5					-	-1	-1	-1	-1	
i	Net balance	-	-	-	-	-	1	-1	0	2	3
j	Net balances treated as Recoverable Costs						1	0	0	2	3

Only positive net balances are carried forward.

These are treated as Recoverable Costs, meaning that suppliers will be permitted higher prices to the extent that they have managed to improve their performance year-on-year, but prices will not be reduced.

7.5.17 In the event of a catastrophic event that the Commission decides warrants reconsidering the IPP, the net balances carried forward may be adjusted to take into account the effect of the catastrophic event. This ensures that in the case of a catastrophic event, which may result in actual opex being significantly higher than allowable opex, any efficiency gains carried forward are not diminished as a result of the event.

7.5.18 It is expected that Transpower would be required, as part of its annual information disclosure, to include an IRIS reconciliation schedule detailing the following:

- i. the actual opex subject to the scheme that is incurred in the assessment period; and
- ii. where a variance (either positive or negative) from the allowable expenditure has occurred, an explanation of the variance.

7.5.19 An independent third-party audit is expected to be required under information disclosure to verify that any efficiency gains/losses are not as a result of changes in classification of accounting policies and/or capitalisation practices. This is to help ensure that inappropriate categorisation of capex and opex is avoided.

7.5.20 Transpower will be expected to report any IRIS gains that it has recovered as a recoverable cost as part of its IPP annual compliance monitoring statement.

Efficiency gains/losses in the final year of the IPP period

7.5.21 When applying the IRIS, an issue arises because Transpower’s actual performance for the final year of the regulatory period will not be known at the time the subsequent price-quality path needs to be set. As such, actual opex will be assumed to be equal to allowable opex (i.e. in Figure 7.4 below, the opex is assumed to be \$99m in year 5, when the actual is later found to be \$98m). An adjustment is made in the first year of the next regulatory period.

7.5.22 In the example below, this is shown in line ‘c’. In year 5, the incremental gain/loss is estimated to be \$0m by assumption (denoted by an asterisk in Figure 7.4). In year 6, this estimate is corrected by \$3m for actual opex in year 5 (note that in the example actual opex in year 5 is \$98m but this is recorded under year 6 as this is the year in which the adjustment is made). This is consistent with the regime adopted by the AER.¹⁹³

Figure 7.4 Adjustment for final year made at the start of the next regulatory period

Regulatory year	← IPP regulatory period →					← 6-year period following IPP →						
	1	2	3	4	5	6	7	8	9	10	11	
Opex subject to IRIS												
a	Opex allowance	101	99	99	100	99						
b	Actual opex	99	98	100	102	98						
c	Incremental gain/loss in year	2	-1	-2	-1	0*	3					
Incremental gains/losses carried forward												
d	Year 1	-	2	2	2	2	2					
e		2	-	-1	-1	-1	-1	-1				
f		3	-	-2	-2	-2	-2	-2				
g		4	-	-1	-1	-1	-1	-1	-1			
h		5	-	-	-	0	0	0	0	0	0	
ADJUSTMENT FOR FINAL YEAR												
						-	3	3	3	3	3	
i	Net balance	-	-	-	-	-	-2	-1	0	2	3	3
j	Net balances treated as Recoverable Costs						0	0	0	2	3	3

Actual opex is not known at the time that the next price-quality path is to be determined. As shown in the green shaded cells, the incremental change in Year 5 is determined by assuming that the incremental gain is zero (i.e. actual opex equals \$101m).

In Year 6, an adjustment is made to the recoverable costs based on actual opex in Year 5. The adjustment is equal to the difference between actual and assumed opex (i.e. \$101m - \$98m). This adjustment affects recoverable costs from Year 7 onwards.

¹⁹³ AER, *Final decision - Electricity transmission network service providers, Efficiency benefit sharing scheme*, June 2008.

APPENDIX A: CONSULTATION PROCESS FOR INPUT METHODOLOGIES TO DATE

A1 Purpose of Appendix

A1.1 This Appendix sets out the key consultation documents that the Commission has released as part of its consultation process for Transpower's IMs and related topics to date, including expert reports that accompanied those consultation papers. It also lists the transcripts from the workshops that the Commission has held in relation to services supplied by Transpower.

A1.2 The list is not intended to include all documents or information provided to or by interested parties in relation to IMs. Unless indicated otherwise, the report is a Commission report.

Table A1 Key Consultation Papers for IMs (Transpower)

Date of Release	Report Name
11 December 2008	Notice of intention to start work on Input Methodologies
19 December 2008	Regulatory Provisions of the Commerce Act 1986 Discussion Paper
19 June 2009	Transpower Process and Recommendation Discussion Paper
19 June 2009	Input Methodologies Discussion Paper
19 June 2009	Revised Draft Cost of Capital Guidelines, with expert report: <ul style="list-style-type: none"> o Franks, J., Lally M., & Myers S., <i>Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology</i>, December 2008
27 October 2009	Cost of Capital Straw-person Worked Example (for discussion at workshop on 12-13 November 2009)
18 November 2009	Transcript - Cost of Capital Workshop - Day 1, 12 November 2009
18 November 2009	Transcript - Cost of Capital Workshop - Day 2, 13 November 2009
18 November 2009	Cost of Capital: Invitation for Post-Workshop Submissions
18 November 2009	Cost of Capital: Effects of Leverage on WACC Under Two Different CAPMs (A spreadsheet 'BL versus Classical CAPM' underpinning this paper was released on 26 November 2009)
18 November 2009	Dr Martin Lally, <i>WACC and Leverage</i> , 17 November 2009
10 December 2009	Update on Process to Determine Input Methodologies and Airports Information Disclosure Revised Transpower Process Paper

Date of Release	Report Name
4 February 2010	Draft for Consultation: Recommendation to the Minister Regarding the Type of Regulation to Apply to Transpower
17 February 2010	Transpower Workshop (Notification and Emerging Views)
10 March 2010	Transcript – Electricity Transmission Workshop, 2 and 3 March 2010
14 April 2010	Recommendation to the Minister of Commerce Regarding the Type of Regulation to Apply to Transpower, 13 April 2010
14 May 2010	Update on Process to Determine Input Methodologies
31 May 2010	<p>Expert reports relevant to Transpower (released with Airports Draft Reasons Paper):</p> <ul style="list-style-type: none"> ○ Yarrow, G., Cave, M., Pollitt, M., Small, J., <i>Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission</i>, May 2010; and ○ Franks, J., Lally, M., Myers, S., <i>Recommendation to the New Zealand Commerce Commission on whether or not it should change its previous estimate of the tax-adjusted market risk premium as a result of the recent global financial crisis</i>, 14 April 2010
25 June 2010	Input Methodologies (Transpower) Draft Reasons Paper
5 July 2010	Draft Commerce Act (Transpower Input Methodologies) Determination
12 November 2010	<p>Revised Draft Commerce Act (Transpower Input Methodologies) Determination</p> <p>Input Methodologies (Transpower) Consultation Update Paper</p>
16 December 2010	<p>Expert reports:</p> <ul style="list-style-type: none"> ○ Dr Martin Lally, <i>Comments on Input Methodologies (EDS) Draft Reasons Paper</i>, 3 September 2010; ○ Dr Martin Lally, <i>Comments on Measurement Error and Regulated Firms' Allowed Rates of Return</i>, 13 September 2010; ○ Dr John Small, <i>Response to CEG</i>, 23 November 2010; ○ Yarrow, G., Cave, M., Pollitt, M., Small, J., <i>Review of Submissions on Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission</i>, November 2010; and ○ Professor George Yarrow, <i>Comments on a CEG memorandum of 17 November 2010</i>, 14 December 2010
To be released on 23 December 2010	<p>Commerce Act (Transpower Input Methodologies Determination) 2010</p> <p>Input Methodologies (Transpower) Reasons Paper, 22 December 2010</p>