PUBLIC VERSION
Confidential information is redacted at [390], [965], [1275](b) and [1278] of this judgment

IN THE HIGH COURT OF NEW ZEALAND
WELLINGTON REGISTRY

[2013] NZHC 3289

UNDER	Part 4 of the Commerce Act 1986
IN THE MATTER OF	appeals under s 52Z of input methodology determinations of the Commerce Commission
BETWEEN	WELLINGTON INTERNATIONAL AIRPORT LTD CIV-2011-485-249
	CHRISTCHURCH INTERNATIONAL AIRPORT LTD CIV-2011-485-251
	AIR NEW ZEALAND LTD CIV-2011-404-802
	AUCKLAND INTERNATIONAL AIRPORT LTD CIV-2011-404-820
	Appellants as regards Decision no. 709
AND	POWERCO LTD CIV-2011-485-180 CIV-2011-485-248
	WELLINGTON ELECTRICITY LINES LTD CIV-2011-485-229 CIV-2012-485-2393
	VECTOR LTD CIV-2011-485-259 CIV-2012-485-2178
	THE MAJOR ELECTRICITY USERS' GROUP CIV-2011-485-268
	Appellants as regards Decisions nos. 710, 711 and 712, [2012] NZCC 26, [2012] NZCC 27 and [2012] NZCC 28
AND	MAUI DEVELOPMENT LTD an interested party as regards Decision no. 712

AND	TRANSPOWER NEW ZEALAND LTD CIV-2011-485-1032 CIV-2012-485-1656 THE MAJOR ELECTRICITY USERS' GROUP CIV-2011-485-269 CIV-2011-485-1660 Appellants as regards Decisions no. 713 and [2012] NZCC 17
AND	COMMERCE COMMISSION Respondent
UNDER	Part 6 of the Commerce Act 1986
IN THE MATTER OF	appeals under s 91(1B) of input methodology determinations of the Commerce Commission
BETWEEN	VECTOR LTD CIV-2011-485-258 POWERCO LTD CIV-2011-485-180 CIV-2011-485-248 Appellants as regards Decisions nos. 710, 711 and 712
AND	TRANSPOWER LTD CIV-2011-485-1032 CIV-2012-485-1656 Appellant as regards Decisions nos. 713 and [2012] NZCC 17
AND	COMMERCE COMMISSION Respondent

Hearing:	3-7, 10-14, 17-21, 24, 25 September 2012 (cost of capital appeals); 26-27 September, 1-5, 15, 17-19, 23, 25-26 October 2012 (asset valuation appeals); 3-4, 6, 10 December 2012 (cost allocation and treatment of taxation appeals); and 11-14 February 2013 (SPA, asset valuation - capex, IRIS and DPP reopener appeals).
Court:	Clifford J, Mr R Davey (lay member) and Mr R Shogren (lay member)

Appearances: V L Heine and N S Wood for Wellington International Airport Ltd
J E Hodder SC and B A Davies for Christchurch International Airport Ltd
J A Farmer QC, S Robertson, M Toner and E Willis for Air New Zealand Ltd
J D Every-Palmer, C R Shrive and E L Rae with
A R Galbraith QC for Auckland International Airport Ltd
J E Hodder SC, B A Davies and E N L Peart for Powerco Ltd
J Oliver and O Meech for Wellington Electricity Lines Ltd
A Myers QC, A R Galbraith QC, M Borsky, A Butler, N Hegan, C Marks, R Versteeg and N Lambie for Vector Ltd
N M Pender, S L Franks and J H Williams for the Major Electricity Users' Group
D H Shavin QC, V L Heine, T D Smith and M On for Transpower New Zealand Ltd
B J Brown QC, M T Scholtens QC, V E Casey, D A Laurenson, A Boadita-Cormican, S Jerebine, C Fleming, T Hallett-Hook and N Gray for the Commerce Commission
O Meech for Maui Development Ltd (interested party)

Judgment: 11 December 2013

JUDGMENT OF THE COURT

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PART 1 – WHAT THESE PROCEEDINGS ARE ABOUT

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Introduction

[1] Part 4 of the Commerce Act 1986 (the Act)[1] provides for the regulation of the price and quality of goods and services in markets where there is little or no competition and little or no likelihood of a substantial increase in competition.[2]

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1 All references in this judgment to the Act, Parts, Subparts and sections are, unless otherwise indicated, references to the Commerce Act 1986 and to Parts, Subparts and sections of the Act.
2 Section 52.

Part 4[3] regulation will, in the future, be imposed on a particular market and the firms within that market following an inquiry by the Commerce Commission (the Commission) and a decision by the Government. But, reflecting previous regulatory arrangements, from the outset Part 4 has provided for the regulation of:

(a) under subpart 9, electricity distribution businesses (EDBs) and Transpower Ltd (Transpower) as suppliers of electricity lines services;[4]

(b) under subpart 10, gas pipeline businesses (GPBs)[5] as suppliers of gas pipeline services;[6] and

(c) under subpart 11, Auckland International Airport Ltd, Wellington International Airport Ltd and Christchurch International Airport Ltd (individually AIAL, WIAL and CIAL and together the Airports) as suppliers of specified airport services.[7]

[2] An important feature of Part 4 is the requirement, found in s 52T, for the Commission to determine what are known as input methodologies (IMs). IMs set the rules pursuant to which the Commission will determine the parameters of two formulae (building blocks allowable revenue (BBAR) and return on investment (ROI)) that are central to price regulation under Part 4.

[3] In these proceedings:

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[3] Part 4 came into force on 14 October 2008, except for subpart 9 relating to the electricity industry and other miscellaneous sections, which came into force on 1 April 2009.

[4] Section 54C defines electricity lines services as meaning the conveyance of electricity by line in New Zealand and as including services performed by Transpower as system operator. Small scale providers are excluded from this definition and thus Part 4 regulation.

[5] Although GPBs and EDBs are the acronyms used in this judgment a variety of acronyms have been used throughout the IMs process. Where we quote a passage that uses an alternative acronym the corresponding acronym from this judgment will be indicated.

[6] Section 55A defines gas pipeline services as meaning the conveyance of natural gas by pipeline. Small scale providers are excluded from this definition and thus Part 4 regulation.

[7] Specified airport services are defined in s 56A to mean all of the services supplied by AIAL, WIAL and CIAL in markets relating to airfield, aircraft, freight and specified passenger terminal activities.

(a) Powerco Ltd (Powerco), Vector Ltd (Vector), Wellington Electricity Lines Ltd (WELL) (together the Energy Appellants), as EDBs;

(b) Transpower;

(c) Powerco and Vector, as GPBs;

(d) the Airports;

(e) the Major Electricity Users' Group Inc (MEUG); and

(f) Air New Zealand Ltd (Air NZ),

appeal against various of the IMs the Commission has determined.

[4] The Energy Appellants, Transpower and MEUG are interested parties as regards each other's energy sector appeals. In the Airports sector appeals, the Airports and Air NZ are interested parties as regards each other's appeals and MEUG is an interested party in the Airports' appeals.

[5] Maui Development Ltd (MDL) also appeared as an interested party to the EDBs and GPBs' appeals, but did not itself appeal. MDL's written submissions were limited in scope and were supportive of the arguments advanced by Vector and Powerco. MDL elected not to make oral submissions. In those circumstances it is not necessary for us to refer to MDL again.

An overview of Part 4 regulation

Workable competition and prices

[6] The general purpose of the Act is to promote competition, ie workable or effective competition, in markets for the long-term benefit of consumers within New Zealand.[8]

[8] Sections 1A and 3(1).

[7] There are, however, a number of markets in which there is little or no competition and little or no likelihood of a substantial increase in competition. In such markets promoting competition cannot, therefore, protect the long-term interests of consumers of goods or services supplied in such markets. Part 4 provides for the regulation of the price and quality of goods and services supplied in such markets.

[8] In other words, Part 4 provides for the regulation of natural monopolies and firms that, while falling short of being true natural monopolies, have substantial market power deriving from the structural characteristics of their markets.

[9] Section 52A expresses the purpose of Part 4 as follows:

> **Purpose of Part**
>
> (1) The purpose of this Part 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) In this Part, the purpose set out in subsection (1) applies in place of the purpose set out in section 1A.

[10] Section 52A(1) therefore directs attention to workably competitive markets. Specifically, it speaks of promoting outcomes that are consistent with outcomes produced in competitive markets, where "competition" is defined in s 3(1) as "workable or effective competition". The outcomes are those listed in s 52A(2)(a) to (d). All this is within the broader context of promoting the long-term benefit of consumers.

[11] "Workable" and "competition" are plain English words, but dictionary definitions are not sufficient to give flesh to the term as it is used in economic regulation. The concept of workable competition was first introduced by JM Clark

in 1940 and developed over a considerable period. Clark wrote, in the context of theories of imperfect and monopolistic competition, of the refinement of the definition of perfect competition and "the realization that 'perfect competition' does not and cannot exist".[9] His concern was that once there is a departure from any single condition of perfect competition, the existence of other conditions of perfect competition may lead to greater rather than lesser imperfection.[10]

[12] Clark gave no definition of workable competition but defined competition as "rivalry in selling goods".[11] Given the inevitability of imperfections, he sought to specify the conditions that in real markets would nevertheless lead to reasonably competitive outcomes. This gave rise to considerable investigation of the structural characteristics of markets that would ensure workable competition.

[13] The OECD has, however, said that "No consensus has arisen over what might constitute workable competition but all bodies which administer competition policy in effect employ some version of it."[12] It might also be said that no set of conditions sufficient to ensure workable competition has been rigorously defined. Rather, the legacy of Clark's notion is that workable competition is a practical description of the state of an industry where government intervention to make the market work better is not justified because the socially desirable outcomes generated by competition already exist to a satisfactory degree.

[14] A workably competitive market is one that provides outcomes that are reasonably close to those found in strongly competitive markets. Such outcomes are summarised in economic terminology by the term "economic efficiency" with its familiar components: technical efficiency, allocative efficiency and dynamic efficiency. Closely associated with the idea of efficiency is the condition that prices reflect efficient costs (including the cost of capital, and thus a reasonable level of profit).

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9 JM Clark "Toward a Concept of Workable Competition" (1940) 30 AER 241 at 241, 60/612/030991.
10 At 241, 60/612/030991.
11 At 243, 60/612/030993.
12 OECD "Glossary of Industrial Organisation Economics and Competition Law" (16 July 1993) <www.oecd.org> at 86.

[15] There is a large body of theoretical literature about the relationship between prices, incentives, efficiency and market outcomes. But the practical context is the existence of sufficient rivalry between firms (sellers) to push prices close to efficient costs. The degree of rivalry is critical. In a workably competitive market no firm has significant market power and consequently prices are not too much or for too long significantly above costs.

[16] These terms are admittedly not precise. No two markets are the same and no single market stays the same. Whether workably competitive conditions exist is a judgement to be made in the light of all the information available, rather than something that can be ascertained by testing whether certain precise conditions are satisfied.

[17] Much of the discussion of workable competition in competition law involves, naturally enough, market power. Workable competition implies that no player has excessive market power. See, for example, the Australian Trade Practices Tribunal's discussion in *Re Queensland Co-operative Milling Association Ltd* [13] and the High Court's discussion in *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd.*[14]

[18] In our view, what matters is that workably competitive markets have a tendency towards generating certain outcomes. These outcomes include the earning by firms of normal rates of return, and the existence of prices that reflect such normal rates of return, after covering the firms' efficient costs.

[19] Of course, firms may earn higher than normal rates of return for extended periods. On the other hand, firms may earn rates of return less than they expected and less than commensurate with the risks faced by their owners when they made their investments. They may even make losses for extended periods. Prices in workably competitive markets may never exactly reflect efficient costs, including a normal rate of return.

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[13] *Re Queensland Co-operative Milling Association Ltd* (1976) 8 ALR 481 (Trade Practices Tribunal).

[14] *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd* [1987] 2 NZLR 647 (HC) at 671.

[20] But the *tendencies* in workably competitive markets are towards such returns and prices. By themselves, these tendencies will also lead towards incentives for efficient investment (investment that is reasonably expected to earn at least a normal rate of return) and innovation. That is to say, the prices that tend to be generated in workably competitive markets will provide incentives for efficient investment and for innovation.

[21] The same tendencies towards prices based on efficient costs and reasonable rates of return will lead also to improved efficiency, provision of services reflecting consumer demands, sharing of the benefits of efficiency gains with consumers, and limited ability to extract excessive profits.

[22] In short, the tendencies in workably competitive markets will be towards the outcomes produced in strongly competitive markets. The process of rivalry is what creates incentives for efficient investment, for innovation, and for improved efficiency. The process of rivalry prevents the keeping of all the gains of improved efficiency from consumers, and similarly limits the ability to extract excessive profits.

[23] Indeed, the term "workably competitive markets" means markets in which these tendencies are seen. The more those tendencies are seen in a market, the more the market can be regarded as workably competitive. And of course, the more competitive the market, the more those tendencies will be seen.

[24] A degree of circularity may be discerned in the preceding paragraphs. This is because workable competition is best thought of in terms of market outcomes and specifically the market outcomes produced by (strong) competition. The circle can perhaps be expressed as follows:

(a) Vigorous competition is known from experience to generate market outcomes that are socially desirable, such as productive efficiency (doing as much as possible with a given set of resources), allocative efficiency (producing goods and services that customers want in accordance with their willingness to pay for them), and dynamic

efficiency (responding quickly to opportunities or changes in circumstances).

(b) These outcomes of competition are also well explained by a highly developed theory.

(c) Actual markets demonstrate varying levels of competition. To a large extent these varying levels are caused by structural characteristics of the market, such as its barriers to entry, the level of sunk costs, economies of scale and scope (with natural monopoly at an extreme).

(d) As a consequence, actual markets will produce outcomes that are nearer or further from the socially desirable ones seen where competition is strong.

(e) The outcomes of strongly competitive markets are better (for society) than those from less competitive markets.

(f) As a corollary, the outcomes from workably competitive markets are better than from markets that do not rise to that level of competition.

(g) Further, within workably competitive markets, the outcomes produced in the more competitive markets are better than those produced by the less competitive.

(h) Since it is outcomes that matter to society, when thinking about workably competitive markets, the outcomes to be pursued are the outcomes produced by the more strongly competitive markets. This is not because such outcomes can be routinely expected, but because they are desirable. Why would regulation aim lower than what is desirable?

[25] As mentioned, the s 52A purpose involves promoting outcomes that are consistent with outcomes produced in competitive markets. It might be asked: why not simply seek to achieve the outcomes produced by competitive markets, as

opposed to workably competitive markets? In our view, the use of the term "workable competition" is no more than a recognition that perfectly competitive markets do not exist. Perfectly competitive markets require conditions – axioms for the mathematical proof of the outcomes – that can never be met, including perfect information completely shared among market participants.

[26] Reflecting that analysis this Court has on two occasions approved the following formulation of workable competition:[15]

> ...workable competition means a market framework in which the presence of other participants (or the existence of potential new entrants) is sufficient to ensure that each participant is constrained to act efficiently and in its planning to take account of those other participants or likely entrants as unknown quantities. To that end there must be an opportunity for each participant or new entrant to achieve an equal footing with the efficient participants in the market by having equivalent access to the means of entry, sources of supply, outlets for product, information, expertise and finance. This is not to say that particular instances of the items on that list must be available to all. That would be impossible. For example, a particular customer is not at any one time freely available to all suppliers. Workable competition exists when there is an opportunity for sufficient influences to exist in any market, which must be taken into account by each participant and which constrain its behaviour.

[27] Thus the purpose is to promote the s 52A(1) (a) to (d) outcomes consistent with what would be produced in workably competitive markets. For example, suppliers of regulated goods or services are to have incentives to innovate and invest, but consistent with the manner in which suppliers in workably competitive markets have incentives to innovate and invest.

[28] When s 52A speaks of promoting outcomes, the question arises: what actions does the regulator take to promote such outcomes? Part 4, in providing for regulation of the price and quality of goods or services in markets where there is little or no competition and little or no likelihood of a substantial increase in competition, envisages that regulation of price and quality will promote those outcomes.

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15 Donald and Heydon *Trade Practices Law* (Law Book Co, Australia, 1978) approved in *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd* [1987] 2 NZLR 647 (HC) at 671; *Fisher and Paykel Ltd v Commerce Commission* [1990] 2 NZLR 731 (HC) at 759.

[29] A key output of Part 4 regulation is prices,[16] the prices that regulated businesses charge for their services. In workably competitive markets, prices are the manifestation of market outcomes: that is, the outcomes of the process of competitive rivalry and of the interaction between supply and demand. It is prices that provide signals to suppliers to innovate and invest. It is prices that determine profits. In each case, of course, prices interact with demand and expected demand. Markets where there is little or no competition do not produce price outcomes that are consistent with the outcomes to be promoted in the s 52A(1) purpose. It is the difficult role of Part 4 regulation to produce prices that generate the s 52A(1)(a) to (d) outcomes, consistent with the outcomes produced in workably competitive markets. Prices are, therefore, at the heart of Part 4 regulation.

Part 4 regulation and prices

[30] Part 4 provides for the following types of regulation:

(a) information disclosure (ID) regulation (subpart 4);

(b) negotiate/arbitrate regulation (subpart 5);

(c) default price-quality path (DPP) regulation and customised price-quality path (CPP) regulation (subpart 6); and

(d) individual price-quality path (IPP) regulation (subpart 7).

ID regulation

[31] ID regulation requires a supplier of a regulated service to disclose, on an after the event – or ex post – basis, information specified by the Commission relating to prices and quality.[17]

[16] Whether expressed in terms of prices or revenue – s 52C.
[17] Section 53A.

Price-quality paths

[32] In DPP, CPP and IPP regulation the Commission determines price-quality paths. Those paths must specify (i) (either or both) of maximum prices and revenues that may be charged and recovered and (ii) quality standards that must be met.[18]

DPP regulation

[33] The purpose of DPP regulation is to provide a relatively low-cost way of setting price-quality paths for suppliers of regulated goods or services, while allowing the opportunity for individual regulated suppliers to have alternative price-quality paths that better meet their particular circumstances.[19] DPP regulation is at times described by the Commission as 'one size fits all' or 'generic' regulation of a group of suppliers. This is a slight over-statement in that, as will become apparent,[20] the Commission included a number of supplier-specific components when determining the DPPs. But much of a DPP is generic and the Commission's capacity to take account of a supplier's specific circumstances is limited by the intention that a DPP be relatively low-cost.

[34] An important aspect of DPP regulation is the incentive for suppliers to increase efficiency and thus profitability provided in a CPI minus X (CPI-X) price-quality path. Suppliers are allowed to increase their prices over the five-year regulatory period by the CPI minus an X factor (specific to each supplier) that reflects the Commission's assessment of anticipated efficiency gains over that regulatory period. Suppliers who improve their efficiency at a rate greater than expected make profitability gains. The quality control aspect of the price-quality path ensures that efficiency gains do not come at the expense of goods or services meeting minimum quality standards.

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18 Section 53M.

19 Section 53K.

20 See for instance Part 6.10 of this judgment which deals with the TCSD and Part 10 which deals with capex.

CPP regulation

[35] CPP regulation is, on the other hand, individual supplier specific. A supplier subject to a 'one size fits all' DPP may make a proposal to the Commission for a CPP if it considers that it may better meet its particular circumstances.[21] In contrast to industry-wide DPP regulation, a CPP provides an alternative price-quality path addressed to the proponent supplier's particular circumstances.

[36] A proposal for a CPP must, however, apply or adopt relevant IMs, limiting the scope for individualisation.[22] At the same time s 53V(2)(c) of the Act provides that in determining a CPP, the Commission may, with the agreement of the supplier, vary an IM that would otherwise apply to the supplier. Thus, whilst the Commission has acknowledged[23] that suppliers must apply existing IMs when making their applications for a CPP, they may submit an application for a variation to one or more IMs in addition to the application that applies existing IMs.

[37] A supplier may make only one proposal for a CPP during a regulatory period,[24] is not entitled to withdraw a proposal once made,[25] and will be bound by the CPP once determined.[26] Further, and not surprisingly given the Commission's position as regulator and the right of appeal provided by s 91(1), the Commission may set a CPP less favourable to the supplier than the otherwise applicable DPP.[27] The supplier does, however, have a right to appeal the Commission's determination.[28] Reflecting the relationship between DPP and CPP regulation, we refer to them together as DPP/CPP regulation.

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21 Section 53K.
22 Section 53Q(2)(d).
23 Commerce Commission *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper* (22 December 2010) at [K1.23], 3/7/001612 [EDBs-GPBs Reasons Paper].
24 Section 53Q(3).
25 Section 53R(a).
26 Section 53R(b).
27 Section 53V(2).
28 Section 91(1).

[38] The Commission comments in the *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper* (EDBs-GPBs Reasons Paper) on CPP regulation as follows:[29]

> ... one of the key features of default/customised price-quality regulation is that, where a regulated supplier subject to a DPP expects to receive lower than normal returns over the current regulatory period, due to its business-specific circumstances occurring during that period, it is able to propose a CPP instead.

[39] For example, a CPP may allow a supplier with planned capital expenditure (capex) greater than that provided for by a DPP to gain a price path which provides for that capex.

IPP regulation

[40] IPP regulation is akin to CPP regulation. In providing for IPP regulation, s 53ZC(1) simply states:

> If individual price-quality regulation applies to goods or services supplied by a supplier, 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.

The section goes on to provide that the Commission must set and monitor compliance with a price-quality path where a supplier is subject to IPP regulation.

[41] In terms of the impact of Part 4 regulation on prices and on the achievement of the s 52A(1) purpose and outcomes:[30]

(a) in ID regulation, the Commission requires information to be disclosed so that pressure is exerted to move prices closer to ones which would satisfy the s 52A(1) purpose (efficient prices) and achieve the (a) to (d) outcomes, than would otherwise be the case; and

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29 EDBs-GPBs Reasons Paper at [2.79], 3/7/001023.

30 Whilst Part 4 provides for the regulation of both prices and quality of regulated services, these appeals generally relate to decisions made by the Commission that affect the regulation of prices, not quality.

(b) in DPP/CPP and IPP regulation, the Commission determines price paths which set the maximum prices suppliers can charge to achieve that purpose and those outcomes.

[42] The prices ideally produced by each of those types of regulation will therefore share the same characteristics and be similarly related to those produced in workably competitive markets. The analytical processes, economic framework and consideration of market mechanisms involved in each type of regulation are, whilst not identical, substantially equivalent.

The role of "building blocks" – BBAR and ROI

[43] Implicit in Part 4 price regulation is the use by the Commission of what is known as the "building blocks" approach to determine or assess the revenues of suppliers of regulated services, and in that way to control or influence the prices charged by those suppliers for those services. The building blocks approach is based on the notion that workably competitive markets produce prices based on costs, or at least prices that tend towards those based on costs. The building blocks approach is directed towards estimating those costs and hence those prices.

[44] This theory is relatively uncontroversial in economics and in regulatory systems throughout the world. The use of the building blocks approach is not itself the subject of any of the current appeals. It is accepted by all parties as an appropriate method for generating prices (in DPP/CPP and IPP regulation) and rates of return (in ID regulation).

[45] Nevertheless, some of the tenets of economic theory and practice that underlie the building blocks approach did come under attack.

[46] Under DPP/CPP and IPP regulation, the building blocks approach requires the Commission to set, in advance, regulated revenue – that is BBAR – that will allow a supplier to recover its costs and to earn a reasonable rate of return on its capital.

[47] The general expression of the annual BBAR for a regulated supplier is:[31]

BBAR = regulatory asset base x cost of capital + depreciation + operating expenditure + tax – revaluation gains (or + revaluation losses) – other income

[48] Under ID regulation, a supplier is required annually to calculate and disclose its ROI for the previous year. The general expression of ROI for a regulated supplier is:[32]

$$\text{ROI} = \frac{\text{revenue} - \text{depreciation} - \text{opex} - \text{tax} + \text{revaluation}}{\text{regulatory asset base}}$$

[49] The ROI equation is effectively the same as the BBAR equation, rearranged in terms of the cost of capital, and then expressed in terms of the ROI. Other than revenue, which in the ROI formula is the actual revenue earned by a firm from the supply of regulated services, the inputs into the ROI equation are the same as the inputs into the BBAR equation. When ROI is calculated in this way it may be compared to the regulatory cost of capital (or weighted average cost of capital (WACC)) applicable to supplying the type of regulated service in question. If a firm's disclosed ROI is consistently higher than its regulatory WACC this may imply that the firm is earning excessive profits.

Implementation of the Part 4 scheme

[50] Implementation of the Part 4 regulatory controls involves a two-step process which requires the Commission:

(a) first, to determine pursuant to s 52T IMs that will be of general application to the supply of particular services;[33] and

(b) secondly, to determine pursuant to s 52P for each regulated supplier the actual regulatory controls to which it will be subject.

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31 EDBs-GPBs Reasons Paper at [2.8.10], 03/07/001027 (footnotes omitted).
32 EDBs-GPBs Reasons Paper at [2.8.30], 3/7/001031.
33 Section 52U.

Section 52T IM determinations

[51] Section 52T(1) requires the Commission to determine a number of IMs to provide the rules whereby various of the terms of the BBAR and ROI equations are to be set. It does so in the following terms:

> 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.

[52] Section 52T(2) provides further direction as to the contents of IMs:

> Every input methodology must, as far as is reasonably practicable,–
>
> (a) set out 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
>
> (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.

[53] It is accepted that the Commission may, but is not required to, determine additional IMs not specifically referred to in s 52T(1).

[54] Section 52R defines the purpose of IMs as follows:

> The purpose of input methodologies 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 this Part.

[55] Generally IMs are determined during a Commission inquiry into whether Part 4 regulation should be imposed. But, as part of the transitional arrangements for the implementation of Part 4 regulation of electricity lines, gas pipelines and airport services, the Commission was required to determine the applicable IMs by 30 December 2010.

[56] On 22 December 2010, the Commission determined IMs required by s 52T for EDBs, GPBs, the Airports and Transpower.[34] The Commission also determined, as part of the regulatory processes and rules IM, rules for what is known as an incremental rolling incentive scheme (IRIS)[35] for EDBs, GPBs and Transpower although s 52T did not require such a determination.

[57] As explained in more detail in Part 4 of this judgment, in 2011 Vector judicially reviewed aspects of the Commission's decision-making process.[36] As a result, and as relevant, the Commission was required to determine, which it had until then not done, asset valuation, allocation of common costs and treatment of taxation IMs for DPP regulation of the EDBs and GPBs.[37] Transpower at the same time judicially reviewed the Commission's decision on Transpower's leverage as reflected in the Transpower cost of capital IM determinations.[38] As a result, the Commission was also required to reconsult on Transpower's cost of capital IM as regards

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34 Decision 709, 1/1/000001; Decision 710, 2/1/000046; Decision 711, 3/1/000215; and Decision 712, 4/1/000378.
35 See Part 9 of this judgment.
36 *Vector Ltd v Commerce Commission* HC Wellington CIV-2011-485-536, 26 September 2011.
37 The Commission had determined such IMs for ID regulation.
38 *Transpower New Zealand Ltd v Commerce Commission* HC Wellington CIV-2011-485-103, 4 November 2011.

leverage. As matters transpired, the Commission not only determined or redetermined the affected IMs, but also – when publishing those decisions, restated the EDB, GPB and Transpower IMs not successfully challenged. The Commission's 2010 Transpower IMs were re-determined on 29 June 2012.[39] The EDBs and GPBs IMs were re-determined on 28 September 2012[40]

[58] The IMs subject to appeal in these proceedings are thus found in:

(a) for the EDBs, [2012] NZCC 26;

(b) for the GPBs, [2012] NZCC 27 and [2012] NZCC 28;

(c) for Transpower, [2012] NZCC 17; and

(d) for the Airports, Decision 709.

Section 52P determinations

[59] Whilst s 52T mandates the determination of IMs for Part 4 regulation, how the various types of regulation are to be applied is determined by decisions made by the Commission under s 52P (s 52P determinations). Section 52P(3) provides generally that a s 52P determination must:

> (a) set out, for each type of regulation to which the goods or services are subject, the requirements that apply to each regulated suppliers; and
>
> (b) set out any time frames (including the regulatory periods) that must be met or that apply; and
>
> (c) specify the input methodologies that apply; and
>
> (d) be consistent with this Part.

[60] It is clear from subparagraph (b) that the making of the Commission's s 52P determinations must follow the making of its s 52T IM determinations. Section 52S provides, in effect, that an IM must be applied in accordance with the relevant s 52P determination.

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[39] Decision [2012] NZCC 17, 42/351/021030.

[40] Decision [2012] NZCC 26, 67/716/033593; Decision [2012] NZCC 27, 67/715/033409; and Decision [2012] NZCC 28, 67/717/033803.

[61] It is in the s 52P determinations that have now been made for ID and DPP regulation (particulars of which appear in Part 2 of this judgment) that the role of the BBAR and ROI formulas is made explicit.[41]

Part 4 rights of appeal

[62] Briefly, s 52Z gives interested persons a right of appeal to this Court against the merits of an IM determination. To succeed, an appellant must establish that the amended or substituted IM sought on appeal is materially better in meeting the purpose of Part 4, the purpose of IMs themselves, or both. A right of appeal against such a determination on a question of law is also available under s 91(1B). In these proceedings the appellants, who are – with two exceptions – regulated suppliers, challenge various aspects of the IM determinations under either or both ss 52Z and 91(1B).

[63] There are only limited rights of appeal against s 52P determinations.

[64] Further particulars of the rights of appeal under Part 4 including our views on the meaning of "materially better" and the nature of these appeals, are discussed in Part 2 of this judgment.

IMs and regulatory period time frames

[65] In very general terms, the time span of an IM will be seven years.[42] An IM may only be amended within that seven-year period subject to the Commission following the extensive consultation process set out in s 52V.[43]

[66] The regulatory period of a DPP/CPP or IPP is generally five years and can be no less than four years.[44] No regulatory period is specified for ID regulation but the Commission has, where applicable, aligned the term of ID regulation with that of

[41] See, for the Airports, Decision 715, 40/312/019752. The determination was amended on 1 March 2012 by way of Decision [2012] NZCC 5. See, for the EDBs, Decision 685, 27/185/013495. The determination was updated to consolidate all amendments as at 22 March 2012 in Decision 714, 64/685/032434. See, for the GDBs, Decision [2013] NZCC 4 and for the GTBs, Decision [2013] NZCC 5.

[42] Section 52Y.

[43] Section 52X.

[44] Section 53M(4) and (5).

DPP/CPP, IPP or, in the case of the Airports, with their five year pricing negotiation practices. The significance of these time frames is canvassed in Part 3 of this judgment.

The Appellants and their appeals

The Energy Appellants

[67] The Energy Appellants own and operate various electricity distribution services. Powerco and Vector also own and operate gas networks. As such they are, along with others, variously subject to ID and DPP regulation pursuant to ss 54F and 54G respectively, as EDBs and ss 55C and 55D respectively, as GPBs.[45] The Energy Appellants as EDBs or GPBs also have the right to propose a CPP.[46] In regulating gas pipeline services the Commission has distinguished between firms providing gas distribution and gas transmission pipeline services (GDBs and GTBs respectively).

Powerco

[68] Powerco is an unlisted company, owned when these appeals were heard, as to 58% by QIC Ltd[47] and as to 42% by Prime Infrastructure. Powerco owns and operates electricity and gas distribution networks throughout the North Island, including in Taranaki, Manawatu, the greater Wellington Area, the Waikato, the Bay of Plenty and Hawke's Bay. In terms of customer connections, Powerco is, after Vector, we infer, New Zealand's second largest electricity and gas distribution company. In terms of network length, it is New Zealand's largest electricity and second largest gas distributor. Its 27,000 km of electricity networks service approximately 305,000 customers. Its 5,000 km of gas networks service 106,000 customers in five major and 30 smaller networks. Its EDB, contributing 80% of overall revenue, is the largest part of its business. Powerco is subject to regulation as an EDB and a GDB accordingly.

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[45] There are 29 EDBs in New Zealand and all are subject to ID regulation. Seventeen non-consumer owned EDBs are also subject to DPP/CPP regulation. There are five GPBs in New Zealand all of which are subject to ID and DPP/CPP regulation.

[46] Section 53Q.

[47] QIC Ltd is an Australian investment fund manager.

[69] Powerco appeals the cost of capital, asset valuation and tax IMs for ID and DPP/CPP regulation of EDBs and GDBs.

Vector

[70] Vector is a company listed on the NZX. Vector is owned as to 75.1% by the Auckland Energy Consumer Trust and as to the balance by individual and institutional shareholders.

[71] Vector owns and operates the electricity distribution network in the greater Auckland area. That network extends from north of Wellsford to Papakura in the south, covering what used to be Auckland Central region, Waiheke Island, North Shore, Waitakere, Rodney, Manukau and parts of the Papakura region. Vector's electricity lines and cables deliver power to more than 456,000 homes and 60,000 businesses. It is subject to regulation as an EDB accordingly. Vector is the largest of the 29 EDBs.

[72] Vector owns the Auckland gas distribution network and gas distribution networks in various other parts of the North Island. Those networks service approximately 150,000 domestic and business customers in 30 towns and cities. It is subject to regulation as a GDB accordingly.

[73] Vector also owns some 2,300 km of high pressure gas transmission networks in the North Island, connecting Taranaki gas production facilities to major users and regional distributors. It is subject to regulation as a GTB accordingly.

[74] Vector appeals:

(a) the cost of capital, asset valuation and cost allocation IMs for ID and DPP/CPP regulation of the Energy Appellants;

(b) certain parts of the regulatory processes and rules IMs, namely for the IRIS and for the reconsideration of DPPs; and

(c) the Commission's decision not to make an IM to set the rules for the starting price adjustment (SPA) process for the DPP/CPP regulation of the Energy Appellants.

WELL

[75] WELL is an unlisted company owned by Cheung Kong Infrastructure Ltd and Power Assets Holding Ltd. WELL owns and operates the greater Wellington electricity distribution network. It is subject to regulation as an EDB accordingly.

[76] WELL appeals the cost of capital and asset valuation IMs for ID and DPP/CPP regulation of EDBs.

Transpower

[77] Transpower is a state-owned enterprise. The shares in Transpower are owned by the Minister of Finance and the responsible minister as to 50% each. Transpower owns and operates New Zealand's high voltage transmission network, known as the national grid. The national grid links electricity generators to electricity lines owned by the EDBs and to certain major industrial users of electricity. Transpower is subject to ID and IPP regulation. IPP regulation of Transpower enables recognition of the special characteristics of its business as the sole supplier of electricity transmission services via the national grid.

[78] Transpower appeals the cost of capital IMs for its ID and IPP regulation.

The Airports and Air NZ

[79] AIAL, WIAL and CIAL own and operate New Zealand's major domestic and international airports at Auckland, Wellington, and Christchurch respectively. The Airports provide regulated airport services and, as such, are subject to ID regulation pursuant to s 56C. Auckland Airport is New Zealand's principal international gateway. AIAL emphasised the importance of this role and, in that context, of appropriate incentives to invest. Wellington Airport is principally a domestic airport, and an important regional hub. It also services some trans-Tasman routes. Christchurch Airport services a mix of domestic and international routes.

[80] AIAL is a company listed on the NZX. WIAL is an unlisted company, owned as to 66% by Infratil Ltd and 35% by the Wellington City Council. CIAL is also an unlisted company. It is owned as to 75% by the Christchurch City Council and 25% by the Crown.

[81] Air NZ is a company listed on the NZX. Air NZ is owned as to 73% by the Crown and as to the balance by individual and institutional shareholders. Air NZ owns and operates the eponymous national domestic and international airline. As such it is by far the largest user of the regulated airport services provided by the Airports.

[82] The Airports appeal the cost of capital and asset valuation IMs for the ID regulation of the Airports.[48] Air NZ also appeals that asset valuation IM.

MEUG

[83] MEUG is an incorporated society that represents its members' interests. MEUG's members are major users of electricity and customers of both Transpower and of the EDBs directly, and hence also of Transpower indirectly. Its members are therefore affected by the Transpower and EDBs IM determinations. MEUG appeals the cost of capital IMs for Transpower and the EDBs.

The interested parties

MDL

[84] MDL is an unlisted company owned by the Maui Mining Companies, Shell, OMV and Todd. MDL owns and operates the high pressure Maui Pipeline which runs 308 km from Oaonui in Taranaki to the Huntly Power Station. Eighty-five per cent of all gas sold in New Zealand passes through the Maui Pipeline. MDL is subject to regulation as a GTB accordingly. MDL did not appeal itself, but was granted interested party status in the appeals against the EDBs and GPBs IMs. MDL generally supports the approach taken by Powerco and Vector.

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[48] To be found in Decision 709 at pts 3 and 5, 1/1/000014-000022 and 000025-000031.

MEUG

[85] MEUG appears as an interested party in the Airports/Air NZ cost of capital IM appeals.

[86] There can be no doubt of the significance to the New Zealand economy of the services the appellants and MDL provide. We acknowledge the significance of this decision for the parties and New Zealand's economy.

Relationship between appeals

[87] These appeals were heard together as they each involve the common factual background of the process the Commission adopted and the materials the Commission considered between 11 December 2008 and 22 December 2010, and subsequently in 2012, in making the IM determinations. These appeals have not, however, been consolidated. Therefore, we must reach separate decisions on each substantive appeal and the questions of relief and ancillary matters those appeals raise, even though there are large factual and legal overlaps between them.

[88] Those overlaps are most apparent in the asset valuation IM appeals. There Powerco and WIAL/CIAL – relying on the same expert advisers and each represented before us by Mr Hodder – base their core challenges on the same legal and economic propositions. Similarly Vector and AIAL, represented by Mr Galbraith, take very similar approaches to each other, noting that AIAL too relies on the same experts as WIAL/CIAL. Likewise, the Commission responded to those overlapping challenges with a generally common set of arguments.

[89] We therefore consider those common aspects of the asset valuation IM appeals on a – to borrow a word from the challenges Clifford J heard to the Commission's consultation methodologies – cross-sectoral basis. Doing so is efficient, as it avoids repetition. At the same time, we consider it promotes understanding of the issues and consistency in our decision-making. We recognise, where appropriate, differences between the approaches taken – in particular by Vector.

How the hearings were organised

[90] The hearing of these appeals involved 39 days hearing time.

[91] The first day, 3 September 2012, involved general opening statements by:

(a) Mr Hodder SC, for Powerco, CIAL and WIAL;

(b) Mr Myers QC, for Vector;

(c) Ms Pender, for MEUG; and

(d) Mr Brown QC, for the Commission.

[92] The parties who did not participate in that first day had declined the opportunity to do so.

[93] The cost of capital IM appeals were then heard on a sectoral basis: first the Energy Appellants and MEUG; then Transpower and MEUG; and then the Airports and Air NZ. Those appeals occupied 16 days of hearing time, from 4 to 25 September 2012.

[94] The asset valuation IM appeals were also heard on a sectoral basis: first the Airports and Air NZ, then the Energy Appellants with MEUG as an interested party. Those appeals occupied 14 days of hearing time, from 26 September to 25 October 2012.

[95] The balance of the appeals were heard in the weeks beginning 3 and 10 December 2012 and 11 February 2013, in the following order:

(a) Powerco's regulatory tax IM appeal (3 and 4 December 2012);

(b) Vector's cost allocation IM appeal (6 and 10 December 2012);

(c) Vector's starting price adjustment (SPA) IM appeals (11 and 12 February 2013);

(d) WELL's (capex) asset valuation IM appeal (13 February 2013);

(e) Vector's regulatory processes and rules IM appeals (IRIS and DPP reopening) (14 February 2013).

[96] We deal first with Vector's appeals against the Commission's decision not to make a SPA IM for the DPP/CPP regulation of the Energy Appellants. We do so because those appeals raise issues relating to what may be called the regulatory architecture of Part 4 that it is helpful to deal with first. They also involve aspects of the procedural history of these appeals which it is helpful to explain at the outset. We then consider the appeals against the asset valuation IMs, before moving to the appeals against the cost of capital IMs. We adopt that order, first, because it reflects the order in which those factors appear in the BBAR formula. Second, the asset valuation IM appeals raise a number of questions of economic theory as that theory is reflected in the mixture of law and economics which is s 52A(1). By contrast, the cost of capital IM appeals raise generally more specific, essentially – in an economic and corporate finance sense – factual issues relating to the various individual parameter values the Commission has determined for use in determining the regulated firms' cost of capital. Finally, we consider the balance of Powerco and Vector's individual appeals against various other IMs (tax, by Powerco, cost allocation, IRIS and DPP re-opening by Vector) and WELL's capex asset valuation IM appeal.

[97] In dealing with the appellants, we generally follow the order of subparts 9, 10 and 11 of Part 4: EDBs, including – as argued – GPBs first, then Transpower, and then the Airports. We acknowledge that, generally speaking, Transpower is dealt with in subpart 9 before the GPBs in subpart 10. But where Vector and Powerco appeal in their capacities as both EDBs and GPBs, they each make their arguments by reference to their status as EDBs, and in terms of the EDBs IMs. They do so on the basis that the GPBs IMs are equivalent to the EDBs IMs, so that their arguments as EDBs apply equally to the IMs which apply to them as GPBs. Hence our approach. As between Powerco and Vector our order of address varies, as theirs did before us.

[98] Before turning to the particular appeals, we discuss important aspects of the factual and legal context of these appeals. We then summarise a number of issues of interpretation of general relevance to these appeals.

Glossary and footnotes

[99] Various terms are defined where they first appear in the text of this judgment. We list those terms and definitions in the glossary to this judgment. Frequently referenced documents are, consistent with the New Zealand Style Guide, given a reference tag, that is an abbreviated name, in both the text of this judgment and again in the footnotes. Those reference tags are also listed in the glossary together with the full citation of the document in question.

[100] In this judgment we generally follow the New Zealand Style Guide. Because of the length of this judgment we have, however, adopted the following footnoting conventions:

(a) Commission decisions are cited by decision number and common bundle reference.[49] Full citations can be found in the glossary.

(b) Citations of documents in the common bundle include a citation to the common bundle in the format: vol/tab/page, for example 1/1/000001 the page number being the common bundle page number, not the page number within the document.

(c) All cases are cited in full even where the case has been cited previously.

(d) Unless otherwise indicated, footnotes are omitted from quotations.

(e) Quotes from the transcript of the appeal hearings and the parties submissions are, consistent with usual practice, not footnoted.

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[49] The common bundle comprised some 80 volumes, 1,055 documents running for over 40,100 pages.

[101] Given the nature of these appeals, it is often not possible to deal with a particular issue discretely in one part of this judgment. Inevitably there is repetition. To simplify the text, we only cross-reference such repetition where the cross-referenced text is relevant to understand that part of this judgment where the cross-reference is provided.

[102] At the beginning of our consideration of each of the appellants' appeals we indicate, in a footnote, which paragraphs of which notice(s) of appeal set out that appeal. Notices of appeal have been given a reference tag and full references can be located in the glossary.

[103] In a few instances we refer – principally when recording an understanding of the background to the Commission's decisions – to material that clearly was part of the closed record, although not in the common bundle. On many occasions, we were encouraged by the parties to read materials found in the common bundle that were only referred to, very briefly, in oral or written arguments. When doing so we sometimes followed references from that material in the common bundle to other material in the closed record, but not in the common bundle. We are satisfied that the limited occasions on which we did that raised no issues that had not been fully explored before us by the parties.

PART 2 – CONTEXT

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Introduction

[104] In law, context is everything. Accordingly, the appellants repeatedly emphasised the importance of context. We record here, in fairly summary form, important aspects of the factual and legal context of these appeals, and introduce the expert evidence we were referred to. We discuss these matters in more detail as we consider the various appeals.

Factual

The regulated services

[105] The supplier appellants generally emphasise the importance of the nature of the regulated businesses they operate, and their special features.

[106] Not surprisingly they – albeit in different ways – all emphasise the scale of their businesses and the long-term nature of the assets in which they invest. Access to capital markets is an issue for all of them as is the issue of regulatory risk and associated uncertainty. These factors are in many ways the correlatives of their being large, natural monopoly, infrastructure businesses. We acknowledge those important aspects of the context of these appeals.

Previous regulatory arrangements

[107] The Commission has summarised previous regulatory arrangements applying to the Airports, the Energy Appellants and Transpower as follows:[50]

> **Recent history of economic regulation in New Zealand**
>
> From 1986 to 2008, generic provisions in the old Part 4 of the Act (i.e. prior to the CAA) provided for the Commission to undertake inquiries into whether particular goods or services should be subject to 'price control' (comprising control of prices, revenues and/or quality standards). Inquiries could result in recommendations to the relevant Minister to impose price control under the old Part 5, on the grounds that: (a) those goods or services were or would be supplied in markets in which competition was limited or likely to be lessened; and (b) it was necessary or desirable for those goods or services to be controlled in the interests of persons acquiring those goods or services.
>
> Two inquiries were completed by the Commission under the old Part 4.
>
> - *Airfield activities* at the three major international airports (i.e. Auckland, Wellington and Christchurch International Airports). The Commission's recommendation to impose price control on relevant services supplied by Auckland International Airport was not accepted by the Minister of Commerce.
> - *Gas pipeline services.* The Commission's recommendation to impose price control on relevant services supplied by Vector (its Auckland gas network only) and by Powerco was accepted by the Minister of Energy, and led to the Commission making authorisations for the supply of the controlled gas pipeline services under the old Part 5 (and which apply

[50] EDBs-GPBs Reasons Paper at [1.2.11]-[1.2.15], 3/7/000988-000989 (footnotes omitted).

from 2005-2012). The authorisations create a CPI-X price path and quality standards (Gas Authorisation).

During the 1990s, information disclosure regulations were introduced for:

- electricity lines businesses (ELBs) – i.e. electricity distribution businesses (EDBs) and Transpower – in 1994, under the Electricity Act 1992, administered by the Ministry of Economic Development (MED);
- gas pipeline businesses (GPBs) in 1997, under the Gas Act 1992, administered by MED; and
- the three major international airports in 1999, under the Airport Authorities Act 1966 (AAA), administered by the Ministry of Transport.

In 2001, a number of sector-specific regulatory provisions were introduced: the Dairy Industry Restructuring Act 2001, the Telecommunications Act 2001, and the now-repealed Part 4A of the Commerce Act. Part 4A of the Act imposed a 'targeted control' (or 'thresholds') regime and information disclosure regime for all EDBs and Transpower, administered by the Commission. The targeted control regime was intended to be less costly than implementing full price control for all EDBs, given there were 28 EDBs at the time (now 29) for a small economy.

The regime was 'targeted' as only ELBs breaching the CPI-X price path or quality thresholds set by the Commission were potentially subject to a 'post-breach' inquiry and possible control under the old Part 5. The Commission did not impose control on any ELBs that had breached the thresholds, but it did, however, enter into 'administrative settlements' with three of those ELBs, namely Vector, Unison and Transpower.

[108] Powerco referred us to a more normatively expressed brief history of economic regulation in New Zealand:[51]

The history of economic regulation in New Zealand falls neatly enough into three periods:

- 1939-1986: These years were characterised by heavy-handed and intrusive regulation, including price control on a wide range of goods or services. This oppressive regulatory approach operated under a range of statutory instruments including the Control of Prices Emergency Regulations 1939, the Control of Prices Act 1947 and the Trade Practices Act 1975.
- 1986-2001: This period saw the birth and adolescence of light-handed regulation. Transitional price control remained for some previously controlled goods like natural gas and flour, with the last of these controls expiring in 1992. From then on Pt 4 of the Commerce Act only played a deterrent role until the 1998 Pt 4 inquiry into airports (a deterrent role because the thinking (and reality) was that the threat of regulation prevented firms from exercising natural monopoly power).

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[51] Quoting from Sumpter (with Hamlin) *New Zealand Competition Law and Policy* (CCH, 2010) at [1032].

- 2001-2008: In recent years there has been a reaction against the light-handed approach of the Commerce Act's early years. That reaction has seen network monopolies once again placed under regulation. In the course of the airports Pt 4 inquiry and the Caygill Inquiry into the electricity industry, it became clear that Pt 4 needed upgrading, and that blunt price control should be replaced with more modern price, revenue and quality controls. These changes were ushered in by Pt 4 which was inserted into the Commerce Act to regulate electricity lines businesses.

In 2007, the Ministry of Economic Development (MED) undertook a review of regulation under Pts 4, 4A and 5 of the Commerce Act. That review led to substantial Commerce Act amendments in September 2008.

[109] We find that classification helpful. We comment that the period between 1986 and 2001 saw the corporatisation of many utility providers that had previously existed as government departments or local body entities. There was also the introduction of a requirement that such entities act commercially and, in some cases, whole or partial sale to the private sector. We also note that not all commentators would concur with the authors' assessment that the threat of regulation prevented the exercise of natural monopoly power.

[110] Thus, in October 2008, when Part 4 generally came into force:

(a) The Airports were subject to ID requirements under the Airport Authorities (Airport Companies Information Disclosure) Regulations 1999, administered by the Secretary of Transport, by virtue of s 9A of the Airports Authorities Act 1966 (the AAA) .

(b) The EDBs and Transpower were subject to ID requirements and the thresholds regime promulgated and administered by the Commission under the old Part 4A. As a result of breaching the thresholds, Vector, Unison and Transpower were by then subject to separate administrative settlements.

(c) The GPBs (including Vector and Powerco) were subject to ID requirements under the Gas (Information Disclosure) Regulations 1997 (the 1997 Gas ID Regulations) administered by the Ministry of Economic Development (MED).

(d) Vector, in relation to some of its Auckland gas pipeline services (Vector Auckland), and Powerco, in relation to all of its gas pipeline services, were subject to price control regulation under the old Part 5 (the Provisional Authorisation and Gas Authorisation) administered by the Commission.[52]

The position by the end of our hearing

[111] The transition from the previous regulatory arrangements to the full implementation of Part 4 regulation has been, and continues to be, a complex process. Subparts 9, 10 and 11 provide transitional provisions. Given that these proceedings relate only to the IM determinations, those provisions are not directly relevant. Moreover, their complexity tends to confuse. The following explanation is sufficient for contextual purposes and summarises the regulatory arrangements under Part 4 which were in place on or about the last day of the hearing of these appeals, namely 14 February 2013.

Energy Appellants – ID regulation

[112] The Commission made its s 52P determination for the ID regulation of the EDBs and GPBs on 1 October 2012 after the commencement of the hearing.[53] The first disclosures under those requirements were to be made for the 12 months ending March 2013 for the EDBs, December 2012 for MEUG and June, September or December 2013 for the GPBs.[54] In previous years the EDBs continued to make disclosure under the (old) Part 4A Electricity ID Requirements and the GPBs under the 1997 Gas ID Regulations.

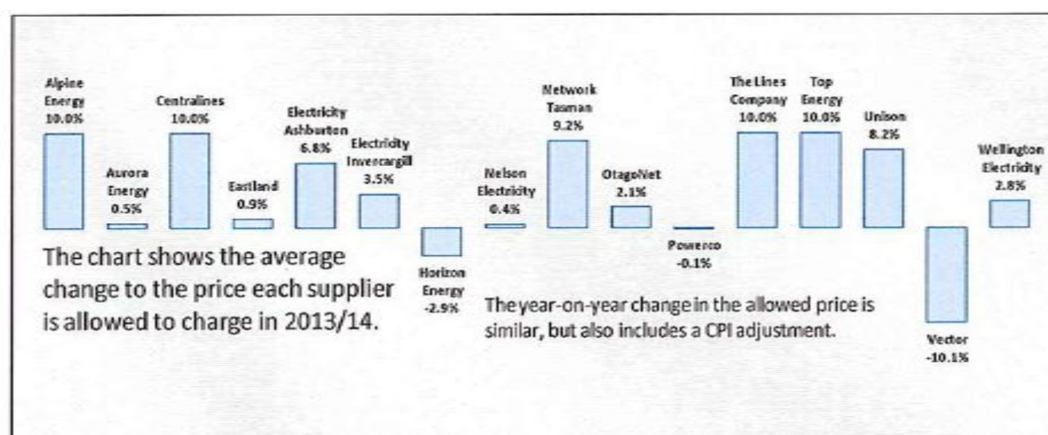
EDBs – DPP regulation

[113] The Part 4A thresholds which expired on 1 April 2009 were deemed to be DPPs for the period 1 April 2009 to 31 March 2010.[55] The Commission extended those deemed DPPs on 30 November 2009 for the period 1 April 2010 to 31 March

[52] Decision 555, 46/381/023220; Decision 657, 22/124/010306; Decision 656.
[53] Decision [2012] NZCC 22; Decision [2012] NZCC 23; Decision [2012] NZCC 24.
[54] Commerce Commission *Information Disclosure for Electricity Distribution Businesses and Gas Pipeline Businesses: Final Reasons Paper* (1 October 2012), 79/1048/039584.
[55] Section 54J.

2015.[56] Following the December 2010 determination of EDBs DPP IMs and the re-determination of those IMs in September 2012,[57] the extended DPPs were reset on 30 November 2012, with effect from 1 April 2013.[58] The reset was on the basis that had the redetermined DPP IMs been set and applied on 30 November 2009 when the deemed DPPs were extended, the Commission's assessment of the profitability of the EDBs would have been different and materially different DPPs would have been set.[59] The key features of that reset are the adjustments to distribution prices summarised, on the assumption suppliers price up to the price cap, in the following table:[60]

Figure 4.1: Adjustment to distribution prices on 1 April 2013

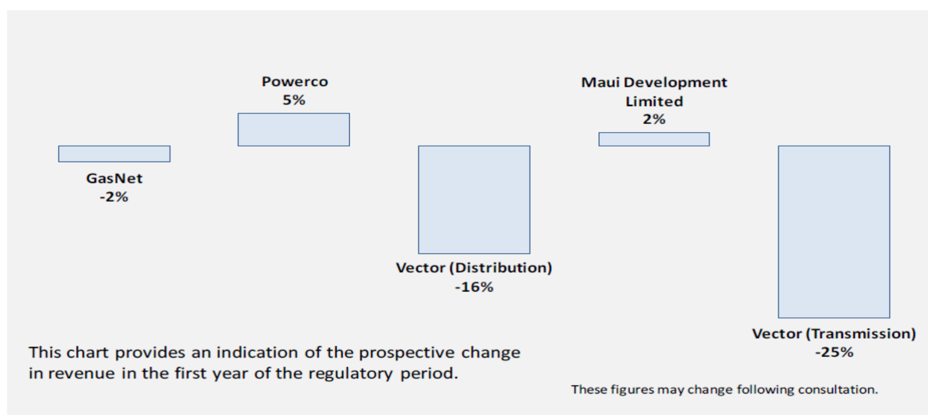


GPBs – DPP regulation

[114] As at 14 February 2013, Vector and Powerco remained subject to the terms of the Gas Authorisation. The Commission anticipated making the first DPP determination for the GPBs by the end of that month to take effect on 1 July 2013 for the regulatory period ending 30 September 2017.[61] That DPP was expected to require GPBs to make the following adjustments to their revenue in the first full pricing year of the regulatory period:[62]

56 Decision 685, 27/185/013495.
57 Decision 710, 2/1/000046; Decision [2012] NZCC 26, 67/716/033593.
58 Decision [2012] NZCC 35, 79/1050/0399331.
59 EDBs DPP Reasons Paper at [2.2]-[2.4], 79/1049/039777.
60 At [4.3], 79/1049/039788.
61 The DPP was in fact made on 28 February 2013. Decisions [2013] NZCC 4 and [2013] NZCC 5.
62 Commerce Commission *Revised Draft Decision on the Initial Default Price-Quality Paths for*

Figure X2: Adjustments for the first full pricing year of the regulatory period



Transpower – ID regulation

[115] No s 52P determination has yet been made for the ID regulation of Transpower. The Commission was intending to consult on that issue this year.

Transpower – IPP regulation

[116] The Commission was required by s 54M(3) to recommend to the Minister of Commerce prior to the expiry of Transpower's administrative settlement that Transpower be subject to DPP, CPP or IPP regulation. The Commission recommended on 14 April 2010 that Transpower be subject to IPP regulation.[63] This recommendation was accepted by the Minister and an Order in Council subjecting Transpower to IPP regulation from 1 April 2011 was promulgated on 23 August 2010.[64]

[117] In October 2010, the Electricity Commission's role in approving Transpower's grid upgrade plans was transferred to the Commission.[65] As a consequence, the Commission was required to determine a capex IM for Transpower by 1 February 2012 at the latest.[66]

Gas Pipeline Services (24 October 2012) at [X8], 77/1006/038674.

63 Commerce Commission *Recommendation to the Minister of Commerce regarding the type of regulation to apply to Transpower* (14 April 2010).

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

65 Electricity Act 2010, s 155.

66 Section 54S.

[118] The Commission made its first s 52P determination for IPP regulation of Transpower on 22 December 2010, contemporaneously with its s 52T IM determinations for that regulation.[67] That determination set Transpower's price-quality path for the period 1 April 2011 to 31 March 2015. The IPP consists of a revenue cap and quality performance targets. The revenue cap is based on a forecast of Transpower's revenue requirements for each year of the regulatory period called forecast maximum allowable revenue (MAR). The 2010 IPP determination set the MAR for the first year of the IPP and a November 2011 amendment set the MAR for the remainder of the regulatory period (1 April 2012 to 31 March 2015).[68] Transpower's capex IM was determined in accordance with s 54S on 31 January 2012, and its IPP was amended again simultaneously.

Airports – ID regulation

[119] The Commission made its s 52P determination for the ID regulation of the Airports on 22 December 2010,[69] contemporaneously with its s 52T IM determinations for that purpose.[70] Those requirements came into force on 1 January 2011. The Airports made two annual disclosures on the basis of WACC determinations made by the Commission pursuant to the Airports cost of capital IM, for the years ending 30 June 2011 and 30 June 2012.

All regulated services – WACC estimates

[120] The Commission also made a number of decisions determining WACC estimates for the purposes of ID and price-quality path regulation of the Airports, EDBs, GPBs and Transpower.[71]

A complex process

[121] Powerco submits that the enactment of Part 4 is illustrative of a "fourth period", one which places considerable emphasis on the importance of incentives for

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[67] Decision 714, 47/685/032434.
[68] Decision 737.
[69] Decision 715, 40/312/019752.
[70] Decision 709, 1/1/000001.
[71] Decision 718, 41/321/020331; Decisions 723, 727, 732, 745, [2012] NZCC 1 and [2012] NZCC 10.

investment. At various points in this judgment we consider the significance and implication of the reference in s 52A(1)(a) to regulated suppliers having incentives to invest. For now, it is sufficient to observe one far more obvious matter.

[122] It is clear that after the somewhat radical, by comparative standards, period of light-handed regulation, the New Zealand regulatory framework for natural monopolies has moved back towards a framework more typical of similar countries. The introduction of the new framework and its immediate application in the electricity, gas and airport services sectors, required the Commission, in making the initial IM and s 52P determinations, to address at one time a wide range of issues that, in other jurisdictions, have been able to be considered over a period of time. Of necessity, this judgment reflects the complexity of that process. So does the time it has taken us to deliver this judgment.

Legal

Legislative history

[123] In New Zealand, legislative history is an important contributor to the interpretation of an enactment.[72] Section 5(1) of the Interpretation Act 1999 provides that "the meaning of an enactment must be ascertained from its text and in the light of its purpose". As Tipping J observed in *Commerce Commission v Fonterra Co-operative Group Ltd*:[73]

> It is necessary to bear in mind that s 5 of the Interpretation Act 1999 makes text and purpose the key drivers of statutory interpretation ... [T]he meaning [of the text] ... *should always be cross-checked against purpose in* order to observe the dual requirements of s 5. In determining purpose the court must obviously have regard to both the immediate and the general legislative context. Of relevance too may be the social, commercial or other objective of the enactment.

[124] Both the Commission and the appellants, Vector especially, provided us with a significant amount of material relating to the legislative history of Part 4. This included early departmental and Cabinet papers, details of submissions made to

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72 "Enactment" means "the whole or a portion of an Act or regulations": Interpretation Act 1999, s 29.

73 *Commerce Commission v Fonterra Co-operative Group Ltd* [2007] NZSC 36, [2007] 3 NZLR 767 at [22].

officials during the drafting of the Commerce Amendment Bill 2008 (the Bill) prior to its introduction, detailed records of the Select Committee process (including officials' reports to the Select Committee) and more traditional materials such as extracts from Hansard and from the explanatory note to the Bill (the Explanatory Note). There is, in our view, an issue as to the extent to which we may properly have regard to all of that wide range of material.

[125] The Supreme Court, when considering the legislative history of Part 4 in *Vector Ltd v Commerce Commission*[74], referred to the Explanatory Note, to the report from the Commerce Committee to the House of Representatives and to the mischief to which the implementation of Part 4 was addressed. William Young J, giving the reasons for the Court, noted that they had also been taken to other materials. In particular the Court was taken by the Commission to an unsuccessful Vector attempt, during the Select Committee process, to have what became s 52T amended to include a reference to the very SPA IM that Vector in those proceedings was arguing s 52T required. William Young J observed:[75]

> For the sake of completeness, we should note the principal legislative history argument which we have not taken into account. When the 2008 Bill was before the Select Committee, Vector proposed an amendment to cl 52S (which became s 52T) which would have added starting price resets to the topics required to be addressed by input methodologies. This was one of the "proposals" alluded to by the Commerce Committee in the passage from its report which we have just cited.
>
> The Committee's rejection of an explicit requirement for a starting price reset input methodology might be thought to tell against Vector's construction of s 52T. But counsel for Vector maintained that we should not rely on this consideration. This was because the reference in the report to Vector's proposal was in general terms and the House of Representatives as a whole was not made aware of the detail. Given the clear view we have formed — based on the statutory text and context — we see no need to resolve whether this aspect of the legislative history is properly able to be taken into account.

[126] Given that the Supreme Court chose not to resolve that issue, and given comments made from time to time by the Court of Appeal favouring a restrictive approach to that issue,[76] we have decided – as we indicated during the hearing we

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74 *Vector Ltd v Commerce Commission* [2012] NZSC 97, [2013] 2 NZLR 445.
75 At [66]-[67].
76 *Skycity Auckland Ltd v Gambling Commission* [2007] NZCA 407, [2008] 2 NZLR 182 at [39]-[42]; *Wellington International Airport Ltd v Air New Zealand* [1993] 1 NZLR 671 (CA) at 675;

would – to limit ourselves to the traditionally accepted legislative history sources when considering questions of interpretation. Here we consider this includes, in addition to the materials referred to by the Supreme Court, MED's *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion* Document (the April 2007 Discussion Document) which very clearly sets out the mischief the enactment of Part 4 addressed.[77] To the extent that, along the way, we may have been unable to avoid being exposed to more non-traditional sources, we became more convinced the traditional approach is to be preferred. A particular explanation of, or opinion on, relevant issues expressed by officials in background materials – for example in advice in preliminary papers or provided to Ministers and the Select Committee from time to time – or even by a Minister (albeit no doubt prepared by officials) in a cabinet paper is, in our view, of no great relevance. What matters is what Parliament considered and decided. Moreover, the complexity and ambiguity of that wider record counts against its utility as an appropriate guide to statutory interpretation. Naturally, the further back one goes in the policy development process the more there will be seen to have been competing ideas, views and proposals.

[127] Outside of the statutory interpretation context, where the wider record contains undisputed factual material it can be a different thing. There the wider record can be helpful to create the relevant factual record. We have read material on the wider record for that purpose.

[128] There is one additional point to note. We take a different approach when the issue is not one of statutory interpretation but whether an alternative IM proposed by an appellant is "materially better". If the wider record is part of the closed record – ie "the documentary information and views" before the Commission – those materials form part of the record we may have regard to in determining these merits appeals.

R v A [2003] 1 NZLR 1 at 4 (CA)

77 Ministry of Economic Development *Review of Regulatory Control Provisions under the Commerce Act 1986* (1 April 2007) 63/662/031613 [the April 2007 Discussion Document].

[129] We discuss the legislative history in detail at various points in this judgment, especially in the context of the asset valuation IM appeals. For now, the following overview will provide a general orientation.

[130] Part 4 of the Act has, since the Act came into force in 1986, provided for the Minister of Commerce, following a Commission inquiry,[78] to recommend that the Governor-General impose control upon businesses through an Order in Council. Part 5 (until 2008) provided for the administration of control. The Commission could authorise controls on price and, from 2001,[79] revenue or quality; or accept undertakings by controlled businesses to reduce prices, reduce revenue or improve quality. In 2001 the ability for the Commission, on request of the Minister, to set thresholds that would assist in determining whether control should be imposed was introduced in Part 4.[80] Electricity distribution and transmission businesses were removed from the purview of the generic Part 4 and made subject to a new Part 4A which required the Commission to set thresholds for those businesses and empowered the Commission to impose control on large electricity lines businesses if the thresholds were breached.[81] As for a business controlled under Part 4, control was administered under Part 5.

[131] The Commerce Amendment Act 2008 removed this demarcation between Parts 4, 4A and 5. Part 4A and the control authorisation provisions of Part 5 were repealed and Part 4 now determines both when control can be imposed and how that control is administered.

[132] The overview to the Explanatory Note records:[82]

> This bill amends Parts 4, 4A, 5 and 6 of the Commerce Act 1986 (the Act) and makes other consequential amendments. The primary focus of the Bill is to fundamentally reform the regulatory control provisions in the Act. Other amendments include imposing enhanced information disclosure regulation on certain services supplied by three international airport companies ...

78 From 1986 to 2001 this inquiry was not compulsory.
79 Commerce Amendment Act (No 1) 2001, s 14.
80 Commerce Amendment Act (No 1) 2001, s 12.
81 Commerce Amendment Act (No 1) 2001, s 3.
82 Commerce Amendment Bill 2008 (201-1) (explanatory note) at 1 [the Explanatory Note].

[133] The Bill, as the Explanatory Note goes on to explain, was the result of a government review of the old Parts 4 and 4A. As part of that review, the government had also considered the effectiveness of the existing regulation of the aeronautical-related services supplied by the Airports. A range of problems was identified as a result of that review, which the Explanatory Note summarises as follows:[83]

> - Absence of a specific purpose statement for Part 4. This has led to dispute and uncertainty, since the general purpose statement of the Commerce Act (section 1A), which seeks to "promote competition", does not work for sectors where competition is not possible:
> - There is no specific requirement for any regulation to incentivise investment and innovation:
> - Separate inquiries are required on "whether to regulate" and "how to regulate":
> - There is uncertainty about the rules governing regulatory decisions (such as the cost of capital):
> - There are no powers to implement alternative forms of regulation (such as information disclosure) other than price control:
> - The Part 4A thresholds regime is generally regarded as creating too much uncertainty for businesses and does not provide adequate incentives for investment in infrastructure:
> - The accountability regime for the Commission is limited (primarily judicial review):
> - The lack of a credible information disclosure regime to constrain the exercise of market power by 3 international airport companies in the supply of aeronautical-related services.

[134] In *Vector Ltd v Commerce Commission*, the Supreme Court summarised important aspects of the legislative history of Part 4 in the following terms:[84]

> The former pt 4A applied to electricity distributors such as Vector and provided for the setting of thresholds which, in some respects, were similar to the price-quality paths now provided for under pt 4 and sub-pt 9. One key difference, however, was that the thresholds set by the Commission did not directly constrain the prices which electricity distributors could charge. So the breaching of thresholds was not directly proscribed. Instead, the former pt 4A proceeded on the basis that a breach of the thresholds could be investigated by the Commission which was either to make a declaration of control in relation to the supplier or give reasons for not doing so. This

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83 At 3.

84 *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [7]-[8] (footnotes omitted).

> regime was discussed by this Court in *Unison Networks Ltd v Commerce Commission*.
>
> For present purposes, what is primarily material about the pt 4A regime (and the regimes under the former pts 4 and 5) are the complaints they attracted from regulated suppliers as to the lack of certainty (particularly in the case of pt 4A because a supplier could not know in advance the consequences of breaching the thresholds), the scope they provided for evaluative assessments by the Commission (leading to regulatory instability), the absence of merits appeal rights and the lack of legislative requirements for regulation to incentivise investment. The current structure of pt 4 reflects the legislative acceptance of the substance of these complaints.

[135] The s 52A purpose statement, including the reference to incentives to innovate and invest; the various types of regulation provided; the IMs themselves; and the rights of appeal here being exercised, all confirm that very clear history. At the same time, the Supreme Court acknowledged and emphasised the intention – referred to in the Explanatory Note – that it was over time that the new regime would provide more timeliness, certainty and incentives for investment.[85]

[136] It is helpful to bear in mind from the outset the different background to the decisions made as to the way Part 4 would – at least initially – regulate electricity line and gas pipeline services on the one hand, and specified airport services on the other.

[137] Electricity line services and gas pipeline services, subject to the Part 4A thresholds regime and the Gas Authorisation, were already subject to a regulatory framework supervised by the Commission. That framework reflected decisions that more intensive regulation than ID regulation, and the threat of further regulation could provide, was required . Those forms of regulation were replaced by ID and DPP/CPP or IPP regulation under Part 4.

[138] Prior to the enactment of Part 4, specified airport services, and hence the Airports, had not been subject to regulation supervised by the Commission. Those firms, and certain of the services they provided, had been investigated by the Commission during a 2002 inquiry into whether control should be imposed on the Airports (the Airports Inquiry). The Commission concluded that there were insufficient constraints on the market power of the Airports and that they were likely

[85] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [64].

to earn excess returns going forward. The Commission recommended control of one of the Airports (AIAL) but the Government decided against further regulation – beyond that already provided by AAA disclosure. The Airports' power to set charges as they (individually) thought fit was retained and remains.

[139] Therefore, at the time that Part 4 came into force, whilst direct price and quality regulation was considered necessary for the EDBs, GPBs and Transpower, and weaknesses in the previous regime were to be addressed in that context, that was not the position for the Airports. As regards the Airports, it had been concluded that the AAA disclosure regime was ineffective in guarding against the possibility of monopoly pricing and informing the statutory consultation process. Accordingly, in the case of the Airports, the overall objective of Part 4 was to provide a strengthened ID and price monitoring regime. That difference in background and outcome is reflected in the way the regulatory impact statement to the Bill (Regulatory Impact Statement) separately addresses the Part 4A thresholds regime applying to EDBs,[86] and regulation of the Airports.[87] Despite these differences the ID regulation of Airports under Part 4 has, as its overall purpose, the s 52A(1) purpose and outcomes that apply to all regulated suppliers.

The nature of these appeals

[140] This is the first time the rights of appeal provided by Part 4 against IM determinations have been exercised. There are particular features to those appeal rights. It is therefore appropriate that we set out our views on those appeal rights with some care.

The structure of appeal rights against Part 4 determinations

[141] Section 91, found in Part 6 of the Act, has traditionally provided for a general right of appeal by way of rehearing against "determinations"[88] of the Commission under the Act. Both merits appeals on the facts and appeals on points of law come within the ambit of s 91 appeals.

[86] The Explanatory Note at 16.
[87] At 33.
[88] The term "determination" is not defined in the Act, but is used throughout the Act to refer to formal decisions of the Commission under the Act.

[142] Being a general right of appeal, the *Austin, Nichols* principles apply to s 91 appeals. That is:[89]

> Those exercising general rights of appeal are entitled to judgment in accordance with the opinion of the appellate court, even where that opinion is an assessment of fact and degree and entails a value judgment. If the appellate court's opinion is different from the conclusion of the tribunal appealed from, then the decision under appeal is wrong in the only sense that matters, even if it was a conclusion on which minds might reasonably differ. In such circumstances it is an error for the High Court to defer to the lower Court's assessment of the acceptability and weight to be accorded to the evidence, rather than forming its own opinion.

[143] When applying the *Austin, Nichols* principles it is also important to bear in mind the following observation of the Chief Justice (writing for the Court) when speaking of both general appeals on the record below and de novo appeals:[90]

> In either case, the appellant bears an onus of satisfying the appeal court that it should differ from the decision under appeal. It is only if the appellate court considers that the appealed decision is wrong that it is justified in interfering with it.

[144] Thus, where an entitled party appeals to the High Court under s 91 against a determination of the Commission, the Commission may be wrong simply because the High Court disagrees with the determination appealed against. The High Court's decision-making exercise is however limited by the terms of the Act and other applicable principles.

[145] From 2001 onwards, Commission determinations relating to price control regulation were progressively exempted from the general right of appeal provided by s 91. At the same time a specific "point of law" appeal was provided as regards some, but not all, of those exempted determinations. Judicial review was available to challenge all determinations of the Commission. Thus, at the time of the introduction of the Bill and as observed in the Explanatory Note:[91]

> The Commission's regulatory decisions are subject to judicial review only. There is a general perception that the accountability regime for the Commission is weak, as judicial review applies to questions of law and process only and not the substance of a decision. Thus the regime is less capable of correcting regulatory error or improving the regulator's decision

89 *Austin, Nichols & Co Inc v Stichting Lodestar* [2007] NZSC 103, [2008] 2 NZLR 141 at [16].
90 At [4].
91 The Explanatory Note at 17.

> making over time. This can impact on business/investor confidence in the regime.

[146] When the review of Parts 4 and 5 of the Act (as they then were) was announced on 22 May 2006, the review was to include "whether or not a 'merits review' would add value to the decision-making process".[92] By the time the Bill was introduced in March 2008, the Government had concluded that the answer to that question was yes. The Bill proposed new accountability mechanisms. The Explanatory Note commented on those new accountability mechanisms in the following terms:[93]

> **Merits review**
>
> Because of the importance of input methodologies, the Bill makes provision for merits review of input methodology determinations by the Commission. This is in the form of an appeal to a High Court judge assisted by 2 expert lay members (in most circumstances). The appeal provides accountability for the Commission, helps ensure that input methodologies deliver on the purpose statement, and promotes business confidence.
>
> Submitters and the Select Committee are invited in particular to consider whether there should be specific criteria for such appeals. The Bill as drafted provides for a right of general appeal by way of re-hearing. This is in line with other parts of the Act and would allow the High Court to apply well-established principles when considering and deciding such appeals. It can be argued, however, that specific and narrower criteria may be appropriate to help reduce gaming risks and to help ensure that only Commission decisions that are unreasonable (rather than unsatisfactory in the view of the Court) are overturned.
>
> The Government gave careful consideration to whether merits review should also be available on final decisions of the Commission applying to individual firms. The pros and cons of merits review are set out in the Regulatory Impact Statement attached to this Bill. On balance, after taking into account costs and gaming risks, and the availability of merits review on input methodologies (which are the detailed decision-rules), the Government decided to limit appeals to points of law. Firms will also have judicial review available to them.

[147] The Regulatory Impact Statement reflected those comments, noting that "providing for merits reviews of Commission decisions on input methodologies" was a key amendment.[94]

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[92] Lianne Dalziel (Commerce Minister) "Parts 4 & 5 of Commerce Act to be reviewed" (press release, 22 May 2006).

[93] The Explanatory Note at 7.

[94] The Explanatory Note at 15.

[148] As introduced, the Bill provided:

(a) in what became s 52Z, a right of appeal against IM determinations which was, in effect, equivalent to the s 91 general right;

(b) in s 91(1) a right of appeal against any determination of the Commission, other than s 52P determinations and IM determinations; and

(c) in what became s 91(1B), a right of appeal on a point of law against any determination of the Commission.

[149] In other words, the only right of appeal against s 52P determinations was to be on a point of law.

[150] Submitters on the Bill were asked to consider whether appeals against IM determinations should be the subject of specific criteria. Submissions also addressed (we infer) the boundary between appeals against IM determinations and s 52P determinations (ie "final decisions" of the Commission applying to individual firms). The commentary on the Bill as reported back from the Commerce Committee (the Select Committee Report) relevantly observes:[95]

> **Appeals**
>
> **Appeal on input methodologies**
>
> New section [52Z] (clause 4) of the bill as introduced allows any person who has an interest in an input methodology determination the right to appeal to the High Court against the determination. We recommend amending new section [52Z] to provide clearer guidance to the High Court on its role in considering appeals on input methodologies. In particular we recommend allowing the High Court to amend or substitute a new input methodology only if it would be "materially better" in achieving the purpose statements in new sections 52A and [52R].
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> ...
>
> **Stages of appeal**

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[95] Commerce Amendment Bill 2008 (201-1) (select committee report) at 4-5 [the Select Committee Report]. Section references have been amended for clarity's sake to refer to relevant sections of the enacted legislation.

> Most submitters argued that appeals should be permitted against final decisions by the Commission. However, they differed as to whether such appeals should replace appeals on input methodologies, or be available in addition to them.
>
> We have concluded that there is a good case for allowing appeals on the final decisions of the Commission on customised and individual price-quality paths. We also recommend retaining the right to appeal on input methodologies. As input methodologies would affect all parties, not just those subject to customised or individual price-quality paths, certainty on the rules as soon as possible would be essential for investment in infrastructure with long-life assets. We consider that if input methodologies could be appealed only in the context of final decisions, there would be considerable delays in finalising input methodologies, appeals would be much more complicated, and there would be a risk of persisting uncertainty because decisions on the rules would be case-specific.
>
> We were concerned about possible gaming risks associated with allowing appeals on input methodologies and certain final decisions. New section 53 provides that input methodologies cannot be stayed while under appeal, and we recommend an amendment to new section 95 of the Act to achieve the same with respect to appeals against appealable final decisions.

[151] Reflecting the Select Committee's reference to s 52P determinations as "final decisions", s 91 as reported back and enacted provides:

> **Appeals in relation to determinations by Commission**
>
> (1) There is a right of appeal to the High Court under this subsection against any determination of the Commission under this Act, other than the following:
>
> a) a determination, or any part of a determination, made under section 52P (a **section 52P determination**) that sets out—
>
> (i) how information disclosure regulation or negotiate/arbitrate regulation applies to regulated suppliers; or
>
> (ii) the default price-quality path that applies to regulated suppliers:
>
> b) an input methodology determination (as defined in section 52Z, and for which a separate appeal right is given under that section).
>
> (1A) An appeal against a section 52P determination may not include an appeal against all or part of an input methodology, whether on a point of law or any other ground.
>
> (1B) There is a right of appeal to the High Court on a question of law against any determination of the Commission under this Act (including a determination referred to in subsection (1)).
>
> ...

[152] Thus s 91:

(a) no longer excludes s 52P determinations, other than those mentioned in s 52P(1)(a)(i) and (ii), from the s 91(1) right of appeal. Appeals against those Part 4 determinations will be decided on normal *Austin, Nichols* principles;

(b) still excludes, in s 91(1)(b), IM determinations from the s 91(1) right of appeal and refers to the separate, s 52Z appeal right available as regards those determinations;

(c) includes a new provision (s 91(1A)) making it clear that although appeals are now allowed against s 52P determinations, such appeals may not challenge an IM, whether on a point of law or any other grounds; and

(d) retains, in s 91(1B), a right of appeal on a question of law against any determination of the Commission, including any determination referred to in subsection (1). In *Transpower New Zealand Ltd v Commerce Commission*,[96] Clifford J held that s 91(1B) properly interpreted provided for appeals on a point of law against IM determinations separate to the general right of appeal against those determinations by s 52Z.[97]

[153] The general structure then is that:

(a) IM determination "merits" appeals are brought under s 52Z;

(b) s 52P determination merits appeals are brought under s 91(1); and

(c) point of law appeals against both IMs and s 52P determinations are brought under s 91(1B).

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[96] *Transpower New Zealand Ltd v Commerce Commission* HC Wellington CIV-2011-485-1032, 4 November 2011.

[97] At [78].

[154] What remains unclear is the scope of the s 91(1) right of appeal against s 52P CPP or IPP determinations (ie final decisions on CPPs and IPPs), given that such an appeal cannot include "an appeal against all or part of an input methodology, whether on a point of law or any other ground".[98]

Section 52Z, error and the materially better standard

[155] Section 52Z relevantly provides:

> **Appeals against input methodology determinations**
>
> (1) Any person who gave views on an input methodology determination to the Commission as part of the process under section 52V, and who, in the opinion of the Court, has a significant interest in the matter, may appeal to the High Court against the determination.
>
> ...
>
> (3) In determining an appeal against an input methodology determination, the Court may do any of the following:
>
> (a) decline the appeal and confirm the input methodology set out in the determination:
>
> (b) allow the appeal by—
>
> (i) amending the input methodology; or
>
> (ii) revoking the input methodology and substituting a new one; or
>
> (iii) referring the input methodology determination back to the Commission with directions as to the particular matters that require amendment.
>
> (4) The Court may only exercise its powers under subsection (3)(b) if it is satisfied that the amended or substituted input methodology is (or will be, in the case of subsection (3)(b)(iii)) materially better in meeting the purpose of this Part, the purpose in section 52R, or both.

[156] Subsection (4) is the "limitation" on s 52Z appeals introduced by the Select Committee. The "materially better" test introduced by subsection (4) raises two issues:

(a) The first is whether, as argued by the Commission and Powerco in particular, deciding appeals under s 52Z involves a two-step process.

[98] Section 91(1A).

> The proposal is that first, the Court is required to determine whether the Commission has erred in determining an IM. Second, and if the answer to that question is yes, the Court has to address the materially better question, namely whether the amended or substituted IM would be materially better.

(b) The second is what the phrase "materially better" means.

[157] We are not persuaded that a "two step" approach to determining these appeals is necessary or helpful. In terms of the *Austin, Nichols* principles, we think the effect of s 52Z(4) is that the IM determination under appeal will be wrong in the only sense that matters if we conclude that the amended or substituted IM will be "materially better" as provided in s 52Z(4). There is, in our view, little point in first looking for error and then applying the materially better test. The important point is that we must be satisfied on the materially better ground before we may allow an appeal.

[158] The use of the phrase "materially better", in contrast to the word "better", does obviously introduce some hierarchy: materially better is clearly intended to be a higher standard than simply better. We heard reasonably extensive submissions, particularly from Mr Hodder, on the meaning of the phrase "materially better". Mr Hodder submits that the "materially better" standard would be met if we were satisfied that the proposed IM would achieve a more than "merely trivial" improvement on the Commission's IM. Mr Hodder and other appellants also refer us to a variety of statutory uses of the phrase "material" and "materially", both in the Commerce Act and in other legislation.[99] A range of synonyms for the phrase "materially better" are suggested, such as substantial significant improvement, appreciably better, better and other than frivolous or de minimis. We do not think an exhaustive analysis of the phrase "materially better" is called for, nor that suggesting a range of synonyms for that phrase is of any great assistance to us in our task. We agree with the Commission's submission that assistance can be derived from the discussion of the Supreme Court in *Vodafone New Zealand Ltd v Telecom*

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[99] See ss 52X, 53ZB(2)(b), 54K(3) and 55F; Insolvency Act 2006, s 364.

New Zealand Ltd relating to the word "substantial", albeit in the different context of establishing the boundaries of an error of law:[100]

> The nature of the interpretative problem in the present circumstances and the caution which must be exercised before it can be said that an interpretation is in error, or before it can be said that a statutory provision has been misapplied, is well illustrated in the judgment of Lord Mustill, speaking for the House of Lords in *R v Monopolies and Mergers Commission, ex parte South Yorkshire Transport Ltd.* What was in issue was much less complicated than "net cost" in the present case. It was the construction of the words "a substantial part of the United Kingdom" in statutory criteria applying to the investigation of mergers of transport services. Lord Mustill drew attention to the "protean nature" of the word "substantial", ranging from "not trifling" to "nearly complete". He cautioned against taking an inherently imprecise word and "by redefining it thrusting on it a spurious degree of precision".

[159] We think a similar comment can be made about the protean nature of the phrase "materially better" and, in particular, the word "materially". As relevant, the Shorter Oxford English Dictionary provides the following definition:

> 4. In a material degree; substantially; considerably.

[160] The word "material" is, again as relevant, defined thus:

> 3. (a) Serious, important; of consequence.
>
> (b) Pertinent, relevant; essential to ...
>
> (c) Chiefly law. Of evidence or a fact: significant, influential, espec. to the extent of determining a cause, affecting a judgement, etc.

[161] Reference to the definitions of the terms "substantially" and "considerably" confirms the degree of semantic overlap between all these terms.

[162] It is also important, as it is in understanding any statutory provision, to consider context: thus the legislative history of the "materially better" phrase is relevant. As noted above,[101] the Explanatory Note when introduced commented that it could be argued that:[102]

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[100] *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153 at [54], citing *R v Monopolies and Mergers Commission, ex parte South Yorkshire Transport Ltd* [1993] 1 WLR 23 (HL) (internal citations omitted).

[101] See [146] above.

[102] The Explanatory Note at 7.

> ... specific and narrower criteria may be appropriate to help reduce gaming risks and to help ensure that only Commission decisions that are unreasonable (rather than unsatisfactory in the view of the Court) are overturned.

[163] When reported back the s 52Z appeal right, which had originally been described as "a right of general appeal by way of re-hearing", had been narrowed to provide "clearer guidance to the High Court on its role in considering appeals on input methodologies".[103] That was achieved by the introduction of the "materially better" standard and the reference to the IM being materially better "in achieving the purpose statements" in ss 52A and/or 52R.

[164] We think something of the practical implication of the phrase "materially better" can be gained from considering the context of these appeals. As will become obvious, for every competing argument before us there is a supporting expert or experts. This is not necessarily a criticism of those experts, but may be a reflection of the complexity of the issues and the nature of economic discourse.[104] Given that context, we think the use of the phrase "materially better" requires us to look through the inevitable conflict and difference of views between experts, all advocating positions which they regard as being better, and to determine whether the IM argued for is, indeed, materially better: that is, an IM which, notwithstanding that divergence of views, is sufficiently compelling to be seen by us as being "materially better" than that proposed by the Commission.

[165] Therefore, taking for example appeals against the cost of capital IM, the amended or substituted cost of capital IM must be materially better in meeting the purpose of Part 4, the purpose in s 52R, or both. Both the s 52A purpose, of the long-term benefit of consumers and the s 52R purpose, of promoting certainty for

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[103] The Select Committee Report at 4.

[104] In *Australian Competition and Consumer Commission v Liquorland* (Australia) Pty Ltd [2005] FCA 630 at [20] Allsop J observes that economics can be usefully understood, in the words of John Maynard Keynes, as "a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor draw correct conclusions". Allsop J relies on an excerpt from Maureen Brunt in *Antitrust in the courts: The Role of Economics and Economists* (in Maureen Brunt (ed) *Economic Essays on Australian and New Zealand Competition Law* (Kluwer Law International, The Hague, 2003) 353 at 358) in which she observes by reference to those words of Keynes – that:

> The nature of economic reasoning is not as well understood as it might be. How often have we heard the impatient exclamation: "Oh, economists never agree!" It is then we should remember Keynes' pronouncement ...

suppliers and consumers, are relevant. However, we consider that in this context the s 52R purpose of certainty is conceptually subordinate to the s 52A purpose of the long-term benefit of consumers. We say that because promoting the long-term benefits of consumers in accordance with s 52A is the central purpose of Part 4 as a whole. IMs must be designed with that in mind. Subject to that, a materially more certain IM is to be preferred to a less certain IM.

[166] Whether a proposed amendment would result in an IM (taken as a whole) being "materially better" in meeting the s 52A purpose, the s 52R purpose, or both, is a matter which is to be assessed in the context of the particular IM being appealed. Furthermore, and adapting wording from the Court of Appeal in *Commerce Commission v Vector Ltd*, the meaning is to be assessed not only in the context of each IM, but also bearing in mind the particular function that an IM performs in the statutory scheme.[105]

[167] Some appeals, for example against the asset valuation IMs, challenge the Commission's approach as a whole. Others, in particular appeals against the cost of capital IMs, do not challenge the Commission's overall approach, but rather challenge specific decisions made by the Commission as regards particular aspects of an IM (for example various parameter values determined by the Commission for the purpose of the WACC formula). The appellants argue, as s 52Z in effect requires, that the relevant IM would be materially better if all, or any one, of those specific decisions were altered in the way they argue for.

[168] Vector argues for changes to the cost of capital IMs that would result in an increase of over three percentage points to each of its vanilla and post-tax WACCs. For Airports the equivalent increases are very similar. Given the materiality of those increases, more than 33% in each case above the WACCs based on the Commission's cost of capital IMs, it would be relatively easy to conclude – if all those changes were appropriate – that the proposed IMs would indeed be materially better than those under appeal.

[105] *Commerce Commission v Vector Ltd* [2012] NZCA 220, [2012] 2 NZLR 525 at [72].

[169] When considered with reference to challenges to individual parameters, and having regard to the same concern, such a challenge faces a higher hurdle. For example, if allowed, Powerco's appeal against the credit rating used in calculating the debt premium parameter would result in an 0.09% upward adjustment to its WACC estimate. It is difficult to conclude that such a minor adjustment would by itself produce a materially better cost of capital IM. By the same token, we acknowledge that an IM can be considered as the sum of its parts; or more precisely, that the impact of an IM can be considered as the sum of the impacts of its parts.

Deference

[170] In *Austin, Nichols* the Supreme Court acknowledged that a level of deference may be appropriate in appeals from specialist tribunals. It said:[106]

> The tribunal may have had a particular advantage (such as technical expertise or the opportunity to assess the credibility of witnesses, where such assessment is important). In such a case the appeal court may rightly hesitate to conclude that findings of fact or fact and degree are wrong.

[171] Here the Commission is one such specialist tribunal. But so also is this Court, as constituted under s 52ZA which relevantly provides:

> ...
>
> (3) The High Court must sit with two lay members (unless the Court considers that only one is required).
>
> (4) Each of the lay members must have relevant experience and be appointed from the pool of people appointed under s 77 to be members of the Court for the purpose of hearing the appeal.

[172] In these circumstances, the Commission does not contend that in IM determination appeals any particular significance should be placed on the Commission's expertise. We agree. Going further, the appellants generally emphasise, given the significance of s 52Z IM appeals for the Part 4 regulatory scheme, the imperative for this Court as a specialist tribunal to independently and afresh assess the issues raised on appeal and not to give any deference to the Commission's decisions. For its part, and whilst acknowledging our specialist

[106] *Austin, Nichols & Co Inc v Stichting Lodestar* [2007] NZSC 103, [2008] 2 NZLR 141 at [5] (footnotes omitted).

expertise, the Commission – both when discussing the approach we should take to the decisions it has made and when considering the "materially better" standard on appeal – suggests that we should exercise a "significant level of caution" in considering whether it is appropriate to allow appeals from the Commission's IM determinations.

[173] The Commission refers in particular to the extensive nature of the decision-making process it has engaged in. We think it is appropriate to acknowledge that fact. In *Wellington International Airport Ltd v Commerce Commission* Clifford J summarised the Commission's extensive IM consultation process.[107] Over a two year period the Commission produced over 800 separate substantive documents and based its consultation on a distribution list comprising more than 440 individual addressees representing more than 200 different organisations for the IM consultation alone. Consultation on the s 52P determinations was also occurring, often in parallel. It cannot be doubted, therefore, that the Commission's decision-making process was both careful and considered.

[174] But we are not persuaded that the Commission's phrase "a significant degree of caution" is the appropriate way of describing how we are to approach our "materially better" decision, relative to the decisions the Commission made. That is, by our assessment, to suggest deference albeit using different words. Like the Commission's, our decision-making process must be both careful and considered. In that, we take due account of both the complexity and uncertainty of many of the issues that are involved and of the extensive period of consideration and consultation that led to the Commission's IM determination. At the end of the day, and to allow an appeal, it is an IM as a whole that we must be persuaded is materially better in achieving the Part 4 purposes. Furthermore, in making that determination we need also to bear in mind the overall scheme of Part 4 and the inter-relationship of the various IMs to each other and to the s 52P determinations. Beyond that we think the approach that is called for is demonstrated in the way we consider each of the individual appeals.

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[107] *Wellington International Airport Ltd v Commerce Commission* HC Wellington CIV-2011-485-1031, 22 December 2011 at [53]-[83].

The closed record

[175] Section 52ZA(2) provides that an appeal against an IM under s 52Z:

> ... must be by way of rehearing and must be conducted solely on the basis of the documentary information and views that were before the Commission when it made its determination, and no party may introduce any new material during the appeal.

[176] This is the so-called "closed record" provision. The implications of that provision were explored in some length in a number of the decisions made by Clifford J leading up to these appeals.[108]

[177] As matters transpire, that provision gives rise to little controversy in these appeals. In a number of particular instances the parties point to material the appellants and Commission rely on which they argue falls foul of the "closed record" rule. We discuss those matters in the appeals where they are raised. The question of the implications of s 52ZA(2) is most significantly raised in Vector's SPA appeal where the 2012 IM determinations had, necessarily the appellants argue, provided an opportunity for post-December 2010 materials to be placed before the Commission. Again, we will discuss those issues when considering Vector's SPA appeal.

[178] Of more general interest is that, as we heard Vector's SPA appeal and several other of the appeals in February 2013, it became apparent to us that the materials before the Commission, even in December 2010 when it made its IM decisions, were not only materials generated during the IM consultation process described above, but also materials generated in the parallel s 52P determination consultation process. During the hearing of those appeals, a range of materials produced during that parallel consultation process was put before us without protest from the Commission, the appellants or the interested parties. We think that was appropriate, not only as providing appropriate context but also – in hindsight perhaps – as being justified by s 52ZA(2).

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[108] See *Wellington International Airport Ltd v Commerce Commission* HC Wellington CIV-2011-485-1031, 22 December 2011 at [87]; [112], [116]-[117], [132], [183], [241], [262]; *Transpower New Zealand Ltd v Commerce Commission* HC Wellington CIV-2011-485-1032, 4 November 2011 at [68], [71].

[179] Since December 2010, the Commission has made a number of additional determinations, particularly s 52P determinations which were, in December 2010, at a relatively early stage of their development. The closed record means that the documentary information and views before the Commission when it made those determinations, and the Commission's reasons for those determinations, are not material we may consider. That is even though, given the intertwined relationships of IM and s 52P determinations, we have little doubt being able to consider those materials would have been of assistance to us. At the same time, and as the Commission and all the appellants agreed, where appropriate it would be unrealistic not to refer to those subsequent determinations, and – as matters of fact – to their effects. We do so at various places. It is by reference, however, to the Commission's knowledge at 22 December 2010 – that is "the documentary information and views" before it at that date – that these appeals fall to be determined.

[180] We note also that we are not starting afresh. By reference to the onus borne by the appellants, it is by and large on the basis of those parts of the record that we have been referred to that we have decided these appeals. That was, by our best estimate, in all likelihood only a relatively small subset of the materials that the Commission considered over time.

Permissible relief

[181] Section 52Z(3) sets out how the Court may dispose of s 52Z appeals. It provides:

> In determining an appeal against an input methodology determination, the Court may do any of the following:
>
> (a) decline the appeal and confirm the input methodology set out in the determination;
>
> (b) allow the appeal by –
>
> (i) amending the input methodology; or
>
> (ii) revoking the input methodology and substituting a new one; or
>
> (iii) referring the input methodology determination back to the Commission with directions as to the particular matters that may require amendment.

[182] The ability to decline the appeal, or allow it by amending, or revoking and substituting, an IM requires no further comment. The question of the extent of the "reference back" power in s 52Z(3)(b)(iii) is not as clear. In our view, however, any such reference back is to be relatively prescribed. We say that because the "reference back" power is drafted narrowly, and is considerably more constrained than the pre-existing "reference back" power found in s 94 of the Act. Moreover, a reference back under s 52Z(3)(b)(iii) being – by definition – the determination of an appeal, must have finality. Therefore, before we can refer a matter back, we must be satisfied the outcome of that reference back will be, in terms of s 52Z(4), "materially better".

[183] The Court has long had the ability to send an issue appealed under s 91 back to the Commission pursuant to s 94. The s 52Z mechanisms for sending an issue back to the Commission differ, however, from those already provided in the Act for s 91 appeals.

[184] Section 93 stipulates how the Court may determine appeals from the Commission:

> **93 Determination of appeals**
>
> In determining an appeal under section 91(1), the Court may do any of the following:
>
> (a) confirm, modify, or reverse the determination or any part of it:
>
> (b) exercise any of the powers that could have been exercised by the Commission in relation to the matter to which the appeal relates.

[185] Additionally, instead of determining an appeal the Court may, under s 94, refer an appeal back to the Commission for reconsideration:

> **94 Court may refer appeals back for reconsideration**
>
> (1) Notwithstanding anything in section 93 of this Act, the Court may, in any case, instead of determining any appeal under that section, direct the Commission to reconsider, either generally or in respect of any specified matters, the whole or any specified part of the matter to which the appeal relates.
>
> (2) In giving any direction under this section, the Court shall–
>
> (a) advise the Commission of its reasons for doing so; and

(b) give to the Commission such directions as it thinks just concerning the reconsideration or otherwise of the whole or any part of the matter that is referred back for reconsideration.

(3) In reconsidering the matter so referred back, the Commission shall have regard to the Court's reasons for giving a direction under subsection (1) of this section, and the Court's directions under subsection (2) of this section.

[186] Section 94 gives the Court an expansive power to refer issues back to the Commission. But such a reference back does not determine the appeal. Rather, once the Commission has, in accordance with the Court's directions, determined the matter, that determination can itself be subject to a fresh, appeal. In *Goodman Fielder Ltd v Commerce Commission,* the Court of Appeal considered an appeal against a High Court decision to: (i) adjourn the appeal; (ii) order the Commission to reconsider its decision not to allow a merger; and (iii) order the Commission to report its decision back to the Court. In the course of its decision the Court stated of s 94:[109]

> The purpose of the kind of provisions of which s 94 is an example is to enable, not reports, but rehearing or reconsideration of the case by the tribunal or body appealed from. They do not contemplate reporting back, but rehearing or reconsideration and a fresh determination by that tribunal or body, as is implicit in the words in s.94(1) "instead of determining any appeal under that section", ie under s 93.
>
> The appellate Court is expected to use this power instead of determining the appeal, not as a preliminary step in determining the appeal. It is a useful power when further investigation is appropriate, but it is needed only for issues which the appellate Court cannot satisfactorily determine as the case stands before it. If the Court can and thinks it appropriate to determine any of those issues without a reference back, the Court should do so before directing such a reference. On ordering a reconsideration by the body appealed from of either the whole or any specified part of the matter to which the appeal relates, the Court parts with the case, unless a further appeal is brought to it. The decision will be taken by the tribunal to which the reference back is made, regard being had to the reasons or directions given by the Court and subject to the ordinary rights of appeal from the tribunal's decision. Those rights are conferred in this instance by the Commerce Act 1986, s 91.

[187] The scope of the s 52Z power to refer an IM determination back to the Commission is, in our view, much narrower.

[109] *Goodman Fielder Ltd v Commerce Commission* [1987] 2 NZLR 10 (CA) at 15-16.

[188] When the Court refers a matter back under s 94 the appeal has not been determined by the Court and a fresh right of appeal arises as regards any decision by the Commission. In contrast to s 94, the s 52Z reference back is the determination of an appeal. Being the determination of an appeal, a reference back with directions as to particular matters that require amendment must be such as to provide appropriate finality. There is, thereafter, only a right of appeal against that "reference back" decision of the Court on a point of law. If the Commission were to diverge from the Court's order the appropriate remedy would – in our view – be judicial review. The reference back does not and cannot re-engage s 52V and, in turn, the s 52Z right of appeal. That right of appeal is reliant on the appellant having participated in the s 52V process. Work completed by the Commission in accordance with an order from the Court would be completed pursuant to that order and not the procedures of the Act.

[189] We acknowledge s 52Z(5), which provides that if the Court allows an appeal the Commission may seek clarification from the Court on any matter "for the purposes of implementing the Court's decision". That ability could be of particular relevance where an IM is referred back to the Commission for amendment. Under s 94 such a dialogue was not permissible as the Court parted with the case unless there was a new appeal.[110] By contrast, here there is no additional appeal on the determination during which errors can be corrected. At the same time, we do not see s 52Z(5) providing for any extended dialogue between the Court and the Commission. Rather the Court's decision will be final, as no further right of general appeal is allowed. The decision will be such that, subject perhaps to clarification of specific implementation issues, the Commission should be able to give effect to the Court's decision. We also note that there is, by our assessment, no suggestion that further consultation by the Commission is envisaged. To that extent, and as we discuss when considering individual appeals, proposals that the Court should generally refer a matter back to the Commission for further consideration and substantive decision-making, involving consultation with interested parties, is not a proposal that we consider a permissible form of relief provided by s 52Z.

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[110] *Goodman Fielder Ltd v Commerce Commission* [1987] 2 NZLR 10 (CA) at 16.

[190] Secondly, in the case of referring an IM back we must be satisfied that the amended methodology will, after the Commission has given effect to our directions as "to the particular matters that may require amendment", be materially better. Under s 94 the Court can "direct the Commission to reconsider, either generally or in respect of any specified matters, the whole or any specified part of the matter to which the appeal relates." Section 52Z(3)(b)(iii) is narrower. Its reference-back power requires "directions as to the particular matters that require amendment". This narrowing of a pre-existing mechanism in our view confirms the restricted nature of the s 52Z reference back power. Moreover, it is difficult to see how we could be satisfied an amendment would make an IM materially better unless our reference back was appropriately prescribed. The Commission argued, correctly in our view, that:

> ... the Court's power to make an order is conditioned upon its satisfaction that the order that it makes ... is materially better. Now, that suggests that a reference back can't give the Commission any power or discretion with reference to a matter that's material, because if it did, the Court couldn't be satisfied that the decision – that the order would be materially better than the Commission's decision.

[191] We therefore consider that a reference back on particular matters requires the Court to provide the Commission with clear directions as to the substantive nature of the required amendments to particular aspects of an IM. Those amendments need to be specified in requisite detail to enable the Court to be satisfied – at the time of the reference back – that the outcome of the reference back will be a "materially better" IM. Thereafter, judicial review would be the appropriate remedy if the Court's directions were not followed.

The error of law appeals

[192] Powerco in its notices of appeal relies generally on s 52Z but also, in relation to questions of law, on s 91(1B). Powerco brought its appeals under both statutory provisions out of an abundance of caution in order to ensure that the errors of law it saw in the Commission's IM determinations were properly addressed. Powerco's primary position, with which we agree, is that the s 52Z right of general appeal includes appeals against errors of law capable of correction within the bounds of the materially better test.

[193] Powerco expressed the broad issues raised by its error of law appeals in the following terms:

> *Asset valuation*
>
> (a) Did the Commission wrongly interpret s 52A by setting the opening [regulatory asset base] for Powerco's [GPB] by reference to existing regulatory valuations, which for Powerco means the opening [regulatory asset base] in the Powerco Authorisation?
>
> (b) Did the Commission wrongly interpret the requirement for certainty in s 52R by setting the opening [regulatory asset base] for Powerco by reference to existing regulatory valuations, which for Powerco means the opening [regulatory asset base] in the Powerco Authorisation?
>
> *Cost of capital*
>
> (a) Did the Commission wrongly interpret s 52A in setting the cost of capital IM for EDBs and [GPBs]?
>
> (b) Did the Commission wrongly interpret the requirement for certainty in s 52R in setting the cost of capital IM for EDBs and [GPBs]?

[194] Vector and Transpower filed separate error of law appeals pursuant to s 91(1B). Under s 91(1B):

(a) Vector appeals against the EDBs and GPBs asset valuation, cost allocation, cost of capital and regulatory rules and processes IMs;[111] and

(b) Transpower appeals against its cost of capital IM.[112]

[195] Vector expresses its separate error of law appeals as follows:

(a) In relation to asset valuation, Vector considers that the Commission misdirected itself as to the correct interpretation of:

(i) Section 52A, in that the Commission has:

[111] See Vector Appeal 258 at [3].
[112] See Transpower Appeal 1032 at [33.1]-[33.2].

- wrongly stated that only s 52A(1)(d) is the key regulatory objective for the determination of the initialregulatory asset base (RAB);

- interpreted s 52A(1)(d) to mean that the supplies' ability to extract excess profits is to be eliminated whereas s 52A(1)(d) merely requires that that ability is to be limited; and

- failed to properly interpret s 52A as giving priority to the objective in s 52A(1)(a).

(ii) Section 53P(4): in that the Commission's decision not to allow CPI for uncontrolled GPBs is contrary to s 53P(4) as the Commission has sought to recover perceived excess profits from an earlier period.

(b) In relation to cost of capital, Vector considers that the Commission misdirected itself as to the correct interpretation of:

(i) Section 52A:

- In relation to ss 52A(1)(a) and (d) as they apply to the cost of capital decision;

- As to the weight required to be placed on the objectives in ss 52A(1)(a) and (d).

(ii) Section 52R, in that the Commission wrongly considers that certainty has no or limited implications for the choice of alternative for each IM.

(c) In relation to cost allocation Vector considers that:

(i) the Commission misdirected itself as to the correct interpretation of:

- s 52A, in that it wrongly stated that suppliers of regulated goods and services must share with consumers efficiency gains arising from the supply of the regulated and unregulated services together, rather than only in relation to the supply of the regulated service;

- s 52R, in that it wrongly considers that certainty has no or limited implication for the choice of alternatives for eachIM; and

- s 52T(3), in relation to the proper meaning of the requirement that the Commission must not "unduly deter" investment by a regulated supplier in the provision of other goods and services.

(ii) The Commission's decisions are inconsistent with s 52T(3) as the decisions will unduly deter investment by a regulated supplier in the provision of other goods and services.

(d) In relation to regulatory processes and rules, Vector considers that the Commission misdirected itself as to the correct interpretation of s 53K which requires that DPPs accommodate the circumstances of most suppliers (in order to achieve a relatively low-cost regime).

[196] Transpower expresses its error of law appeals as follows:

(a) That the Commission was required to consider Transpower's circumstances in determining each IM to apply to IPP regulation of Transpower and failed to do so.

(b) That the Commission materially misdirected itself as to the meaning of the relevant provisions of Part 4 (s 52A, s 52R, principles of good regulatory practice) and so failed to address the correct statutory question (by adopting an estimate of the WACC of a nominal EDB as the starting point, and purporting to consider whether any adjustments to this were necessary to reflect Transpower's actual circumstances).

[197] Little attention was paid by the appellants, and therefore by the Commission, to those error of law appeals. Rather, the appellants proceeded on the basis that their s 52Z appeal submissions encompassed, as it were, matters that might arise from the error of law appeals. Those appeals were, therefore, effectively subsumed in the s 52Z merits appeals. Again, and sometimes explicitly, the approach taken was that those error of law appeals, and their possible implications, were likely to be explored were the appellants to exercise their separate right under s 52(6) to appeal on a point of law to the Court of Appeal.

[198] It therefore follows that our disposal of those error of law appeals is encompassed in our disposal of the general s 52Z "materially better" appeals. Given the way the appeals were argued, it would be artificial if we were to approach them differently. Nevertheless, the issues these error of law appeals raise, reflecting how they do duplicate the "materially better" appeals, feature throughout this judgment.

The effect of allowing these appeals

[199] The effect of allowing these appeals is best considered by reference to ID and DPP/CPP and IPP regulation separately.

[200] If an appeal of an IM for ID regulation was allowed, our understanding is that the revised IM would apply when disclosure was next required.

[201] Were we to allow an appeal against an IM applying to DPP/CPP or IPP regulation, to the extent that the revised IM would materially alter price paths, the Commission would, we understand, be required to redetermine relevant price paths. If the previous price paths, compared to the redetermined price paths, resulted in suppliers under or over-recovering their revenues, the Commission may:

(a) allow suppliers to claw back, that is to recover, some or all of any shortfall in their revenues; or

(b) claw back some or all of the over-recovery of revenue by requiring suppliers to temporarily reduce their prices.[113]

Expert evidence

[202] Throughout the IM consultation process, and earlier, the Commission, regulated suppliers and interested parties relied extensively on the advice provided by a wide range of experts. Typically, and particularly during the Commission's IM consultation process, those experts acknowledged and agreed to abide by the Expert Witness Code of Conduct contained in Schedule 4 of the High Court Rules.

[203] An inevitable effect of the scope of these appeals, and that they were held on the basis of the closed record, is that we were referred to a very large amount of expert opinion evidence without being able to explore that evidence with them. Moreover, not infrequently we were referred, in fairly brief terms, to complex expert evidence and encouraged to read and consider that evidence in detail in the course of our decision-making process. By reference to the principal expert evidence in the asset valuation and cost of capital IM appeals, we outline – as a significant part of the context of these appeals – some information on the experts involved and the nature and scope of the evidence they provided.

[204] When considering asset valuation issues, the Commission relied on what it called "the Experts". To avoid confusion, we refer to them as "the Commission's (or its) Experts". The Commission's 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, University Reader in Business Economics at the Judge Business School, University of Cambridge and Assistant Director of the Economic and Social Research Council Electricity Policy Research Group; Dr John Small of Covec Ltd, Auckland; and Professor George Yarrow,

[113] Section 52D.

Chairman of the Regulatory Policy Institute, and Emeritus Fellow at Hertford College.

[205] The Commission's Experts jointly provided a report in May 2010[114] and a report in November 2010,[115] in which they reviewed the Commission's draft and final decisions on the IMs respectively. They agreed with the Commission's approach to setting the initial RAB and the decision to adopt the existing regulatory valuations for specialised assets. They also individually provided a range of reports on asset valuation issues by way of comment on, amongst other things, the May-June 2010 Draft Reasons Papers and the reasons papers themselves.

[206] On asset valuation, the supplier appellants rely on a range of experts who all supported a replacement cost approach to the valuation of regulatory assets. Powerco and Vector place considerable reliance on Mr Balchin, who was a director of the Allen Consulting Group (an Australian economics and public policy firm) and now is executive director of Price Waterhouse Coopers (PwC).[116] Mr Balchin supported using a revaluation approach to set the initial RAB by valuing it as its Optimised Deprival Value at the beginning of the regulatory period in 2010, and proposed the Hypothetical New Entrant Test.[117]

[207] At the same time, the regulated suppliers rely on a wide range of other experts who all agreed that a replacement cost approach was appropriate:

(a) Messrs Houston and Green of NERA Economic Consulting (NERA) (relied on by Powerco and WIAL/CIAL).[118]

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[114] Yarrow, Cave, Pollitt and Small *Asset Valuation in Workably Competitive Markets – A Report to the New Zealand Commerce Commission* (May 2010), 7/28/003095.

[115] Yarrow, Cave, Pollitt and Small *Review of Submissions on Asset Valuation in Workably Competitive Markets – A Report to the New Zealand Commerce Commission* (November 2010), 12/57/005327.

[116] PwC *Response to the Discussion of AV in Draft Decision document* (19 October 2010), 59/593/030483; PwC *Commerce Commission Review of Input Methodologies Cross-Submission* (for CIAL) (15 October 2009), 54/469/027734; Balchin *Control of Natural Gas Distribution Services Draft Decision Paper* (for Powerco) (30 November 2007, 48/405/024636, PwC *AV in Draft Decision* (12 July 2010), 58/561/029617.

[117] These concepts are discussed fully in Part 5 of the judgment.

[118] NERA *Asset Valuation – A Report for Orion New Zealand Ltd* (19 August 2010), 59/592/030404.

(b) Dr Hird and Mr Ockerby, Directors of Competition Economics Group (CEG), who advise clients on competition and regulatory issues (relied on by Vector).[119]

(c) Mr Wilson, a Consulting Engineer and Valuer (relied on by Vector).[120]

(d) Messrs Balchin (PwC), Mellsop (NERA), and Murray and Shepherd of Law and Economics Consulting Group Ltd (LECG), in a joint submission to the NZ Airports Association.[121] Mr Mellsop, by himself, provided similar advice which was relied on by the Airports.[122]

(e) Mr Morton, a Regulatory Consultant and Principal of Synergies Economic Consulting (relied on by Vector).[123]

(f) In relation to the Airports IM, Messrs Balchin, Mellsop, Murray and Shepherd in their joint submission,[124] Mr Vessey (Opus International Consultants Ltd) both alone and with Messrs Chung, Horsley, Seager and Stanley,[125] and Oxera Consulting Ltd (Oxera)[126] and NERA (this time in the persons of Messrs Mellsop, Counsell and Taylor)[127].

[208] Other experts disagreed with the HNET test, and agreed with the Commission's approach. These were the New Zealand Institute of Economic Research (NZIER), which produced a number of reports,[128] and Frontier Economics Pty Ltd (Frontier Economics)[129] (relied on by Air NZ).

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119 Hird and Ockerby (CEG) *IM for AV* (August 2010), 58/574/029934.

120 Wilson *Commerce Commission and Regulatory Asset Bases for EDB and GPD – Statement* (20 August 2010) 60/601/030751.

121 LECG, NERA and PwC *Economic principles for the valuation of airport assets under the Commerce Act* (8 March 2010), 57/523/029004.

122 NERA *Submission to the Commerce Commission on the IM Airports Draft Reasons Paper* (15 October 2009), 55/473/027873.

123 Synergies Economics Consulting *Expert Statement* (August 2009), 53/450/026852.

124 LECG, NERA and PwC *Economic principles for the valuation of airport assets under the Commerce Act* (8 March 2010), 57/523/029004.

125 Vessey *Wellington Airport: Land Conversion Works* (21 October 2010) 60/613/031008, Chung, Horsley, Seager and Stanley *Airport Valuation Issues* (8 March 2010), 57/522/028983..

126 Oxera *Valuation of airport assets* (12 July 2010), 58/565/029695.

127 NERA *Treatment of Future Development Land* (12 July 2010), 58/554/029474.

128 NZIER *Response to Selected Issues in Post-Emerging Views Workshop* (8 March 2010), 57/519/028921; NZIER *Input Methodologies Discussion Paper – Comments on Submissions on*

[209] Vector also relies on a number of experts who said the Commission's behaviour would negatively affect incentives to invest: Dr Bishop of Charles River Associates (prepared for Unison Networks),[130] Mr Morton,[131] and Messrs Carlton and Bamberger, competition and regulatory economists.[132]

[210] When considering cost of capital issues, the Commission received advice from a group of experts which it called the "Expert Panel". Again we refer to those experts as "the Commission's (or its) Expert Panel". The Commission's Expert Panel comprised Professor Franks, a Professor of Finance at London Business School and Academic Director of London Business School's Centre for Corporate Governance; Dr Martin Lally, an Associate Professor in the School of Economics and Finance at Victoria University of Wellington; and Professor Stewart Myers, the Robert C Merton (1970) Professor of Finance at MIL Sloan School of Management. The Commission's Expert Panel produced reports on 18 December 2008[133] and 14 April 2010.[134] Dr Lally also produced reports individually.[135]

[211] The appellants rely on a wide range of experts on cost of capital issues:

(a) Professor Officer, a Professor at the University of Melbourne and the University of Queensland and Dr Bishop, the Executive

Behalf of the Major Airports Comments (1 September 2009), 54/462/027310, NZIER *Development Land* (2 August 2010), 59/578/030144.

129 Frontier Economics *Cross-submission – input methodologies conference* (14 October 2009). 55/471/027830, Frontier Economics *Comments on submissions to the Input Methodologies Discussion Paper* (1 August 2009), 53/449/026835, Frontier Economics *IM Draft Reasons Paper* (12 July 2010), 58/557/029531.

130 Bishop *Asset Valuation for NZ EDBs* (19 August 2010), 59/595/030535.

131 Synergies Economics Consulting *Expert Statement* (1 August 2009), 53/450/026852.

132 Carlton and Bamberger *Report* (23 August 2010), 60/605/030904.

133 Franks, Lally and Myers *Recommendation to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) 5/11/001755.

134 Franks, Lally and Myers *Cost of Capital Recommendation to the New Zealand Commerce Commission on whether or not it should change its previous estimate of the TAMRP as a result of the recent Global Financial Crisis* (14 April 2010), 7/27/003087.

135 Lally *WACC and Leverage* (17 November 2009), 7/18/002664, Lally *Comments on Input Methodologies (EDS) Draft Reasons Paper* (3 September 2010), 12/51/005002, Lally *Comments on Measurement Error and Regulated Firms' Allocated Allowed Rates of Return* (13 September 2010), 12/52/005012, Lally *The cost of capital for the airfield activities of New Zealand's international airports* (June 2001), 14/73/005975, Lally *Leverage and WACC for Transpower* (7 June 2012), 42/345/020967, Lally *Leverage and WACC for Transpower* (20 June 2012), 42/350/021009.

Director and Chairman of Value Adviser Associates Pty Ltd, a specialist business valuation firm (relied on by Transpower). [136]

(b) Dr Hird, a Director of CEG (relied on by Vector, and Powerco and WELL to a lesser extent).[137]

(c) Professor Guthrie, a Professor at the School of Economics and Finance at Victoria University of Wellington (relied on by Transpower).[138]

(d) PwC, specifically reports by Mr Wattie, Mr Redmayne, and Ms Taylor (relied on by Powerco, Vector, and Transpower).[139]

(e) Ireland, Wallace and Associates, Financial Advisers (relied on by MEUG);[140]

(f) Auckland Uniservices Ltd (Uniservices), an innovation broker owned by the University of Auckland, specifically reports by Dr Marsden from the Department of Accounting and Finance at the University of Auckland (relied on by the Airports).[141]

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136 Officer and Bishop *Independent Review of Commerce Commission's WACC Proposals for Transpower* (5 August 2010), 34/254/017330.

137 CEG *Review of updated input methodologies* (for Vector) (30 November 2010), 40/310/019579, CEG *Cost of Capital Input Methodologies* (for Vector) (15 August 2010), 36/274/017917.

138 Guthrie *Leverage and Transpower's WACC* (5 April 2012), 42/336/020778.

139 PwC *Electricity Networks Association: Submission on the Cost of Capital Parameter Estimates in the Commerce Commissions (Draft) Electricity Distribution Services Input Methodologies Determination 2010 (for ENA)* (August 2010), 34/244/016956, PwC *Cross submission to the Commerce Commission on the Cost of Capital Workshop made on behalf of 17 Electricity Distribution Businesses* (2 December 2009) 28/199/014080, PwC *Revised Draft Guidelines: Submission to Commerce Commission* (for Powerco), 25/159/012244, PwC *Electricity Networks Association: Submission on the Cost of Capital Parameter Estimates in the Commerce Commission's (Draft) Electricity Distribution Services Input Methodologies Determination 2010* (for ENA), 35/258/017536, PwC *Transpower NZ Ltd: Leverage and the Cost of Capital* (5 April 2012), 42/337/020806.

140 Ireland, Wallace and Associates *Input Methodologies: Cost of Capital: Post Workshop Submissions* (for MEUG) (2 December 2009), 28/191/013910.

141 Uniservices *Comments on the Commerce Commission's Approach to estimate Cost of Capital* (for NZAA) (2 December 2009), 28/193/013917, Uniservices *Comments on the Commerce Commission's approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (for NZAA) (12 July 2010), 33/233/016503, Uniservices *Comments on Air New Zealand's and BARNZ's Submissions to the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (for NZAA) (3 August 2010), 34/251/017231, Marsden *Statement regarding External Expert Advice Provided with Submissions on Input Methodologies* (14 September 2010), 36/293/018267.

PART 3 – GENERAL THEMES

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Introduction

[212] These appeals against the Commission's December 2010 IM determinations involve a wide range of particular matters. Nevertheless, during the hearing of these appeals and as we have written this decision, a number of general themes emerged. It is useful to introduce those themes at this stage, partly to avoid later repetition and partly to highlight the linkages between these appeals, where individual subject matters may appear disparate. All these themes feature in more than one of the Parts of this judgment.

IMs and regulatory certainty

[213] The appellants emphasise the importance of IMs, and Part 4 more generally, in promoting – or "maximising" to use Powerco's word – certainty. That they were right to do so is, in our judgement, confirmed by the judgment of the Supreme Court in *Vector v Commerce Commission*.[142] As there recognised, the contents of the IMs contribute to certainty by increasing the predictability of outcomes and constraining the Commission's evaluative judgements.[143] The framework for Part 4 decision-making provided by the s 52A(1) statement of purpose and outcomes, the s 52R

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142 *Vector v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445.
143 At [56]-[61].

purpose, the right of merits appeal against IM determinations and the general right of appeal against DPP/CPP and IPP decisions also contribute to certainty.[144]

[214] Consistent with the Commission's submissions, Part 4 does not, however, anticipate that IMs will provide absolute certainty as to how the Commission will apply Part 4 regulation. Both the Court of Appeal and the Supreme Court have now commented on the actual degree of certainty provided by the new Part 4.[145] The s 52R purpose of IMs is to promote certainty in relation to the rules, requirements and processes applying to Part 4 regulation: to that end, IMs as far as is reasonably practical, set out relevant matters in sufficient detail so that each affected supplier is reasonably able to estimate the material effects of the methodology on the supplier.[146] Notwithstanding the application of IMs, there will necessarily be uncertainty for regulated suppliers as to the impact on them of IMs and Part 4 regulation more generally. Some uncertainty is inevitable. As the Court of Appeal observed in its decision that a SPA IM was not required by s 52T:[147]

> … there is a continuum between complete certainty at one end and complete flexibility at the other. The question is where Parliament has drawn the line. Clearly Parliament did not accord the Commission absolute flexibility, nor did it require absolute certainty in the regulatory regime. The requirement for the publication of input methodologies was intended to promote certainty in relation to the matters dealt with in s 52T(1). Against that framework, however, the Commission still has to make regulatory decisions, including as to price resetting under s 53P(3)(b). Parliament must have considered that, as the Commission does so, further certainty will emerge. *Moreover, the Commission's extensive consultation obligations under Part 4 are also likely to produce further certainty over time.*

[215] More specifically, and as the Supreme Court analysed in upholding that decision of the Court of Appeal, the degree of certainty provided is itself a product of the detailed provisions of Part 4.[148] Thus, it is important to understand the way in

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144 Whilst there was considerable focus in the legislative materials on the significance of the introduction of the right of merits review as regards IM determinations, we think that the introduction, at the Select Committee stage, of a general right of appeal as regards DPP/CPP and IPP determinations is also significant in this context.

145 *Commerce Commission v Vector Ltd* [2012] NZCA 220, [2012] NZLR 525 at [5], [34]; *Vector v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [56]-[61].

146 Sections 52R and 52T(2).

147 *Commerce Commission v Vector Ltd* [2012] NZCA 220, [2012] 2 NZLR 525 at [60] (emphasis added).

148 *Vector v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [56]-[58].

which the provisions of Part 4, particularly as they relate to the role of IMs, provide regulatory certainty over time.

[216] Before determining an IM the Commission must follow the specific process detailed in s 52V. This includes, in s 52V(2), express provision for consultation.

[217] Once an IM is determined, s 52S requires that it be applied by the Commission when: (1) determining whether or how Part 4 regulation should apply to relevant goods and services; or (2) when determining the prices or quality standards applying to regulated goods or services. Once stipulated, therefore, an IM determines the way in which the Commission must approach important decisions under Part 4 regulation. IMs, when initially determined and reviewed, are subject to s 52Z merits appeals.

[218] The Commission must review IMs no later than seven years after their publication and, after that, at intervals of no more than seven years.[149] Within that seven year period, the Commission may review IMs at any time. When the Commission reviews IMs it must once again undertake the s 52V consultation process.[150]

[219] Importantly, for DPP regulation, a DPP (determined in accordance with relevant IMs) generally applies for a period of five years.[151] DPPs are then reset. Section 53ZB provides that DPPs may not, however, be reopened within that five year regulatory period on the grounds of a change in an IM, except where an IM is successfully appealed. Thus if the Commission amends, prior to the expiry of a DPP, an IM which applied when that DPP was set, the IM remains in place without amendment until the reset occurs. The reset of the DPP is then undertaken on the basis of the amended IM. In other words, in terms of DPP regulation, five years is the maximum period of certainty provided by Part 4.

149 Section 52Y(1).
150 Section 52Y(3).
151 Section 53M(4). Section 53M(5) provides, in effect, that the Commission may, if it considers that it would better meet the Part 4 purpose, set a period of less than five years but in any event may not set a period less than four years.

[220] The position for ID regulation is less clear. All s 52P determinations must set out timeframes (including the regulatory periods) that must be met or that apply.[152] There is, in the case of ID regulation however, no particular regulatory period specified. Section 52P determinations for ID regulation must specify "when, and for how long, information must be disclosed".[153] There is no equivalent of s 53ZB in the case of ID regulation. Therefore, were a relevant IM to be amended (at any time), that could in turn lead to an amendment of the relevant s 52P ID determination pursuant to s 52Q. Such an amendment would come into force on the date specified by the Commission.

[221] References to the importance of the certainty provided by Part 4 regulation, which featured in all the appeals, are to be assessed in the context of the overall framework just described. However, we acknowledge that given the nature and extent of the work undertaken by the Commission in setting IMs and making s 52P determinations, wholesale change in a short period of time seems unlikely. Moreover, and as already recorded, there is no doubt at all, given the legislative history and the terms of Part 4 itself, that increased certainty – in all the senses we have mentioned – is an important object of Part 4 taken in general, and of IMs in particular.

The s 52A purpose and workable competition

[222] We think it is fair to say that, although not always clear in terms of the submissions, there is a reasonable measure of consensus between the appellants, the interested parties and the Commission on the overall construction of s 52A(1). The overall purpose of Part 4 is clear: the promotion of 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. To use the wording discussed in *Powerco v Commerce Commission*,[154] the interests to be promoted here are those of the "acquirers" of goods and services in the relevant markets, not the broader interests of those acquirers as participants in New Zealand's wider economy. The way that purpose is to be achieved is by the promotion of outcomes in Part 4 markets

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[152] Section 52P(3)(b).
[153] Section 53C(1)(f).
[154] *Powerco Ltd v Commerce Commission* [2008] NZCA 289 at [23].

that are consistent with outcomes in workably competitive markets, such that the subparagraph (a) to (d) outcomes are achieved. Those outcomes are expressed by reference to the way in which suppliers are affected by Part 4 regulation. That is, it is suppliers of regulated goods and services who are to have incentives to innovate and to invest, who are to have incentives to improve efficiency and to provide services at a quality that reflects consumer demands, who are to share efficiency gains with consumers and who are to be limited in their ability to extract excessive profits.

[223] A number of the appellants for whom Mr Hodder appeared, advance two propositions to the effect that the Commission misunderstood the significance of the s 52A purpose:

(a) first, when the Commission referred to itself as having considerable discretion in determining the content of IMs; and

(b) secondly, in the way that it responded to the workably competitive market outcomes referred to in s 52A, particularly when determining the asset valuation IMs relating to both the Energy Appellants and the Airports.

[224] The second, and more specific of those propositions, was also relied on by a number of other appellants, again, particularly in the asset valuation IM appeals but also more generally.

[225] There is, as will be seen, a considerable degree of overlap between the two propositions. The second – which is also directed at what the Commission considered to be the relative lack of guidance provided by workably competitive market outcomes – is in many ways a particular example of the more general. But we think it is helpful to analyse the two propositions separately.

[226] The first, more general, proposition involves the contention that the Commission has incorrectly understood the "weight" of the s 52A(1) reference to "promoting outcomes that are consistent with outcomes produced in competitive

markets", and to the more particular outcomes listed in subparagraphs (a) to (d). It has done this, Mr Hodder submits, when for example it said that it had a "broad discretion" as to the content and structure of IMs. Mr Hodder contends that that approach is wrong and that it defeats the very certainty for investors and businesses which the new regime was intended to achieve. That error had, as he puts it, infused the Commission's decision-making.

[227] In making the more general proposition Mr Hodder refers, amongst other things, to the following observations of the Commission in the EDBs-GPBs Reasons Paper:[155]

> Section 52T provides the Commission with a broad discretion as to the content and structure of IMs. In exercising its discretion, the Commission has had regard to a number of relevant considerations, including the purpose of IMs as set out in s 52R, the purpose of information disclosure regulation and default/customised price-quality regulation (as applicable), the Part 4 Purpose in s 52A, and all submissions made by interested parties throughout the consultation process.

[228] Taking those observations of the Commission on a stand-alone basis, we think Mr Hodder's point may be fairly put as being that the Part 4 purposes and outcomes in s 52A(1), the purpose of IMs as set out in s 52R and the other subsidiary purpose statements are not simply matters that the Commission must have "regard to". Rather they are specific provisions that the Commission must give effect to. Whilst the Commission has to have regard to submissions made by interested parties, having done so it may decide that it is not persuaded by them and have no further regard to them. The various purpose statements perform a quite different role. The Commission must be guided by them and must give effect to them. As the Supreme Court has explained: "[a statutory body] must act within the scope of the authority conferred by Parliament and for the purposes for which those powers were conferred."[156] The Supreme Court also noted there that "a power granted for a particular purpose must be used for that purpose" and that even a "broadly framed

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155 EDBs-GPBs Reasons Paper at [2.2.3], 3/7/01000. Similar comments appear in Commerce Commission *Input Methodologies (Airport Services) Reasons Paper* (22 December 2010) at [2.2.4], 2/6/00617 [Airport Reasons Paper].

156 *Unison Networks Ltd v Commerce Commission* [2007] NZSC 74, [2008] 1 NZLR 42 at [50].

discretion should always be exercised to promote the policy and objects of the Act".[157]

[229] Notwithstanding the slightly loose wording cited by Mr Hodder, in our assessment the Commission was well aware of that obligation and sought to discharge it. Elsewhere in the paper the Commission is clear that it must give effect to these purposes and has endeavoured to do so.

[230] In the foreword to the EDBs-GPBs Reasons Paper the overall evaluative criteria that the Commission applies to its IMs is whether they fulfil the purpose statement. The Commission concludes that:[158]

> Overall, we are satisfied that the package of input methodologies determined today, will, when applied to information disclosure and default/customised price-quality regulation, best meet the purpose statement under Part 4 of the Commerce Act. These input methodologies will provide a strong foundation for delivering the long-term benefits to consumers envisaged by Parliament when it enacted Part 4.

[231] Second, the Commission is clear that it has an obligation to fulfil the purpose of Part 4 rather than just have regard to it, stating that:[159]

> ... the Commission *must* promote outcomes in regulated markets that are consistent with those produced in competitive markets (to the extent relevant to markets with limited or no competition), 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)).

[232] This statement, that the Commission must give effect to the purpose, is repeated in *Input Methodologies (Airport Services) Reasons Paper* (the Airports

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157 At [53].
158 At Foreword, 3/7/00963.
159 At [X8], 3/7/00974 (emphasis added).

Reasons Paper) and *Input Methodologies (Transpower) Reasons Paper* (the Transpower Reasons Paper).[160]

[233] Third, the Commission undertakes a detailed consideration of whether the proposed IMs will meet the statutory purpose, indicating that fulfilment of the statutory purpose was its primary goal rather than one of many considerations. The Commission states that: [161]

> The central purpose [to promote the long-term benefit of consumers] is to be achieved by promoting outcomes consistent with those produced in workably competitive markets. The Commission has therefore sought to identify the outcomes typically produced in workably competitive markets. The IMs are designed to promote, in the regulated markets, outcomes consistent with those in workably competitive markets such that the objectives set out in s 52A(1)(a)-(d) of the Act are achieved.
>
> ...
>
> As discussed in subsequent chapters of this Paper, in relation to the IMs for electricity distribution services, gas distribution services and gas transmission services, the Commission has considered what outcomes would be consistent with those produced in workably competitive markets such that the objectives in paragraphs (a) to (d) of the Part 4 Purpose are achieved. In deciding on the appropriate IMs as a result of this exercise, the Commission has had to exercise its judgement—for instance, there is a natural tension between providing suppliers with incentives to invest and limiting their ability to extract excessive profits.

[234] We are therefore satisfied that, as a general proposition, the Commission did not misconstrue the role of the s 52A purpose statement or the subsidiary purpose statements. Having said that, whether a particular IM actually gives effect to those purposes is something which can only be properly decided in the context of each particular appeal.

[235] The more specific proposition is that the Commission erroneously failed to accept that the s 52A reference to outcomes consistent with those produced in workably competitive markets in effect mandates what is known as the hypothetical new entrant test (HNET) approach to asset valuation questions. Mr Hodder submits that the conclusion that the HNET approach is mandatory flows from a proper

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[160] Commerce Commission *Input Methodologies (Transpower) Reasons Paper* (22 December 2010) at [X8], 4/8/001639 [Transpower Reasons Paper]; Airports Reasons Paper at [X7], 2/6/000596.

[161] EDBs-GPBs Reasons Paper at [2.4.3] and [2.4.7], 3/7/001003 and 001005.

understanding of the phrase "workably competitive markets" as being a reference to markets which are in or tending towards long-run equilibrium where prices reflect the cost structure of an efficient new entrant.

[236] The Commission's position is that Powerco's "markets in long-run equilibrium" argument involves an incorrect reference to a feature of perfectly, not workably, competitive markets. Moreover, the Commission considers that the argument confuses features of particular markets (and makes those features the regulatory objectives) with the s 52A(1)(a) to (d) outcomes that are the regulatory objectives here. In reaching that conclusion the Commission proceeded on the basis that the s 52A(1) purposes and outcomes statements – albeit as mandatory considerations – left more decision-making flexibility to the Commission than Powerco and others argue is, as a matter of law, available.

[237] That difference of views affects the asset valuation IM appeals most directly and we consider it in that context.

The relationship between ss 52A(1)(a) and (d)

[238] The introduction of the reference in s 52A(1)(a) to regulated suppliers having incentives to innovate and invest gave rise to a difference of views between the supplier appellants on the one hand and the Commission, MEUG and Air NZ on the other, as to the importance of that outcome, relative to those found in subparagraphs (b) to (d), but particularly in (d).

[239] All parties say that they accept that each of the subparagraphs (a) to (d) objectives is important and that they have to be balanced in light of the s 52A(1) criterion of the long-term benefit of consumers. Having said that, the supplier appellants take the view that those long-term interests require that special attention, if not paramountcy, be given to the objective of suppliers having incentives to invest. It is clear that the appellants' proposition, particularly Powerco and Vector's, is that the balancing exercise would, if properly undertaken in light of the Part 4 purposes, result in the "incentives to innovate and invest" outcome having particular significance.

[240] There are two limbs to this argument. The first is based on the importance of dynamic efficiency to the long-term benefit of consumers. The second is based on the legislative history of s 52A(1)(a), and within that the Government's now withdrawn 2006 economic policy statement to the Commission, issued under s 26 of the Act, on investment in infrastructure (the August 2006 GPS).[162]

[241] The Commission acknowledged the importance of dynamic efficiency in the EDBs-GPBs Reasons Paper and the Airports Reasons Paper (together the Principal Reasons Papers) where it commented:[163]

> The most significant benefits of workably competitive markets to consumers over the long-term are often considered to be incentives for dynamic efficiency – the discovery and use of new information that leads to the development of new goods and services, and to new, more efficient techniques of production.

[242] At the same time, the Commission recognises the difficulties of promoting innovation in regulated markets.

[243] The Commission's view of the relative importance of dynamic efficiency, which it equates with incentives to invest, is reflected very clearly in its commentary in the EDBs-GPBs Reasons Paper on its decision to adopt a 75th percentile WACC estimate when calculating DPPs.[164] The Commission explains that it considers the longer term costs to consumers of underestimating the costs of capital are, or are likely to be, greater than the shorter term costs of over-estimation. The Commission continues:[165]

> That is, the Commission is acknowledging that where there is potentially a trade-off between dynamic efficiency (i.e. incentives to invest) and static allocative efficiency (i.e. higher short-term pricing), the Commission will [*always favour*]/[*generally favours*] outcomes that promote dynamic efficiency. The reason is that dynamic efficiency promotes investment over time and ensures the longer term supply of the service, which thereby

162 "Statement to the Commerce Commission of Economic Policy of the Government: Incentives of Regulated Businesses to Invest in Infrastructure" (10 August 2006) 95 *New Zealand Gazette* 2814 [August 2006 GPS]. This statement was issued pursuant to s 26. Section 26(1) provides that "the Commission shall have regard to the economic policies of the Government as transmitted in writing from time to time by the Minister".

163 EDBs-GPBs Reasons Paper at [2.6.28]; 3/7/001019; Airports Reasons Paper at [2.6.28], 2/6/000635.

164 EDBs-GPBs Reasons Paper at [H1.26]-[H.1.31], 3/7/001378.

165 At [H1.31], 3/7/001378.

> promotes the long-term benefit of consumers (consistent with outcomes in workably competitive markets).

[244] Those comments appear in two places in virtually identical terms. As indicated, however, in one the Commission says it "will always favour" outcomes that promote dynamic efficiency.[166] In the other it says it "generally favours" those outcomes.[167] Notwithstanding that inconsistency, there would not appear to be too much room between the supplier appellants and the Commission thus far on the importance of dynamic efficiency. As we shall see, however, MEUG, in its appeals against the Commission's 75th percentile decision, takes the view that favouring investment does not necessarily follow recognition of the importance of dynamic efficiency.

[245] A different picture emerges as between the Commission, and Vector in particular, as regards the significance in this context of the legislative history of Part 4, and of s 52A(1)(a) in particular.

[246] Vector's submission was that, in the past, the Commission had focussed overly on the short-term benefits provided by lower prices as opposed to the longer-term benefits provided by suppliers having appropriate incentives to invest and innovate. Such incentives would, in workably competitive markets, be properly reflected in higher (than perfectly efficient) prices in the short to medium term. The addition of s 52A(1)(a) was, Vector submits, the government's response to that pattern of undesirable regulatory behaviour by the Commission.

[247] In this context, particular emphasis is placed by Vector on the significance of the August 2006 GPS for the interpretation of Part 4. Vector argues that the policy objectives underlying the enactment of Part 4 were clearly articulated in that policy statement and that its overriding object was that regulated businesses have improved incentives to invest in replacement, upgraded and new infrastructure and in related businesses for the long-term benefit of consumers. This objective was to be achieved by:[168]

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166 EDBs-GPBs Reasons Paper at [H1.31], 3/7/001378.
167 EDBs-GPBs Reasons Paper at [H11.62], 3/7/001533.
168 August 2006 GPS at [7].

> (a) regulatory stability, transparency and certainty giving businesses the confidence to make long-life investments;
>
> (b) regulated rates of return being commercially realistic and taking full account of the long-term risks to consumers of underinvestment in basic infrastructure ...

[248] Vector's further argument, referencing the April 2007 Discussion Document, was that the new Part 4 purpose statement was intended to "pick up the government's recent section 26 Statement of Economic Policy on the importance of investment and innovation for regulated businesses.[169] Vector argues that the August 2006 GPS was withdrawn after the new Part 4 was enacted on the basis that "the expectations in this statement are now included in Part 4".[170]

[249] The Commission contests Vector's analysis of the continuing significance of the August 2006 GPS. Part 4, the Commission argues, reflects Parliament's legislative decisions. The August 2006 GPS has been revoked, and Part 4 now speaks for itself. The Commission argues, moreover, against s 52A(1)(a) being given paramountcy, pointing in particular to the Select Committee's Report to Parliament which, it submits, put the point beyond doubt:[171]

> Most submitters supported the purpose statement as drafted. Others argued that the primary objective in the purpose statement should be investment. Although we agree that incentives to invest are important, we consider they need to be balanced against the need to protect consumers from excessive prices.

[250] This particular difference of views is most clearly reflected in Vector's asset valuation IM appeals and in its cost allocation IM appeals. Having said that, Vector's emphasis on s 52A(1)(a), and the importance of incentives to invest, is a theme of all its appeals.

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[169] April 2007 Discussion Document at [87], 63/662/031640.

[170] See http://med.govt.nz/templates/MultipageDocumentTOC _21483.aspx (last accessed 20 July 2011). The August 2006 GPS was revoked on 1 November 2010.

[171] The Select Committee Report at 2.

Fundamental reform versus regulatory continuity

[251] What is, on reflection, in many ways the most significant theme in these appeals is the competing characterisation of the enactment of Part 4 as representing "fundamental reform" or an expression of regulatory continuity.

[252] The Energy Appellants emphasise the fundamental reform characterisation. In their view, the enactment of Part 4 was a response to the perceived difficulties under the previous regime, and as the Explanatory Note including the Regulatory Impact Statement reflect, with the thresholds regime in Part 4A particularly. Part 4 was therefore forward-looking legislation calling for a fresh start and requiring the Commission to adopt a new substantive approach. At the same time, that "forward-looking" new regulatory framework was an opportunity to correct the errors of the past. In particular, Vector argues that the decisions made by the Commission during the Gas Control Inquiry, and subsequently in the Gas Authorisation, were wrong. More subtly, Powerco argues that, whilst it is not required to show that those decisions were wrong in terms of the previous legislative framework, they were ones which could not properly be continued and reflected under Part 4. That is particularly the case for the Commission's asset valuation IM determinations which, for using existing regulatory values by reason of – amongst other things – concerns relating to past revaluation gains, are unlawfully retrospective.

[253] For the Airports, the position is an even more subtle one. In light of the unambiguous legislative history, the Airports acknowledge that AAA disclosure has been ineffective. But that does not mean Part 4 was, for the Airports, a particularly radical change. Rather the continuation of the AAA regime in parallel to the introduction of Part 4 ID disclosure regulation for the Airports, emphasised the continuity of the basic regulatory settings. That was that the Airports are entitled, after consultation, to set prices as they see fit. In that context, and as will be discussed, the Commission went too far in determining a cost of capital IM for use by it in conjunction with ID regulation of the Airports.

[254] Air NZ takes a somewhat similar approach as the Energy Appellants, favouring the fundamental reform view over that of regulatory continuity. Thus it

argues that introduction of ID disclosure for the Airports was the opportunity to reverse monopolistic practices that had in the past improperly inflated asset values and returns.

[255] MEUG did not put its arguments in any particular historical context: rather it argued by reference to the principles it said were reflected in Part 4, and in particular in the new s 52A purpose statement.

NPV = 0 and FCM

[256] Central to the Commission's approach to Part 4 regulation and to regulatory control of natural monopolies more generally are the related concepts or principles of NPV (net present value) = 0 (NPV = 0) and financial capital maintenance (FCM). In terms of the Commission's determination of the IMs, these are first mentioned in the executive summary to the June 2009 IMs Discussion Paper. There the Commission, in what we think is a non-controversial way, explains the relationship between the s 52A(1) purpose and outcomes, and economic principles stemming from the three dimensions of economic efficiency – allocative, productive and dynamic – which the s 52A(1) outcomes both reflect and are designed to promote. The Commission comments:[172]

> The Commission considers that the application of the 'Net Present Value equals zero' approach ('NPV=0'), and the related concept of real financial capital maintenance (FCM), are consistent with these principles.

[257] The Commission then goes on to note that it has to, in addition, make decisions consistent with the principles of consistency, transparency, flexibility and cost effectiveness, whilst noting the primacy of the statutory requirements.

[258] The concept of NPV=0 is explained by the Commission in the EDBs-GPBs Reasons Paper by reference to the following explanation by the Australian Competition and Consumer Commission (ACCC) of the building block model:[173]

> The building block model consists of two equations which are known as the revenue equation and the asset base roll forward equation. These two

[172] 2009 Discussion Paper at [X13], 6/14/002062.
[173] EDBs-GPBs Reasons Paper at [2.8.12], 3/7/001207 citing the ACCC's, *Statement of Principles for the Regulation of Electricity Transmission Revenues – Background Paper* (2004) at 21.

> equations are used to determine an allowed stream of revenues for each [transmission network service provider] for as long as it remains regulated. Ignoring any incentive rewards or penalties, these equations together ensure that the present value of the allowed revenue stream is equal to the present value of the expenditure stream of the regulated firm.

[259] The Commission then explains:[174]

> The equivalence of the present value of revenues and present value of costs referred to in the ACCC quote, is often referred to by the term 'NPV=0', which recognises that if this equivalence holds, then the *net* present value (NPV) of the revenues less the costs is zero. The term NPV=0 is used throughout earlier consultation documents and submissions on Part 4.

[260] The equivalence of the present values of revenues and the references, by the ACCC to the *expenditure stream*, and by the Commission to *the costs*, includes the cost of capital – ie the return demanded by investors. Hence NPV=0 reflects the situation where a firm is – in a workably competitive market – earning its cost of capital, ie making normal but not excessive profits.

[261] The concept of FCM is similar. Again, in the Principal Reasons Papers the Commission explains:[175]

> Over the lifetime of its assets, a typically efficient firm in a workably competitive market would expect *ex ante* to earn at least a normal rate of return (i.e. its risk-adjusted cost of capital). Because allowing a firm the expectation of being able to earn normal returns over the lifetime of an investment provides it with the chance to preserve its 'financial capital' in real (not nominal) terms, such an outcome is often referred to as 'financial capital maintenance' or 'FCM'. In a regulatory context, FCM is achieved, on an *ex ante* basis.

[262] The Commission, in a footnote, provides examples of commentary on the FCM principle:[176]

> For example: "In defining the costs of depreciation and allowed return, regulators should adopt rules that meet the accounting principle of 'Financial Capital Maintenance' (FCM), i.e. rules which allow investors to maintain the real value of their capital. This principle is a necessary condition for total cost recovery – meaning for efficient investment and for the prevention of monopoly profits. … FCM therefore provides the standard by which

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174 EDBs-GPBs Reasons Paper at fn 108, 3/7/001027; Airports Reasons Paper at fn 105, 2/6/000642.

175 EDBs-GPBs Reasons Paper at [2.6.28], 3/7/001020-21; Airports Reasons Paper at [2.6.28], 2/6/000636.

176 EDBs-GPBs Reasons Paper at fn 100, 3/7/001020; Airports Reasons paper at fn 95, 2/6/000636.

> investors effectively measure whether the regulatory regime is allowing them to recover their costs including a rate of return comparable with that offered by other companies and sectors" (Shuttleworth, G., supra n 95, pp. ii and 13). The concept of FCM underpins the decisions of regulators in many OECD countries (e.g. refer: Diewert E., Lawrence D. and Fallon J., *Asset Valuation and Productivity–Based Regulation Taking Account of Sunk Costs and Financial Capital Maintenance*, Report to the Commerce Commission, Economic Insights, Canberra, 11 June 2009, pp. 39-47).

[263] Thus as with NPV=0, FCM is seen as an outcome consistent with the making of normal but not excessive profits and is therefore an outcome that will also efficiently promote the purpose of, and outcomes sought by, s 52A(1).

[264] But, as the Commission explains, it is not possible to guarantee that suppliers will necessarily earn normal returns, nor that they may not extract excessive profits. In these appeals, the risk that due to the impact of regulatory controls suppliers may earn less than normal returns over time features in differences of view about the usefulness of the NPV=0/FCM approach, on the relative importance of the s 52A outcomes, and on the treatment of revaluation gains. So too does the impact of suppliers not earning normal returns and the impact of the risk or perceptions of the risk that this may occur. Suppliers emphasise that s 52A(1) seeks the outcome of limiting suppliers' ability to extract excessive profits, not eliminating that ability. The opportunity to earn excessive profits in the short to medium term is an important feature of workably competitive markets.

[265] It is the first of those differences of view that is of particular significance here. As to that, the following comments in the *Input Methodologies Discussion Paper* (June 2009 IMs Discussion Paper) fairly summarise, and anticipate, that debate:[177]

> While various submitters accepted that FCM and NPV=0 have some application in certain regulatory instruments for testing alternative outcomes (such as profitability measures), they contended that they are neither concepts of over-arching application, nor are they applicable to all instruments and therefore unfit for purpose. Submitters further argued that, as FCM and NPV=0 are ex ante concepts, their application part-way through the lifetime of an asset (such as in the context of asset valuation) is inappropriate.

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[177] Commerce Commission *Input Methodologies Discussion Paper* (19 June 2009) at [2.71], 6/14/002099-2100 (cross reference omitted) [June 2009 IMs Discussion Paper].

> As noted above, the Commission agrees that in practice, a constraint that seeks to broadly ensure normal returns are earned cannot precisely be applied to regulated suppliers over the lifetime of the assets utilised in supplying regulated services, as any analysis will typically be conducted part way through the lifetimes of these assets. However, the Commission's view is that NPV=0 and FCM are useful concepts to address particular issues in a consistent way, so as to align outcomes closer to normal returns over time.

[266] That issue is reflected in appeals against the way the asset valuation IMs set initial RAB values. The acceptance of the explanation of FCM and NPV=0 as ex-ante concepts is reflected in the absence of appeals as to how initial RAB values are rolled forward.

The treatment of revaluation gains – the Commission's line in the sand approach

[267] Another controversial aspect of the way the Commission seeks to broadly ensure normal returns are earned over time is its approach to the treatment of revaluation gains in setting initial RAB values. Revaluation gains, and losses, are a common feature of generally accepted accounting practices (GAAP). In a regulatory context, where the values a regulator ascribes to a firm's assets set revenue and prices, rather than – as in unregulated markets – the opposite being the case, revaluation gains give rise to particular issues.

[268] The Commission's approach for the future is generally accepted. Consistent with its use of a nominal WACC, which incorporates an allowance for inflation, all revaluation gains are required to be treated as income for pricing purposes.

[269] The Commission's approach to revaluation gains in determining initial RAB values is, however, controversial.

[270] To the extent that revaluation gains included in initial RAB values had not in the past been, and would not in the future be, treated as income for pricing purposes, the Commission was concerned that regulated suppliers would be extracting excessive profits. The Commission saw the HNET approach, of current, new replacement cost valuations, as giving rise to that possibility. It decided to base initial RAB values on past valuations that had been used for regulatory purposes under the regimes that existed at the time Part 4 was enacted. It called this its "line

in the sand" approach, namely one that was "consistent with the Commission's intention of drawing a "line in the sand" at the start of Part 4 under the issues raised in relation to replacement cost-based valuations undertaken in the past".[178]

[271] The Commission acknowledged that such valuations could incorporate revaluation gains that had not in the past been treated as income for pricing purposes, and would not be so treated in the future.

[272] The Commission's approach on the treatment of revaluation gains when determining initial RAB values was something of a middle ground between that argued for generally by supplier appellants on the one hand and, in the case of the Airports asset valuation IM appeals, by Air NZ on the other.

[273] Supplier appellants generally argue that initial RAB values should be set without reference to the possible significance of past revaluation gains. Air NZ argues for a more aggressive approach to eliminating past revaluation gains from initial RAB values. These differences of view have the greatest influence in the asset valuation appeals.

[178] EDBs-GPBs Reasons Paper at [E.18], 3/2/000291.

PART 4 – VECTOR'S SPA APPEALS

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Overview

[274] A s 52P determination for DPP regulation must, in addition to complying with the general provisions of s 52P(3), also comply with s 53O. Section 53O, as relevant, provides:

> If default price-quality regulation applies to regulated goods or services, the section 52P determination must set out a default price-quality path that includes–
>
> (a) the starting prices that apply to the supply of the goods or services during the first regulatory period; and
>
> (b) the rate or rates of change in prices, relative to the Consumer Price Index, allowed during the first regulatory period; and
>
> (c) the quality standards that apply during the first regulatory period; and
>
> (d) the date or dates on which the default price-quality path (or any part of it) takes effect;

[275] Once a price path is set, it applies for the regulatory period – generally five years. Section 53P requires the Commission, at the end of the regulatory period, to reset a price path. Again as relevant, s 53P provides:

> (1) Before the end of the first and every subsequent regulatory period, the Commission must amend the section 52P determination by setting out the starting prices (as referred to in section 53O(a)), rates of change (as referred to in section 53O(b)), and quality standards (as referred to in section 53O(c)) that apply for the following regulatory period. ...
>
> (3) The starting prices must be either–
>
> (a) the prices that applied at the end of the preceding regulatory period; or
>
> (b) prices, determined by the Commission, that are based on the current and projected profitability of each supplier. ...

[276] Relevant IMs, as per the s 52P determination, must be applied in setting prices.[179]

[277] In three separate appeals,[180] Vector argues that the methodology the Commission has finalised to reset the "rolled over" price paths for EDBs DPP regulation,[181] and to set the first price paths for GPBs DPP regulation,[182] - in both cases based on the Commission's determination of current and future profitability – should be the subject of an IM determination. That is, Vector argues that there should be an IM for the starting price adjustment (SPA) process required when a DPP is set or reset.

[278] Vector says such an IM could be determined as a processes and rules IM or as part of each or any of the cost of capital, asset valuation, allocation of common costs or treatment of taxation IMs.

[279] WELL also appealed against the Commission's omission to specify a SPA IM but abandoned this appeal by memorandum of counsel dated 9 November 2012.

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179 Section 52S.

180 See [291] and [297].

181 On 30 November 2012 the Commission published its first reset of the EDBs DPPs. Those price paths will apply, subject to these appeals, during the balance of the current five year regulatory period that is 1 April 2013 to 30 March 2015.

182 The Commission published a DPP for GDBs and GTBs on 28 February 2013. Those price paths will apply, subject to these appeals, during the first regulatory period set by the Commission of four years and three months, from 1 July 2013 to 31 September 2017.

The Commission's approach to starting prices

[280] Part 4 makes no express provision as to how the Commission is to determine prices based on "current and projected profitability", nor the relationship between such profitability and the "relevant" IMs. As the Commission itself has acknowledged, the relationship between that profitability assessment and IMs is implicit or indirect.

[281] In the EDBs-GPBs Reasons Paper, the Commission observed: [183]

> The Commission is still consulting on how to set starting prices for the existing DPPs applying to EDBs (pursuant to s 54K(3)) and for the first DPPs that will apply to GPBs. The Commission has proposed assessing the current and projected profitability of each supplier by comparing each supplier's ROI against the relevant cost of capital estimate. However, as noted in the next subsection, given that ROI indicators are likely to derive from information disclosure regulation (or from responses to s 53ZD notices, prior to the first information disclosure determinations being made), the relationship between IMs and DPPs *will be an indirect one*.

[282] As the Commission there explained, at the time of the publication of the Principal Reasons Papers (22 December 2010) the Commission was consulting on how to set starting prices for "the existing DPPs applying to EDBs (pursuant to s 54K(3)) and for the first DPPs that will apply to GPBs".[184] That is, the Commission was consulting on a SPA methodology. That SPA methodology would not be an IM but rather a methodology used in, and an integral part of, those s 52P determinations. The most current explanation of the Commission's thinking at that time can be found in a discussion paper, "Starting Price Adjustments for Default Price-Quality Paths", dated 5 August 2010. In that paper the Commission proposed a SPA framework comprised of the following steps:[185]

> a. calculate the supplier's returns using ROI statistics and other information;
>
> b. assess the supplier's profitability by comparing the supplier's returns against an industry-wide ROI band centred around the WACC point estimate provided by the cost of capital IM (the *Draft IMs* establish this to be the 75th percentile of the IM vanilla WACC range);

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[183] EDBs-GPBs Reasons Paper at [2.8.28], 3/7/001030 (emphasis added).

[184] In accordance with s 54J(2), the thresholds for EDBs that expired on 31 March 2009 became DPPs.

[185] Commerce Commission *Starting Price Adjustments for Default Price-Quality Paths: Discussion Paper* (5 August 2010) at [3.7], 65/699/032885.

c. if a supplier's returns are above or below the ROI band, calculate the percentage difference with respect to the relevant limit of the ROI band (**ROI differential**);

d. translate the ROI differential into an adjustment to the supplier's actual weighted average prices or revenues for a specified year, where the supplier's adjusted weighted average prices or revenues become the starting prices for the next regulatory period.

A footnote to sub-paragraph (d) of the above quote stated:[186]

> This adjustment would also take into account factors such as inflation indexation, pass-through costs, and recoverable items.

[283] Put simply, the Commission's proposed SPA framework involved:

(a) an assessment of supplier returns, on an ROI basis; and

(b) a comparison of supplier returns against an industry-wide ROI band centred on a WACC point estimate.

[284] If a supplier's returns fell within the ROI band no SPA would generally be made. If they were above or below that band, the supplier would receive a downward or upward adjustment accordingly.

[285] That consultation process had, by the time the hearings of these appeals closed, resulted in:

(a) for GPBs, the publication by the Commission on 24 October 2012 of a draft s 52P DPP for GPBs;[187] and

(b) for EDBs, the publication by the Commission on 30 November 2012 of its s 52P determination resetting the EDBs DPP, which came into effect on 1 April 2013.[188]

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186 At [3.7], 65/699/032885.

187 The Commission determined the final DPP for GDBs and GTBs on 28 February 2013. For the draft determinations see Commerce Commission *Revised Draft Decision on the Initial Default Price-Quality Paths for Gas Pipelines Services* (24 October 2012), 77/1006/038670; Commerce Commission *Gas Distribution Default Price-Quality Path Determination 2013: Consultation Draft* (24 October 2012), 77/1007/038790; Commerce Commission *Gas Transmission Default Price-Quality Path Determination 2013: Consultation Draft* (24 October 2012), 77/1008/038816.

[286] In the GPBs draft 2012 DPP determination the Commission explained how it proposed to assess the GPBs current and future profitability to set their DPPs:[189]

> Our preference is to set prices based on current and projected profitability, and in doing so apply the Commission's input methodologies – rules, requirements and processes set in advance. These were specifically developed to promote the outcomes in the Part 4 Purpose, and provide the basis for a detailed building block costs assessment from which a path can be set that generally allows suppliers to earn a normal return over the regulatory period.

[287] In *Resetting the 2010-2015 Default Price-Quality Paths for 16 Electricity Distributors* (the EDBs DPP Reasons Paper) the Commission explained how it had assessed the EDBs' current and future profitability when resetting their DPPs:[190]

> To adjust prices based on the current and projected profitability of each supplier, we have calculated each supplier's costs on a 'building block' basis, and then set prices that factor in the outlook for future demand. The key building block cost components are the return *on* and *of* capital, operating expenditure (opex), and tax.

[288] Thus the Commission had moved away from its earlier "ROI band" approach to an individual supplier "building block" approach.

[289] Vector is now generally satisfied with those processes for deriving a starting price, but argues that the processes should be the subject of a SPA IM. This would mean the processes could only be amended in accordance with s 52V and would be subject to the right of appeal provided by s 52Z. It is this which is Vector's express goal, rather than any particular change to the SPA process.

Procedural background

[290] Vector brings three separate SPA appeals. In order to understand the relationship between those appeals, and the Commission's response to them, some procedural background is necessary.

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[188] Decision [2012] NZCC 35, 79/1050/039931 and the EDBs DPP Reasons Paper of the same date.

[189] *Revised Draft Decision on the Initial Default Price-Quality Paths for Gas Pipeline Services* at [1.10], 77/1006/038680 (footnotes omitted).

[190] Commerce Commission *Resetting the 2010-2015 Default Price-Quality Paths for 16 Electricity Distributors* (30 November 2012) at [4.12], 79/1049/039790 [EDBs DPP Reasons Paper].

[291] Vector filed a notice of appeal against, among other things, the Commission's failure to include a SPA in its 2010 IMs contained in Decisions 710, 711 and 712, on 16 February 2011.[191] That notice contained two s 52Z SPA appeals:[192]

(a) that the "processes and rules for adjusting starting prices, adjusting rates of change in relation to price shocks and financial hardship, and when and how claw-back will be applied" should be the subject of a s 52T(1)(c) processes and rules IM (a stand-alone SPA IM); and

(b) that the "processes and rules for adjusting starting prices, adjusting rates of change in relation to price shocks and financial hardship, and when and how claw-back will be applied" should be included in "each input methodology relevant to DPP regulation (asset valuation, cost of capital, regulatory tax and cost allocation)".

[292] It is Vector's contention that those processes and rules should be included as an IM or in other IMs in order to:

(a) achieve the s 52R certainty purpose;

(b) satisfy the s 52T(2)(a) requirement that suppliers be reasonably able to estimate the "material effects" of an IM; and

(c) satisfy the s 52T(2)(b) requirement that the Commission set out how it "intends to apply" IMs.

[293] In a memorandum of counsel accompanying its appeal, Vector foreshadowed judicial review proceedings "in respect of the Commission's failure to determine input methodologies for DPP processes and rules".

[294] Those judicial review proceedings were subsequently filed on 23 March 2011. Vector challenged the Commission's failure to both determine DPP processes

191 Vector Appeal 259.
192 At [EDS.RRP(1)], [GDS.RRP(1)] and [GTS.RRP(2)].

and rules IMs for EDBs and to specify, as IMs applicable to DPP regulation, IMs for asset valuation, cost allocation and treatment of taxation.

[295] Clifford J determined and upheld Vector's judicial review challenges in a judgment he delivered on 26 September 2011.[193] He directed the Commission to:

(a) determine separate cost allocation, asset valuation and treatment of taxation IMs for DPP regulation; and

(b) determine a stand-alone SPA IM for DPP regulation of EDBs and GPBs;

[296] The Commission appealed Clifford J's decision as to the need for a SPA IM to the Court of Appeal. It did not, however, appeal his decision that the Commission was required to determine asset valuation, cost allocation and treatment of taxation IMs for DPP regulation of EDBs and GPBs. Thereafter:

(a) On 9 December 2011 the Commission initiated consultation on new IMs, including a SPA IM.[194]

(b) On 1 June 2011 the Court of Appeal released its decision, allowing the Commission's appeal.[195] The Court of Appeal found that the requirement in s 52T(1)(c)(i) that the Commission determine IMs that include, to the extent applicable, "regulatory processes and rules, such as the specification and definition of prices" did not require a SPA IM to be determined. Neither did s 52T(2)(a) and (b).

(c) On 15 June 2011 the Commission announced draft decisions on the asset valuation, allocation of costs and treatment of taxation IMs for DPP regulation of EDBs and GPBs.[196] At the same time the

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193 *Vector Ltd v Commerce Commission* HC Wellington CIV-2011-485-536, 26 September 2011.

194 Commerce Commission *Additional Input Methodologies for Default Price-Quality Paths: Process and Issues Paper* (9 December 2011), 69/740/034291.

195 *Commerce Commission v Vector Ltd* [2012] NZCA 220, [2012] 2 NZLR 525.

196 Commerce Commission *Draft Input Methodologies for Default Price-Quality Paths: Allocation of Costs, Valuation of Assets and Treatment of Taxation Amendment and Cost of Capital Input Methodology: Consultation Paper* (15 June 2012), 69/757/034647.

Commission advised that it had, following the Court of Appeal's decision, ceased to consult on a SPA IM.

(d) On 20 July 2012, at the request of Clifford J and in preparation for these hearings, the Commission filed – on a basis agreed by all parties – a memorandum summarising the application and, up to that point, implementation of the Part 4 regime. When referring to the progress to that date in implementing Clifford J's 26 September 2011 decision, the Commission noted:

> The Commission is consulting on and will re-determine Decisions 710, 711 and 712 no later than 30 September 2012.
>
> All parties are proceeding on the basis that the re-determination will apply the IMs currently under appeal to DPP regulation without any substantive change, and that the appeals can be heard and determined on that basis. Appellants may file amended notices of appeal prior to the hearings, which post date the proposed re-determinations. Further, as the Commission is re-determining the entire Decisions 710, 711 and 712, the Judgement(s) in these appeals will relate to the re-determined Decisions, and any relief ordered should be directed accordingly.
>
> Any change to the substance of the IMs in the re-determination (other than their application to DPP regulation) will be the subject of fresh appeal rights.

It was on that basis that the hearing for these proceedings commenced on 3 September 2012.

(e) On 28 September 2012, by which time the cost of capital IM appeals had been heard, the Commission "re-determined" its 22 December 2010 IMs for EDBs and GPBs to include asset valuation, cost allocation and treatment of taxation IMs for DPP regulation (the 2012 IMs).[197]

(f) As anticipated, on 12 October 2012, Vector filed an application to amend its 16 February 2011, s 52Z, notice of appeal. The

[197] Decisions [2012] NZCC 26, 67/716/033593; [2012] NZCC 27, 67/715/033409; [2012] NZCC 28, 67/717/033803.

> amendments requested by Vector and subsequently agreed to by the Commission,[198] in effect add references to the 30 September 2012 IMs and refresh, for want of a better word, the 16 February 2011 appeal so that it relates to all the 2012 IMs. The Commission's decision-making process had, as it were, caught up with Vector's original notice of appeal, which had referred to the then non-existent asset valuation, cost allocation and treatment of taxation DPP IMs.

[297] Following these amendments the Commission raised the new issue of whether, by reference to the closed record provisions found in s 52ZA(2), any of the post-December 2010 consultation material was properly "before" the Court. That is an issue to which we will return. As we understand it, largely in response to that, on 18 October 2012 Vector filed a new notice of appeal in respect of the 2012 EDBs and GPBs asset valuation, cost allocation, and treatment of taxation DPP IMs.[199] This is the third appeal. Vector said that each of the asset valuation, cost allocation and treatment of taxation DPP IMs should include "the methodology the Commission intends to apply for assessing current and projected profitability, referred to as the SPA methodology."[200] That was – Vector argues – effectively required by s 52T(2)(a) and (b), and would be materially better in terms of the achievement of ss 52A and 52R purposes. In a footnote to that notice of appeal Vector noted that it had submitted that:[201]

> ... the most pragmatic approach would be for the method for setting DPP prices to be included in full in, say, the DPP AV IM and then simply cross-referenced in the other additional IMs.

[298] In that way, Vector sought to ensure that the record for its SPA appeals would include the materials put before the Commission when it was consulting on the 2012 IMs, both during the period when it was consulting on a SPA IM and after the Court of Appeal's decision on 1 June 2011 when it ceased to do so.

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198 As will be apparent, these events were occurring whilst the Court was hearing the cost of capital and asset valuation appeals. These procedural issues were discussed during those hearings, perhaps more informally than might otherwise have been the case.

199 Vector Appeal 2178.

200 At [3].

201 At fn 1.

[299] Vector appealed the Court of Appeal's decision. That challenge was heard in the Supreme Court on 9 and 10 October 2012 and the Supreme Court released its decision on 15 November 2012. It upheld the Court of Appeal's decision, also finding that a SPA IM was not required by s 52T(1)(c) or s 52T(2)(a) and (b).[202]

[300] By this time there were, therefore, three SPA appeals by Vector:

(a) the 16 February 2011 s 52Z appeal against the Commission's non-determination of a stand-alone SPA IM;

(b) the 16 February 2011 s 52Z appeal against the Commission's non-inclusion of SPA provisions in the cost of capital, asset valuation, treatment of taxation and cost allocation IMs, now refreshed and directed at the redetermined (ie replaced) 2012 asset valuation, treatment of taxation and cost allocation IMs and still directed at the 2010 cost of capital IM ; and

(c) the new 18 October 2012 s 52Z appeal, directed at the non-inclusion of SPA provisions in the new asset valuation, cost allocation and treatment of taxation IMs.

The Commission's strike-out application

[301] On 30 November 2012, in an action that had been foreshadowed in informal procedural discussions for some time, the Commission filed a strike-out application. That application was directed at what the Commission describes as:

(a) the "first limb" of the refreshed 16 February 2011 appeal in which Vector seeks relief under s 52T(1)(c); and

(b) either:

(i) the 18 October 2012 appeal; or

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202 *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445.

(ii) the "second limb" of the 16 February 2011 appeal in which Vector seeks relief directed to the asset valuation, cost allocation and treatment of taxation IMs determined in December 2010.

[302] To understand the Commission's strike-out application and its substantive position on the two appeals, it is necessary first to understand how the Commission characterises Vector's 2011 and 2012 appeals.

[303] As regards the 2011 appeal:

(a) The Commission characterises Vector's first appeal (that there should be a DPP processes and rules IM, ie a separate SPA IM) as a "s 52T(1)(c)" appeal. That is, in terms of the open-ended s 52T(1)(c) requirement that the Commission determine IMs relating to "regulatory processes and rules", the Commission should have developed a SPA IM.

(b) The Commission characterises Vector's second appeal (that the cost of capital, asset valuation, allocation of costs and treatment of taxation IMs should include SPA provisions) as an appeal under s 52T(2). That is, SPA provisions were required to be included in those IMs so that suppliers could reasonably estimate the material effects of the SPA provisions on the IMs. They were also required to be included so that the IMs would set out how the Commission intended to apply the SPA provisions to particular types of goods or services.[203]

[304] The 2012 appeal, Vector's third appeal, is also, in the Commission's characterisation, a s 52T(2) appeal.

[305] Those characterisations were, as may already be apparent, designed to reflect the Supreme Court's decision. Accordingly, the Commission applied to strike out the first of Vector's 2011 appeals on the basis that, as the Supreme Court had held no

[203] Section 52T(2)(a) and (b).

stand-alone SPA IM was required pursuant to s 52T(1)(c), the Commission's (discretionary) decision not to make one could not be appealed. That decision was, simply put, not an IM determination by reference to which the s 52Z right of appeal arose.

[306] The second ground of the Commission's strike-out application is directed in the alternative at:

(a) the October 2012 notice of appeal; or

(b) the second February 2011 appeal.

[307] Those alternative applications are based on the proposition that, in terms of the relief ordered by Clifford J in Vector's judicial review proceedings as affected by the subsequent appeal decisions, the Commission had no jurisdiction to include SPA provisions in those redetermined 2012 IMs. We therefore find the alternative nature of the relief claimed confusing. If we strike out the notice of appeal dated 18 October 2012, that would leave the second limb of the notice of appeal of February 2011 on foot, when the jurisdictional argument is that the Commission had no power to include the provisions that are the subject of that appeal. It is only by striking out both the 2012 appeal and the second limb of the February 2011 appeal, that the Commission reflects its jurisdictional point. But, and in any event, that would leave the original February 2011 appeal as regards the inclusion of SPA provisions in the December 2010 cost of capital DPP IM on foot, as the Commission's determination of that IM was not in any substantive way part of the "re-determination process".

[308] We deal now with the substance of the Commission's strike-out application.

The "first limb" of the 2011 appeal – is there an IM determination to be appealed?

The Commission's argument

[309] The Commission in effect argues and Vector accepts that there is only a s 52Z appeal right against an IM. That is, by reference to the definition of 'input

methodology' in s 52C, there is only an appeal right against the Commission's determination of a description of a methodology, process, rule or matter that includes any of the matters listed in s 52T and that is published under s 52W.

[310] Section 52Z relevantly provides:[204]

> Any person who gave views on an input methodology determination to the Commission as part of the process under section 52V, and who, in the opinion of the court, has a significant interest in the matter, may appeal to the High Court against the determination.
>
> In this section and section 52ZA, **input methodology determination** means any of the following:
>
> (a) the initial determination of an input methodology:
>
> (b) any determination by the Commission that amends the input methodology:
>
> (c) any determination by the Commission of an input methodology following a review of the input methodology.
>
> (3) In determining an appeal against an input methodology determination, the court may do any of the following:
>
> (i) decline the appeal and confirm the input methodology set out in the determination:
>
> (ii) allow the appeal by—
>
> (i) amending the input methodology; or
>
> (ii) revoking the input methodology and substituting a new one; or
>
> (iii) referring the input methodology determination back to the Commission with directions as to the particular matters that require amendment.
>
> ...

[311] An IM is defined in s 52C as:

> **input methodology** means 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

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[204] Section 52(Z)(1)-(3).

[312] Section 52ZA(1) additionally provides:

> Any appeal under section 52Z must be brought within 20 working days after the date on which the input methodology determination is published.

[313] The Commission argues therefore that only a published IM is appealable, essentially because of:

(a) the reference to the "publication" of a relevant "description" in the definition of an IM in s 52C; and

(b) the fact that the appeal must be brought within 20 working days of the IM determination being published.

[314] As well as having an obligation under s 52U to publish initial IMs for Part 4 regulation, the Commission may amend an IM (s 52X) and must, on a seven-year cycle, review IMs (s 52Y). Following a s 52Y review, the Commission may amend or replace the relevant IM. We infer the choice of amendment or replacement would reflect the degree of change to the relevant IM following such a review.

[315] This interpretation of s 52Z significantly constrains the appeal right by preventing appeals against Commission decisions to:

(a) not make an initial IM;

(b) not amend an IM following voluntary consultation; or

(c) not amend or replace an IM following a compulsory review.[205]

[316] If the Commission did not make an IM it was not obliged to make, did not amend an IM and did not replace an IM following a review, its relevant decisions would not be appealable. Given the significance in the Part 4 scheme of increased

[205] The Commission may review IMs at any time and must, pursuant to s 52Y, review IMs no later than seven years after publication. An IM that is changed following review remains in place unamended until the DPP is also reset. This usually occurs every five years and not more than every four years.

accountability for the Commission, that is an unattractive proposition. But it is the essence of the Commission's jurisdictional challenge to Vector's SPA appeal.

[317] Vector too, appears to accept this reading of s 52Z. Vector never argues that s 52Z does not require the existence of an IM before an appeal right exists. Rather, Vector argues that this requirement is not an obstacle here as it is appealing against an IM. Vector generally identifies that IM as the rules and processes IM. At other points, Vector points to individual IMs and says that any one of them would be materially better if the SPA provisions were added to it.

[318] The difficulty with this part of the Commission's strike-out application is well illustrated by reference to the IRIS IM, and the appeal against it. The IRIS IM – as is discussed in more detail in Part 9 of this judgment – provides a mechanism whereby efficiency gains made in one period may continue to be shared between a regulated supplier and its customers in the next regulatory period, and not directed fully to customers in the price path reset at the start of the second regulatory period. An IRIS IM is not required by s 52T(1). The Commission acknowledges there is no question that there is a right of appeal against that "voluntary" IM as so determined. The distinction the Commission seeks to draw is between a decision to make a "voluntary IM", which is appealable, and a decision not to make such an IM, which is not appealable. We are not attracted to that distinction.

[319] Vector has, from the outset, appealed under s 52Z that the IRIS determined by the Commission, which is only available in CPP regulation, should be available also in DPP. That is, Vector says there should be an IRIS IM for EDBs and GPBs DPP regulation, where there is no such IM now. That is, it is appealing the Commission's decision not to make an IRIS IM for EDBs and GPBs DPP regulation. The Commission has not argued that Vector may not bring that appeal although, as noted, it is in effect a decision by the Commission not to make an IM. This reveals a clear inconsistency in the Commission's approach. We also think it more than a little artificial that a decision not to make a particular IM should not be appealable, whereas not including a particular IM in a DPP is appealable.

A better interpretation

[320] An alternative, and in our view better, interpretation is that any decision by the Commission about whether to make or not make, amend or not amend, redetermine or not redetermine, an IM is an appealable IM determination.

[321] This is consistent with the ordinary understanding of a determination as a decision,[206] and is consistent with the interpretation of other appeal rights against Commission determinations in the Act. The s 91 appeal "against any determination of the Commission" is understood as an appeal against a Commission decision to do or not do something.[207]

[322] For instance, in *Brambles New Zealand Ltd v Commerce Commission*, Brambles appealed under s 91 a decision of the Commission pursuant to s 66 to not authorise Brambles' acquisition of GE Capital Returnable Packaging Systems Ltd.[208] Under s 66 a person proposing to acquire the assets of a business can apply for clearance to do so from the Commission. There is no doubt that the Commission's refusal to clear an acquisition is a determination.

[323] Moreover, under s 66(4):

> If the period specified in subsection (3) expires without the Commission having given a clearance for the acquisition and without having given a notice under subsection (3)(b), the Commission shall be deemed to have declined to give a clearance for the acquisition.

[324] Wild J observed that even this is a determination against which a s 91 appeal lies.[209]

[325] A decision not to do something the Commission is empowered to do and a deemed declination are both determinations susceptible to appeal. Thus it is difficult to see why an express and reasoned decision to not make, amend, or redetermine an IM following an extensive consultation process in which the desirability of making,

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206 *Air New Zealand Ltd v Commerce Commission* HC Auckland CIV-2003-404-6590, 6 May 2004 at [26]-[27].

207 See *Brambles New Zealand Ltd v Commerce Commission* (2003) 10 TCLR 868 (HC);

208 See *Brambles New Zealand Ltd v Commerce Commission* (2003) 10 TCLR 868 (HC); *Goodman Fielder Ltd v Commerce Commission* (1987) 1 NZBLC 102,701 (CA).

209 *New Zealand Bus Ltd v Commerce Commission* (2002) 7 NZBLC 103,605 (HC) at [24].

amending or redetermining an IM has been discussed, should not be a determination against which a s 52Z appeal can be brought.

[326] There is, as the Commission has argued, a textual argument based on:

(a) the definition of IM, as something which has been published under s 52W;

(b) the alternative forms of relief provided by s 52Z(3)(b), all of which on their face are directed at an IM that has been determined, ie made and published; and

(c) section 52ZA itself, which speaks of appeals being brought within 20 working days after the date on which the IM determination is published.

[327] But, in our view, that is to give greater weight – in the overall scheme of Part 4 and the appeal rights granted thereby – to the act of publishing an IM itself, as opposed to the significance of the Commission's decision when making IMs. That includes where that decision is not to make a particular IM or not to incorporate particular provisions in an IM. Section 52V, which sets out the process for determining IMs, requires the Commission to publish draft methodologies and to give interested persons a reasonable opportunity to give their views on draft methodologies. It is quite conceivable that the Commission could embark on determining a particular IM and then decide it was not, in fact, required. Similarly, and as happened here, the substantive content of IMs will change during consultation, including removing provisions that may have at one point in time been envisaged. Similarly, submitters may from the outset propose that certain matters be included in IMs and the Commission may from the outset and through to the end of its process take an alternative view.

[328] There is also an argument that the Commission's reliance on the concept of publication, that appears within the definition of the term IM, fails to take account of various references to the right of appeal being against the *determination* of the IM,

and to the s 52ZA right arising within 20 workings days after the date on which the IM *determination* was published.

[329] Section 52W(2) requires the IM, not the IM determination, to be published by notice in the *New Zealand Gazette*. Section 52W(1)(a) reflects that distinction. IMs must be published in the *Gazette* within 10 working days of their determination by the Commission. Logically therefore, the publication of the Commission's determination and the publication of the IM itself, in the manner required by s 52W and to which the reference to "publication" within the definition of IM must refer, are different things. Here, the Commission published its IM determinations on 22 December 2010.

[330] Thus, in our view, the phrase "input methodology determination" against which the appeal right exists, is a Commission decision determining the content of an IM, following a process of consultation in which – here – the issue the subject of the appeal has been "at large". In other words, our interpretation does not go as far as giving a right of appeal on a matter which has not been the subject of consultation. That is another reflection of the closed record provision: by definition there would be no record about such a matter and therefore no basis for any appeal. But where the issue the subject of the appeal has been consulted on, the determination of the IM is a determination of that issue, whether or not that determination results in that matter being included in an IM or amended or replaced IM.

[331] That interpretation reflects the purpose of the s 52Z appeal right.

[332] When the meaning of s 52Z advanced by the Commission is cross-checked against the purpose of providing for merits review appeals,[210] it is clear that that meaning cannot stand.

[333] On introduction of the Bill the Explanatory Note recognised that:[211]

> Because of the importance of input methodologies, the Bill makes provision for merits review of input methodology determinations by the Commission.

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210 See Tipping J in *Commerce Commission v Fonterra Co-operative Group Ltd* [2007] NZSC 36, [2007] 3 NZLR 767 at [22].

211 The Explanatory Note at 7.

> ..The appeal provides accountability for the Commission, helps ensure that input methodologies deliver on the purpose statement, and promotes business confidence.

[334] In her speech to the House, the Minister moving the first reading of the Bill similarly noted:[212]

> In recognition of the importance of the rules, we are providing for merits review, by way of a right of general appeal on input methodologies. Appeals will go to the High Court, which will sit with expert lay members. ... The original Cabinet decision had a narrower form of merits review. However, I was persuaded to broaden the criteria, particularly as the input methodologies had been the focus of all the litigation in the past, and it is important that we get these right. ...
>
> Most disputes about final decisions are in fact disputes about what the rules or input methodologies should be, so it is much more important to provide full appeal rights on the rules rather than on the implementation of the rules. We also saw the need to retain a balance between providing accountability for the regulator, and allowing it to get on with its job rather than being tied down with litigation.

[335] The significance of IMs means that decisions to not make IMs on certain issues, to not amend IMs and to not redetermine IMs following a review are also important decisions for suppliers. As Vector submits, an interpretation which excluded these decisions from the s 52Z appeal:

> ... would also have the perverse result of incentivising the Commission to completely omit processes and rules relevant to DPP regulation from the IM framework (even where including such processes and rules would better meet the Part 4 purpose statements).

[336] So limiting the s 52Z appeal rights is not consistent with Parliament's purpose of holding the Commission accountable on important decisions it makes about what the rules or IMs should be.

[337] Accordingly, despite the difficulty for the Court in fashioning an appropriate remedy when an appeal is against a decision not to make, amend, or redetermine an IM, this is the interpretation that is consistent with the purpose of the merits review and is an interpretation the words can reasonably bear.

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[212] (20 March 2008) 646 NZPD 15158.

[338] That conclusion is not only important here, in the context of Vector's SPA appeal, but is also important in terms of our understanding of the future dynamic of the process whereby the Commission is required to review IMs on at least a seven-year basis. That is, and as we think the scheme of Part 4 envisages, IMs are not set in stone. An approach taken today may usefully be reviewed, at least at the compulsory seven-year review period. Where interested persons argue against the continuation of an existing approach, it seems more than appropriate that such argument be able to be reflected, where it is unsuccessful, by merit appeal rights.

[339] We therefore decline the Commission's strike-out application as regards the first limb of the 2011 appeal.

The 2012 appeal and the second limb of the 2011 appeal – were the requested SPA IMs within the Commission's jurisdiction?

[340] This to us was a rather pointless application. As observed, and elaborated on, in [344] the purpose of this strike-out application was to exclude certain material from the closed record. Putting aside the pleading confusion we have mentioned, even if successful against both appeals, this strike out would have left Vector's February 2011 appeal on foot. Vector said from the outset that the Commission should have included SPA provisions in the by then determined cost of capital DPP IM. In any event, we do not think the relief ordered by Clifford J, and its jurisdictional basis, precluded consideration of SPA provisions. It was for the Commission to determine whether to specify the EDBs and GPBs ID IMs as applicable to DPP regulation, or to specify separate such IMs. The Commission chose the latter path. The Commission described that path in the following way:[213]

> Determining additional IMs is a new task, with a different process and a different output to our previous work.

[341] That approach alone counts fatally against the Commission's argument here. Moreover, and as acknowledged in the 20 July memorandum, "any change to the substance of the IMs in the re-determination (other than their application to DPP regulation) will be the subject of fresh appeal rights". That acknowledgement

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[213] Commerce Commission *Additional Input Methodologies for Default Price-Quality Paths: Process and Issues Paper* (9 December 2011) at [18], 69/740/034305.

accepts that there could be a substantive change, as in other aspects of the Commission's consultation.[214]

[342] We also do not accept the Commission's characterisation of the Court of Appeal's decision as being that the Commission was not empowered to include SPA provisions in the IMs for DPP regulation of EDBs and GPBs that it had, until that time, erroneously failed to determine. What the Court of Appeal and subsequently the Supreme Court said – as made very clear in the Supreme Court's decision – is that the Commission was not required to do so.

[343] We therefore decline the second limb of the Commission's strike-out application.

[344] In doing so we record that, in all of this, the Commission's principal purpose would appear to be to have excluded from the record of Vector's SPA appeals materials relating to a possible SPA IM put before the Commission in the process of determining the 2012 IMs. We say that because, as already noted, even if both legs of the Commission's strike-out application are upheld, that would still leave Vector's 16 February 2011 s 52T(2)(a) and (b) SPA appeal against the cost of capital DPP IM. That appeal would clearly have to be heard and determined on the basis of the materials that were before the Commission in December 2010 when it made the decision not to include SPA provisions. We think it is better to confront the "record" issue when dealing with the substance of the appeals, rather than to attempt to deal with that issue in the guise of a strike-out application.

[345] Before turning to the substance of Vector's SPA appeals, there is one further issue to be dealt with. The Commission argues, although the effect of our accepting that argument is not clear, that in some way the parties had – as recorded in the 14 July memorandum – agreed to so limit the record. We do not accept that argument. The 14 July memorandum was a narrative relating to the implementation of the orders made by Clifford J when directing re-determination of the DPP IMs.

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214 See, for example, the Commission's request for views on the relevance of the Supreme Court's decision, *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153 for the asset valuation IMs in *Additional Input Methodologies for Default Price-Quality Paths: Process and Issues Paper* at [111], 69/740/034329.

We do not think it was intended or understood to determine the questions of record which now arise. As Vector submits, the re-determination exercise was the first time the Commission had formally consulted in an IM context on appropriate asset valuation, cost allocation and treatment of taxation IMs for DPP regulation. It was in that consultation that Vector and others added material to earlier submissions they had made on the appropriateness of those IMs. We see no reason to read the 14 July memorandum as some form of agreement to exclude that material. Admittedly the opportunity to provide it arose because of the error the Commission made. But that does not, in our view, support its exclusion.

Would a SPA IM be materially better?

[346] We turn now to the substance of Vector's SPA appeals.

[347] We do not need now to distinguish any further between the appeals, nor determine the extent to which they can be said to rely on s 52T(1) or (2). Vector claims that it would be "materially better" for the SPA methodology that the Commission has now determined in its s 52P determinations to be, to the extent that it is not already based on IMs, included in one or more IMs. As Vector put it in its written synopsis handed to the Court at the commencement of the hearing of these appeals (emphasis as in the original):

> Over time the Commission has proposed a number of SPA methodology variants outside of the IM Determination process. The methodology currently applied by the Commission for determining allowable revenue for EDSs[215] was summarised in memoranda provided to the Court on 14 September 2012 and is comprised of the following (with the SPA methodology – that is, the part currently missing from the DPP IMs – in bold):
>
> (a) application of the asset valuation DPP IM for each year of the regulatory period (in the current DPP asset valuation IM), **and a further method for forecasting commissioned assets (ie capital expenditure)**;
>
> (b) application of the cost of capital, regulatory taxation and cost allocation DPP IMs for each year of the regulatory period (in the current DPP cost of capital, regulatory taxation and cost allocation IMs);

[215] EDS means Electricity Distribution Services. The parties occasionally use this term to refer to the EDBs

(c) **further methods for forecasting operating expenditure and revenue (volume) growth; and**

(d) **specification of the allowable revenue formula** (which sets out the equation for applying (a) to (c) above in order to determine maximum allowable revenue each year of the regulatory period).

[348] Vector's argument, advanced by Mr Galbraith, is that the SPA IM should include the key non-IM inputs, that is forecast capex, operating expenditure (opex) and forecast revenue (volume), as well as the allowable revenue formula itself. Those matters should be included in the way that they have now been determined in the Commission's actual and proposed DPP reset and set for EDBs and GPBs respectively.

[349] In terms of the substance of that proposition:

(a) the allowable revenue formula is – as we hope will by now be apparent – the BBAR formula;

(b) the Commission's approach to forecast capex, forecast opex and forecast quantity growth can be summarised as follows:

(i) forecast capex is calculated by combining suppliers' estimates of their forecast network capex with, for EDBs, forecasts of non-network capex derived from each supplier's historic average level of expenditure; and, for GPBs, suppliers' forecasts of their non-network capex limited by reference to their historic average level of expenditure;

(ii) forecast opex is calculated by modelling the effect that changes to network scale, operating efficiency and input prices will have on expenditure and adjusting that to reflect increased insurance costs from natural disasters; and

(iii) forecast quantity growth is calculated by forecasting changes to the quantity of energy delivered, changes to the number of

connections and the effect those changes will have on revenues.

[350] As noted, Vector does not propose any changes to those approaches to make them “materially better”. It now simply wants them – in the terms decided - to be IMs.

[351] For a number of reasons, which with respect to the detailed arguments we heard we will record reasonably succinctly, we dismiss that appeal.

Appeal rights do not make an IM materially better

[352] Most importantly, this is an application (whether characterised as an appeal for a stand-alone SPA IM or the inclusion of SPA provisions in other IMs) that does not – in any substantive way – seek a materially better IM. It is obvious that an IM the Commission formulated in accordance with a direction by us would not be appealable. Section 52Z rulings are the outcome of an appeal process, and only appealable on points of law. Moreover, in our view s 52Z does not contemplate further consultation by the Commission with suppliers and other interested parties (see our discussion on the nature of these appeals in Part 2). As filed, the relief Vector sought requires the Commission to consult on the proposed SPA IM under s 52V. Vector, in our view correctly, abandoned that proposition during the hearing. Thus, the fundamental proposition is that the SPA provisions in the s 52P determination would be “materially better” if they were, when proposed to be amended, subject to the s 52V process and then to the s 52Z right of appeal.

[353] In other words, what Vector is really seeking is the opportunity to ensure that, in the future, the approach taken by the Commission on DPP resets may be made materially better pursuant to a s 52Z appeal.

[354] We do not consider that such an appeal can be allowed by reference to s 52Z(4) which requires the amended or substituted IM to be “materially better” – we think as regards the effect of its terms – in meeting the purpose of Part 4, the purpose in s 52R or both. That is, in our view, a s 52Z appeal is to be directed at the terms of an IM itself, not the consequence of its status as such.

The significance of the Supreme Court's SPA IM decision

[355] There is clearly an overlap between the Supreme Court's SPA decision and this appeal.

[356] By reference to the very same argument that was made before us (that is the argument based on the benefit of increased certainty provided by the s 52V process and appeal rights if a SPA IM is determined) the Supreme Court held that a SPA IM was not required under either of s 52T(1) or s 52T(2). The Supreme Court reasoned as follows:[216]

> There seem to us to be three possible approaches:
>
> (a) The Commission was required to publish a starting price reset input methodology. This is Vector's argument.
>
> (b) The published input methodologies could encompass starting price resets but whether they should is a matter for the Commission subject to the possibility of a right of appeal to the High Court.
>
> (c) Input methodologies must not address starting price resets, in the sense that a published input methodology which did so would be ultra vires.
>
> The third approach is not very plausible, particularly in light of the non-exhaustive nature of the s 52T(1) obligation. In response to a direct inquiry from the bench, Mr Brown QC for the Commission accepted that it would have been open to the Commission to have published a starting price reset methodology if it chose to do so.
>
> With option (c) referred to in [69] out of the way, the choice for us comes down to one between (a) and (b). This choice must be made in a context in which the Commission has, ostensibly anyway, met its s 52T obligations by having published input methodologies addressed to each of the topics prescribed in s 52T(1).
>
> We consider that there are a number of factors intrinsic to s 52T which, in this particular context favour option (b):
>
> (a) The non-exhaustive exposition of the topics required to be covered – a reference to the "must include" in s 52T(1).
>
> (b) The slightly informal structure of s 52T(1)(c) – "regulatory processes and rules, such as ...". To be noted is the absence of a requirement for *all* "regulatory processes and rules" to be addressed.

216 *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [69]-[70] (footnotes omitted).

> (c) The "reasonably practicable" limitation in s 52T(2), with its implicit reference to the tight timetable imposed on the Commission in relation to the publication of input methodologies.
>
> (d) Most significantly, the absence of a direct and explicit reference to the starting price resets in s 52T.
>
> All of these aspects of the statutory text tell against a construction of the section which requires the input methodologies to address the particular and very important, but not explicitly identified, topic of starting price resets.

[357] Finding that the clearest guidance is the language of s 52T(1) itself, and the absence of any reference to starting prices, the Supreme Court concluded:[217]

> If the Commission wished to publish an input methodology, it was entitled to do so. We are, however, satisfied that s 52T did not impose on the Commission an absolute obligation to address starting price resets in the published methodologies.

[358] Before us, Mr Galbraith placed considerable reliance on the Supreme Court's acknowledgement that if the Commission wished to publish a SPA IM, it was entitled to do so.

[359] The submission was, in effect, that the Supreme Court had, explicitly or implicitly, reached the view that the "materially better" appeal on the SPA IM would be heard by us. It would be for us to decide whether the SPA IM proposed by Vector was materially better. Implicitly, we could make that materially better decision by reference to the "increased certainty" argument that relied on the status of the SPA being an IM, rather than any change to its substantive content. We therefore need to consider explicitly whether that is what, in fact, the Supreme Court held as the approach we have taken thus far might be considered to be inconsistent with that.

[360] Mr Brown's submission to us, notwithstanding the Commission's acceptance in the Supreme Court and before us that it could voluntarily set a SPA IM, was that the Commission was most unlikely, and in fact almost certainly would not, ever make such an IM. As we understood it, that proposition flowed from the Commission's view of the relationship between IMs as required by s 52T, and the nature of the decisions called s 52P determinations. From our reading of the

[217] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [76].

Supreme Court's judgment, it is not clear to us that that position was discussed. Having said that, there is clearly an indication at [77] of the Supreme Court's judgment that the Commission had made reasonably plain its likely approach to these appeals:[218]

> Vector's appeals against the published input methodologies include the contention that they should be amended to address starting price resets. Mr Brown was not disposed to accept that this contention could be resolved in favour of Vector on the appeals even if the High Court concludes that the input methodologies would be "materially better" if amended in the way proposed by Vector. This point was not pursued in any detail in argument and the underlying basis for Mr Brown's stance was not examined. Given the absence of detailed argument on the point, we are not in a position to resolve it one way or the other.

[361] More significantly, it would not appear that it was clear in the Supreme Court that the SPA IM Vector now seeks would be on all fours with the Commission's s 52P SPA process. It is that fact which leads us to conclude that the s 52Z(4) "materially better" test is not satisfied here. Hence we do not find the Commission's acceptance of the possibility of a SPA IM in the Supreme Court, or any implication the Supreme Court might have taken from that, of particular significance.

A SPA IM would not increase certainty

[362] In any event, we are not persuaded by the substance of Vector's "increased certainty" argument.

[363] First, we note and agree with the Supreme Court's assessment of the effects of the way in which s 52T IM and s 52P determinations work together. That is, and as the Supreme Court found, simply making a material matter the subject of an IM, as opposed to a s 52P determination, does not give the degree of additional certainty that Vector asserted.

[364] We also note that Vector now has, as a result of the s 52P determinations that have now been made or anticipated, the very certainty, in a substantive sense, that it had argued for. That is suppliers now know exactly how the Commission has approached and will approach its task of resetting and setting DPPs. As both the

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[218] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [77].

Court of Appeal and the Supreme Court anticipated, suppliers now have the certainty of the Commission's s 52P determination providing them with all the information Vector has ever sought from a SPA IM. To that extent, and at this point in the process, the SPA IM as sought by Vector adds nothing.

[365] We therefore dismiss Vector's SPA appeals. We note that, in doing so, we have not responded to some of the detail of the Commission's arguments that relied on distinctions it drew between appeals under s 52T(1) and (2). Given the nature of the relief Vector sought, we found those distinctions more than a little difficult to follow. They really go to underpinning the Supreme Court's decision that a SPA IM was not required and are not helpful in this context.

Record issues

[366] We note finally as regards this appeal that much was made, by the Commission, both in its strike-out application and as regards the substance of Vector's appeal, of the inappropriateness of including "post-December 2010 SPA IM issues" in the record before us. As matters transpired, that issue came to nothing. The essential point was that Vector was not wishing to engage before us in a debate about the merits of one or another particular SPA methodology but rather in one about the status of the Commission's SPA methodology. Both the Commission and Vector relied on post-December 2010 SPA IM consultation materials, particularly to explain (Vector) and to respond to (the Commission) that very argument. That they did so was, in our view, appropriate. Indeed we think that the record for these appeals could well include material "before" the Commission in what it regarded as a separate s 52P process. The point we are making is that in reality that was not a "separate" process at all, just as Clifford J found there were not separate processes for the various industry IM determination decisions in his *Wellington International Airport Ltd v Commerce Commission* decision.[219] Quite clearly, the Commission's decisions on IMs were influenced by the decisions it was at the same time making on s 52P determinations, and all parties were aware of that. This may be something for

[219] *Wellington International Airport Ltd v Commerce Commission* HC Wellington CIV-2011-485-1031, 22 December 2011 at [160] and [180].

the Commission to bear in mind in the future. We think it is a substantive point which merits some consideration.

[367] In December 2010 – when in reality the substance of the decisions on the IMs were made – the Commission did not have before it its later conclusions on the DPP process, which Vector now wishes to see made a SPA IM. Having regard to the legislative intent behind the "closed record" provision, we also think it would be anomalous were an IM now to be made on the basis of matters that the Commission did not finish considering until its 28 February 2013 decisions on its s 52P DPP determinations.[220] In our view, both the Supreme Court and the Court of Appeal clearly upheld the submissions of the Commission, particularly as regards the transitional implementation of Part 4 regulation for EDBs and GPBs, on the nature of the relationship between the relatively early s 52T IM determinations and the much later s 52P DPP determinations. That consideration also supports our more general conclusion as to the anomalous nature of us now accepting Vector's appeal and, in effect, determining a SPA IM by reference to decisions made by the Commission after December 2010 and in a different context.

[220] Decisions [2013] NZCC 4 and [2013] NZCC 5.

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PART 5 – THE ASSET VALUATION APPEALS

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Asset valuation in Part 4 regulation

[368] The asset valuation IMs provide the methodology for determining the regulatory value of the assets used by a firm to provide regulated goods and services. Those assets constitute the regulatory asset base, or the RAB as it is known.

[369] To recap, under Part 4 price-quality regulation[221] the RAB value – in conjunction with the cost of capital determined pursuant to the cost of capital IM – sets maximum allowable returns *on* capital. The RAB value also provides the basis for determining the return *of* capital required by a supplier in each period (to cover depreciation in asset values). These two elements, the required return on and of capital, are known as a supplier's capital costs. A supplier's capital costs, together with other allowable costs, set maximum allowable revenues using the BBAR formula reflected in the relevant s 52P determinations.

[370] Under Part 4 ID regulation, and again in the manner reflected in the relevant s 52P determinations, the RAB value is used to measure the return on investment, or ROI, a supplier is required to disclose annually.

[371] The Commission's approach to setting the RAB value of assets acquired after its determination of the initial RAB is relatively straight forward and is not challenged. Such assets will be brought into the RAB at a value equal to their cost.[222] That value will be adjusted each year for CPI indexation with the resulting

[221] Be it DPP/CPP or IPP regulation.
[222] In CPP and IPP regulation the regulator will have interrogated a supplier's capex proposals, so

revaluation gains to be treated (consistent with the use of a nominal WACC[223]) as income when setting or monitoring prices and for straight line depreciation based on physical asset lives.

[372] Setting the RAB value of assets already in existence at the commencement of Part 4 regulation, ie the initial RAB value, is more difficult and, as reflected by these appeals, highly contentious.

[373] In the building blocks approach which underpins Part 4 regulation, costs are estimated, as far as possible, by reference to what would occur in a workably competitive market. For instance, the cost of capital is estimated based on the return required by diversified investors in a business with the risk characteristics of the regulated business.

[374] However, this approach fails when it comes to estimating initial RAB values. In a workably competitive market the value of a business' assets can be estimated by the value of the expected revenue stream. But in building blocks regulation the task is to set the revenue stream based on, among other things, asset values which gives rise to a circularity. That circularity has to be broken. Another means is needed to value the business' assets.

[375] A range of approaches is available. The question becomes which approach to adopt.

[376] The cost of a resource (for example an asset base) is often measured by economists according to the amount that it could earn in its most valuable alternative

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that the cost of those assets will have been subject to regulatory scrutiny. In ID and DPP regulation that is not the case. The Airports asset valuation IM deals specifically with future acquired land, and when such land may be included in the RAB.

223 The Commission explains the relationship between the use of a nominal WACC and the treatment of revaluation gains, including for inflation indexation, in the EDBs-GPBs Reasons Paper, at [2.8.14], 3/7/001028 in the following terms:

> As noted above (paragraph 2.6.28) FCM requires that regulated suppliers are compensated for the impact of economy-wide inflation over time. Where a nominal cost of capital is used, the value of any existing asset in the RAB does not need to be revalued to reflect changes in economy-wide inflation for the suppliers financial capital to be maintained in real terms. Alternatively, however, regulated suppliers can also be compensated for inflation by applying a cost of capital calculated in real terms and indexing the value of the RAB by the CPI. The two approaches are equivalent in present value terms when assessed over the lifetime of the assets (footnotes omitted).

use, as this is the amount that must be forgone when a resource is used in a particular way. This is commonly known as a resource's opportunity cost.

[377] That approach can be used with respect to land forming part of a RAB. But, the Commission argues, valuations based on opportunity cost (ie the value of the asset in its most valuable alternative use) should not be used in the initial valuation of specialised (non-land) assets in the RAB. Being specialised, or sunk, the alternative uses are limited or non-existent and the resultant regulatory values of such assets, and therefore the associated returns, would be too low to provide sufficient incentives for investment. We discuss that view in Part 5.3 of this judgment.

[378] Rather regulators generally value specialised assets in the initial RAB by reference to an external, usually a form of accounting-based, valuation standard.

[379] The key types of accounting-based approaches are historic cost-based methodologies and replacement cost-based methodologies.

[380] Historic cost-based methodologies are based on the original cost of the existing assets and can be applied with or without indexation. Those methodologies that do not involve indexation are referred to as depreciated historic cost (DHC), whereas those that are indexed – often by the CPI – are known as indexed historic cost (IHC). Replacement cost-based methodologies, such as optimised depreciated replacement cost (ODRC), are instead based on the lowest cost of purchasing modern equivalent assets today that can deliver the same set of services as the existing assets. Optimised deprival value (ODV) is another well-known valuation methodology that has been used in New Zealand by regulated and unregulated firms, and in practice is largely derived from ODRC. It therefore typically results in similar valuation outcomes.

[381] An important consideration for a regulator is, therefore, whether to use a historic or replacement cost-based methodology to determine initial RAB values.

[382] Once set, the initial RAB values need to be rolled forward. A key feature in that exercise is the significance of the treatment of revaluation gains as income.

[383] Because a supplier's allowed maximum revenue (or assessed return) is derived in part from the value of the RAB, an increase in valuation directly affects the level of allowed revenue. In other words, in the absence of a regulatory constraint a regulated supplier could increase its allowed revenue simply by revaluing its assets, without any increase in investment or efficiency. Higher profits resulting from such a revaluation would be a windfall gain rather than a reward for superior performance, which is contrary to the long term benefit of consumers, and to the objective in s 52A(1)(d) of limiting a supplier's ability to extract excessive profits. In *Vodafone New Zealand Ltd v Telecom New Zealand Ltd*,[224] the Supreme Court referred favourably to a 2003 article, *Replacement Cost Asset Valuation and Regulation of Energy Infrastructure Tariffs*.[225] In that article Professor Johnstone (referring to ODRC as DORC) described the phenomenon in the following terms:

> *(iii) DORC Provides Existing Asset Owners with a Free Lunch*
>
> Under the regulators' tariff formula (3) each dollar granted in RAB locks in place a future tariff stream with present value (at discount rate *r* – WACC) of one dollar. By writing up the value of existing assets to DORC, the asset owner gains the amount of that write-up (revaluation) in NPV. This NPV windfall – and accordant share price increase – is achieved by a mere book entry with no actual cash outlay.

[384] Where a nominal WACC is used, the phenomenon is addressed by revaluation gains usually being treated as income in the context of regulated markets. An increase in valuation increases the allowed maximum revenue, but this is off-set by treating the increase as income also.

[385] Going forward, that approach is not controversial. What is controversial here (and not at all straight forward) is whether, and if so how, to take account of the possibility that an ODV upon which the initial RAB value is based might incorporate revaluation gains that had not in the past been, and would not in the future be, treated as income.

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[224] *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153.

[225] David Johnstone "Replacement Cost Asset Valuation and Regulation of Energy Infrastructure Tariffs"(2003) 39(1) Abacus 1.

The asset valuations appeals – an overview

[386] With the exception of the Airports' land, the asset valuation IMs provide for initial RAB values to be based on what the Commission described as "existing regulatory valuations", namely the values "disclosed" – in the case of all suppliers except Powerco and Vector (Auckland) – or "determined" – in the case of Powerco and Vector (Auckland) – in 2009 under the regulatory regimes then in place.[226] Very much in summary those valuations were:

(a) in the case of the EDBs, 2004 ODV valuations adopted as initial values for the Part 4A thresholds regime, as updated to disclosure year 2009 in the manner provided by that regime;

(b) in the case of Powerco and Vector as controlled GPBs, the 2002/2003 ODV valuations used by the Commission for price control purposes under the 2008 Gas Authorisation, as updated to 2009 for price control purposes;

(c) in the case of the uncontrolled GPBs, including Vector's Natural Gas Corporation (NGC) GTB and GDB assets purchased by Vector (Vector NGC), GAAP values as disclosed in 2009 being, in turn, a variety of earlier valuations updated to 2009; and

(d) in the case of the Airports' non-land assets, by reference to their existing regulatory valuations as disclosed in their 2009 disclosure financial statements.[227]

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[226] See Airports Reasons Paper at [4.1.7], 2/6/000663; EDBs-GPBs Reasons Paper at [4.1.8], 3/7/001069; That is:

(a) for the EDBs, ID under the Part 4A requirements, continued on a transitional basis by s 54W;
(b) for the controlled GPBs, price control under Part 5, continued on a transitional basis by ss 55G and 55H;
(c) for the uncontrolled GPBs, ID under the Gas ID Regulations, continued on a transitional basis by s 55J; and
(d) for the Airports, ID under the Airports ID Regulations, continued on a transitional basis by s 56F.

[227] The Airports asset valuation IM defines the phrase "2009 disclosure financial statements" to mean the disclosure financial statements completed by an Airport under reg 4 of the Airports ID Regulations for the accounting period (as defined in reg 2(1) of those regulations) ending in 2009: Decision 709 at cl 1.4, 1/1/000004.

[387] The asset valuation IMs then provide for those base or reference valuations to be subject to a range of adjustments.

[388] For the Airports' land, the Commission required the Airports to use a market value alternative use (MVAU) method and undertake a 30 June 2009 valuation by reference to the land valued in their 2009 disclosure financial statements.

[389] Powerco (in its capacity as a GPB only), Vector (as both an EDB and a GPB) and the Airports (in relation to their non-land assets) all say that the relevant asset valuation IMs should generally provide for initial RAB values to be determined by new replacement cost valuations (ODVs in the case of the EnergyAppellants, ODRCs in the case of the Airports)[228] as at the last day of the 2010 disclosure year (30 June 2010).[229]

[390] Powerco and Vector acknowledge that the resulting RAB values for the EDBs and GPBs will be higher, and materially higher, than those which the Commission's asset valuation IMs produce. The Commission has calculated that increase, in terms of the EDBs only, as equating "to an increase in value across the sector, for no investment outlay, of about $1.9 billion".[230] In submissions, Vector does not challenge the Commission's assessment of the uplift involved. Rather Vector explains that uplift is largely comprised of increased replacement costs in the intervening period (we infer, since 2004 when the base values for EDBs were calculated), applies across the sector and affects individual suppliers differently. The position with the GPBs is less clear. Vector suggests, in submissions, a figure of $365 million (in 2008 values) as a measure of the difference between what it says are the correct values, and the Commission's proposed values. Powerco acknowledges that its initial RAB values will also increase, but – consistent with its view that an increase of any size is not of itself a relevant consideration when determining the correct valuation approach – declines to comment on the size of any increase involved. Air NZ submits that some $[confidential] of revaluation gains

[228] ODVs and ODRCs are identical, save that ODVs apply a final, economic value or EV, assessment once the ODRC value is determined. That difference is not material to these appeals.

[229] See Powerco Appeal 248 at [8]-[12]; Vector Appeal 258 at [3]; Vector Appeal 259 at [EDS.AV(1)]; AIAL Appeal 820 at [4]; CIAL Appeal 251 at [11]-[14]; WIAL Appeal 249 at [11.1].

[230] EDBs-GPBs Reasons Paper at [2.44], 3/7/001280.

($[confidential] for non-land assets and $[confidential] for land assets) were not treated as income for price-setting purposes between 2002 and 2009.

[391] Incorporation of revaluation gains into initial RAB values is not, the regulated suppliers argue, illegitimate or in any way contrary to the provisions of Part 4. Rather, such new valuations (including revaluation gains) are equivalent to valuations that would be produced by a workably competitive market and therefore properly reflect and will give effect to the Part 4 purpose statements.

[392] The general proposition, as expressed by AIAL, is that values and prices in workably competitive markets reflect current, not past, capital costs.[231] Thus, in the Airports ID context, new valuations would meet the purpose of Part 4 because they provide an accurate measure of what the assets would currently be worth in a workably competitive market, enabling interested parties to assess:

(a) whether the Airports are limited in their ability to extract excessive profits; and

(b) whether the Airports have incentives to innovate and to invest, because returns would be assessed against a measure of current replacement value.

[393] In his oral submissions, for Powerco, Mr Hodder made the same or a very similar point in the following way:

> ... there's a fundamental proposition which I may as well raise at this stage, although it comes more in terms of the experts. If you have an efficient allocation of resources which you're expecting from a competitive market, then it may be, if the real value of assets has gone up, the prices have to go up, you have to contemplate the possibility that prices will go up and that's what effectively the revaluation process would have involved. It meant that those assets that were devoted to, in this particular case, gas distribution, were worth more than they used to be and therefore users of them should be paying more for them because they were worth more.

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231 Oxera *Valuation of Airport Assets: Expert Report Prepared at the Request of New Zealand Airports Association* (12 July 2010) at [3.8], 58/565/029705.

[394] The Commission was wrong, therefore, to assume that a wealth transfer offending against the s 52A(1)(d) outcome was involved if revaluation gains were included in opening RAB values.

[395] For the Commission, an important aspect of the approach to determining the asset valuation IMs was its concern to ensure that the initial RAB values did not inappropriately – by its assessment – incorporate revaluation gains. In the Foreword to the EDBs-GPBs Reasons Paper the Commission made that concern clear in the following terms:[232]

> In the case of asset valuation, all regulated suppliers have strongly argued for asset valuations at the start of the Part 4 regime that are likely to be significantly higher than the regulatory valuations already in place. In the case of electricity distribution businesses, adopting this approach would legitimise price increases that would, based on what we believe to be a very conservative assessment, result in transfers from consumers to suppliers of almost $2 billion for no corresponding benefit. The Commission was not convinced by this proposition.

[396] A similar concern is evidenced in the Foreword to the Airports Reasons Paper:[233]

> Regulated suppliers have argued for asset valuations at the start of the Part 4 regime that are likely to be significantly higher than the regulatory valuations already in place. Adopting this approach could legitimise price increases by making it more difficult for interested persons to assess whether the suppliers are limited in their ability to extract excessive profits. On the other hand, airlines and their representatives argued for establishing the asset value by rolling forward an earlier, and lower, valuation from 2002. The Commission was not convinced by either proposition; it has instead selected an approach that is based on existing regulatory valuations, which airports have disclosed under information disclosure regulations.

[397] Powerco's position is that the impact of any such revaluation gains is irrelevant. Vector acknowledges the possibility of a "price shock" and proposes – in very general terms and without including this in its substitute methodology – that any price shock could be smoothed. The simple point from Vector's standpoint is that the asset valuation IMs should provide for new ODV valuations as at 1 July 2010 and that the results of that valuation process should be accepted as the relevant RAB values.

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[232] EDBs-GPBs Reasons Paper, 3/7/000962.
[233] Airports Reasons Paper, 2/6/000587.

[398] The Airports argue similarly that, for specialised assets, initial RAB values prepared on the basis of new ODRCs would provide the appropriate basis on which to measure profitability (ROI) in the future. Past revaluations are irrelevant when setting a RAB for a new regime.

[399] In the case of land – which is of particular significance for the Airports given the makeup of their RABs – the Airports agree, subject to what is said below, with the Commission's MVAU approach. But the Airports say that the valuation date should be as at 1 July 2010. The Airports challenge other specific land aspects of their asset valuation IMs, namely the exclusion from the RAB of:

(a) assets held for future use until commissioned;[234]

(b) work under construction until commissioned, and the suspension of capitalisation of holding costs if construction is suspended; and

(c) subject to specific exceptions,[235] past land conversion costs.

[400] After flirting with a more radical proposal,[236] Air NZ reverted to its original proposition that the Commission should have based its initial RAB value on values determined in the 2002 Airports Inquiry and should have excluded all revaluation gains not treated by the Airports as income for price setting purposes.

[401] Thus, central to all the asset valuation IM appeals, except the Airports' land appeals, is the proposition that the Commission's analysis of and response to revaluation gains was wrong, both legally and factually.

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[234] Assets held for future use must be separately disclosed, together with accumulated holding costs, outside the RAB. Once such assets are commissioned, they enter the RAB, together with holding costs.

[235] AIAL's seawall and northern runway and WIAL's runway end safety area (RESA).

[236] In its original notices of appeal Air NZ argued for those 2002 values. Influenced by *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2011] NZSC 138, it argued in its written submissions for the adoption of values as at the date the assets of the Airports had originally vested in them (AIAL, 1988; WIAL, 1990 and 1992; CIAL, 1988) and for the exclusion of all subsequent revaluations not taken into account as revenue. Before us Mr Farmer formally withdrew that approach.

[402] WELL also appeals the asset valuation IM but, distinct from the above appeals which all challenge the valuation of the initial RAB, it argues more narrowly that the asset valuation IM should include a methodology for forecasting capex. Reflecting the distinctive nature of WELL's appeal, as compared with the other asset valuation appeals, it is considered separately in Part 10 of this judgment.

The theoretical basis of the asset valuation IM appeals

[403] Powerco and Vector both argue from somewhat different conceptual bases that a materially better asset valuation IM would use new, 2010, ODV replacement cost valuations to determine initial RAB values. Such an IM would be materially better as:

(a) the workably competitive markets standard in s 52A(1) requires new 2010 ODVs; and/or

(b) the existing regulatory valuations are inadequate.

[404] Although they argued from different conceptual bases, at the hearing Powerco and Vector adopted each other's arguments.

[405] In general terms, Powerco largely bases its merits appeal on an economic analysis of workably competitive markets advanced by its expert adviser, Mr Balchin. At the same time, it challenges the regulatory valuations used as base valuations in the asset valuation IMs as being "non credible". Notwithstanding the theoretical – in an economic and not pejorative sense – basis of that argument, Powerco only seeks a new valuation in its capacity as a GDB. As explained to us by Mr Hodder, we understand that decision to be an essentially pragmatic one. That is, Powerco has decided that the RAB values produced by the EDBs asset valuation IM were "good enough", especially as Vector was appealing that IM.

[406] Vector's argument is that the Commission should have adopted new ODVs for the start of the new regulatory regime because the existing valuations the Commission chose were not fit for purpose. Vector formulates this challenge in a number of ways, variously claiming that Part 4 was a new, forward-looking regime,

requiring new valuations, that the Commission's choice was based on arbitrary or unprincipled reasoning, the choice was inconsistent with the workably competitive market outcomes identified in the Part 4 purpose statement and that the existing valuations were developed for a different purpose (not price control). In making these arguments, Vector advances an analysis of the relevance of workably competitive market valuation outcomes for asset valuation issues under Part 4, equivalent, if not identical, to that of Powerco in reliance on Mr Balchin.

[407] Reflecting that argument, Vector's preferred relief – which Powerco adopted – would require new 2010 ODVs to be undertaken to set initial RAB values (Vector's Alternative 1). Such valuations would result in robust and principled initial RAB values that would be materially better at promoting the s 52A(1) outcomes. Those valuations were to be:

(a) in the case of the GPBs, determined in accordance with a new 2010 ODV handbook to be formulated by the Commission based on its *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base – Valuation Methodology* (2005 Gas Authorisation ODV Guidelines); and

(b) in the case of the EDBs, determined in accordance with the methodology set out in PwC and Sinclair Knight Mertz's *Report to the Electricity Networks Association: Revised ODV Handbook* (PwC 2010 ODV Handbook),[237]

with each of those methodologies to be updated and finalised by the Commission following a process involving the report of a valuer and further consultation with regulated suppliers.

[408] The Airports (noting that Mr Hodder represents both WIAL and CIAL whose case he argued together and who we refer to as WIAL/CIAL) all rely on advice from

[237] PwC and Sinclair Knight Mertz *Report to the Electricity Networks Association: Revised ODV Handbook* (9 August 2010), 59/588/030319 (PwC 2010 ODV Handbook).

a group of experts, including Mr Balchin, on the significance of the workably competitive markets standard for asset valuations.[238] As in the case of the EDBs and GPBs, the fundamental argument for specialised assets is that a materially better Airports asset valuation IM would provide for 2010, replacement cost (ODRC) valuations for specialised assets.

[409] Air NZ's focus is very much on the inappropriate inclusion of revaluation gains not treated as income in valuations adopted by the Airports under the prior regulatory regime. Air NZ's particular concern is how this had given rise to, and disguised, excessive profits. Hence its preference for the 2002 valuations, and a limit on the incorporation of subsequent revaluation gains.

Vector's Alternatives 2 and 3

[410] For its part, and taking a more pragmatic approach, Vector argues that, if we are not persuaded to adopt Vector's Alternative 1, we should direct the Commission to amend the EDBs and GPBs asset valuation IMs so that initial RAB values are derived, or "back-solved", from the prices that applied immediately prior to the starting price adjustments set by the Commission in November 2012 for the EDBs and in February 2013 for the GPBs (Vector's Alternative 2).

[411] Finally, if we are not persuaded that either Vector's Alternative 1 or Vector's Alternative 2 would produce materially better GPBs and EDBs asset valuation IMs, then, as a third alternative (Vector's Alternative 3), we should direct the Commission to amend the EDBs and GPBs asset valuation IMs (Vector's Alternative 3):

(a) in the case of the EDBs so that:

(i) optimisations are reversed (rather than reapplied) as explained in Part 5.6; and

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[238] J Balchin, J Mellsop, K Murray and S Shepherd *Commerce Commission Input Methodologies Emerging Views (Airport Services) Post-Workshop submission: Economic principles for the valuation of airport assets under the Commerce Act* (8 March 2010), 57/523/029005.

(ii) easements acquired between 1 January 1993 and 1 April 2004 are revalued to market value as at 31 March 2009; and

(b) in the case of the uncontrolled GPBs, so that consumer price index indexation is applied from 2003 rather than 2005; and

(c) in the case of all the GPBs so that:

(i) the initial RAB is adjusted for finance during construction by multiplying the RAB for GPS system fixed assets by 1.0245;

(ii) optimisations are permitted to be reapplied as at 30 June 2009; and

(iii) updated multipliers for hard rock and business district installations, and traffic management adjustments, are applied or reapplied (as the case may be) as at 30 June 2009.

[412] Powerco does not engage with either of Vector's Alternative 2 or Vector's Alternative 3.

Our approach to the asset valuation appeals

[413] We deal first in Parts 5.3 and 5.4 of this judgment with the appellants' arguments that materially better asset valuation IMs would use new, 2010 ODV/ODRC valuations. In Part 5.3, given its centrality to the appellants' arguments, we deal first with the aspect of the asset valuation appeals that relates to the implications of the workably competitive markets standard, either as advanced by Powerco and the Airports in reliance on Mr Balchin and others, or as advanced by Vector (Vector's Alternative 1) in terms of its more particular challenge to existing regulatory valuations.

[414] In Part 5.4 we consider Powerco, Vector and the Airports' argument that the prior regulatory valuations adopted by the Commission as base values were, for a variety of reasons, unfit for purpose so that, again, the asset valuation IMs were in

effect required to set initial RAB values based on new 2010 replacement cost (ODV) valuations (Vector's Alternative 1).

[415] Secondly, in Parts 5.5 to 5.6 of this judgment, we address Vector's Alternatives 2 and 3, which raise more specific issues.

[416] Thirdly, we consider the separate challenges by the Airports to the way the Airports asset valuation IM addresses land issues, noting again the relevance of the appellants' workably competitive markets standard argument in this context as well.

[417] Finally, we consider Air NZ's challenge to the Airports asset valuation IM.

[418] Before doing this, we address the regulatory history of the EDBs, the GPBs and the Airports, as that history relates in particular to issues raised by these asset valuation IM appeals.

5.2 REGULATORY HISTORY

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Introduction

[419] The appellants and the Commission all emphasise the importance for these appeals of the history of the regulatory treatment of asset values.

[420] For Powerco and Vector, that history is said to support their argument that the Part 4 regime was a fresh start, therefore requiring new valuations. For its part, the Commission emphasises the continuity it sees as existing between the old and the new regimes for gas and electricity, and therefore the validity of its approach.

[421] For the Airports, a proper understanding of that history is said to support their argument, based on the differences between the environment the Airports operated in compared to that of the EDBs and GPBs, that the Commission was wrong to take the same approach to asset valuation issues in both instances.

[422] To Air NZ, that history shows that the previous regime had failed to discipline the Airports pricing of specified airport services and, in particular, had allowed the treatment of revaluations to disguise true rates of return.

[423] We are not certain the regulatory history is as determinative of these appeals as the parties contend. We are certain that it is not feasible in this judgment to go into that history to the level of detail the parties do in their submissions to us.

Nevertheless, it is important that we set out our understanding at an appropriate level of detail. That will enable the parties to assess whether we have, from their perspectives, appreciated the significance of that history for their arguments. Moreover, the resulting narrative shows that the issues raised by these appeals have been under scrutiny for many years now. An awareness of that fact reinforces the importance of these appeals, being as they are the first occasion on which the merits of the regulators' (now the Commission's) approach to these issues has been able to be directly challenged.

[424] We deal first with the history of the regulation of the EDBs and GPBs, then with that of the Airports. Regulatory history played a far larger part in the appeals against the EDBs and GPBs asset valuation IMs than it did in the appeals against the Airports asset valuation IMs.

Electricity and Gas

[425] The history of the regulatory approach to asset valuation issues, and within that the use of an ODV methodology, in the electricity and gas distribution sectors – prior to the Commission's consideration of those issues when determining the asset valuation IMs – is best understood by reference to:

(a) the Electricity (Information Disclosure) Regulations 1994 (the 1994 Electricity ID Regulations) and the 1997 Gas ID Regulations;

(b) the, now repealed, Part 4A thresholds regime, as it applied to EDBs; and

(c) price control of Powerco and Vector (Auckland)'s GDBs, as provided for in the Commission's October 2008 Gas Authorisation.

[426] We set that history out – in some detail we acknowledge – in the Appendix to Part 5 of this judgment. That detail responds to the detail of the submissions we heard. By reference to that Appendix, we think that history can be summarised for our purposes as follows.

[427] The regulatory approach to the use of ODVs for asset valuation purposes in the electricity and gas sectors prior to the implementation of Part 4 had three phases.

[428] In the first phase, in ID regulation under the Electricity Act 1992, and then, for EDBs, under the Part 4A disclosure requirements (the 2004 Electricity ID Requirements), the MED and subsequently the Commission took an ODV approach for two basic reasons:

(a) because of a lack of reliable historic cost information; and

(b) because they considered that an ODV approach mimics outcomes in competitive markets.

[429] From the outset, the 1994 Electricity ID Regulations mandated that an ODV methodology be used for valuing assets each year and required the use of an official handbook, the *Handbook for Optimised Deprival Valuation of Electricity Line Businesses* (the 1994 MED Electricity ODV Handbook).[239]

[430] No asset valuation methodology was mandated by the 1997 Gas ID Regulations. In January 2000 MED published the *Draft Handbook for Optimised Deprival Valuation of System Fixed Assets of Gas Pipeline Businesses* (the 2000 MED Draft Gas ODV Handbook)[240] for consultation. That Handbook anticipated revised Gas ID Regulations, but was never finalised. Nevertheless, under the 1997 Gas ID Regulations, the ODV approach became the de facto approach used by gas suppliers, although not on a regulated mandatory basis. Both sets of regulations required disclosure of a wide range of information, to enable a firm to calculate its annual accounting rate of profit (ARP) by reference to a specified formula.[241] In that calculation, revaluation gains were treated as income.

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239 Commerce Commission *Handbook for Optimised Deprival Valuation of Electricity Line Businesses* (23 June 1994) [1994 MED Electricity ODV Handbook].

240 Ministry of Economic Development *Draft Handbook for Optimised Deprival Valuation of System Fixed Assets of Gas Pipeline Businesses* (1 January 2000), 43/357/021404 [the 2000 MED Draft Gas ODV Handbook].

241 Electricity ID Regulations, sch 1, pt 2(1)(c); Gas ID Regulations, sch 1, pt 2(1)(c).

[431] In the second phase, during the development of the Part 4A regulatory framework, and during the process that led ultimately to the Gas Authorisation, the Commission explicitly endorsed the approach Powerco, with Vector's support, and the Airports advocate in these appeals.

[432] Part 4A, which came into force in May 2001, introduced the thresholds regime for the EDBs. Developing that regime required the Commission to address asset valuation issues. Section 57ZD of Part 4A required the Commission to "carry out a review of valuation methodologies for line businesses' system fixed assets as soon as practicable". That statutory direction initiated a process of review that was, reflecting the complexity and/or the controversy associated with this topic, still in progress when the Commission began consulting on the IMs in December 2008. For a large part of that period the Commission favoured an ODV approach to asset valuations. Moreover, those valuations were to be regularly updated. At the same time the Commission's consistent approach, throughout that period and subsequently, was that revaluation gains were to be treated as income for pricing purposes.

[433] An October 2002 Commission discussion paper[242] foreshadowed much of the Commission's analysis on asset valuation issues in the IM determinations.

[434] In discussing the ODRC/ODV approach the Commission touched briefly on underlying economic theories, anticipating the subsequent debate which is at issue here. ODRC was claimed, the Commission noted, to have efficiency benefits. ODRC, mimicking behaviour observed in competitive markets, establishes investments a hypothetical efficient new competitor would make. In that way it sets maximum revenues and prices an incumbent can charge while avoiding creating incentives for inefficient by-pass. But, as the Commission also noted, others disputed the theoretical justification for ODRC, especially where competition was unlikely.[243]

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[242] Commerce Commission *Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets: Discussion Paper* (1 October 2002).

[243] At [5.34]-[5.35].

[435] On the revaluation issue the Commission commented:[244]

> If revaluations caused by inflation are not matched by income forgone, then a real WACC should be used (with the revaluations providing compensation for inflation). If revaluations are not treated as income (income forgone) and a nominal WACC is used to determine the return on capital, investors would earn more than their cost of capital. This discussion assumes that the inflation premium contained in the nominal WACC matches inflation in asset values. If it does not, investors may earn more or less than a normal rate of return.

[436] This passage is central to the subsequent debate between the Commission and the suppliers that the asset valuation IM appeals reflect.

[437] By August 2004 the Commission had determined new ID requirements under Part 4A, the 2004 Electricity ID Requirements, and prepared a new ODV handbook, the *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (the 2004 Electricity ODV Handbook) for the EDBs.[245] In a companion report to the Commission's 2004 Electricity ODV Handbook (the Electricity Lines Businesses Companion Report) the Commission recorded its view that an ODV methodology:

(a) Allowed valuations of system fixed assets to be prepared that were consistent with contestable market outcomes, thereby providing an implicit restriction on monopoly pricing as well as incentives for efficient investment.[246]

(b) Measured the economic value of system fixed assets to a lines business on the basis that the business operated in an efficient manner that was sustainable over time and did not enable the business to extract monopoly rents. To this end, the ODV method assumed a hypothetical operating environment where the relevant market was

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244 At [5.38].

245 Commerce Commission *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (30 August 2004), 45/378/022739 [the 2004 ODV Electricity Handbook].

246 Commerce Commission *Regulation of Electricity Lines Businesses: A Companion Report to the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (31 August 2004) at 6, 45/379/022806 [Electricity Lines Businesses Companion Report].

> contestable and there were no material barriers to entry into that market by an alternative service provider or efficient new entrant. In such a situation the incumbent lines business's revenue could not exceed the amounts customers would need to pay an efficient new entrant employing a sustainable, cost-reflective pricing strategy.[247]

[438] From December 2004 and for some time thereafter, the Commission was of the view the Part 4A EDB ODVs would be updated in the year preceding a thresholds reset: that would, based on the Commission's then timetable, be 31 March 2008, and every five years thereafter. In April 2006, that was described as a "final decision".[248]

[439] In January 2006, in an initial discussion paper on asset valuation issues during the Gas Authorisation process, the Commission commented in terms which reflect Powerco's position then and now, and which provide perhaps the Commission's clearest endorsement of the HNET approach:[249]

> Determining the ODV involves aggregating the component asset values of the network, using the lesser of ODRC or EV for each asset. The ODV methodology is designed to produce valuations for network assets consistent with contestable market outcomes, thereby providing an implicit restriction on monopoly pricing of services as well as incentives for efficient investment. Therefore the ODV method measures the economic value of system fixed assets to a business on the basis that the business operates in an efficient manner that is sustainable over time and is not able to extract monopoly rents.
>
> To this end, the ODV method assumes a hypothetical operating environment where the relevant market is contestable and there are no material barriers to entry into that market by an alternative service provider or efficient new entrant. In such a situation the incumbent business's revenue could not exceed the amounts customers would need to pay an efficient new entrant employing a sustainable, cost reflective pricing strategy.

[440] In October 2006, the Commission published its "final" decision confirming the use of an ODV methodology to set opening RAB values for the gas businesses the subject of the inquiry, set out the terms of that methodology and directed

[247] Electricity Lines Businesses Companion Report at [96], 45/379/022827.
[248] Commerce Commission *Valuation of the Regulatory Asset Base (Implementation Matters) for Distribution Line Businesses: Decision Paper* (13 April 2006) at [23]-[24], 47/387/023627.
[249] Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector Valuation of the Regulatory Asset Base Methodology Discussion Paper* (30 January 2006) at [102]-[103], 46/385/023397.

Powerco and Vector to prepare ODVs accordingly as at 30 June 2005.[250] In February 2007 the Commission confirmed that approach.[251] By April 2007 Powerco and Vector had finalised those 2005 ODV valuations.

[441] In the third phase, from the second half of 2007 onwards in the context of both the threshold regimes under Part 4A for the EDBs and the price control regime for the GPBs, the Commission moved away from its approach in the second phase (that which Powerco, with Vector's support, and the Airports advocate in these appeals).

[442] On a theoretical basis it argued that the HNET, being based on contestable markets theory, was inconsistent with the s 3(1) workable competition definition.[252] The Commission's move away from current, regularly updated ODVs also occurred:

(a) in the context of supplier concerns that the ODV methodology could produce under valuations, and volatile valuations (particularly if the ODV methodology was applied at regular intervals as the Commission proposed for Part 4A regulation of the EDBs); and

(b) in the context of the Commission's concern about revaluation gains.

[443] As noted, the Commission had always been of the view, both in terms of price control and ID regulation, that revaluation gains (or losses) needed to be treated as income or losses if they were to be added to RAB values. We think the practical implications of that requirement, as possibly affected by an ODV methodology, became very clear to the Commission during the course of the Gas Authorisation. Until then, the requirements of both the 1994 Electricity ID Regulations and the

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250 Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base – Methodology: Decisions Paper* (3 October 2006), 47/393/023815 [2005 Gas Authorisation ODV Guidelines].

251 Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector: Valuation of the Opening Regulatory Asset Base Valuation Methodology* (15 February 2007), 47/396/024113.

252 Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd: Draft Decisions Paper* (4 October 2007) at [243]-[246], 48/401/024278 [the October 2007 Draft Authorisation]; Commerce Commission *Update on the Review of the Information Disclosure Regime and Proposed Change to ODV Disclosure Date* (27 September 2007) at [1], 48/400/024191.

1997 Gas ID Regulations, and the Commission's Part 4A, 2004 Electricity ID Requirements, had – as it were – "looked after" the revaluation gain issue. That is because:

(a) those regulations, for disclosure purposes, required revaluations to be treated as revenue;[253] and

(b) those regulations did not, in a regulatory sense, set prices and revenues, meaning that the Commission had not (as it itself noted) analysed the actual price/revenue significance of unrealised revaluation gains.

[444] The Commission had recognised for some time, however, that it would need to address the significance of revaluation gains under Part 4A at some point. For example, in October 2005 the Commission commented on that issue in the following terms:[254]

> ...where ODV revaluations have lead to increases in the RAB value, then if ELBs have not taken these into account then they are likely to have earned what the Commission would deem to be excess returns. Prior to the threshold reset, this will emerge only where ELBs have breached their threshold and are subject to investigation. Otherwise these matters will not need to be reconsidered until the time that the threshold is reset and the Commission will form its views at that time.

[445] In September 2007 the Commission postponed a March 2008 ODV update for EDBs for ID purposes. That would happen in 2009, when the thresholds were reset. Moreover, the valuations to be used were rolled forward 2004 ODVs. At that point no final decision had been reached on regular ODV valuations. But the Commission was aware that, if average ODV changes were higher or lower than cumulative inflation, income and expenses, implications would arise. The Commission was, therefore, considering how "rolled forward valuations would be reconciled with ODV valuations in those years that a full valuation would be

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253 1994 Electricity ID Regulations and 1997 Gas ID Regulations.

254 Commerce Commission *Regulation of Electricity Lines Businesses – Valuation of the Regulatory Asset Base: Decision Paper* (13 October 2005) at [146], 46/383/023355 [October 2005 EDBs RAB Decision Paper].

required".[255] By December 2008, at the same time the Commission embarked on the process to determine the IMs, it decided not to require periodic ODV revaluations under Part 4A.

[446] Similar issues were reflected during the Gas Authorisation process.

[447] After Powerco and Vector finalised their 2005 ODV valuations in April 2007, Parsons Brinkerhoff Associates (PBA) acting on behalf of the Commission identified revaluation gains (relative to the 2002/2003 valuations of Powerco and Vector used by the Commission during the Gas Control Inquiry) of $137 million and $98 million respectively. Those revaluation gains were to be treated as income consistent with the approach taken in the Gas Control Inquiry. Not to do so would allow Powerco and Vector to receive significant unwarranted windfall profits at the expense of gas consumers "inconsistent with Part 5".[256] The Commission first proposed in *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd: Draft Decisions Paper* (the October 2007 Draft Authorisation) to amortise those revaluation gains over 44 and 50 year periods respectively. [257] Subsequently in October 2008, at much the same time as it embarked on the IM determination process, the Commission based the Gas Authorisation on Vector's revised 2003 ODV and Powerco's revised 2002 ODV, rolled forward to 2005. The 2005 ODVs were set aside and there was no need to amortise for 2002/03 – 2005 revaluation gains.[258]

[448] Thus, by the time Part 4 was enacted and was to be implemented the Commission had reached a similar position in both the electricity and gas sectors regarding the use of ODV valuations for opening RAB values and, in particular, the practice of periodic ODV revaluations. ODV values were, in the absence of reliable historic cost information, an acceptable way of producing a valuation at a given point in time, even if those values incorporated some element of revaluation gains not

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255 Commerce Commission *Review of the Information Disclosure Regime Companion Paper to the Exposure Draft of the Revised Information Disclosure Requirements* (20 December 2007) at [326].

256 The October 2007 Draft Authorisation at [E.51], 48/401/024211-2.

257 The October 2007 Draft Authorisation at [720], 48/401/024393 and at [724], 48/401/024395.

258 Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd: Decisions Paper* (30 October 2008) at [428]-[437], 50/423/025356-9.

treated as income for pricing purposes. But the Commission would, by the use of "historic" ODV values, seek to limit the extent to which that occurred. In the EDBs-GPBs Reasons Paper, the Commission notes that, in its December 2008 reasoning on roll-forward under Part 4A, it had described this approach as "indexed historic cost (IHC)".[259] In a footnote, the Commission then comments:[260]

> Strictly speaking this is not a true IHC value, which would be based on indexing and depreciating the actual (i.e. 'historic') cost of commissioning the assets. The starting point for the 2009 disclosed values is an earlier ODV valuation, which is deemed to be the indexed historic cost (IHC) value at that time (given records on the historic cost of all EDB assets are generally not available). However, appropriate records are available subsequent to that ODV valuation, to establish the IHC value of all assets added to the RAB since then. Over time, as all assets that were originally in the ODV become fully depreciated, the RAB value will become a true IHC value. Both the Commission and interested parties nevertheless refer to an earlier ODV rolled forward in this manner on an ongoing basis as 'IHC'.

[449] In the electricity sector that view had been reached largely in the context of ID regulation: the Commission had not yet reset price paths based on asset valuations. In the gas sector, however, that approach to valuation had been important in the price control decisions the Commission had made (on a building blocks basis) for Powerco and Vector (Auckland) in the Gas Authorisation.

Airports

[450] It is possible to deal with the history of the regulation of Airports as providers of airport services more succinctly. We do so by reference first to the relevant legislative framework, as it developed over time. Second, we discuss the significance of the Commission's inquiry between 1998 and 2002 whether price control should be imposed on any of the Airports.

[451] Until the 1980s, airports in New Zealand were generally owned and operated by or on behalf of the government (usually in the form of a joint venture between central and local government). The primary statutes governing airports were the Civil Aviation Act 1964 (now repealed) and the AAA.

[259] EDBs-GPBs Reasons Paper at [F2.3], 3/7/001331.
[260] At fn 624, 3/7/001331.

[452] The AAA was effectively an empowering enactment only, authorising local authorities (and others) to establish and carry on airports. The Civil Aviation Act 1964 contained a regulation-making power by which charges, fees and dues could be set for the use of airports.[261] Typically, airport charges were set as a specified percentage of the gross operating revenue of particular types of aircraft using the airport.

[453] The Airport Authorities Amendment Act 1986 facilitated the corporatisation of airports by allowing the Crown and local authorities to form and hold shares in airport companies. Incorporation of AIAL followed the enactment of the Auckland Airport Act 1987. CIAL was incorporated on 1 July 1988. The incorporation of WIAL followed the enactment of the Wellington Airport Act 1990. Two important provisions of the Airport Authorities Amendment Act 1986 were:

(a) section 4(3), which required (and still requires) an airport to be operated or managed as a commercial undertaking; and

(b) section 4A(1), which empowered (and continues to empower) an airport to set such charges as it from time to time thinks fit for the use of its airport or the services or facilities associated with it.

[454] Potential abuse of market power issues were addressed by:

(a) the possibility of regulation under the then new general price control provisions of the Commerce Act 1986; and

(b) a requirement that an airport consult with airlines using the airport before setting its charges (AAA, s 4(2)(a)).

[455] In 1997 there were three further significant amendments to the AAA.

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261 Civil Aviation Act 1964, s 13.

[456] First, the requirement to consult was expanded to include a requirement that an airport consult not only before fixing or altering the amount of a charge but also within five years after fixing or altering the amount of that charge.[262]

[457] Second, each of the Airports (because each met a revenue threshold) were required to consult with their substantial customers before approving capex equal to 20% of its assets.[263]

[458] Third, provision was made for ID regulations to be administered by the Secretary of Transport.[264] The Airports ID Regulations were subsequently promulgated. They required, amongst other things, disclosure of information relating to the Airports' respective asset bases and revaluations and the basis for allocating assets to identified airport activities. No valuation methodology was mandated, although the Airports were required to comply with GAAP. Furthermore, and unlike the ID regimes that had applied to the EDBs and the GPBs, the Airports were not required to disclose profitability indicators nor to treat revaluation gains as income in their disclosed accounts.

[459] The following convenient summary of the relevant GAAP requirements appears in the Airports Reasons Paper:[265]

> Reporting of asset values under GAAP is currently governed by the asset valuation accounting standard 'New Zealand Equivalent to International Accounting Standard 16' (NZ IAS 16). NZ IAS 16 applies to 'property, plant and equipment' and states in paragraphs 32-33 that the fair value of land and buildings is usually determined from market based evidence. If there is no market based evidence because of the specialised nature of the asset and the asset is rarely sold, an entity may estimate fair value using an income approach or a depreciated replacement cost (e.g. ODRC) methodology. Previous asset valuation standards included SSAP-28 (up to 2001) and FRS 3 (2002-2007). In the past, the requirements of the standards have accommodated a wide range of valuation techniques adopted by the airport companies, such as DHC, ODRC, ORC, market based comparisons, and capitalisation of income.

[460] As the Commission explained in the Airports Reasons Paper, which explanation was not challenged by the Airports, under GAAP the value of property,

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262 AAA, s 4B, inserted by s 4 of the Airport Authorities Amendment Act 1997.
263 AAA, s 4C, inserted by s 4 of the Airport Authorities Amendment Act 1997.
264 AAA, ss 9A-9D, inserted by s 4 of the Airport Authorities Amendment Act 1997.
265 Airports Reasons Paper at [4.3.21] and fn 189, 2/6/000680.

plant and equipment (all assets in the RAB) was required to be recognised initially in the balance sheet at cost and thereafter carried in accordance with either an historic cost model or fair value model, at the reporting entity's choice. Airports had a relatively wide discretion as to the approach they could use and the year in which they undertook the valuation. Each of the Airports adopted a fair value approach, whereby assets are valued on a depreciated replacement cost approach and an asset added after the date of the last replacement cost-based valuation is included at cost.[266]

[461] During the debate on the 1997 amendments to the AAA, the Government announced that it had decided that the Minister of Commerce should request the Commission to report:

(a) whether there was evidence of monopoly pricing by the Airports; and

(b) whether the then price control provisions of the Act should be imposed on any of the Airports.

That request was made in May 1998 and the Commission delivered a draft report in July 2001.[267] Land was to be valued at opportunity cost, determined on the basis of its highest alternative use value. Specialised or sunk assets, whose opportunity costs were non-existent, would be valued at DHC, with the asset base optimised as appropriate.[268]

[462] By the time the Commission delivered its draft report, the Commerce Amendment Act 2001 had introduced the new Part 4 and new ss 70 to 74 of the Act. Following the Commission's draft report, the request that initiated the inquiry was withdrawn and, on 25 July 2001, a new request was issued asking the Commission to consider whether any of the airfield activities supplied by the Airports should be controlled.

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266 Airports Reasons Paper at [4.3.21], 2/6/000680.

267 Commerce Commission *Draft Report: Price Control Study of Airfield Activities at Auckland, Wellington and Christchurch International Airports* (3 July 2001), 43/364/021656.

268 At [38] and [42]-[43], 43/364/021665-66

[463] The Commission delivered its final report entitled *Final Report: Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports* (the Airports Inquiry Report) on 1 August 2002 recommending, by a three/two majority, control of AIAL but not WIAL or CIAL.[269] The majority report based its recommendation on an optimised ('used and useful'):[270]

(a) MVAU (opportunity cost) approach to the valuation of the Airports' land assets, excluding land held for further use and conversion costs (which were valued as sunk assets at historic cost) and holding costs which were to be capitalised (and depreciated) and included in the RAB for charging purposes as a specialised asset at historic cost only when commissioned;[271] and

(b) DHC valuation methodology for non-land assets. Investors would be compensated for inflation through the use of a nominal WACC.[272]

[464] Land, having alternative uses, was valued on an opportunity cost basis, providing signals on continuing appropriate use as an airfield and incentives to invest.[273] For specialised assets, DHC valuations, which allowed for the recovery of actual amounts vested (after depreciation), were favoured because of concerns about the economic efficiency and distributional impact of (then) recent mid-life switches[274] from DHC to ODRC in the case of all three airports.[275]

[465] While the minority agreed with the majority's use of an opportunity cost methodology to value the Airports' land, they did not accept the majority's DHC methodology used to value specialised assets.[276] The minority's preferred approach was, as had been argued for by the Airports, to value specialised assets using ODRC.

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269 Commerce Commission *Final Report: Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports* (1 August 2002) at [113], 44/367/021750 [Airports Inquiry Report].
270 Airports Inquiry Report at [41], 44/367/021736.
271 Airports Inquiry Report at [33]-[36], [46] and [5.119], 44/367/021735, 021737 and 021846.
272 Airports Inquiry Report at [39], 44/367/021736.
273 Airports Inquiry Report at [33], 021735.
274 WIAL in 1993, AIAL and CIAL in 1999.
275 Airports Inquiry Report at [5.83], 021838.
276 Airports Inquiry Report at [5.84], 44/367/021838.

Using ODRC altered the calculation of returns for the Airports and led the minority to conclude that the likely net benefits to acquirers of control of AIAL would not be significant.[277] Otherwise, they agreed with the report.

[466] In May 2003, after further advice from the MED, the then Minister rejected the Commission's recommendation of control for AIAL and decided not to declare control of any of the three airports. At that point therefore the Commission had no direct regulatory oversight of the Airports. During the Airports Inquiry, and as reflected in the majority/minority views, asset valuation issues had however, received considerable attention.

[467] Thus, at the time the Commission commenced consideration of IMs for the Airports the three key features of the relevant regulatory framework were:

(a) the requirement for the Airports to consult in relation to charges and capex and to provide information to substantial customers;

(b) the entitlement of the Airports to set such charges as they (individually) from to time thought fit; and

(c) disclosure by the Airports under the Airports ID Regulations.

The development of the asset valuation IMs

[468] We now consider briefly the development of the Commission's asset valuation IM decisions and – more particularly – its decisions on the methodology for determining initial RAB values and the treatment of revaluation gains. We outline how the Commission's views developed because:

(a) it is helpful to place the Commission's IM determinations in the context of the views it had previously expressed on what might become those determinations; and

[277] Airports Inquiry Report at [11.19], 44/367/022038.

(b) of arguments made by the appellants by reference to changes in the Commission's thinking on these issues over time.

[469] Nevertheless, at the end of the day it is the Commission's decisions as set out in the Principal Reasons Papers that we must have regard to,[278] albeit understanding – where relevant – their origins.

[470] We outline that development by reference to the following major steps in the Commission's consultation process:

(a) December 2008: *Regulatory Provisions of the Commerce Act 1986: Discussion Paper* (the December 2008 Provisions Paper);[279]

(b) June 2009: the June 2009 IMs Discussion Paper;

(c) December 2009: the three emerging views papers for the EDBs,[280] GPBs,[281] and Airports[282] (collectively the December 2009 Emerging Views Papers and individually the December 2009 EDBs Emerging Views Paper, the December 2009 GPBs Emerging Views Paper and the December 2009 Airports Emerging Views Paper);

(d) May – July 2010 draft determinations and reasons papers (collectively the May – June 2010 Draft Reasons Papers and individually the May 2010 Airports Draft Reasons Paper, the June 2010 EDBs Draft Reasons Paper, the June 2010 GPB Draft Reasons Paper and the June 2010 Transpower Draft Reasons Paper);[283]

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278 See a similar comment by the Court of Appeal in *Commerce Commission v Powerco Ltd* CA123/06, 9 November 2006 at [23]. The context there was a judicial review challenge, not a s 52Z merits appeal.

279 Commerce Commission *Regulatory Provisions of the Commerce Act 1986: Discussion Paper* (19 December 2008), 5/12/001804 [December 2008 Provisions Paper].

280 Commerce Commission *Input Methodologies (Electricity Distribution) Emerging Views Paper* (23 December 2009), 7/21/002773 [December 2009 EDBs Emerging Views Paper].

281 Commerce Commission *Input Methodologies (Gas Pipeline Services) Emerging Views Paper* (23 December 2009), 7/22/002916 [December 2009 GPBs Emerging Views Paper].

282 Commerce Commission *Input Methodologies (Airport Services) Emerging Views Paper* (23 December 2009), 7/20/002682 [December 2009 Airports Emerging Views Paper].

283 Commerce Commission *Input Methodologies (Airport Services) Draft Reasons Paper* (31 May 2010), 8/31/003464 [May 2010 Airports Draft Reasons Paper]; Commerce Commission

(e) October – November 2010: Revised draft determinations and consultation update papers (Technical Consultation).[284]

The December 2008 Provisions Paper

[471] In the December 2008 Provisions Paper the Commission provided a high level explanation of asset valuation issues generally. It referred to the two general approaches of historic cost-based methodologies and replacement cost-based methodologies used by regulators for asset valuations. It also referred more specifically to DHC, IHC, ODRC and ODV valuation methodologies before observing:[285]

> The Commission highlights that all these methodologies can be implemented in a manner capable of producing outcomes consistent with the application of a NPV=0 approach, as long as revaluation gains and losses are appropriately taken into account.

The June 2009 IMs Discussion Paper

[472] The June 2009 IMs Discussion Paper contained a detailed analysis of asset valuation issues, and of the treatment of revaluation gains. In it the Commission exposed its preliminary view that, in the context of establishing initial RAB values under Part 4, an earlier base valuation (ie as we understand it, one before 2007)[286] should be taken to draw a "line in the sand" for sunk assets.[287] The Commission explained that the phrase "line in the sand" had its origins in the Australian

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Input Methodologies (Electricity Distribution) Draft Reasons Paper (18 June 2010), 9/37/003510 [June 2010 EDBs Draft Reasons Paper]; Commerce Commission *Input Methodologies (Gas Pipeline Services) Draft Reasons Paper* (21 June 2010), 10/38/003932 [June 2010 GPBs Draft Reasons Paper]; Commerce Commission *Input Methodologies (Transpower) Draft Reasons Paper* (24 June 2010), 11/40/004353 [June 2010 Transpower Draft Reasons Paper].

284 These papers and draft determinations are listed in the glossary under 'Technical Consultation'.

285 The December 2008 Provisions Paper at [274], 5/12/001884.

286 We say that because, in the June 2009 IMs Discussion Paper at [6.107], 6/14/002228, the Commission observed:

> Moreover, strong increases in replacement and opportunity costs up to and including 2007 – in each regulated sector – suggest that the regulatory framework principles, and thus the purpose of Part 4, would be promoted effectively if earlier valuations are used (where feasible) and updated in a manner consistent with suppliers' actual pricing behaviour. This is because base valuations derived and updated in this way will minimise the risk of imposing windfall gains or losses on businesses. Thus, they will limit suppliers' ability to extract excessive profits in future (consistent with s 52A(1)(d)), while ensuring that they receive at least a normal return over the lifetime of their assets (consistent with s 52A(1)(a)).

287 See the June 2009 IMs Discussion Paper at [6.105]-[6.112], 6/14/002228-9, and Table X3, 6/14/002064.

Productivity Commission which, when faced with a dispute over the treatment of revaluations gains by airports:[288]

> ... concluded that there was no easy solution, but proposed drawing a 'line in the sand' such that any revaluations that had been undertaken past a certain earlier date would be netted out of the asset base used to monitor rates of return. The basis for the Productivity Commission's argument was that such an approach "represents a reasonable compromise between the competing interests".
>
> The Productivity Commission acknowledged that drawing such a line would likely involve an element of "rough justice". However, in terms of the effect of doing so on efficiency, the Productivity Commission noted that, provided there is appropriate valuation of new investment for pricing and monitoring purposes, the approach adopted in relation to the valuation of existing assets is unlikely to alter investment levels to any great extent. The Commission notes that the promotion of dynamic efficiency also requires that the regulator acts in a predictable way, consistent with the previous approaches it has accepted.

[473] Thus the Commission's understanding of the "line in the sand" approach at that point involved picking a date at which to value the RAB and allowing businesses to retain revaluation gains prior to that date.

[474] The way to update the RAB, with or without revaluations, crucially depended on whether revaluations had been taken into account in prices in the intervening years.[289] The Commission noted:[290]

> ...that in recent times replacement costs of many assets employed by regulated suppliers have been rising at a rate significantly greater than inflation. Under such conditions, the replacement cost of a supplier's asset base will have been increasing in real terms. However, the revaluation gains observed when new replacement cost valuations are assessed would be completely unrelated to whether or not the supplier has made an effort to improve their productivity and performance. They would be attributable to exogenous increases in replacement costs instead.

[475] The Commission further developed its preliminary views as regards the Airports, EDBs and GPBs separately.

[476] In the case of the Airports:[291]

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[288] The June 2009 IMs Discussion Paper at [6.76]-][6.77], 6/14/002222-3, footnotes omitted.
[289] The June 2009 IMs Discussion Paper at [6.109]-[6.110], 6/14/002229.
[290] The June 2009 IMs Discussion Paper at [6.72], 6/14/00221-2.
[291] The June 2009 IMs Discussion Paper at [10.96], 6/14/002374 and [10.78]-[10.79], 6/14/002370.

(a) The Commission's preliminary view was that an ODRC valuation methodology – as had been supported by both the Airports and BARNZ and not the DHC approach adopted in the Airports Inquiry – should be used to value specialised assets in order to set the initial value of the RAB for Airports in 2010. The Airports' 2002 ODRC valuations would be used. Revaluations from 2002 onwards, which had been included as "income" for price-setting purposes would be included by the Commission in the updated initial RAB value at 2010, but not otherwise. Those valuations would also be updated to 2010 by taking account of subsequent additions, disposals and straight line depreciation during that period on an un-indexed basis.

(b) For land, an opportunity cost-based approach was preferred, with three options presented. The first involved using 2002 values updated to 2010. Land revaluations would be included to the extent taken into account in pricing up until 2010. The second and third involved using 2010 opportunity cost valuations.

[477] For EDBs the Commission concluded that adopting the 2004 ODV valuations, undertaken as "initial values" for Part 4A ID regulation, was its preferred approach, even though those valuations might themselves include significant revaluation gains for a number of EDBs.[292]

[478] The Commission further concluded that those 2004 ODV valuations should be updated to 2010 on an IHC basis.[293] This was the same approach taken to valuing the RAB under the 2004 Electricity ID Requirements where the 2004 ODVs were required to be updated on an IHC basis and disclosed annually.[294] Hence, if the Commission's preliminary view became final, opening RAB valuations would be readily available from the EDBs' 2010 disclosures.[295]

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292 The June 2009 IMs Discussion Paper at [11.70]-[11.71], 6/14/002403.
293 The June 2009 IMs Discussion Paper at [11.79], 6/14/002405.
294 The June 2009 IMs Discussion Paper at [11.75], 6/14/002404.
295 The June 2009 IMs Discussion Paper at [11.75], 6/14/002404.

[479] For the GPBs the Commission focused its attention on those GPBs which were not, at that time, subject to price control, but only subject to ID regulation under the Gas Act. That is Vector (NGC), Wanganui Gas and MDL.[296]

[480] The Commission first concluded, for reasons very similar to those it relied on for the EDBs, that it would adopt earlier ODV valuations for those GPBs as base valuations, and update those to 2010 for capex, depreciation and disposal. The question again became which earlier ODV valuation to take as a base valuation.

[481] The Commission noted that ODV valuations undertaken for Vector (NGC) and Wanganui Gas in 2003, and an ODRC valuation undertaken by MDL in 2002, had been found to be broadly comparable and, given the findings of the Gas Control Inquiry (that although the s 52 requirements in the Act for the introduction of price control were met, control was not ultimately recommended by the Commission for other reasons), consistent with each supplier having at least a normal return prior to 2003. Therefore adopting a valuation undertaken prior to 2003 would be inconsistent with possible expectations of the GPBs. In considering whether to adopt an ODV valuation undertaken after 2002/2003, the Commission was concerned that it could not determine readily the extent to which revaluation gains during that period had been included in pricing by GPBs (with the exception of MDL).

[482] On that basis, the Commission's preliminary view was that the base valuation for each of the non-controlled businesses should be the 2003 ODV valuations for Vector (NGC) and Wanganui Gas, and the most up to date, that is 2006, ODRC valuation for MDL.[297]

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[296] The reason why the Commission paid little attention in the June 2009 IMs Discussion Paper to Powerco and Vector's (controlled) Auckland businesses becomes clear later. In the EDBs-GPBs Reasons Paper, the Commission was to refer to the 2005 initial RAB valuations for Powerco and Vector (Auckland) under the Gas Authorisation as having been subject to an extensive consultation process and able to be considered as "effectively locked in already": EDBs-GPBs Reasons Paper at [E2.59], 3/7/001284.

[297] The June 2009 IMs Discussion Paper at [13.71], 6/14/002501.

The Emerging Views Papers – December 2009

[483] The Commission published separate emerging views papers for each of the EDBs, GPBs and the Airports.[298] Each of those papers took a very similar approach to setting out the Commission's thinking. In each of those papers the Commission explained that it had considered two additional valuation approaches to that it had favoured in the June 2009 IMs Discussion Paper.[299] These were:

(a) using new, current ODV/ODRC valuations (the HNET approach); or

(b) using "the most recent regulatory values", ie recent asset values disclosed in accordance with the regulatory requirements applying to a supplier.

[484] The Commission recorded that it had, for reasons we review later, rejected the HNET approach. On that basis, the Commission noted that there were a number of possible approaches to the valuation of the RAB that would meet the s 52A(1) purposes.

[485] In each of the December 2009 Emerging Views Papers, the Commission advised that it had amended its preliminary view and that its current view was that:[300]

> ... the initial value of the RAB should be established using the most recent asset values disclosed in accordance with the regulatory requirements applying to the supplier...

[486] Those values were already in the public domain and would therefore be consistent with investor expectations. Adopting that approach balanced the interests of consumers and suppliers by avoiding significant and unnecessary price shocks whilst producing a valuation that was at least as high as investors' expectations,

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298 December 2009 EDBs Emerging Views Paper, 7/21/002773; December 2009 GPBs Emerging Views Paper, 7/22/002916; December 2009 Airports Emerging Views Paper, 7/20/002682.

299 December 2009 EDBs Emerging Views Paper at [74], 7/21/002809; December 2009 GPBs Emerging Views Paper [74], 7/22/002954; December 2009 Airports Emerging Views Paper at [68], 7/20/002714.

300 December 2009 EDBs Emerging Views Paper at [77], 7/21/002809; December 2009 GPBs Emerging Views Paper at [73], 7/22/002953; December 2009 Airports Emerging Views Paper at [68], 7/20/002714.

whilst also limiting suppliers in their ability to extract excessive profits going forward.

[487] Those values were:

(a) in the case of the EDBs, values from the 2009 disclosures under Part 4A;

(b) in the case of the uncontrolled GPBs, values from the 2009 disclosures under the 1997 Gas ID Regulations;

(c) in the case of the controlled GPBs, values from 2009 established under the Gas Authorisation; and

(d) in the case of the Airports' non-land asset values from the 2009 disclosure under the Airports ID Regulations.

[488] It will be recalled that, as regards initial RAB values for the EDBs, the Commission's preliminary view was that current ID requirements would provide appropriate opening RAB valuations. Notwithstanding that, in the December 2009 EDBs Emerging Views Paper the Commission described its proposal to adopt those values as a "change". That confusion may have arisen, we surmise, because of the close drafting parallels between the December 2009 EDBs and December 2009 GPBs Emerging Views Papers. Be that as it may, it is difficult to see why the Commission described that approach, as it applied to the EDBs, as a change.

[489] It will also be recalled[301] that the Commission's preliminary view had similarly been to use, for Vector (NGC), 2003 ODV valuations and, for MDL, its 2006 ODRC valuation. Those valuations were also, in fact, the ones disclosed in the 2009 disclosures.[302]

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301 See [482] above.
302 EDBs-GPBs Reasons Paper at fn 243, 3/7/001088.

[490] It would therefore only appear to be in the case of Wanganui Gas and the Airports that any particular change had occurred.

May – June 2010 Draft Reasons Papers

[491] Following the release of the December 2009 Emerging Views Papers further submissions and cross-submissions were made. Additionally, sector-based workshops were held during February 2010 and, again, interested parties filed submissions and cross-submissions. Following that process, the Commission published the May-June 2010 Draft Reasons Papers for the Airports in May, and for the EDBs and the GBPs in June 2010. In May that year the Commission had received a report from Professor Martin Cave, Dr Michael Pollitt, Dr John Small and Professor George Yarrow (the Commission's (its) Experts) on asset valuation in workably competitive markets.[303] That report heavily influenced the May-June 2010 Draft Reasons Papers and, indeed, the Commission's final decisions.

[492] The Commission confirmed and further developed – in reliance on that expert advice – the views it had expressed in the December 2009 Emerging Views Papers for each sector. We do not detail those views here, as they generally anticipate the views expressed in the Reasons Papers.

The asset valuation IM determinations– December 2010

[493] On 22 December 2010 the Commission released its IM determinations and the accompanying reasons papers.

[494] As first proposed in the December 2009 Emerging Views Papers, and confirmed in the May-June 2010 Draft Reasons Papers, the asset valuation IMs provided for initial RAB values to be determined by reference to existing regulatory valuations, subject to a range of adjustments.

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[303] Yarrow, Cave, Pollitt and Small *Asset Valuation in Workably Competitive Markets – A Report to the New Zealand Commerce Commission* (1 May 2010), 7/28/003095.

[495] In each of the Principal Reasons Papers the Commission summarised its reasons for its asset valuation IM determinations for specialised assets in virtually identical language.[304] Put together, that summary can be expressed as follows:[305]

> In summary, the arguments that have been advanced in favour of new replacement cost-based valuations to establish initial RAB values under Part 4 are not persuasive:
>
> - It is wrong to dismiss existing regulatory valuations:
>   - existing valuations are consistent with promoting outcomes consistent with outcomes produced in workably competitive markets;
>   - existing valuations reflect the continuing relationship between suppliers and consumers that has been shaped by past regulatory arrangements;
>   - given this context, material changes to existing valuations – either upwards or downwards – would be unlikely to be consistent with outcomes produced in workably competitive markets;
>   - *the credibility of the valuations has been reinforced by accepting the majority of the small number of concerns that submitters have expressed about the valuations (EDBs/GPBs only); and*
>   - *if anything, the issues that have been raised in relation to prior replacement cost-based valuations provide more – not less – justification for relying on valuations that have been consulted upon and adjusted with the benefit of hindsight (EDBs/GPBs only).*
> - Replacement costs are only one of a number of influences on the value of specialised assets in workably competitive markets:
>   - the predictions of an economic analysis that is based on assuming that assets display a limited degree of specialisation are misleading;
>   - when there is a high extent of asset specialisation in a market, replacement costs are likely to have a more distant relationship to asset values than when there is a low extent of specialisation; and
>   - valuations based on current replacement costs are likely to be higher, and provide a far less appropriate constraint on

[304] EDBs-GPBs Reasons Paper at [4.3.64]-[4.3.65], 3/7/001097; Airports Reasons Paper at [4.3.42]-[4.3.43], 2/6/000684-5.

[305] We quote directly from the Reasons Papers, amalgamating the text in doing so and indicating where the text varies between the two papers by the use of italics. We omit internal references to those papers.

pricing, than valuations that are not predicated on assuming away – in their entirety – the high extent of asset specialisation that is a central characteristic of the markets regulated under Part 4 (EDBs/GPBs) or for specified airport services (Airports).

- Asset values in workably competitive markets are not defined by long-run equilibrium in theory or in practice.

- The initial RAB value does not need to reflect today's replacement costs for replacement costs to have an influence over the longer term.

In reaching its decision to have regard to prior regulatory valuations, the Commission notes the following:

- *Airports/Submitters* were unable to demonstrate to the Commission's satisfaction that asset values in workably competitive markets characterised by substantial specialised assets would:

  - be equivalent to a new replacement cost-based valuation; or

  - bear a particularly close relationship to a new replacement cost-based valuation.

- Upward revaluations might be warranted if:

  - *Airports were able to demonstrate that prices set on the basis of existing regulatory valuations would not maintain their efficient financial capital (i.e. earning less than a normal return on the original cost of their investment). They have not done so. Existing valuations are therefore consistent with Airports having appropriate incentives to invest (i.e. s 52A(1)(a)), while also limiting any excessive profits that would be disguised as a result of a higher asset value (i.e. consistent with s 52A(1)(d)) (Airports only);*

  - *EDBs and GPBs were able to demonstrate that prices set on the basis of existing regulatory valuations would prevent them from earning at least a normal return relative to the original costs of their investments before profits appeared excessive. They have not done so. Existing valuations are therefore consistent with EDBs and GPBs having appropriate incentives to invest (i.e. s 52A(1)(a)), while interested persons will still be able to assess whether EDBs and GPBs are limited in their ability to extract excessive profits in future (i.e. consistent with s 52A(1)(d)) (EDBs/GPBs only).*

- The new Part 4 Purpose does not in any way require new replacement cost based asset valuations (such as new *ODV* (*EDBs/GDBs) or ODRC* (*Airports*) valuations).

- *It is difficult to reconcile as logically consistent the view that a one-off revaluation is unavoidable now with the view that further revaluations would be unnecessary (EDBs/GPBs only).*

[496] In the EDBs-GPBs Reasons Paper the Commission went so far as to say that it favoured using existing regulatory valuations "simply because they were the valuations established under the regulatory provisions immediately prior to Part 4, and were considered 'fit for purpose' by the Commission at that time".[306]

[497] Against that background we now consider the issues raised by the asset valuation IM appeals in the manner set out above, namely:

(a) in Parts 5.3 and 5.4 we consider the appellants' arguments for new, 2010 ODV/ODRC valuations;

(b) in Parts 5.5 and 5.6 we consider Vector's Alternatives 2 and 3;

(c) in Part 5.7 we consider the Airports' land appeals; and

(d) in Part 5.8 we consider Air NZ's argument for 2002 valuations.

[306] EDBs-GPBs Reasons Paper at [5.16], 3/7/001353.

5.3 DOES THE "WORKABLY COMPETITIVE MARKETS" STANDARD REQUIRE 2010 ODVS?

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Introduction

[498] Powerco, Vector and the Airports (for specialised assets) all argue that new, 2010 ODV/ODRC valuations would be materially better at meeting the s 52A and/or s 52R purpose(s) because the "workably competitive markets" standard in s 52A(1) requires asset valuation IMs to set initial RAB values based on new, replacement cost, ODV/ODRC valuations.[307] Our assessment of that argument has essentially two parts.

[499] First, we consider that argument:

(a) as advanced by Powerco (with Vector's support during the hearing) in reliance on Mr Balchin;

(b) as advanced by the Airports, in reliance on Mr Balchin and others; and

[307] Powerco Appeal 248 at [8]-[12]; Vector Appeal 259 at [EDS.AV(1)]; AIAL Appeal 820 at [4]; CIAL Appeal 251 at [11]-[14]; WIAL Appeal 249 at [11.1].

(c) in each case as responded to by the Commission, including in reliance on its Experts.

[500] We explain why we disagree with many of the conclusions reached by the Commission in rejecting the relevance of that approach.

[501] Secondly, and notwithstanding that, we explain why we agree with the Commission's conclusion that s 52A does not require new, current ODV/ODRC valuations of the initial RAB.

[502] To that extent, we reject Powerco and the Airports' principal argument for concluding that asset valuation IMs providing for new, current ODV/ODRC valuations would be materially better than the appealed asset valuation IMs.

Where we differ from the Commission

Mr Balchin and the HNET

[503] Powerco and the Airports' argument that the s 52A "workably competitive markets" standard requires a current replacement cost approach to the valuation of the initial RAB, applying the HNET was – as Mr Hodder acknowledged on many occasions on behalf of Powerco and WIAL/CIAL – very much based on the advice provided by Mr Balchin. Mr Balchin is an economist who has provided advice, principally in Australia, to both the public and private sectors on the regulation of infrastructure and network industries. He was advanced by Mr Hodder as Powerco and WIAL/CIAL's expert witness on these matters. Mr Balchin, and others also prepared a report in March 2010 for the Airports and the NZAA.[308] That report was a major focus of the Airports' arguments.

[504] Powerco had earlier relied on Mr Balchin's advice in the Gas Authorisation process. The gist of Mr Balchin's advice then, and later in the IM consultation process, can be seen in comments he provided in November 2007 on the

[308] J Balchin, J Mellsop, K Murray and S Shepherd *Commerce Commission Input Methodologies Emerging Views (Airport Services) Post-Workshop submission: Economic principles for the valuation of airport assets under the Commerce Act* (8 March 2010), 57/523/029005.

Commission's draft decision paper on control of natural gas distribution services.[309] In that statement Mr Balchin quoted from an affidavit he had provided in 2006 for Powerco in Powerco and Vector's unsuccessful application for judicial review[310] of the decision to impose price control on their GPBs:[311]

> The relevant line of inquiry when attempting to derive an initial regulatory asset value that is consistent with the outcome of a market that is characterised by effective or workable competition is to observe the decisions that would be made by a hypothetical new entrant into that market. Generally speaking, entry into competitive markets will be profitable and will occur whenever prices would generate revenue that exceeds new entrants' costs. Long run equilibrium occurs when no further entry is profitable – which will occur where prices are commensurate with new entrants' costs. The cost structure that a hypothetical new entrant would attain, therefore, defines the cost structure that can be said to be the outcome of a market that is characterised by effective or workable competition.
>
> The relevant question then becomes what costs would be incurred by a hypothetical new entrant into the regulated market. Clearly, if the new entrant built its own gas distribution network from scratch, then it would incur the cost of constructing that new network. However, such a cost structure is not appropriate for the gas assets owned by Powerco as Powerco's assets are not all brand new and so will have a shorter remaining life and may also be more expensive to maintain. But a hypothetical new entrant has a further option, which is to purchase the assets from an incumbent provider. In this situation, to calculate what it would be prepared to pay for the existing assets, the hypothetical new entrant would commence with the cost of new assets, but then reduce that amount by the additional amount that it considers it would cost to operate the old assets, and so derive its offer price.
>
> The ODV methodology provides an estimate of the amount that a hypothetical new entrant would be prepared to pay for existing assets as described in paragraph 38, and hence defines the initial regulatory asset value that is consistent with the outcome of a market that is characterised by effective workable competition.

[505] Mr Balchin's first comments in the IM consultation process came in October 2009, when he authored cross-submissions, as relevant in largely identical terms, for Powerco and CIAL.[312] In both of those cross-submissions he stated, in similar terms to his 2006 affidavit, as follows:[313]

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309 J Balchin *Control of Natural Gas Distribution Services Draft Decision Paper – Statement for Powerco* (30 November 2007), 48/405/024636.

310 *Powerco Ltd v Commerce Commission* HC Wellington CIV-2005-485-1066, 24 December 2007.

311 Affidavit of J Balchin in *Powerco Ltd v Commerce Commission* HC Wellington CIV-2005-485-1066, 24 December 2007, in February 2006, at [37]-[39], as quoted in J Balchin *Control of Natural Gas Distribution Services Draft Decision Paper – Statement for Purpose* (30 November 2007) at [48], 48/405/024652-3.

312 J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross Submission*

In previous statements or reports, I have argued that economic principles predict that the outcome produced in a competitive market for asset values is an asset value that reflects the cost structure of a hypothetical new entrant into that market. I remain of this view. The chain of logic that produces this outcome is as follows.

- Long run equilibrium in a competitive market occurs when no further net entry or exit into that market is profitable. This proposition holds irrespective of whether the market is a perfectly competitive market, perfectly contestable market or workably competitive market.

- Generally speaking, net entry into competitive markets will be profitable and would be expected to occur whenever prices would generate revenue that exceeds new entrants' costs (and net exit would occur if the reverse holds). Therefore, long run equilibrium attains when prices are commensurate with the cost structure of new entrants (that is, prices are at a level whereby a new entrant would make normal returns on its investment). This proposition does not assert that entry (exit) happens instantaneously if entry or replacement of assets is profitable (unprofitable), but rather that it would be expected to occur over time, leading to economic rents being eliminated.

- Turning specifically to fixed assets, if the new entrant entered by constructing new assets, then its cost structure would reflect the full cost of constructing the relevant assets using current technology and the cost of acquiring land and interests in land (like easements) at a price reflecting the value in the next best use (its opportunity cost). Alternatively, if the new entrant had the option of buying 'old' assets as an alternative to constructing its own, then it would pay an amount for the old assets that implied the same cost of provision (in present value terms) as the 'new' assets. Thus, the implied value for 'old' assets is given by the cost of the new assets, less the difference in forward looking cost of providing the services using the 'old' assets compared to the 'new'.

As I have emphasised above, this chain of logic is not dependent on any particular type of competition holding. Rather, it merely posits that, in any market that is in long run equilibrium (being the condition in which there are no incentives for net entry or exit), prices will reflect the cost structure of a new entrant and that, in turn, implies a value of existing assets.

...

In my view, the concept of long run equilibrium is a central feature of practical models of workable competition and is the appropriate outcome for the Commission to observe from such a market and to employ as the standard for asset valuation. I also consider this (hitherto at least) to have been the orthodox view of the outcome for asset values that would be

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(prepared for CIAL) (15 October 2009), 54/468/027734; J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross-submission (prepared for Powerco)* (15 October 2009), 54/469/027734.

[313] At [2.2.1]-[2.2.2], 54/468/027742-3; 54/469/027779-81, respectively. Mr Balchin's cross-submissions for Powerco also addressed issues relating to tax and depreciation issues not addressed in his cross-submission for CIAL.

> observed in a competitive market amongst regulatory economists and regulators, in Australasia at least...

[506] In both cross-submissions Mr Balchin summarised his overall conclusion as follows:[314]

> In my view, the requirement for the Commission to replicate the outcome of a competitive market provides clear guidance to the Commission about how to set the initial RAB for the regulated airport assets, which is to set those values in line with the cost structure of a hypothetical new entrant. This is the predicted outcome of a competitive market (including a workably competitive market) when it is in long run equilibrium. In my view it is appropriate and orthodox to have regard to such equilibrium outcomes when setting the initial RAB.

[507] Mr Balchin therefore took the view that the workable competition standard requires a current replacement cost based methodology. Mr Balchin did not explicitly advocate new, current ODV/ODRC valuations at the start of the new regime. Mr Balchin also argued that the Commission's NPV=0 approach was wrong in respect of the initial RAB and that the use of DHC was illogical. Mr Balchin's expert opinion was that, in workably competitive markets in equilibrium, costs faced by the HNE in effect determine prices and therefore asset values.[315]

The Commission's Experts respond to Mr Balchin

[508] Powerco and the Airports' criticisms of the Commission's reasoning can also be found in Mr Balchin's July 2010 response in the form of largely identical letters he wrote to CIAL and Powerco,[316] and which those firms in turn provided to the Commission. Mr Balchin was responding to the joint report of the Commission's Experts,[317] released with the May-June 2010 Draft Reasons Papers.[318]

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[314] J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross Submission (prepared for CIAL)* (15 October 2009) at [1.2], *Commerce Commission Review of Input Methodologies Cross Submission (prepared for Powerco)* (15 October 2009) at [1.2], 54/469/027776..

[315] At [2.2.1]-[2.2.4], 54/468/027743-027747, 54/469/027780-3 respectively.

[316] Letter from J Balchin (PwC) to N Cochrane (CIAL) regarding his Response to the Discussion of Asset Valuation in the Draft Decisions Document (12 July 2010), 58/561/029617; letter from J Balchin (PwC) to P Goodeve (Powerco) regarding his Response to the Discussion of Asset Valuation in the Draft Decisions Document (19 August 2010), 58/593/030483.

[317] Asset Valuation Report, 7/28/003095.

[318] The May-June 2010 Draft Reasons Papers, 8/31/003177, 9/37/003510, 10/38/003932.

[509] Mr Balchin was also responding to the Commission's Experts' individual comments on the May-June 2010 Draft Reasons Papers.[319] The Commission's Experts had been asked to address, among other things, the relevance of the HNET and how quickly asset values adjust towards static equilibrium conditions. This was some six months after Mr Balchin's first statements in the IMs development process.

[510] In each letter Mr Balchin characterised the "main themes" of the Commission's Experts as:[320]

> (a) an implicit assumption (although not discussed or expressed as a clear finding) that the Commission should focus on the dynamics of workably competitive markets and not just static equilibrium concepts.
>
> (b) the Commission should place most weight on workably competitive markets that have similar features to those of the market for regulated service, in which markets the link between asset values and replacement costs may be weak; and
>
> (c) a particularly informative 'workably competitive market' for the Commission's purposes is the situation of a bilateral monopoly where the two parties know that they will have limited alternatives once they have made their investments and so enter into a long term contract before investing to address this risk in which case the link between asset values during the period of the contract and prevailing replacement costs may be severed altogether.

[511] In response to the Commission's Experts Mr Balchin, in each of those letters, took the view that:[321]

> - the experts were incorrect to direct the Commission to the dynamics of workable competition – the tendency towards equilibrium (that is, the process of entry and exit and hence the elimination of excess returns or losses) is a central feature of workably competitive markets and it is the long run equilibrium outcome to which an

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[319] M Cave *Expert Review of the New Zealand Commerce Commission's Draft Decisions and Reasons for Electricity Distribution Services and Gas Pipeline Services* (July 2010); 12/50/004992; M Pollitt *Expert Review of the New Zealand Commerce Commission's Draft Decisions and Reasons for Electricity Distribution Services and Gas Pipeline Services* (July 2010), 11/43/004499; J Small *Expert Review of the New Zealand Commerce Commission's Draft Decisions and Reasons for Electricity Distribution Services and Gas Pipeline Services* (July 2010), 11/44/004508; G Yarrow *Review of Input Methodologies (Electricity Distribution Services and Gas Pipeline Services) Draft Reasons Paper* (July 2010), 11/45/004518.

[320] Letter from J Balchin (PwC) to N Cochrane (CIAL) regarding his Response to the Discussion of Asset Valuation in the Draft Decisions Document (12 July 2010) at 2-3, 58/561/029618-9; and Letter from J Balchin (PwC) to P Goodeve (Powerco) regarding his Response to the Discussion of Asset Valuation in the Draft Decisions Document (19 August 2010) at 2-3, 58/593/030485.

[321] At 2-3, 58/561/029618-9; and at 2-3, 58/593/030485.

> appeal is typically made when resolving the trade-off between providing the incentive to invest (s 52A(a)) and ensuring that a supplier is limited in its ability to extract excessive profits (s 52A(d)).

> - the experts were incorrect to direct the Commission's attention to markets with characteristics that are most similar to markets for the regulated services – such markets were likely to be close to the edge of the range of workable competition (if not beyond) and hence the least effective at promoting the long term interest of consumers (that is, efficiency). Better guidance would come from observing the outcomes in better functioning markets.
>
> - the long term contracting analogy is flawed – in the period after the contract had been signed the market would no longer be workably competitive and so observations drawn from this period were irrelevant. The observation that should have been made is that in the period when there was workable competition – that is, at the time the contract was signed – the asset value and replacement cost would have coincided.

[512] We acknowledge that the Commission's Experts would not necessarily characterise the main themes of their advice in the way Mr Balchin did. But, very clearly, Mr Balchin's response set the scene for their further advice, particularly when they reviewed submissions in response to the May-June 2010 Draft Reasons Papers. We therefore think that Mr Balchin's response to the Commission's Experts' views is a helpful framework for our consideration of the position ultimately taken by the Commission on the HNET argument.

[513] We also acknowledge, as can be seen from our outline of the regulatory history, that the Commission had, at various earlier points, expressed views on the relevance of ODRC/ODV asset valuation methodologies, and of the HNET approach being very similar to if not indistinguishable from Mr Balchin's consistent approach. But by the time of the asset valuation IM decisions, as it signalled earlier, the Commission's view had changed.

[514] Much was made of that change of view. Not surprisingly supplier appellants emphasised what they considered to be the correctness of the Commission's earlier position, and what they perceived as the errors reflected in its move away from that position. Whilst that change or development of a view is, quite obviously, interesting in and of itself, the fact that the Commission did change its mind does not, in our view, prove anything one way or the other as to which view is to be

preferred. Rather, we need to focus on the reasons given by the Commission in the Principal Reasons Papers for its decisions on the asset valuation IMs and, in particular, on its approach to the initial RAB. In saying that, we record our view that the Commission's Experts, somewhat unhelpfully, minimised in some areas and exaggerated in others, the difference of views that existed between them and the Commission, on the one hand, and the regulated suppliers, on the other. We think it fair to say that among regulatory economists, who generally share the same body of scholarship and have received similar training, genuine differences of view about the nature of workably competitive markets tend to be quite small. Where there is direct engagement with the same notion, apparent differences are largely due to differences in the way the notion is expressed rather than differences in views about how markets work.

[515] In the end, however, we have reached a clear view that the Commission was correct not to place reliance, much less sole reliance – as was advocated in these appeals by Powerco and the Airports – on a current replacement cost approach, leading to a new, current ODV/ODRC for the initial RABs.

[516] It is more important that we explain why we agree with the Commission's conclusions than where we disagree with its reasoning. However, much time and effort was expended by both the appellants and the Commission in developing their positions. This is why we first consider the three areas of dispute identified by Mr Balchin quoted in [511] above,[322] as it is here that we part ways with the Commission.

Workable competition and long-run equilibrium

[517] Mr Balchin framed his argument in terms of what happens in markets in long-run equilibrium, ie when no further entry into the market is profitable, and hence there is no entry into or exit from the market. This is when, he says, prices are commensurate with a new entrant's costs. A new entrant's costs would be the replacement costs of the incumbent's assets reduced by an amount sufficient to

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[322] Those areas are: (1) the focus on workable competition and not just static equilibrium concepts; (2) the focus on markets similar to the markets for regulated services instead of better functioning markets; and (3) use of the long-term contracting analogy.

reflect the fact that they are used assets with a shorter life and higher operating costs than new replacement assets.

[518] In the first of the passages quoted above Mr Balchin spoke of the "tendency" towards equilibrium and that "it is the long run equilibrium to which appeal is typically made...". But, in other places, Mr Balchin seemed to go further. In the summary of his conclusions to his October 2009 cross-submissions mentioned above, he states:[323]

> In my view, the requirement for the Commission to replicate the outcome of a competitive market provides clear guidance to the Commission about how to set the initial RAB for the regulated airport assets/electricity lines businesses, which is to set those values in line with the cost structure of a hypothetical new entrant. This is the predicted outcome of a competitive market (including a workably competitive market) **when it is in long run equilibrium**. In my view it is appropriate and orthodox to have regard to such equilibrium outcomes when setting the initial RAB.

[519] The Commission's Experts pointed out (correctly) that workably competitive markets may never be in equilibrium (except perhaps transiently), and went on to charge Mr Balchin with ignoring the short-run dynamics of rivalry that are the essence of competition. Mr Balchin clung tenaciously to the concept of long-run equilibrium.

[520] An analysis of the record makes it clear that little, in fact, separates the two sides on this issue.

[521] The Commission in its Principal Reasons Papers stated:[324]

> While the Commission agrees that workably competitive markets will tend towards equilibrium over time, asset values in these markets are not defined by a long-run equilibrium. J. M. Clark is the academic widely credited with first distinguishing workable competition from other traditional economic models of competition (refer Chapter 2). He noted that in workably competitive markets, "tendencies towards equilibrium ... never reach their static limits". So in workably competitive markets, long-run equilibrium is unlikely to be reached, shortages and surpluses continuously arise and

[323] J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross-submission (Prepared for CIAL)* (15 October 2009) at [1.2], 54/468/027740; J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross-submission (prepared for Powerco)* (15 October 2009) at [1.2], 54/54/469/027776 (emphasis added).

[324] EDBs-GPBs Reasons Paper at [4.3.60]-[4.3.61], 3/7/001096; Airports Reasons Paper at [4.3.38]-[4.3.39], 2/6/000683 (footnotes omitted and emphasis as in original).

> outcomes constantly evolve. Asset values in particular vary in light of changing expectations about the future, not simply in light of changes in replacement costs today.
>
> Empirical evidence supports this conclusion. It demonstrates that while asset values in workably competitive markets characterised by specialised assets may occasionally converge with replacement costs, they only *very rarely if ever* equate and will normally diverge by a significant amount for a prolonged period of time, including in some cases indefinitely. The extent and duration of any deviation will be influenced by, amongst other things, any arrangements that have shaped the relationship between suppliers and their consumers.

[522] In a footnote to the third sentence of the first paragraph of that passage, the Commission explains:[325]

> In economics, equilibrium usually refers to the point at which supply and demand are in balance, and market conditions are not changing. At this point, the price level is such that the amount that consumers seek to buy is exactly equal to the amount that suppliers are able to produce. Static long-run equilibrium could be achieved, in theory, if all changes in background economic parameters were to cease (eg demand stopped growing, technology remained the same), and suppliers were able to respond instantaneously and with full flexibility until no demand was left unsatisfied at the market price. Entry and exit during this adjustment process is assumed to be free and costless. Clearly, these static adjustments are not a descriptor of what happens in the real world. Suppliers operate day-to-day on the basis of the configuration of assets currently installed, prices cannot be varied instantaneously and the demand for services is ever changing.

[523] It is difficult to know how to interpret the opening clause in the first sentence of that passage other than to mean that markets will get closer and closer to long-run equilibrium over time. But that is not what the Commission believes, as the rest of the paragraph demonstrates. This is indicative of the slipperiness of the issues involved.

[524] We consider that it would be wrong to suggest that workably competitive markets tend towards long-term equilibrium, in the sense that markets will reach such equilibrium and then tend to stay there or thereabouts, or even get ever closer to it. To the extent that Mr Balchin said that, he was in our view incorrect. But Mr Balchin made it clear that he was appealing to the properties of long-run equilibrium, not claiming that long-run equilibrium was itself some sort of goal to be reached if only sufficient time may pass.

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[325] EDBs-GPBs Reasons Paper at fn 259, 3/7/001096 (emphasis as in original).

[525] Long-run equilibrium is a theoretical concept with certain properties. It is long-run equilibrium market outcomes that are considered to be the socially desirable product of workably competitive markets. The fact that workably competitive markets never reach such equilibrium is not the point. They tend towards producing the outcomes associated with long-run equilibrium.

[526] These comments are consistent with our discussion of workably competitive markets in Part 1.

[527] In our view the Commission, in considering Mr Balchin's view on the significance of the characteristics or properties of markets in long-run equilibrium, overlooked that it is the socially desirable outcomes towards which workably competitive markets tend that matter. Reflecting this, the Commission noted that in workably competitive markets the actual outcomes at any moment may diverge from the long-run equilibrium outcomes. Of course they do. That is the point. Regulation seeks to emulate the socially desirable outcomes and to abstract from actual day-to-day divergences from them.

[528] In short the uncontroversial fact emphasised by the Commission and its Experts, that workably competitive markets do not ever reach long-run equilibrium, is irrelevant to the principles involved. More unfortunate was the emphasis on the fact that outcomes in workably competitive markets differ at any moment, to varying degrees, from the outcomes to which those markets tend (with the tendency being strongest where competition is strongest). That emphasis diverted the Commission from thinking clearly about what regulation is trying to achieve.

[529] The Commission's task was not to analyse how asset values in workably competitive markets may fluctuate, but to estimate asset values for the initial RABs that, applied in a regulatory framework, would produce outcomes consistent with those produced in workably competitive markets.

[530] In its discussion of this issue – outcomes consistent with those produced in workably competitive markets – the Commission reproduced in the Principal Reasons Papers comments provided to it by one of its Experts, Professor Yarrow,

when commenting on the Commission's *Input Methodologies (Airport) Services Draft Reasons Paper* (May 2010 Airports Draft Reasons Paper):[326]

> [R]egulatory economists are fond of saying that good regulation should seek to replicate the outcomes of competitive markets. Indeed, the Draft Reasons paper itself quotes one of the leading regulatory economists to this effect:
>
> "*2.6.21 Likewise, in his seminal text on economic regulation, Alfred Kahn states that: "the single most widely accepted rule for the governance of regulated industries is regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible."*
>
> Most of us in the trade have said something similar at some point in our careers, but it is important to understand why it is wrong, so as to avoid future pitfalls when developing regulatory rules.
>
> In the Kahn statement, the killer words are "if it were feasible". If it were feasible, we wouldn't nowadays want to regulate. We regulate because it is not feasible, and because it is not feasible we don't know what results competition will produce, *except possibility in static economic conditions with perfect information.*

[531] This is an example of the introduction of unhelpful thinking into an area where there is little genuine difference of opinion. Professor Yarrow seems to believe that Kahn fell into error by not recognising that competition is not feasible in markets where regulation is considered appropriate. But of course Kahn knew as well as anyone that where lack of competition is the problem, introducing it is often infeasible (unless competition would emerge if prohibitions on it were removed). Kahn was speaking of outcomes, and was perfectly right to speak of the results that effective competition would produce.

[532] Earlier in his comments, Professor Yarrow spoke of workable competition being "defined ... in terms of its likely performance" and observed that:[327]

> 'workability' is very much to be judged in terms of the propensity of the relevant forms of competition, in the relevant contexts, to tend toward advantageous outcomes in terms of consumer welfare, and of economic efficiency more generally.

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[326] Airports Reasons Paper at [2.6.17], 2/6/000632; EDBs-GPBs Reasons Paper at [2.6.17], 3/7/001016, quoting from Yarrow *Review of Input Methodologies (Airports Services) Draft Reasons Paper* (25 June 2010) at 5-6, 11/42/004484.

[327] Yarrow *Review of Input Methodologies (Airports Services) Draft Reasons Paper* (25 June 2010) at 4, 11/42/004483.

[533] This is essentially no different from Mr Balchin's focus on competitive market outcomes.

[534] That superficial difference of views about long-term equilibrium is of no substance.

Guidance from different types of workably competitive markets

[535] The Commission stated that:[328]

> ...a number of submissions from regulated suppliers have argued that the most relevant insights are those derived from "better functioning" workably competitive markets –in other words those with minimal (if any) barriers to entry and exit.

[536] The Commission took issue with that view. Considering that the focus of Part 4 is on the outcomes produced in workably competitive markets, we find this puzzling. We consider that the outcomes produced in better functioning workably competitive markets are, indeed, the ones to be pursued. The fact that such workably competitive markets may depart in many respects from the markets for regulated services, which are not workably competitive, is the very reason to examine them.

[537] The Commission correctly observed that the markets regulated by Part 4 are characterised by barriers to entry and exit that significantly limit any credible threat of competitive pressure from new entrant suppliers seeking to "contest" the market.[329] It then discussed the case where, despite the existence of barriers to entry created by an incumbent's lower cost structure than that of potential entrants, the market is still workably competitive. This happy result arose from other constraints on the market power of the incumbents (assumed to be plural) such as the threat of substitute services, the buying power of consumers (such as through explicit or implicit long-term contracting arrangements), or rivalry amongst the existing incumbents themselves. (The Commission was insistent that the relationships to which it was referring need not be explicit).[330]

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328 EDBs-GPBs Reasons Paper at [2.6.9], 3/7/001014; Airports Reasons Paper at [2.6.9], 2/6/000630 (footnotes omitted).
329 EDBs-GPBs Reasons Paper at [2.6.10], 3/7/001014, Airports Reasons Paper at [2.6.10], 2/6/000630.
330 EDBs-GPBs Reasons Paper at [4.2.22], 3/7/001079.

[538] We do not see the relevance of that discussion to the markets regulated by Part 4, most simply because those markets are not workably competitive.

[539] The Commission then stated:[331]

> In a regulated market context, where an incumbent supplier uses long-lived specialised assets to supply services and, as a result, can supply the market over time at a lower cost than a hypothetical new entrant, it would be inappropriate to use the characteristics of the higher cost hypothetical new entrant as a benchmark for setting or monitoring the prices of regulated suppliers.

[540] This sentence appears to start with the proposition that where an incumbent supplier uses long-lived specialised assets to supply services, then its costs will be lower than those of a HNE. No other possibility is canvassed in the succeeding discussion. However, a footnote[332] makes it more or less clear that in some circumstances a HNE would have lower costs, because it could benefit from greater economies of scale and scope with a modern configuration of assets rather than the incumbent's set of assets that has grown incrementally.

[541] Moreover, in assuming that a HNE's costs would be higher than an incumbent's, the Commission also seems to assume that the HNE would be purchasing new assets at their market cost. But in the hypothetical framework the new entrant could purchase used assets. The price it would be prepared to pay in a workably competitive market would be the price of new assets (the replacement cost) less the additional costs of operating the old assets due to their shorter remaining lives, higher maintenance costs, and less efficient configuration.

[542] The Commission concluded:[333]

> Thus, arguments that rely on the threat of entry to constrain the behaviour of incumbents, would therefore amount to assuming away those characteristics which create the market power that warrant regulatory intervention in the first place – namely, the barriers to entry created by investments in lower cost long-lived specialised assets.

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331 EDBs-GPBs Reasons Paper at [2.6.13], 3/7/001015, Airports Reasons Paper at [2.6.13], 2/6/000631 (footnotes omitted).

332 EDBs-GPBs Reasons Paper at fn 88, 3/7/001015; Airports Reasons Paper at fn 83, 2/6/000631.

333 EDBs-GPBs Reasons Paper at [2.6.14], 3/7/001015 and 2/6/000631 respectively.

[543] There are three problems with this conclusion.

[544] First, the HNET is not an argument that relies on the threat of entry to constrain the behaviour of incumbents. Rather, it seeks to place a value on assets such that applying that value would result in outcomes consistent with those in workably competitive markets.

[545] Secondly, assuming away barriers to entry is the whole point of the test. Its rationale is to find a means of discovering the costs that would apply to a supplier if it were in a workably competitive market.

[546] Thirdly, it assumes that the incumbent's costs are lower than those of a HNE which, as explained above, is not necessarily the case. (They would be lower than those of a potential new entrant who had to purchase new assets and who would, of course, therefore not enter.)

[547] Much of the Commission's analysis of the HNET appears to assume that it leads to valuations equal to the costs of replacing old assets with new assets. In our view this misunderstands the proper application of the test and effectively ignores the optimisation and depreciation elements in ODV valuation.

Long-term contracting

[548] The Commission, led by its Experts, spent a good deal of its analysis considering markets "that most closely resemble the factual context of the markets for regulated industries". It thus sought guidance from markets with a high proportion of specialised assets and characterised by sunk costs. Indeed, it explicitly argued for "the relevance of the valuations likely to be produced in these markets", despite such markets lying at the fringes of what may be considered workably competitive. It even stated that "[e]conomic theory that assumes away these characteristics in their entirety is unhelpful and likely to be misleading".[334] Again, in our view the Commission diverted itself from thinking clearly about the desirable outcomes produced by workably competitive markets.

[334] Airports Reasons Paper at [4.3.31]-[4.3.32], 2/6/000682; EDBs-GPBs Reasons Paper at [4.3.53]-[4.3.54], 3/7/001094.

[549] We consider that it is difficult to disagree with Mr Balchin's relatively uncontroversial characterisation of the markets to which the Commission had particular regard as those "close to the edge of the range of workable competition (if not beyond) and hence the least effective at promoting the long term interests of consumers (that is, efficiency)".[335]

[550] Indeed, we consider that, almost by definition, markets closest in characteristics to those of the regulated industries must be natural monopolies needing regulation, or something similar, and certainly not models whose outcomes regulation should emulate.

[551] How did this approach, which appears strange and perhaps even perverse in terms of the clear direction provided in s 52A(1), come to be applied?

[552] It stems from the observation by the Commission's Experts that in some such markets, where there cannot be "competition in the market", there has been "competition for the market". Prior to market services being supplied, purchasers indicate that they will enter into a long-term contract with a supplier. Potential suppliers compete for the contract, which then sets price and quality standards for the period of the contract. Such arrangements occur, for example, between shippers and stevedoring services.

[553] As a preliminary point, we note that unless there is strong rivalry in "competition for the market", the outcomes from long-term contracting are unlikely to be close to the socially desirable outcomes to which the Part 4 purpose is directed. Suppose, for example, that electricity lines users were to negotiate with potential electricity lines companies prior to the investment in and provision of the service. How many suppliers would be bidding for the privilege? It is worth asking this question because the Commission and its Experts seem to consider that such a situation is inherently less fanciful, and more useful as an intellectual construct, than a HNET.

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335 Letter from J Balchin (PwC) to P Goodeve (Powerco) regarding his Response to the Discussion of Asset Valuation in the Draft Decisions Document (19 August 2010) at 3, 58/593/030485; Letter from J Balchin (PwC) to N Cochrane (CIAL) regarding his Response to Discussion of Asset Valuation in the Draft Decisions Document (12 July 2010) at 3, 58/561/029619.

[554] All this is well and good, but the question is how it sheds light on regulated outcomes designed to be consistent with the Part 4 purpose.

[555] The first observation is that, based on the material placed before us, no such long-term contracting has been evident in the relevant regulated markets in New Zealand (supply of airport services and electricity and gas transmission and distribution). Nor, it may be observed, virtually anywhere else. Implicit contracting cannot be considered to have occurred either,[336] at least not in the sense that purchasers obtained what they considered to be a satisfactory price-quality outcome consistent with what would occur in a workably competitive market.

[556] A further distraction is added by the introduction of the notion of an implicit contract between the regulator and consumers. The relevance of that notion never becomes clear in the Commission's reasoning. We also note our doubt that implicit contracting could constrain market power to the extent apparently supposed by the Commission, that is, transforming a market with a high proportion of specialised assets and characterised by sunk costs, into one that is workably competitive to the extent that it provides satisfactory outcomes of the type required by s 52A.

[557] In our view, Mr Balchin was correct to point out that long-term contracting cannot transform a market characterised by strong market power into one that is competitive. For their part the Commission's Experts can point out that, nevertheless, long-term contracting can generate satisfactory outcomes, given all the right conditions.

[558] As in all the analysis involved in considering the outcomes produced by workably competitive markets, attention must be given to what insights can be drawn from varying hypotheses. If hypothesising long-term contracting in New Zealand's regulated industries helps in thinking through desirable market outcomes, then it should be tried, notwithstanding that the corresponding New Zealand markets do not in fact exhibit such behaviour.

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336 Something like implicit long-term contracting could be said to have taken place in New Zealand between the Airports and airlines, but s 4A(1) of the AAA gives the Airports the right to set such charges as they think fit.

[559] This is analogous to hypothesising that the relevant markets are contestable, despite the fact that we know they are not.

[560] How then is the long-term contracting construct brought to bear?

[561] By the time of the Principal Reasons Papers, the answer is: only to a small extent. As the Commission submits in response to suggestions by Powerco and the Airports, the Commission did not "apply" or "rely" on that construct. Rather, as evidenced by the following paragraphs from the Principal Reasons Papers (emphasis added by the Commission in its submissions), it found it of assistance:[337]

> ... the Commission for example agrees with its Experts who suggest that workably competitive markets involving long-term contracting *can provide some useful insights* when evaluating various options for setting IMs, particularly in the case of the IM for asset valuation ... .
>
> ...
>
> It is important to note, however, that regulatory arrangements under Part 4 are not explicitly intended to promote the outcomes of long-term contracting in workably competitive markets. Rather, because such contracts can effectively promote outcomes that are consistent with workably competitive market outcomes, as well as with the regulatory objectives in s 52A(1)(a)-(d), *they – along with other factors – have provided some useful guidance* to the Commission in setting IMs in a manner consistent with the Part 4 Purpose.

[562] In the Principal Reasons Papers, the long-term contracting analogy seems to be employed by the Commission only when arguing that it should not have regard just to markets where there is a low degree of asset specialisation.[338] By contrast with this negative conclusion, no positive insights from long-term contracting are evident in the Principal Reasons Papers.

[563] In the end, the Commission's discussion of long-term contracting seems to have no other purpose than to enable the Commission to observe that all the valuation approaches discussed during consultation produce valuations that are

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[337] EDBs-GPBs Reasons Paper at [2.6.22] and [2.6.26], 3/7/001017-8; Airports Reasons Paper at [2.6.22] and [2.6.26], 2/6/000633-4.

[338] EDBs-GPBs Reasons Paper at [4.3.58], 3/7/001095; Airports Reasons Paper at [4.3.36], 2/6/000683.

capable of promoting outcomes consistent with those produced in workably competitive markets.[339] How it reached this conclusion is, however, unclear.

[564] It further concluded that in workably competitive markets sharing the most similarities with the regulated markets, replacement costs are just one of a number of factors that influence asset values. That statement could only be relevant if the task facing the Commission were to estimate asset values in markets sharing the characteristics of regulated markets. It is not. We do not, therefore, consider that the use of the HNET is invalidated by the arguments of the Commission and its Experts relating to long-run equilibrium, guidance from markets closer in nature to those of regulated industries, or long-term contracting.

[565] Thus far we have explained why we agree, in general terms, with Mr Balchin's responses to the Commission's and its Experts' criticisms of his HNET approach to asset valuation issues. We will now set out why, nevertheless, we think the Commission was right to conclude that s 52A(1) does not require the Commission to take the HNET approach in the asset valuation IMs and, therefore, why we are not persuaded by Powerco's argument to the contrary.

Why 2010 ODVs not required

[566] The HNET has some initial attraction. It must have, to have been so widely used among regulators, at least in Australia. It seeks to relate the prices that can be charged for services in a workably competitive market to asset values consistent with such prices.

[567] The test does not seek or purport to describe what happens in workably competitive markets. For example, it does not rely on a claim, which would obviously be untrue, that entry and exit are costless and cease to occur after a time. Rather, the test hypothesises about the tendencies in workably competitive markets so as to provide benchmarks and relies on the prices charged for services being constrained by the possibility of new entry and the costs of an efficient new entrant.

[339] EDBs-GPBs Reasons Paper at [4.2.26], 3/7/001080; Airports Reasons Paper at [4.2.28], 3/7/000674.

[568] As is clear from the regulatory history, the Commission has recognised all of this at various points over the years when considering issues relating to the regulation of natural monopolies and RAB values.

New ODVs and revaluation gains

[569] Notwithstanding that recognition, and again as shown by the regulatory history, the Commission became concerned with a possible implication of the ODV approach when considering initial RAB values for the EDBs under Part 4A regulation and for Powerco and Vector under price control pursuant to the Gas Authorisation. That concern related to revaluation gains resulting from ODV valuations at a particular time not having been taken into income for pricing purposes and thus enabling a regulated supplier to increase its revenue simply by revaluing its assets, without any increase in investment or efficiency. Some regulated suppliers shared those concerns, albeit by reference to the prospect of revaluation losses. We think the Commission, and those regulated suppliers, were right to hold those concerns.

[570] Turning to Part 4, if ODV valuations produced by the HNET do or may incorporate:

(a) revaluation gains, allowing a regulated supplier to extract excessive profits; or

(b) revaluation losses, inhibiting the supplier's ability to earn a normal return,

then questions about whether the s 52A(1) purpose is met must arise, most directly in terms of limiting the ability of suppliers to extract excessive profits. The second possibility could arise where an ODV valuation process optimised away an asset (prudently and efficiently invested) that was still being used by a regulated supplier and which had not yet been fully depreciated. The Commission noted that some suppliers had been concerned by the "lottery" nature of ODRC valuations.[340]

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[340] EDBs-GPBs Reasons Paper at [4.3.33], 3/7/001090.

[571] As, we admit, something of a segue, it is interesting to note at this point the following comments of the Commission in the Airports Inquiry report:[341]

> In reviewing historical experience in the United States, Alfred Kahn notes the Supreme Court's support for the DRC approach in *Smyth v Ames* of 1898, which came at a secular low point in the trend of the general price level, when replacement costs were probably below historic costs. Fifty years later, the same Court overthrew that precedent in the *Hope* case in 1994, following a period of inflation in the two World Wars that had resulted in DRC being above DHC. By that time, the respective positions of the regulatory agency and regulated firm had reversed, with the former then preferring DHC and the latter DRC. This suggests that, in the United States, distributional issues are an important consideration for industry-specific regulation. The same probably applies in other jurisdictions.

[572] Therefore, by our assessment, the significance of revaluation gains or losses that may result from new ODV valuations to establish the initial RAB, and the implications of such gains or losses for achieving the s 52A(1) purpose, are significant factors counting against the conclusion that s 52A, taken overall, requires the use of new ODV valuations to determine initial RAB values. The question of taking account of revaluation gains and losses in setting the initial RAB values is taken up in Part 5.4 of this judgment.

Initial RAB values and roll forward

[573] It is the very concerns referred to above regarding the uncertainties involved in replacement cost valuations, that result in the consensus between the Commission and regulated suppliers that the new ODV/HNET approach should not be used at the start of successive future regulatory periods. Instead, in price-quality path regulation all new investments from the start of the regime are brought into the RAB at cost and have the potential to return the regulated cost of capital. Such investments are thus protected from any subsequent changes in, for example, demand and technology, including the geographic and time period patterns of demand, that would result in assets being reduced in value or even removed from the asset base. Equivalently, new investment will have a NPV=0 over its life, where the discount rate is the regulated cost of capital. (Of course, if the regulated cost of capital is set too high or too low, the NPV will actually be positive or negative. This is discussed in Part 6 of this judgment when dealing with the cost of capital appeals.)

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[341] Airports Inquiry Report at [5.74], 44/367/021835.

[574] In our view, consideration of the correct approach to setting initial RAB values cannot be divorced from consideration of how the initial RAB values are to be rolled forward, or updated, to provide a new starting RAB each year. It seems to us inescapable that if the logic of the HNET is accepted, and Powerco and WIAL/CIAL say that it is so compelling as to require the use of the test, then that logic would suggest that a new ODV should be prepared whenever the RAB needs to be estimated, ie at the start of each regulatory period.

[575] But none of the appellants, other than AIAL in the context of ID regulation where it retains the right to set prices it thinks fit, suggest that procedure (although it appears to have been the position of some submitters during the IM consultation process). Frequent revaluations would introduce the possibility that asset values could be written down as well as up. It would also create the possibility of large revaluation changes needing to be taken into revenue, resulting in up and down price shocks that would be very difficult to administer and not conducive to a settled market for either suppliers or users. The proposed roll-forward provisions eliminate those uncertainties and provide for a return on new investment at the regulated cost of capital.

[576] It is our view that, advocating that the HNET need be a once-only event undermines the argument that principle demands its use in the first place. Once that principle is discarded, the case for requiring an ODV at any particular time is severely weakened. If the roll-forward provisions are acceptable, why not apply them to an ODV carried out some time ago?

[577] Powerco acknowledges the point, but denies any inconsistency is involved. In doing so it submits that the suggestion of inconsistency is a misapprehension that arose because there was broad industry and Australian regulatory support for the two principal positions of:

(a) setting the opening RAB at ODV, on the basis of the HNET; and

(b) rolling the RAB forward using indexation rather than periodic ODV revaluations to "avoid the potentially significant adverse incentives created by periodic revaluations".

[578] Powerco relies for its first point on an article by NERA and PwC that looks at the Australian experience with valuing regulatory assets.[342] The Commission fairly submits by reference to that article that it would not appear such a general statement of principle can be advanced. What the authors of that article said was:[343]

> A conclusion that can be drawn from the valuations considered in this report is that, while replacement cost valuations (mainly, the optimised depreciated replacement cost or ODRC method) have not been applied universally in Australia, such valuations have been generally accepted as a reference point for the valuation that ultimately is accepted.

[579] In making the second proposition, namely the reference to avoiding adverse incentives, Powerco referred to a report by the Allen Consulting Group.[344] Interestingly, that was a report to the ACCC as to whether electricity transmission assets at future reviews should be revalued on an ODRC basis, or by reference to previous RAB valuations updated for capex, depreciation disposals and inflation during the previous regulatory period. The Allan Consulting Group approached the choice between the two approaches by reference to the strength of the incentive each provided to the transmission network service provider to minimise cost and – determined simultaneously – the level of risk borne by transmission providers over the ability to recover costs incurred.

[580] The observations of the Allen Consulting Group on the ODRC revaluation methodology to the following effect are of interest:[345]

(a) Under the ODRC revaluation methodology regulated charges would be independent of the costs actually incurred (that is capital costs and operating costs) in providing transmission services.

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342 Nera and PwC *Initial Value of Regulatory Assets – The Australian Experience – Report for Orion and Powerco* (6 December 2009), 55/486/028185.

343 At [1.2], 55/486/028190.

344 Allen Consulting Group *Methodology for Updating the Regulatory Value of Electricity Transmission Assets* (2 August 2003), 45/371/22395.

345 At 5-6, 45/371/022398-400.

(b) The ODRC revaluation methodology represented the polar case along the spectrum of trade-offs relating to the strength of incentives to reduce cost, and the degree of certainty over the recovery of costs. The roll-forward methodology, in contrast, provided a degree of certainty over the recovery of costs incurred – with the degree of certainty (and the strength of the incentive to minimise costs) determined by the length of the regulatory period selected.

(c) The setting of prices completely independent of costs was not feasible for regulated electricity transmission businesses in the short term. Nor was it desirable in the longer term. Much depended upon the accuracy of the estimated ODRC value, for which substantial statistical uncertainty would be inevitable.

(d) Whilst ODRC would maintain the average prices at approximately the level consistent with those of the hypothetical (efficient) new entrant, the time profile of charges of such an entrant might not be the most efficient charges and the roll forward methodology might permit the more efficient time profile of charges.

(e) Given the risks associated with estimate errors, it was difficult to see how the Commission could credibly adhere to such a regulatory regime over the long term.

[581] Likewise of interest are the following observations on the origins of ODRC:[346]

> It is noted that the references to concepts like optimal deprival value and the associated current replacement cost concepts derived from a desire in the 1980s to improve the measures of the financial performance of government business enterprises. This approximately coincided with the debate about the most appropriate measure of income for financial accounting purposes, relating to the debate between financial capital maintenance and operating (or physical) capability maintenance.

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346 Allen Consulting Group *Methodology for Updating the Regulatory Value of Electricity Transmission Assets* (1 August 2003) at 7, 45/371/22400.

> It is noted that revaluing assets at their ODRC value has similarities to concepts from the financial accounting field, such as Optimised Deprival Value and the valuation methods consistent with the operating capital maintenance concept. The regulatory asset base in regulation has a specific purpose, which is to reflect the value of the regulated assets in the eyes of the regulator at each point in time, and the test for the appropriateness of any method for updating of the regulatory asset base has a specific objective – which is to ensure that the change in the regulatory value provides incentives for efficiency, including to minimise cost but to continue to invest[ment] where it is efficient to do so. Accordingly, it need not follow that accounting conventions developed for other purposes – such as measuring the financial performance of government businesses or to derive better estimates of economic income – are appropriate for this task.

[582] By our assessment, those comments indicate that the Allen Consulting Group saw more disadvantages from adopting an ODRC revaluation approach than Powerco recognises. Those reasons are not dissimilar to ours regarding the use of current ODRC valuations for initial RAB values in reaching the view that new replacement cost valuations are not required under Part 4 for initial RAB values.

[583] Clearly, it would be consistent with the roll-forward provisions if initial RAB values were to be determined in the same way – if initial RAB values were set so that the assets existing at the start of the new regime earned NPV=0 over their whole lives. There appears to be little or no disagreement among the parties that this would be appropriate, were it possible. However, it is also agreed to present insuperable difficulties of implementation. Perhaps over-simplifying, two pieces of information would be needed:

(a) the actual costs of all investments that have entered into the initial RAB at the time it is to be estimated (the start of the new regime, more precisely the beginning of the first year in which a price-quality path is to be set or the new ID requirements are to apply); and

(b) all revenues earned over that whole period.

[584] The impossibility of this task lies behind the comment frequently made that applying the NPV=0 principle to assets part way through their lives is difficult.[347]

[347] Although Air NZ came close to saying it is possible and should be used.

[585] Some consequences of, or corollaries to, the above points are worth noting.

[586] First, if at the time the initial RAB is determined, the NPV of revenues is already higher than a figure consistent with NPV=0 over the whole life of the assets, that would provide a windfall gain to the supplier. The Commission accepts it is prevented from clawing back such a gain by s 53P(4).

[587] Mr Balchin made an argument it was unlikely that that was the position, because it would require inefficiently high prices in the early, under-utilised, part of assets' lives. On this ground he argued that no meaning could be ascribed to DHC. Returns to the asset owner may need to be higher than the cost of capital in the later years of the assets' lives to make up for accounting losses earlier, and a DHC valuation would need adjustment upwards if it were to provide the basis for the RAB.

[588] Notwithstanding those arguments, we are not prepared to assume – even in terms of the economic theory supporting Powerco and the Airports' argument – that regulated suppliers have, in fact, suffered accounting losses to date. A considerable part of the reasons for regulation of natural monopolies is experience over time with their ability to earn above normal returns. The regulatory regimes in place prior to the enactment of Part 4, which have been transitioning to full Part 4 regulation since December 2010, reflect those concerns. The same reasoning applies in the context of ID regulation. There the concern manifests itself in terms of the significance of revaluation gains for assessing whether or not profits are normal or excessive. That is, incorporating revaluation gains or losses into RAB values against which ROI is to be measured could disguise excessive profits (in the case of gains), or wrongly suggest such profits (in the case of losses). The possibility that such returns may have been earned in the past by the Airports gave rise to the Airports Inquiry. That concern provides the basis for ID regulation of Airports under Part 4, and for the requirement under s 56G that the Commission report to the Ministers of Commerce and Transport as soon as practicable after a new price is set by an Airport under the AAA in or after 2012 as to how effectively ID regulation under Part 4 is promoting the s 52A purpose and outcomes in respect of specified Airport services.

[589] Moreover, as regards the EDBs and GPBs, and as discussed more fully when considering Vector's arguments, no regulated supplier – other than Vector whose evidence we did not find persuasive –provided factual evidence to suggest that the initial RAB values were such that over the lifetime of the assets the suppliers would in fact earn less than normal returns. As will become apparent, like the Commission we think that is of considerable significance. Therefore we think it is a valid concern, when deciding on the approach to determining initial RAB values, that greater than normal returns may have been earned in the past. That is, after all, one of the reasons why values are not determined simply by reference to prices.

[590] Secondly, any variance in the initial RAB is translated dollar-for-dollar into revenue. That is, if the initial RAB is $1 million higher or lower, that generates allowable revenue that is $1 million higher or lower in NPV terms. (Again, this depends on the regulated cost of capital accurately reflecting the supplier's actual cost of capital.)

[591] Clearly, a higher RAB is highly advantageous to suppliers, particularly those subject to DPP/CPP and IPP regulation. The Commission was conscious of this. There was some prevarication on the part of Powerco and Vector about the effect of undertaking a new ODV. Both purported not to be in a position to advise us of the likely outcome of a new ODV valuation, such a valuation being an expensive task that had not been undertaken. However, their acceptance of the Commission's estimate of the valuation gains for the EDBs across the sector of some $1.9 billion,[348] undermined their position, as did Vector's willingness to rely on the PwC 2010 ODV Handbook from which the Commission derived its $1.9 billion estimate.[349] In our view, the highly advantageous nature of higher initial RAB values creates strong incentives for new ODVs to be overstated. The appellants naturally played this concern down, pointing to the protections that could be provided by independent valuations, signed statements by company directors and the like. As far as it goes, we accept that proposition and, moreover, in all likelihood the ongoing good faith of those involved in these processes. Nevertheless, we do not

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348 EDBs-GPBs Reasons Paper at [E2.44] and fn 578, 3/7/001280.

349 As noted in [407] the relief sought by Vector's Alternative 1 is an order pursuant to s 52Z(3)(b)(i) for a new, 31 March 2010, ODV valuation based on the PwC 2010 ODV Handbook, finalised by the Commission in accordance with the report of a valuer.

take this issue lightly. Powerful incentives can have significant effects on human behaviour. The effect of those incentives is also, for Air NZ, a matter of concern. Its fundamental argument is that the Airports have treated revaluation gains inappropriately in the past. That treatment had the effect of apparently justifying normal, but in Air NZ's argument in effect disguising excessive, profits when charges were based on valuations that included such gains.

[592] These considerations also support the conclusion that the workably competitive markets standard does not require the HNET/ODV approach to valuing the initial RAB.

Initial RAB values and the s 52A(1)(a) outcome

[593] Vector and Powerco place great emphasis on the importance of initial RAB values for their impact on investor expectations and confidence and therefore, future investment behaviour. Lower than appropriate initial RAB values, that is lower than current replacement cost values, would, by this argument, adversely affect investor confidence contrary to the required outcome of suppliers of regulated goods or services having incentives to innovate and to invest, including in replacement, upgraded and new assets. The same argument is implicit in the Airports' appeals, and their emphasis on how the workably competitive markets standard was to be applied to promote the s 52A(1) outcomes, particularly that in paragraph (a).

[594] In contrast, the Commission observed that initial RAB values had far less significance for incentives for investment and efficiency than did the RAB roll-forward provisions, but that initial RAB values did have a notable bearing on a supplier's ability to earn excess returns.[350]

[595] As has been pointed out on numerous occasions, regulated industries employ specialised non-land assets which, once committed, have little value in alternative uses. They become sunk. Their opportunity cost is close to zero. The Commission infers from this that the value of specialised non-land assets in a workably competitive market is unlikely to be close to their value in an alternative use. Thus

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350 EDBs-GPBs Reasons Paper at [2.8.38], 3/7/001032; Airports Reasons Paper at [2.8.22], 2/6/000643.

opportunity cost valuations would be inappropriate because they would involve the write-down of asset values and "not give rise to an environment that is conducive to future investment".[351]

[596] But it is necessary to explore further what is meant by value. As has been discussed, the value of assets in unregulated, workably competitive, markets is governed by the revenue stream that those assets may produce. But that revenue stream, and consequently the asset value, is at the mercy of external circumstances to one degree or another, through changes in costs, changes in purchasers' preferences, the impact of competition, and so on.

[597] Nevertheless in unregulated markets the opportunity cost of sunk or specialised assets is far from irrelevant. Since they are specialised, the best that they could probably be sold for is their scrap value. Suppose the market suffers a massive change that reduces the asset owner's revenue. So long as the revenue stream is sufficient to cover operating costs, the asset owner will stay in business unless the revenue over and above that amount is lower than the return on the scrap value of the assets. If not, the asset owner would be better off selling the assets for scrap and investing the proceeds elsewhere.

[598] Similarly therefore, in a regulated industry, unless the RAB is set at less than the scrap value, the asset owner will rationally keep the assets in operation, and indeed operate them as efficiently as possible.

[599] Moreover, the asset owner will still have just the same incentives to invest in new assets and asset replacement (so long as those new investments are taken into the RAB at cost) because the regulatory environment provides for new investments to return the regulated cost of capital.

[600] The argument on investment grounds against such a harsh determination of the RAB – setting it just above scrap value – is that, as the Commission says, it "may set a precedent that damages a supplier's incentives to invest in future".[352] No doubt

[351] EDBs-GPBs Reasons Paper at [4.3.6], 3/7/001082; Airports Reasons Paper at [4.3.9], 2/6/000676.

[352] EDBs-GPBs Reasons Paper at [4.3.6], 3/7/1001082 and [X21], 3/7/000978; Airports Reasons

it would cause enormous consternation and call the investment environment into question. But normally that would be more relevant to potential future investors in other industries where initial RABs had not yet been set, eg industries not currently regulated but subject to the possibility of regulation. Although s 52A(1) talks of the suppliers of regulated goods or services having incentives to innovate and invest, we agree that the impact on potential future investors in industries other than those currently regulated is a relevant factor.

[601] Despite the apparent illadvisedness – to say nothing of the unlikelihood – of opportunity cost valuation of specialised assets, it is worth making another point. It is arguable that the assets would be more efficiently used if lower prices were charged. The marginal opportunity cost of using the assets would be very low. As is well accepted, prices set to just cover marginal costs provide for allocative efficiency in the use of the services provided by the assets.

[602] What this means is that users of the services supplied by the asset owner would make better use of the asset if the price for doing so represented only the cost to the community of keeping those assets in production. To the extent that prices exceed the cost to the community, assets will be systematically under-used. Some potential users prepared to pay the long-run marginal costs of running the assets would be priced out of the market. In practical terms this means there would be less production of the goods and services that rely on regulated services as inputs than is socially optimal. That is, those downstream goods and services are themselves under-used in relation to their true resource cost to the community.

[603] This discussion is doing little more than noting the familiar dilemma with the production of services with large economies of scale. There are benefits in pricing such services at marginal cost. If such services are priced at marginal cost, they will make a loss. On the other hand, if that were the prospect facing an investor, the investment would not be made. The ability to price above marginal cost, and thus recover total costs (if not more) comes with the market power that comes with economies of scale.

Paper at [4.3.9], 2/6/000676 and [X20], 2/6/000599.

[604] It follows from this discussion that we agree with conclusions drawn by the Commission that the initial RAB has:

(a) little or no impact on incentives for that supplier to innovate and invest in new or replacement assets;

(b) little or no impact on the supplier's incentives to improve efficiency and provide services at a quality that reflects consumer demand; and

(c) little or no impact on the supplier sharing with consumers the benefits of efficiency gains.

[605] The setting of the initial RAB does, however, have an impact on the general investment environment for regulated industries and industries subject to the possibility of regulation. It sends signals about the behaviour of the regulator. This is a question of reasonable investor expectations. In our view, reasonable investor expectations should be met by following a carefully considered approach when setting a RAB, subject to there being no evidence that suppliers would be unable to recover the costs of their past prudent and efficient investments. (This does not imply that the cost of purchase of a regulated business as a going concern should necessarily be fully protected.)

[606] We are, therefore, not persuaded by the argument that meeting the s 52A(1) outcomes provides strong support for using the HNET/ODV approach to setting initial RAB values.

Implementation uncertainties

[607] Noting that the prices for regulated services generated by a HNET/ODV valuation may not be consistent with the s 52A(1) outcomes, the attraction of the HNET approach is based on the theoretical proposition that it will reveal actual replacement cost values, as Mr Balchin puts it, generated by a workably competitive market in, or perhaps tending towards, equilibrium. That conceptually attractive proposition is, however, difficult to achieve in reality.

[608] The difference in forward-looking costs of providing the service with the old asset compared to the new, for example, may require an adjustment for savings that result from the HNE not having to maintain aged assets or from "optimised in" new technology reducing maintenance costs. Estimating such adjustments is, as the various Handbooks we were referred to show,[353] anything but a straightforward task.

[609] Mr Balchin notes that:[354]

> In practice, however, a number of simplifications commonly are made when estimating an ODV ... Most notably, the depreciation step (i.e., adjusting for the difference in the forward looking costs of the old assets compared to the new) is normally calculated using an accounting depreciation method (such as straight line depreciation) as a proxy for the theoretically correct value. Similarly, a value is commonly applied to surplus installed capacity by sizing the optimal asset to meet a standard planning horizon.

[610] Expressing a far more negative view, in the article referred to favourably by the Supreme Court Professor David Johnstone states that:[355]

> Auditing in the sense of independent corroboration is impossible with DORC.[356] No two firms of valuers working independently can be expected to come up with equal or even nearly equal DORC valuations. The problem is that DORC valuations embody multiple subjective and at worst completely arbitrary choices, and can only be verified when these are specified and taken as given.

[611] The observations of Allen Consulting Group on the lack of precision in ODRC valuation processes are also relevant.

[612] We accept that in implementing any method of estimation based on theory (essentially any method at all), compromises need to be made. But we are also concerned at the possibility that, even though theoretically appropriate, there is a real risk that ODV methodology, as practised, may depart so far from its theoretical

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353 See, for example, Commerce Commission *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (30 August 2004), 45/378/022739.

354 J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross Submission (prepared for Powerco)* (15 October 2009) at 12, 54/469/027785; J Balchin (PwC) *Commerce Commission Review of Input Methodologies Cross-submission (prepared for CIAL)* (15 October 2009) at 12, 54/468/027747.

355 David Johnstone "Replacement Cost Asset Valuation and Regulation of Energy Infrastructure Tariffs" (2003) 39(1) Abacus 1 at 11. (Footnotes omitted)

356 DORC (Depreciated Optimal Replacement Cost) is but another way of referring to ODRC.

foundations in the HNET as to lose its credibility as generating the prices that could be charged for services in a workably competitive market.

Tobin's q

[613] Relying on a report by Orion's economic expert, NERA, Powerco and WIAL/CIAL:[357]

(a) submit that Tobin's q theory provides strong in principle support for asset values being tied to replacement cost; and

(b) criticise the Commission for not referring to it in its draft or final Principal Reasons Papers.

[614] Orion's report explains Tobin's q in the following terms:[358]

> Tobin's Q is a theoretical model of links that are thought to exist between the financial economy (company debt and equity values) and the real economy (firm's investment decisions). Specifically, Tobin's Q (or, more correctly, 'marginal Q') measures the ratio of the value to a firm of an additional unit of capital and its replacement cost.
>
> ...
>
> Tobin's Q is an alternative statement of the investment theory set out in our earlier report. It is built on the foundation that, in the long term, asset values will adjust to reflect the replacement costs of those assets. Tobin's Q is consistent with workable competition, because it recognises that while market forces will act to align asset values with costs (through new entry or expansion of existing competitors), this process is not instantaneous. This may be because of time lags associated with acquiring and installing new capital or because the necessary investments are 'lumpy'.
>
> We noted in our earlier report that these adjustment costs imply that, in a workably competitive market, firms may earn above or below normal economic profits for a period until such a time as entry, expansion or exit occurs to restore equilibrium. In the same way, the Tobin's Q model recognises that the Q ratio may be above or below one at given points in time, but can be expected to trend towards one over time.

[615] Relevant to a consideration of the criticism, the Commission had requested its Experts to examine, amongst other things, empirical evidence on the relationship

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357 Citing Greg Houston and Danielle Wood (NERA) *Empirical Estimates of Tobin's Q (prepared for Orion)* (15 March 2010), 57/531/029141.

358 At [2.1] and [2.2], 57/531/029145-6 (footnotes omitted).

between replacement costs and asset values including discussion of Tobin's "average q" in a general context and in that of markets with long-lived specialised infrastructure investments.[359]

[616] After surveying and summarising a number of studies the Experts concluded that:[360]

> ... it appears that q has a tendency to return to one or slightly less than one in the long run, although significant deviations below one can persist for decades.

[617] Powerco and WIAL/CIAL submit that the Experts' conclusion does not differ substantively from the conclusions of NERA that:[361]

> ... although Q may be above or below one at given points in time, in the long run the ratio should trend towards one ...

and

> ... we do not consider that the available empirical studies in any way invalidate the conclusion articulated in our earlier report that in workably competitive markets asset values will reflect their ODRC over time.

[618] However, the conclusions by the Experts and NERA are to be read in light of qualifications that preceded them:

(a) First, in the Experts' report:[362]

> The review shows that observed market values vary quite widely from equality with replacement cost, that some of this variation is systematically correlated with contextual factors ...
>
> Since the economic environment can vary substantially from one market/industry to another, it is not feasible for us to discuss even a modest fraction of the possible contexts in which competition might be considered workable. ...
>
> ...
>
> Serious attempts have been made to estimate replacement cost ... To do this, authors look at flows of investments and depreciation

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[359] Asset Valuation Report at 5, 7/28/003099.

[360] Asset Valuation Report at 51, 7/28/003145.

[361] Greg Houston and Danielle Wood (NERA) *Empirical Estimates of Tobin's Q (prepared for Orion)* 15 March 2010) at 12-13, 57/531/029155.

[362] Asset Valuation Report at 24 and 25, 7/28/003118 and 7/28/003139.

> over time and infer from those flows what the stock of replacement costs should be. This requires making some assumptions about rate of technical progress and depreciation; it is not free from controversy and debate ...
>
> The difficulties of estimating replacement cost are mentioned in many of the papers surveyed ...

(b) Second, in NERA's report:[363]

> Given the wide range of values and their sensitivity to the assumptions made, we consider that it is difficult to draw any meaningful conclusions from these studies about the long term empirical relationship between asset values and costs.

[619] Like reservations were also expressed in a report by one of Vector's experts, CEG, upon which WIAL/CIAL relied. CEG prefaced its reference to the Commission's Experts' conclusion with the words:[364]

> To the extent that it ... [the empirical evidence surveyed by the Commission's experts] can be relied on ... .

[620] Having regard to the qualifications and reservations, we are of the opinion that no great weight attaches to Powerco's and WIAL/CIAL's criticism of the Commission.[365]

[621] In any event, while the Commission's draft or final Principal Reasons Papers may not have referred to Tobin's q theory as such, they do discuss the concept of the ratio of market asset values to replacement costs, which is the gravamen of Tobin's q theory.[366]

[622] Certainly the absence of a reference to Tobin's q in the Principal Reasons Papers does not evince a flaw in the Commission's reasons such as to lead us to a

363 Greg Houston and Danielle Wood (NERA) *Empirical Estimates of Tobin's Q (prepared for Orion)* (15 March 2010) at 12, 57/531/029155.

364 J Ockerby and T Hird (CEG) (for Vector) *Input Methodology for Asset Valuation* (1 August 2010) at [117], 58/574/029970.

365 A view apparently shared by Mr Hodder: "... there's a discussion of ... Tobin's q, I don't propose to add to ... that ...".

366 May 2010 Airports Draft Reasons Paper at [4.2.18], 8/31/003259; Airports Reasons Paper at [4.3.39], 2/6/000684; June 2010 EDB Draft Reasons Paper at [4.2.15], 9/37/003628; June 2010 GPB Draft Reasons Paper at [4.2.15], 9/38/004052; and EDBs-GPBs Reasons Paper at [4.3.61], 3/7/001096.

conclusion, nor advance Powerco's or WIAL/CIAL's cases, that their alternative IMs are materially better.

Outcome

[623] Our analysis leads us to conclude, contrary to the position taken by Powerco with Vector's support, and the Airports, that the reference in the s 52A(1) purpose to promoting outcomes consistent with those produced in workably competitive markets does not require – as a matter of economic theory and therefore of law as that theory is reflected in the section – the Commission in the asset valuation IMs to base initial RAB values on the HNET approach: ie, on new/current ODV valuations. Thus we are not persuaded on the basis of the appellants' primary argument, that new, 2010 ODV/ODRC valuations would be materially better at meeting the s 52A and/or s 52R purpose(s) and nor that the Commission erred in the interpretation of s 52A(1) in this context.

[624] In reaching that conclusion we have considered many of the Commission's reasons for its similar conclusion on the need for new valuations, and indeed its approach to initial RAB values more generally.

[625] Before we turn to the second basis upon which Vector (with Powerco's support) and the Airports argue that new, 2010 ODV/ODRC valuations would be materially better, we think it will be helpful if we summarise where, thus far, we agree or disagree with the Commission's reasons for rejecting new valuations, and where we have yet to consider that reasoning.

[626] At [495] we summarise the Commission's reasons for its initial RAB value determination (based on existing regulatory valuations).

[627] By reference to that summary, and our analysis, it can be seen that to the extent the Commission made that determination because it was wrong to dismiss existing regulatory valuations, we:

(a) are yet to conclude whether existing valuations are consistent with promoting the s 52A(1) purpose and outcomes;

(b) are not persuaded – essentially because of the contentious nature of the regulatory history of asset valuation issues and – other than for the controlled GPBs – the absence of a direct link between asset values and prices, that existing valuations do represent a relevant continuing relationship between suppliers and consumers;

(c) are not persuaded that considering whether changes to asset valuations are consistent with outcomes produced in workably competitive markets is a helpful frame of reference – what matters are prices; and

(d) have not yet considered the implications of the adjustments proposed by suppliers and agreed, or not, by the Commission;

[628] Similarly, to the extent the Commission made that determination:

(a) because replacement costs are only one of a number of influences on the value of specialised assets in workably competitive markets – we find the Commission's reasoning generally unpersuasive and, in some places, wrong;

(b) because asset values in workably competitive markets are not defined by long-run equilibrium in theory or in practice – we note that in our view such values nevertheless can be expected to reflect a tendency towards those outcomes;

(c) because initial RAB values do not need to reflect today's replacement costs for replacement costs to have an influence over the longer term – we comment that that does not take the argument very far;

(d) because submitters were unable to demonstrate that in workably competitive markets characterised by substantial specialised assets, asset values would be equivalent to, or bear a close relationship to, new replacement cost-based valuations – we simply note the workably

competitive markets are not characterised by substantial specialised assets;

(e) because although upward revaluations might be warranted if regulated suppliers were able to demonstrate that prices set on the basis of existing regulatory valuations would not maintain their efficient financial capital (ie earning less than a normal return on the original cost of their investment), they have not done so and therefore existing valuations are consistent with s 52A(1)(a) and (d), – as noted, that is an argument we are yet to consider;

(f) because the new Part 4 purpose does not require new replacement cost-based asset valuations – we agree; and

(g) because it is difficult to reconcile as logically consistent the view that a one-off revaluation is unavoidable now with the view that further revaluations would be unnecessary – we agree and say that it is not merely difficult but impossible.

[629] Against that background, we now turn to Vector, Powerco and the Airports' second argument, namely that the existing EDB and GPB regulatory valuations are not fit for purpose and that new, current ODVs are required to properly determine initial RAB values. That involves our consideration of those parts of the Commission's reasons not so far considered by us.

5.4 EXISTING EDB, GPB AND AIRPORTS REGULATORY VALUATIONS NOT FIT FOR PURPOSE?

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Introduction

[630] The essence of Vector's challenge on its merits appeal is that the regulatory values for the EDBs and GPBs used by the Commission in the asset valuation IMs as base values[367] are not fit for purpose under Part 4.[368] As noted, Vector formulates its challenge in a variety of ways, generally claiming that Part 4 was a new, forward-looking regime, requiring new valuations, that the Commission's choice was based on arbitrary or unprincipled reasoning, the choice was inconsistent with the workably

[367] We found the phrase "base value" as used in this context by the Commission a little confusing. Does it refer to the 2009 disclosed or determined regulatory valuations themselves, as adjusted under the asset valuation IMs? Or does it refer to the earlier valuations – for example, the EDBs 2004 initial ODV RAB values for Part 4A thresholds regulations – from which the EDBs' 2009 disclosed valuations derived? Either meaning can, dependent on context, be the appropriate one. We therefore endeavour to be explicit on the point.

[368] Vector Appeal 259 at [EDS.AV(1)].

competitive market outcomes identified in the Part 4 purpose statement and that the existing valuations were developed for a different purpose (not price control). It is very clear that, in general terms, Part 4 is a forward-looking regime. To that extent, Vector's argument is not controversial, but neither would it take matters very far. We think the essence of Vector's forward-looking argument is that Part 4 is a break with the past, and a new start. That new start requires current/new ODVs for initial RAB values, and initial RAB value decisions that are not influenced by what may have happened in the past, whether or not revaluation gains that might be incorporated into those new, current valuations have, or have not, in the past been treated as income for pricing purposes.

[631] Powerco makes a similar, but less elaborate, argument. It says its base value under the GPBs asset valuation IM is not credible.[369] Arguing this appeal for Powerco, Mr Hodder explicitly adopted Vector's arguments.

[632] AIAL also makes a similar, but in its case far less elaborate, argument. We deal with that argument after we have dealt with those of Vector and Powerco.

[633] Vector's arguments were presented slightly differently in each of its written submissions, its oral argument in chief and its reply. Taken together, and including Powerco's submissions as well, those "not fit for purpose" arguments can be seen as falling into two categories:

(a) first, an argument based on an interpretation of Part 4 – applying equally to the EDBs and the GPBs – which calls for a new, forward-looking, approach to asset valuation and hence new ODVs for initial RAB values; and

(b) secondly, arguments based on asserted inherent flaws in the earlier valuations from which the 2009 regulatory valuations were derived, namely:

(i) EDBs – 2004 ODVs under the thresholds regime;

[369] Powerco Appeal 248 at [8]-[12].

(ii) controlled GPBs (Powerco and Vector Auckland) – 2002/03 ODVs under the Gas Authorisation; and

(iii) uncontrolled GPBs – various.

[634] There are, in turn, four principal limbs to that first, interpretational, argument:

(a) Part 4 was a fundamentally reformed, and forward-looking, regulatory regime. The base regulatory valuations had been prepared under different regimes, and for different purposes. By definition, new, robust, principled and forward-looking replacement cost initial RAB values were required in order to promote the s 52A(1) outcomes.

(b) Important aspects of the Commission's decisions on asset valuation issues in the Part 4A and Gas Authorisation processes – especially the Commission's change of heart over the use of ODVs for RAB values[370] and its backward-looking concern regarding past revaluation gains[371] which remained central to its asset valuation IM determinations, are not open to the Commission under Part 4.

(c) Those important aspects of the Commission's decisions are inconsistent with the reasonable expectations of regulated suppliers. In making those decisions the Commission has acted opportunistically and, therefore, in a way that is contrary to the outcomes of regulatory certainty and investor confidence that were a central purpose of the Part 4 reforms.

(d) The use of the 2009 regulatory valuations in the asset valuation IMs would produce initial RAB values that would result in the

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[370] This is a reference to the Commission's change of mind over:
(a) using updated ODV valuations for roll forward under Part 4A; and
(b) using the 2005 ODV valuations of Powerco and Vector, prepared by them in accordance with the Commission's valuation methodology, as the basis for initial RAB values under the Gas Authorisation.

[371] The argument here is that s 52T(1)(a)(ii) which requires an IM dealing with "valuation of assets, including deprecation treatment of revaluations", is only concerned with revaluations occurring after initial RAB values have been determined.

> Commission, in breach of s 53P(4), setting starting prices which retrospectively sought to recover what the Commission wrongly perceived as excessive past profits.

The line in the sand

[635] Before addressing Vector and Powerco's "not fit for purpose" arguments it is necessary to outline what is known as the Commission's "line in the sand argument", as advanced by Mr Brown throughout the hearings.

[636] The Commission's reasons for adopting existing regulatory valuations as initial RAB values for the Airports, EDBs and GPBs are explained in significant complexity in the Principal Reasons Papers. That complexity is reflected in the summary of those reasons, taken from the Principal Reasons Papers, set out at [495].

[637] At the asset valuation hearings, however, the central theme of Mr Brown's and Ms Casey's submissions was a much simpler proposition. "In a nutshell", the Commission's decision had been to draw a line in the sand by using existing regulatory valuations that were known, that produced outcomes consistent with those in workably competitive markets, and that had not been demonstrated to result in businesses earning inadequate returns. Drawing a line in the sand was beneficial in that it would end the debate over the adequacy of replacement cost methodologies, the treatment of past revaluation gains and the past earning of excessive returns.

[638] The "line in the sand" argument was the Commission's primary response to the supplier appellants' "not fit for purpose" challenges. The Commission had taken that approach on the reasonable understanding that the 2009 regulatory valuations were sufficiently high for regulated suppliers to earn at least a normal return on capital for past investments. That understanding had been confirmed by the lack of evidence from suppliers that that would not be the case.

[639] Mr Brown's explicit proposition was, therefore, that the Commission in responding to these appeals did not need, as it had not necessarily done in the past, to concern itself with a detailed justification of those values as products of particular valuation methodologies or exercises.

[640] Somewhat surprisingly then, references to drawing a "line in the sand" are sparse in the record.

[641] The concept is first mentioned in the June 2009 IMs Discussion Paper.

[642] There are no references to a "line in the sand" in the December 2009 Emerging Views Papers. Vector's different "line in the sand" approach, backsolving asset values from existing prices (discussed at the EDBs and GPBs workshop)[372] is referred to in the June 2010 EDBs Draft Reasons Paper and June 2010 GPBs Draft Reasons Paper.[373] There is no discussion of the "line in the sand" during this part of the process in the Airports context.

[643] In the EDBs-GPBs Reasons Paper the Commission returns to its "line in the sand" approach. It concludes:[374]

> Having made these adjustments, the valuations represent a 'line in the sand' at the start of part 4. Combined with a move away from replacement cost-based approaches more generally under Part 4 (paragraph 4.3.66-4.3.84), this will help reduce the scope for debate about asset valuation in future.

Later it comments:[375]

> Making such adjustments with the benefit of hindsight:
>
> - effectively draws a 'line in the sand' at the start of Part 4 under the issues raised in relation to replacement cost-based valuations undertaken in the past; and
>
> - reinforced the credibility of the existing regulatory valuations under Part 4.

[644] Again, there are no equivalent references to the "line in the sand" in the Airports Reasons Paper.

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372 *Final Transcript Electricity and Gas Workshop* (25 February 2010) at 141-145, 56/512/028825-028830.

373 June 2010 EDBs Draft Reasons Paper at [4.3.91], 9/37/003658; June 2010 GPBs Draft Reasons Paper at [4.3.66], 10/8/004071.

374 EDBs-GPBs Reasons Paper at [4.3.12], 3/7/001083.

375 EDBs-GPBs Reasons Paper at [4.3.39], 3/7/001092.

[645] Mr Brown explains the absence of references to a "line in the sand" during parts of the consultation process as resulting from a change in terminology, from "line in the sand" to a "base valuation":

> Really there was a – what happened was there was a change in terminology, that the line in the sand really became the base valuation. That was the expression that was used.

[646] It might be an overstatement to call this a change in terminology as the Commission has used both terms together in the June 2009 IMs Discussion paper, when the first reference to a line in the sand occurred.[376] The change in terminology is more accurately from "base valuation" to existing or prior regulatory valuation. We have already commented on the limited extent to which that change involved anything more than a change in terminology.

[647] By the time of the Principal Reasons Papers the Commission makes no references to a "base valuation".

[648] Mr Brown's point that the absence of a specific reference to a "line in the sand" does not mean the Commission was not drawing a line in the sand is, however, fair. Despite the absence of any references to drawing a line in the sand in the Airports Reasons Paper, that is what the Commission's adoption of existing regulatory valuations amounts to. The adoption of existing regulatory valuations for Airports is justified in identical terms (bar the paragraph numbers) to the adoption of existing regulatory valuations for EDBs and GPBs, which are classified as a line in the sand.[377]

[649] The Commission's proposition was that the line in the sand approach – adopted for the reasons given – obviated the need to consider the particular valuation issues that the "not fit for purpose" challenges raised. That proposition has a certain attraction, not least because it would simplify our task. But, as can be seen at [[627] and [628]], we are not persuaded by a number of the reasons the Commission gave for adopting those existing regulatory valuations. Moreover Vector, with Powerco's

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376 June 2009 IMs Discussion Paper at [Table X3], 6/14/002063.

377 We consider the relationship between the Commission's "line in the sand" argument, and its approach to initial RAB values of the Airports' land, when we deal with the Airports' land asset valuation IM appeals in Part 5.7 of this judgment.

support, challenges that proposition in a number of its "not fit for purpose" arguments, not least as based on the proposition that Part 4, being essentially forward-looking, requires new valuations, and by reference to the unlawful retrospectivity it says is implicit in the Commission's "line in the sand" approach.

[650] We therefore turn to those arguments now. We return to the line in the sand argument when we consider the second category of the "not fit for purpose" arguments based on the assertion that there are inherent flaws in the earlier valuations on which the disclosed or determined 2009 regulatory valuations are based.

Part 4 – a fundamentally reformed, forward looking, legislative regime requiring new ODVs?

[651] Powerco and Vector's argument is that Part 4 is a new, forward looking, regulatory regime.[378] It was, as the Supreme Court has now recognised,[379] put in place in response to complaints from regulated suppliers about the Part 4A thresholds, and the Parts 4 and 5 price control, regimes. For Powerco, Mr Hodder argues that things were to be better – his word – for suppliers under the new Part 4. Vector argues to similar effect.

[652] In its synopsis of argument, Vector put it this way:

> Principled and robust RAB is particularly important under the new Part 4, where an initial RAB is being determined for the first time in the context of:
>
> (a) a fundamentally reformed legislative regime intended to focus on better regulatory practices and incentives to invest, and to provide the discipline of merits review; and
>
> (b) a regulatory history for gas and electricity where an initial RAB for price control purposes was either never determined or determined in circumstances that would not be permitted under the new Part 4.

[653] In summary, the new regime required new, 30 June 2010, valuations. ODV was the only available methodology.

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[378] See [[634](a)] above.
[379] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [8].

[654] For its part, the Commission emphasises what it sees as the important continuity that exists between the old and the new regimes. That continuity supports its use of existing regulatory valuations.

[655] A convenient place to begin a consideration of this issue is with the Explanatory Note. The overview statement, having first referred to those parts of the Act that the Bill would amend, immediately makes the following statement:

> The primary focus of the Bill is to fundamentally reform the regulatory control provisions in the Act.

That statement obviously supports Powerco and Vector's argument.

[656] At the same time, there is continuity between the old and new regimes. That continuity can be found, in part, in the need to provide for the regulation of price and quality of goods supplied in natural monopoly markets.

[657] Implicit to the Explanatory Note is the acceptance that the EDBs and the controlled GPBs were, as firms not faced with competition or the threat of competition, to remain subject to price-quality control. The previously uncontrolled GPBs were to be brought into that regime. There was no question, therefore, that they also were not faced with competition or the threat of competition. The "key" reason for providing such control applied to them.[380]

[658] However, the Commission's argument that the underlying problem was the same, and therefore the need for regulation was the same, is not in our view an answer to Powerco and Vector's arguments. Fundamental reforms were made by the introduction of Part 4.

[659] Of particular relevance to Powerco and Vector's argument is the introduction of the s 52A purpose statement and of the s 52A(1) outcome, the requirement for IMs to be set in advance and the mandatory matters for which IMs are to be determined. We examine the significance of each of those reforms in light of Powerco and

[380] The Explanatory Note at 2.

Vector's proposition, namely that Part 4, being a new regime, requires current replacement cost-based initial ODVs.

The new s 52A purpose statement

[660] The general purpose of the Act is "to promote competition in markets for the long-term benefit of consumers within New Zealand".[381] The s 1A purpose statement has long been held to require an overall efficiency-based analysis, with consumers meaning all New Zealanders, not any particular group.

[661] The s 1A purpose is, as already noted, not apposite as a framework for those parts of the Act where the purpose of regulatory intervention is to counteract the absence of competition. The s 52A purpose statement recognises that. Section 52A has its origins in s 57E of the former Part 4A. Section 57E provided:

> **57E Purpose**
>
> The purpose of this subpart is to promote the efficient operation of markets directly related to electricity distribution and transmission services through targeted control for the long-term benefit of consumers by ensuring that suppliers–
>
> (a) are limited in their ability to extract excessive profits; and
>
> (b) face strong incentives to improve efficiency and provide services at a quality that reflects consumer demands; and
>
> (c) share the benefits of efficiency gains with consumers, including through lower prices.

[662] Section 57E influenced the subsequent approach to price control decisions. In *Powerco Limited v Commerce Commission*, Powerco and Vector sought to judicially review decisions leading to the imposition of price controls on them by the Commission under the then Part 4.[382] The Commission was said to have erred in valuing wealth transfers as a benefit, when s 1A required the Commission to ignore such wealth transfers. Wild J held that s 1A did not apply to Part 4. The existence of s 57E in Part 4A suggested Part 4 too should have its own purpose section, and be immune from s 1A. Thus the Commission was entitled to value wealth transfers

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381 Section 1A.

382 *Powerco Ltd v Commerce Commission* HC Wellington CIV-2005-485-1066, 24 December 2007.

when acting under Part 4. This decision was upheld on appeal, with the Court of Appeal stating:[383]

> We cannot accept that [the former] s 52 envisages only an NPB [net public benefit] test, even if that test is couched in terms of acquirers. NPBs, by their nature, do not discriminate between discrete groups in the economy. They are truly utilitarian, with each economic actor counting for no more or less than any other. But [former] s 52 expressly provides for acquirers. That express provision would be superfluous, and distinctly out of place, if the [former] s 52(b) test involved consideration of only NPBs. The reference to acquirers must have a practical effect on the consideration to be undertaken.
>
> ...
>
> Section 52(b)(i) requires the Commission and/or the Minister to evaluate the costs and benefits of control with reference to acquirers. It would seem to subvert the purpose of this cost-benefit exercise not to consider the value of the monopoly (or monopolistic) company's excess returns and the extent to which their transfer would be in the interests of acquirers.

[663] Part of the review of Part 4 and Part 4A of the Act was whether Part 4 required its own purpose statement. The review found that the absence of a specific purpose statement for Part 4 had been a problem. One was to be provided. The Regulatory Impact Statement acknowledges how the s 52A purpose statement built on s 57E, when it states that the section:[384]

> ... includes both efficiency and distributional objectives, to provide for an appropriate balance between the protection of consumers and that of producers and investors. The proposed purpose statement is similar to the Part 4A purpose statement. Building on the Part 4A purpose statement will mitigate the risk of losing case law.

[664] More specifically:

(a) the reference to promoting the efficient operation of markets for the long-term benefit of consumers is replaced by the reference to promoting the long-term benefits of consumers by, in turn, promoting outcomes that are consistent with outcomes produced in competitive markets;

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383 *Powerco Ltd v Commerce Commission* [2008] NZCA 289 at [31]-[32] and [34].
384 The Regulatory Impact Statement at 20.

(b) the reference to targeted control is deleted, consistent with the new menu of regulatory options;

(c) the three specific outcomes are broadly restated; and

(d) paragraph (a), containing the reference to incentives to innovate and to invest, is introduced.

[665] Relative to s 57E, s 52A goes a step further towards putting consumers' interests front and centre, that reference now coming before the reference to the (socially desirable) outcomes associated with workably competitive markets.

[666] Those elements of continuity and development, particularly as regards protecting the interests of consumers, do not immediately suggest that a new approach is required to initial ODVs relative to the approach the Commission had taken, having regard to those interests, in the past.

Section 52A(1)(a)

[667] A matter of particular significance for Vector and Powerco is the introduction of the reference, in paragraph (a) of s 52A(1), to incentives to innovate and to invest. The introduction of that paragraph was, they argue, a very important signal, relative to the terms of the thresholds and price control regimes and the way the Commission implemented those regimes. It was a clear signal that, in the past, the Commission had inappropriately favoured lower prices in the short term over incentives to invest in the long term. They argue that in achieving the s 52A(1) purpose overall primacy should be given to paragraph (a).

[668] In August 2006, prior to the commencement of the review that led to the enactment of Part 4, the Government issued a policy statement to the Commission under s 26 of the Act on incentives of regulated businesses[385] to invest in infrastructure (the August 2006 GPS).

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[385] That is, businesses regulated under Part 4, 4A or ss 70 to 74 of Part 5 of the old Act.

[669] The August 2006 GPS recorded the Government's overarching objective for infrastructure:[386]

> To enhance infrastructure's net contribution to economic growth and societal well-being over time, while reducing the incidence and severity of service failures and adverse effects on the environment.

[670] In the case of regulated businesses, the Government's policy objective was that they have:[387]

> ... incentives to invest in replacement, upgraded and new infrastructure, and in related businesses for the long-term benefit of consumers.

[671] Vector emphasises that, once Part 4 had been enacted, the August 2006 GPS was withdrawn on the basis that its expectations had been included in Part 4.[388] This, Mr Galbraith argues, supports the proposition that the inclusion of paragraph (a) is to be seen as comparable to the reference in the August 2006 GPS to:[389]

> regulated rates of return being commercially realistic and taking full account of the long-term risk to consumers of under investment in basic infrastructure...

[672] Moreover, incorporating a reference to innovation and infrastructure investment in the Act strengthened the direction to the Commission. The objectives of s 52A(1) are – as we have already discussed – to be given effect: the August 2006 GPS was simply something the Commission had to "have regard to".[390]

[673] The Commission's response to this part of Vector's argument emphasises the similarity between the specific outcomes sought by s 52A(1), and those that had previously been sought, under Part 4A, by s 57E. It also argues that, although there had been no previous reference in the Act to the need to incentivise innovation and investment in the context of the regulation of natural monopolies, that was, in fact, a consideration the Commission had had regard to. Moreover the Commission had, as

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386 The August 2006 GPS at [2].
387 At [7].
388 The August 2006 GPS was revoked by notice in the *New Zealand Gazette* on 4 November 2010.
389 At [7(b)].
390 Section 26(1) provides:

> In the exercise of its powers under this Act, the Commission shall have regard to the economic policies of the Government as transmitted in writing from time to time to the Commission by the Minister

it notes, referred in the past to the need for incentives to innovate and invest when regulatory controls were imposed.

[674] We acknowledge the factual accuracy of the Commission's arguments. But we think the new purpose statement, with its reference to incentives to invest and innovate, is not simply a confirmation of what the Commission had been doing in the past. Rather, we agree with Powerco's and Vector's submissions that emphasising the importance of suppliers regulated under Part 4 having incentives to invest and innovate was an important object of the reforms that were enacted.

[675] Having said that, in order to assess the significance of the August 2006 GPS for the interpretation of s 52A(1)(a), and for the relationship between paragraphs (a) and (d) of s 52A(1), it is necessary to consider the legislative history that both Vector and the Commission referred us to. Given the significance Vector places on that statement, both here and in its cost allocation IM appeal, we set it out in full:[391]

> 1. The Government's objective of returning New Zealand's per-capita income to the top half of the OECD requires improved labour and capital productivity.
>
> 2. Improved labour and capital productivity relies on quality infrastructure including secure and affordable energy services, affordable and sophisticated telecommunications technologies, and efficient transport links. In recognition of this, the Government has adopted the following overarching objective for infrastructure:
>
> > *"To enhance infrastructure's net contribution to economic growth and societal well-being over time, while reducing the incidence and severity of service failures and adverse effects on the environment."*
>
> 3. The provision of efficient infrastructure requires that businesses have the confidence and incentives to make investments in replacement, upgraded and new facilities and services.
>
> 4. Particular issues arise in the case of businesses which are or may be regulated under Parts 4, 4A or sections 70 to 74 of Part 5 of the Act. The way in which the prices, revenues and/or quality of goods and services produced by these businesses is regulated or controlled can affect their incentives to invest in new or upgraded infrastructure.
>
> 5. This is an important issue because regulated businesses tend to operate in basic infrastructure sectors where security of supply is of paramount importance.

[391] The August 2006 GPS.

6. Similar considerations apply to investment by regulated businesses in related facilities and services. It is in the long term interests of the economy in general and consumers in particular that regulated businesses, in common with non-regulated businesses, are able to utilise existing assets to reduce the cost of investing in new infrastructure and to take advantage of economies of scale and scope.

7. The Government's economic policy objective is that regulated businesses have improved incentives to invest in replacement, upgraded and new infrastructure, and in related businesses for the long-term benefit of consumers. The Government considers that this objective will be achieved by:

   (a) regulatory stability, transparency and certainty giving businesses the confidence to make long-life investments;

   (b) regulated rates of return being commercially realistic and taking full account of the long-term risks to consumers of underinvestment in basic infrastructure; and

   (c) regulated businesses being confident they will not be disadvantaged in their regulated businesses if they invest in other infrastructure and services.

8. That Government also considers that it is important that regulatory control ensure that:

   (a) the consumers of regulated businesses are not disadvantaged by the investments of regulated businesses in other infrastructure and services;

   (b) regulated businesses are held accountable for making investments in that business where those investments have been provided for in regulated revenues and prices; and

   (c) regulated businesses provide infrastructure at the quality required by consumers at an efficient price.

[676] The early legislative history of Part 4 confirms the influence of the GPS on the drafting of s 52A(1). The genesis of Part 4 as it stands today was a review of Parts 4 and 5, announced by the Ministry of Commerce in May 2006, and completed in January 2008.

[677] The terms of reference for the review of the Act, released in September 2006, referred indirectly to the GPS. The overarching objective of the review was identified as being "to ensure that the imposition of regulatory control is consistent with the long-term benefit of consumers within New Zealand". Consistent with that objective, the review would also "consider whether any amendments to the Act are

desirable to reinforce the Government's policy objectives on investment and infrastructure".[392]

[678] In an April 2007 Discussion Document, MED suggested a purpose statement for Part 4 that included, as paragraph (d), what became – by the time the Bill was introduced – paragraph (a) of s 52A(1).[393]

[679] Referring to that purpose statement the April 2007 Discussion Document observed:[394]

> It is based on the overall purpose statement of the Act plus s 57E of Part 4A, and picks up the government's recent s 26 Statement of Economic Policy on the importance of investment and innovation for regulated businesses. To the extent possible, it is desirable to use terminology already in the Act, as it allows industry, Government, and the Commission to rely on the jurisprudence that has emerged on the current Act. ...
>
> Subpart (d) incorporates the Government's policy in relation to infrastructure investment set out in the government's recent s 26 Statement of Economic Policy.

[680] The August 2006 GPS is not, however, mentioned in the Explanatory Note or the relevant Hansard record. There is no explicit Parliamentary recognition in that material that, as Vector argues, the August 2006 GPS had been taken up into Part 4. There are, on the other hand, as Vector argues in support of that particular proposition, many references to the importance of investment and innovation. The Explanatory Note reflects that theme in a number of places:

(a) There was a debate about whether the current purpose statement of Part 4A was appropriate, given that there was no explicit reference to a key regulatory objective of providing for incentives to invest.[395] That there was no specific requirement for any regulation to incentivise investment and innovation was recognised as one of the main problems with the existing (Part 4A) legislation.[396] The Part 4A

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[392] Cabinet Economic Development Committee "Review of Parts 4 and 5 of the Commerce Act 1986" (13 September 2006) at Appendix 1, 63/660/031540.
[393] April 2007 Discussion Document at [6], 63/662/031619.
[394] At [87], 63/662/031640.
[395] The Explanatory Note at 17.
[396] The Explanatory Note at 30.

thresholds regime was generally regarded as creating too much uncertainty for businesses and did not provide adequate incentives for investment in infrastructure.[397]

(b) Therefore, one of the objectives of the Bill was to provide specifically for incentives to invest in infrastructure. Certainty was considered a pre-requisite for that. The purpose statement would spell that out.[398]

(c) The certainty to be provided by IMs was expected to help improve the climate for investment in infrastructure.[399]

(d) Part 4 regulation sought to preserve incentives for suppliers to invest while at the same time protecting consumers, where required, from excessive prices and poor quality service.[400]

(e) More generally, the option chosen for the purpose statement was one that explicitly stated that the objective of regulation was to improve efficiency and to protect consumers from excessive prices, similar to the Part 4A purpose statement.[401] That included both efficiency and distributional objectives, to provide for an appropriate balance between the protection of consumers and that of producers and investors. It built on the Part 4A purpose statement. Building on the Part 4A purpose statement would mitigate the risk of losing case law.[402]

[681] The responsible Minister, the Minister of Commerce, made a number of statements in the House and in public which confirmed the importance of the introduction both of the purpose statement generally, and of its reference to the purpose of Part 4 being to provide, amongst other things, for suppliers to have

397 The Explanatory Note at 3.
398 The Explanatory Note at 4.
399 The Explanatory Note at 15.
400 The Explanatory Note at 9 and 10.
401 The Explanatory Note at 19.
402 The Explanatory Note at 20.

incentives to innovate and invest, including in replacement, upgraded and new assets.

[682] In terms of her statements in the House:

(a) On the occasion of the introduction of the Bill the Minister observed:[403]

> For the first time, the bill puts in place a purpose statement for economic regulation. The absence of a purpose statement in Part 4 of the current Act has led to uncertainty as to the objective of this form of regulation. The new purpose statement makes it clear that the objective is the long-term benefit of consumers of goods or services that are not faced with competition or the likelihood of a substantial increase in competition. The bill aims to do this by promoting outcomes consistent with those produced by competitive markets, including providing incentives to invest, innovate, and make efficiency gains while requiring suppliers to share gains with consumers and to limit excessive profits.

(b) In moving the second reading of the Bill she commented in very similar terms:[404]

> The bill introduces a specific purpose statement for economic regulation, which is a significant improvement to the current Act. I would go so far as to say that the absence of such a purpose statement has led to considerable uncertainty, which has affected the ability of infrastructure companies to make timely investment decisions. The new purpose statement makes it clear that the objective is the long-term benefit of consumers of goods or services that are not faced with competition or the likelihood of a substantial increase in competition. This is to be achieved by promoting outcomes consistent with those in competitive markets, including providing incentives to suppliers to invest, innovate, and improve efficiency while requiring them to share efficiency gains with consumers and to limit excessive profits.

(c) In the Committee of the whole House, and referring to the order in which the various elements of the s 52A(1) outcomes are expressed, the Minister commented as follows:[405]

> Starting with the incentives to innovate and to invest is really sending a signal about how important it is not to forget that future

[403] (20 March 2008) 646 NZPD 15157.
[404] (2 September 2008) 649 NZPD 18313-4.
[405] (2 September 2008) 649 NZPD 18541.

> needs are just as important when we are looking at a non-competitive market. New section 52A, to be inserted by clause 4, sets out incentives to suppliers of regulated good or services to innovate, to improve efficiency, and to provide services of a quality that reflects consumer demand – that is, current consumers. The purpose of this provision is also to ensure that suppliers share with consumers the benefits of efficiency gains, and to limit the ability of suppliers to extract excessive profits. I think we have the order right, and that sends a very good signal

(d) Finally, moving the third reading, the Minister commented:[406]

> The bill is a major rewrite of the price control provisions in Parts 4 and 4A and in certain parts of Part 5 of the Commerce Act 1986. Its overall aim is to provide protection for consumers against excessive prices and poor quality when buying what are important infrastructural services where there is no real prospect of competition, while at the same time ensuring that suppliers have incentives to invest, innovate, and improve efficiency.

[683] In terms of public statements:

(a) On the introduction of the Bill on 13 March 2008 the Ministers of Commerce and Energy said that under the Bill "infrastructure businesses like electricity lines companies and airports will gain improved incentives to innovate and invest while giving consumers protection from excessive prices and poor quality".[407]

(b) On the enactment of Part 4 on 5 September 2008 the Minister commented:[408]

> The passing of this Bill is excellent news for the growth and improvement of New Zealand infrastructure businesses that are natural monopolies. It will provide greater certainty for regulated businesses and incentives for investing in infrastructure while giving consumers protection from excessive prices and poor quality.

[684] Taken overall, that legislative history does show the influence of the 2006 GPS on the formulation of the s 52A(1) purpose statement and, in particular, the

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406 (2 September 2008) 649 NZPD 18549.

407 David Parker "Bill Gives Better Incentives for Infrastructure Investment" (press release, 13 March 2008).

408 Lianna Dalziel "Infrastructure Investment Gets Boost From Law Change" (press release, 5 September 2008).

inclusion of paragraph (a) first in the list of outcomes Part 4 regulation is designed to produce. At the same time, what is clear is that the overall purpose of Part 4 is to protect the long-term interests of consumers and that, in seeking to do that, the paragraph (a) and (d) outcomes need to be balanced. Reflecting that, the various statements made by the Minister, both in the House and publically, sometimes refer first to the need to protect consumers from excessive profits while providing for incentives to invest: on other occasions, that order is reversed.

[685] The Select Committee recognised the need to balance promoting the outcome of regulated suppliers having incentives to invest with that of limiting their ability to extract excessive profits – consistent in both cases with outcomes produced in workably competitive markets when it observed:[409]

> Most submitters supported the purpose statement as drafted. Others argued that the primary objective in the purpose statement should be investment. Although we agree that incentives to invest are important, we consider they need to be balanced against the need to protect consumers from excessive prices.

[686] Moreover, it is to be noted that the overall purpose of Part 4 is to promote the long-term benefit of consumers of regulated goods and services, and not the interests, for example, of consumers of unregulated services or to provide more general incentivising effects which may be considered to be in the interests of the wider New Zealand economy. The incentives to innovate and invest to which s 52A(1)(a) refers are ones that are consistent with those provided by workably competitive markets. Similarly, in the August 2006 GPS, the Government's goal was that infrastructure be provided at the quality required by consumers and at an efficient price.

[687] It is also important to understand how the purpose of providing incentives to invest was to be achieved by the new Part 4. Here, the legislative history is also of assistance. What that history, and in turn the provisions of Part 4, shows is that the increased certainty which the new regime was seen as providing was central to ensuring appropriate incentives to invest in infrastructure and to innovate would

[409] Select Committee Report at [2].

exist. The Explanatory Note, when referring to the particular objective of the Bill as being to "provide specifically for incentives to invest in infrastructure", observes:[410]

> Certainty is considered a pre-requisite for this.

[688] The certainty which was a specific purpose of setting IMs in advance was "expected to help to improve the climate for investment in infrastructure".[411] The advantages of the new regime over Part 4A were seen to be that "firms will have greater certainty as to their obligations (including the consequence of breaches)".[412]

[689] The importance of certainty as a way of providing for incentives to invest was also reflected in comments made to Parliament by the responsible Minister during the third reading debate. During the debate reference had been made to potential use of ODV approaches to asset valuation issues. The Minister observed:[413]

> I think the member is asking me to set the input methodologies; we are not doing that ... the whole point of defining them up front is so that businesses have certainty going forward ...

[690] We therefore conclude that it is to misinterpret s 52A(1)(a) to say it reflects the August 2006 GPS as having in some way been taken into Part 4. The more orthodox, and we think correct, interpretation is that when introducing the legislation the Government reflected, to the extent it considered appropriate, the August 2006 GPS in the terms of the Bill and that, as enacted, it is the terms of Part 4 that reflect Parliament's legislative intent.

[691] Overall, the certainty to be provided over time by the new Part 4 is central to the promotion of appropriate incentives to invest. We are not persuaded that the introduction of s 52A(1)(a) provides strong, or indeed any, support for Vector and Powerco's proposition that initial RAB values are to be determined on the basis of current/new ODV valuations by reference, amongst other things, to an assertion of the primacy of paragraph (a) amongst the s 52A(1) outcomes or the terms of the August 2006 GPS.

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410 The Explanatory Note at 4.
411 The Explanatory Note at 5.
412 The Explanatory Note at 6.
413 (2 September 2008) 649 NZPD 18539.

IMs

[692] The fourth element of the reforms to Part 4 relevant to this first limb of Powerco and Vector's "not fit for purpose" argument is the significance of the introduction of the requirement for the Commission to determine IMs in advance of their application. We think a similar argument applies here, as it did as regards the introduction of s 52A(1)(a).

[693] As s 52R makes clear, the purpose of IMs is to promote certainty. The Supreme Court recognised the centrality of certainty to the regulatory reforms in *Vector* when it observed:[414]

> ... it is perfectly obvious that the mischief to which the 2008 amendments were addressed encompassed the lack of regulatory certainty under the old pt 4A regime and the absence of merits appeal rights in respect of Commission decisions.

[694] That certainty was, moreover, to be provided over time.[415]

[695] Requiring initial RAB values to be set on the basis of new, current ODVs would not provide any greater certainty than the approach taken by the Commission. If anything, it would tend to provide less. We therefore do not think that the basic reason for the introduction of IMs, and the requirement for them to be determined before their use, supports a conclusion that initial RAB values must, in effect, be determined by current, new ODVs.

[696] We therefore turn to the second category of the appellants' interpretational "not fit for purpose" argument, namely that the Commission in determining the asset valuation IMs relied on decisions made in the past that were not valid under Part 4.

Reliance on past decisions no longer valid under Part 4

[697] Vector and Powerco challenge the Commission's initial RAB decisions as being a continuation of previous decisions that were either wrong when made or are, in any event, no longer valid under Part 4. That argument reflects a more general

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[414] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [63].
[415] At [64].

proposition: the enactment of Part 4 was a response to the unsatisfactory way in which the Commission had acted as regulator under the old regimes.

[698] We explain first why we are not persuaded by that more general proposition.

The Commission an unsatisfactory regulator?

[699] The enactment of Part 4 reflected Parliament's intention to improve the regulatory framework applying to natural monopolies. That is obvious. The new regulatory package, taken as a whole, would bring about the desired changes and, in particular, provide greater certainty for suppliers. But that is not necessarily a criticism of the way the Commission had acted under the previous regime. The uncertainty present under the previous regime resulted from the terms of that regime. We do not think there is any basis, on the record before us, upon which to conclude that the enactment of Part 4 reflects a legislative consensus that the Commission was, because of unsatisfactory performance of its statutory functions, itself responsible for that general uncertainty.

[700] One particular aspect of the regulatory history tends to confirm that. From 2005 to 2008 the Commission went through the Gas Authorisation process, culminating in 30 October 2008 in the imposition of price control on Powerco and Vector. Price control was imposed by reference to asset valuation decisions that Powerco and Vector say the enactment of Part 4 demonstrates were wrong then, and are wrong now. Yet, at the same time as the Commission was in the process of making those wrong decisions, the Part 4 review was announced and undertaken (May 2006 to January 2008), the Bill was introduced on 13 March 2008 and Part 4 was enacted on 16 September 2008. One might have thought that Parliamentary dissatisfaction with the Commission would have been reflected very clearly in the legislative history had such dissatisfaction, in fact, existed.

[701] More specifically, Vector's challenge is based on the way the Commission, under Part 4A and during the Gas Authorisation process, changed its announced approach to the use of ODVs, and by reference to s 52T(1)(a)(ii).

The Commission's change of mind on ODVs

[702] Vector's criticism would appear to be that, if the Commission had under the new Part 4 made equivalent asset valuation IM decisions, it would not have been able to have thus so "changed its mind". That is to do no more than to point to differences in the regimes: making asset valuation IM decisions up front is designed to promote certainty. Put simply, the Commission was not previously required to do that, and its decision-making processes naturally reflected that.

Section 52T(1)(a)(ii)

[703] Asset valuation IMs are, in terms of s 52T(1)(a)(ii), required to deal with the "valuation of assets, including depreciation, and treatment of revaluations". The Commission points to that as a clear statutory mandate for its concern with revaluation gains that might be incorporated in initial RAB values. The Commission argues that, given the history of treatment of revaluation gains, and how they were to be treated going forward, it did not make sense to ignore such gains on a once only basis when initial RAB values were calculated for Part 4 purposes. Powerco and Vector's response was to the contrary. It was Powerco's and Vector's contention that, reflecting the "new start" called for by Part 4, the asset valuation IMs were not to deal with revaluation gains that, rightly or wrongly, may or may not have been recognised in the past. Only revaluations that might occur after the application of the asset valuation IMs to produce initial RAB values were relevant. Therefore by "looking back", both as to the date at which the base valuations had initially been calculated and moreover at revaluation gains that had arisen in the past, the Commission acted unlawfully. As both Mr Hodder and Mr Galbraith put it, a valuation was a valuation was a valuation: what had happened in the past was not relevant for the valuations called for in 2010 by the new Part 4.

[704] Each of the previous ID regimes, (the 1994 Electricity and 1997 Gas ID Regulations, and the 2004 Electricity ID Requirements) required revaluation gains to be treated as income for disclosure purposes.

[705] The Commission took the same approach when assessing returns of EDBs that had breached their threshold under the thresholds regime and during the Gas

Inquiry. Additionally, the Commission conditioned its use of ODV valuations under the Gas Authorisation by reference to revaluation gains, and set price paths for the controlled GPBs that treated revaluation gains as income.

[706] Under the asset valuation IMs roll-forward provisions and Part 4 ID regulation, revaluation gains are once more treated as income.

[707] Given that background, it would, in our view, be surprising if – without some far more explicit provision - s 52T(1)(a)(ii) were to be interpreted as Powerco and Vector argue.

[708] Moreover, that argument made in this context effectively implies that s 52T(1)(a)(ii) by itself requires new valuations. Powerco's and Vector's argument is, that by reference to the section, the Commission cannot adopt existing regulatory valuations that, in the case of the controlled GPBs and the EDBs, were made having regard, amongst many other things, to revaluation gain issues. Thus, if interpreted as Powerco and Vector now argue, the section – which no doubt generally reflects the need for the asset valuation IMs to deal with roll-forward issues – would have the far more substantive outcome argued for, namely that it requires new valuations to determine initial RAB values. We think that is a further reason to reject the interpretation argued for. There are other aspects of Part 4 that support that conclusion.

[709] As observed, the Explanatory Note characterises DPP/CPP regulation as building on the previous threshold regimes. That acknowledgement of continuity is significant here also.

[710] We think that conclusion is further reinforced by various of the transitional provisions that apply to the EDBs and the GPBs:

(a) Part 4A thresholds were deemed to be s 52P determinations (s 54J(2));

(b) existing price control terms continued in force, with their expiry deemed to be the expiry of a CPP (s 55G(22) and s 55H(2)); and

(c) section 53X(2) provided that starting prices at the beginning of that first DPP period would be those that previously applied under price control "unless the Commission advises the supplier that different starting prices apply".

[711] These transitional provisions do not, in our view, support the conclusion that past revaluations are, in effect, to be ignored in setting initial RAB values.

[712] As the Commission submits, s 53ZD(c) explicitly gives the Commission power to examine, consider or investigate any asset valuation that "is occurring or that has occurred during the previous seven years". Notwithstanding the arguments to the contrary, we find it difficult to see how that power would be of any value if past asset valuations, which by definition would appear to encompass revaluations, were by definition of no relevance for setting initial RAB values and for achieving the objectives of Part 4.

[713] A further indication that what may have occurred in the past is relevant going forward is found in s 53P. Section 53P(1) requires the Commission to amend the initial or subsequent s 52P determination by setting, amongst other things, the starting prices that apply for the (second or subsequent) following regulatory period. In terms of s 53P(3) those starting prices must be either:

(a) the starting prices that applied at the end of the preceding (ie the still current) regulatory period; or

(b) prices, determined by the Commission, that are based on the current and projected profitability of each supplier.

[714] Any assessment of current profitability must consider the past and, amongst other things, prices charged in the past or the revenues they generated.

[715] In our view, therefore, the fundamental reforms to Part 4 do not, in and of themselves, support the specific proposition that new, ODV initial RAB values were

required in order to promote the s 52A(1) outcomes.[416] In terms of the outcome of particular concern to Vector and Powerco, namely that of ensuring that regulated suppliers have appropriate incentives to innovate and invest, the certainty to be provided by the new regime, rather than basing initial RAB values on current ODVs, was seen as being central to that objective.

Asset valuation IMs retrospective and breach s 53P(4)?

[716] Powerco argues that the Commission's approach to setting initial RAB values offends against the general presumption that legislation is not to have retrospective effect, unless expressly stipulated. Vector argues to similar effect, but more particularly by reference to s 53P(4), which provides that starting prices for DPPs "must not seek to recover any excessive profits made during any earlier period". Vector argues that the asset valuation IMs breach this specific prohibition, or at least that the initial RAB values set in accordance with those IMs do.

[717] The alleged general and specific retrospectivity is said to arise by reason of the Commission's concern with the significance of revaluation gains, and the way those concerns affected the Commission's initial RAB value decisions.

[718] We have already described those matters. In summary:

(a) The Commission's long-standing position on the ODV approach and associated revaluation gains is that:[417]

> Because ODV is a form of replacement cost valuation methodology, it implicitly involves revaluations (potentially up to the current depreciated replacement cost of the assets). It therefore diverges significantly from a DHC approach, and from a valuation approach which is sufficient to ensure consistency with FCM. For the ODV methodology to be implemented consistently with FCM, any revaluation, up to the level of the current ODV (and not only revaluations due to inflation), must be treated as income.

(b) Mindful of that, the Commission based its determination of initial RAB values on existing regulatory valuations and thus limited the

[416] This conclusion builds on our analysis of Powerco's HNET argument.
[417] The October 2007 Draft Authorisation at [621], 48/401/024370.

> revaluation gains that would otherwise be occasioned if current ODVs were adopted.

[719] In the EDBs-GPBs Reasons Paper the Commission describes the main argument in favour of new ODVs as being "that it is required to promote outcomes consistent with outcomes produced in workably competitive markets".[418] The Commission rejects this argument because allowing businesses to undertake a new ODV revaluation "would likely result in valuations so high that they would be clearly inconsistent with workably competitive markets outcomes".[419] The Commission calculated that applying the proposed PwC 2010 ODV handbook would result in an "increase in value across the [EDB] sector, for no investment outlay, of about $1.9 billion".[420] The problem with allowing suppliers such a windfall is that:[421]

> If regulated suppliers were permitted to increase their prices to reflect a change in replacement cost, without the revaluation gain being treated as income, regulated suppliers would not be limited in their ability to extract excessive profits. This would be unlikely to be consistent with s 52A(1)(d).

[720] The treatment of revaluation gains in the previous regulatory regimes also features as a reason for adopting past regulatory valuations. The Commission states that:[422]

> ... it is not clear why submitters consider that the effects of any revaluation should not be treated as income at the start of the Part 4 regime. Under the previous information disclosure regulations, asset revaluations had to be taken into account by treating revaluation gains 'as income' in profitability indicators (paragraph 4.3.26 above). Treated this way, any new valuation would be broadly equal in value terms to the valuation derived using existing regulatory values. Ignoring the effect that any new valuation would have on revenues expected in future would be inconsistent with the regulatory principles that were implemented under the Part 4A information disclosure regime, the Gas Information Disclosure Regulations and the Gas Authorisation.

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418 EDBs-GPBs Reasons Paper at [4.3.83], 3/7/001102.
419 EDBs-GPBs Reasons Paper at [F5.34], 3/7/001368.
420 EDBs-GPBs Reasons Paper at [E2.44], 3/7/001280.
421 EDBs-GPBs Reasons Paper at [X20], 3/7/000978.
422 EDBs-GPBs Reasons Paper at [4.3.31], 3/7/001089.

[721] The origin of Powerco's argument is to be found in comments by Mr Balchin on the potentially retrospective significance of a strict application of the NPV=0, FCM theory:[423]

> Lastly, I note that the NPV=0 asset valuation method has a number of additional flaws.
>
> First, it is impracticable to apply as it requires information on historical revenue and expenses that is seldom available. ...
>
> Secondly, the effect of the NPV=0 method if it is applied in a formulaic manner is that the initial RAB that is determined will have a mechanical relationship with past earnings. In particular, an additional $1 of profit prior to the introduction of regulation would translate into a reduction of the initial RAB by $1 plus interest. This economic observation is, I understand, the basis for the legal objection to the method on the ground that it is retrospective.

[722] Powerco adopted that argument, expressing its assertion of retrospectivity by reference to the hypothetical example of two firms, one that treated revaluation gains as income and one that did not. If the Commission applied the FCM principle to derive asset valuations then the firm which treated its revaluation gains as income would get an asset valuation consistent with the workably competitive markets standard. But the firm that did not treat its revaluations as income would get a lower asset valuation, to take account of its higher prices pre-regulation. Powerco argues that that hypothetical example demonstrates that application of the FCM approach would require the Commission to adjust future prices based on past actions. This would be retrospective regulation (as well as incongruous).

[723] There is, as the Commission submits, a reasonably straightforward answer to Powerco's argument, as based on Mr Balchin's economic observations. The simple point is that the Commission did not apply the NPV=0 method in a formulaic manner, so that the initial RAB was determined having a mechanical relationship with past earnings. Rather, and as the Commission explains, it saw the NPV=0 and FCM concepts as:

> ..."useful concepts" to address particular issues in a consistent way, so as to align outcomes closer to normal returns over time.

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[423] PwC *Commerce Commission Review of Input Methodologies Cross Submission (Prepared for Christchurch International Airport Limited)* (October 2009) at [2.3.4], 54/468/027754.

[724] Similarly, therefore, Powerco's hypothetical is not reflected in the Commission's initial RAB value decisions. More fundamentally, we do not think regulation is retrospective for treating regulated entities, with different characteristics because of past events, differently.

[725] We therefore turn to Vector's more specific argument.

[726] For Vector, Mr Galbraith acknowledged that the heart of Vector's argument is found in the following proposition:

> If the asset valuation methodology has the effect of seeking to recover, in full or in part, profits from a previous period (by setting a RAB lower than it otherwise would following a principled valuation approach), this would necessarily be carried through to the starting prices and would be unlawful under ss 53P(4) and 55F.

[727] In other words, current ODVs were the principled approach and the Commission was – by definition – seeking to recover profits from a previous period by setting an initial RAB lower than a current ODV where it did so by reference to its concern at the significance of revaluation gains not treated as income for pricing purposes.

[728] This is, as noted, based on the words of s 53P(4) that prohibit the recovery of any "excessive profits" made during any earlier period when a DPP is reset. Vector also relies on the limited circumstances in which "claw-back", as that concept is defined in Part 4, is allowed.

[729] Section 53P provides for the resetting of DPPs, in the context of the general proposition that initial DPPs will be included in:

(a) the recommendation that particular goods and services are to be regulated under Part 4;[424] and

(b) the initial s 52P determination to be made as soon as practicable after regulation is imposed.[425]

[424] Section 52K(2)(f).
[425] Sections 52P(2)(a) and 53(O)(a).

[730] In the case of DPP regulation, s 53P, as relevant, provides:

> (1) Before the end of the first and every subsequent regulatory period, the Commission must amend the section 52P determination by setting out the starting prices (as referred to in section 53O(a)), rates of change (as referred to in section 53O(b)), and quality standards (as referred to in section 53O(c)) that apply for the following regulatory period ...
>
> (3) The staring prices must be either–
>
> (a) the prices that applied at the end of the preceding regulatory period; or
>
> (b) prices, determined by the Commission, that are based on the current and projected profitability of each supplier.
>
> (4) Starting prices set in accordance with subsection (3)(b) must not seek to recover any excessive profits made during any earlier period...

[731] Section 55F applies specifically to the first s 52P determination of price paths for GPBs. It allows claw-back if a GPB has increased its weighted average prices, in the period beginning 1 January 2008 and ending on the date of that determination, by more than the movement, or forecast movement in the all groups index number of the New Zealand Consumer Price Index over that period. In other words, s 55F imposed a type of price freeze on the GPBs.

[732] To understand s 55F, and Vector's argument, it is necessary to understand what claw-back is and how it fits into the scheme of Part 4. Claw-back is defined in s 52D as follows:

> **52D Meaning and application of claw-back**
>
> (1) A reference to the Commission applying claw-back is a reference to the Commission doing either of the following:
>
> (a) Requiring a supplier to lower its prices on a temporary basis in order to compensate consumers for some or all of any over-recovery that occurred under the prices previously charged by the supplier:
>
> (b) Allowing a supplier to recover some or all of any shortfall in its revenues that occurred under the prices previously charged by the supplier.
>
> ...

[733] The circumstances in which the Commission must and may apply claw-back are stipulated as follows:

(a) The Commission must apply claw-back if, following a s 52Z appeal, an IM is changed and, had that changed methodology been applied when the DPP/CPP was set, a materially different price path would have been set (s 53ZB).

(b) The Commission may apply claw-back if:

(i) when setting a CPP, it sets a lower or a higher price than applied under the DPP (ss 53V(2)(b) and 54P);

(ii) an initial DPP is set before all relevant initial IMs are published and a materially different path would have been set if the subsequently published IMs had been applied (ss 54K(3) and 55F(4)); and, as already explained

(iii) when setting the first DPP for GPBs, a GPB increased its weighted average prices by more than CPI from 1 January 2008 to the date of determination (s 55F(2)).

[734] Vector's proposition is, therefore, that subject to the very limited exception of s 53ZB, when all relevant initial IMs have been determined (as was the case with the Commission's s 52P determinations in November 2012 and February 2013 referred to at [113] and [114]), the only exception to the prohibition on the recovery of profits from previous periods is that allowed by s 55F(2) in the case of the GPBs.

[735] As a matter of statutory interpretation that proposition cannot be argued with. Nor does the Commission attempt to do so. That is, the Commission acknowledges that "claw-back", lowering prices in order to compensate for over-recovery of revenues during a previous period, is only allowed where specifically provided for.

[736] We are not persuaded on the basis of the material before us that, however things are analysed, any retrospectivity or claw-back is involved.

[737] The Commission says it has arrived at a principled valuation. To the extent that valuation is lower than the value used to set, or implied by, past prices, it does not seem surprising that the Commission would, under s 52P, set lower starting prices. That would reflect its judgement that current profitability (as reflected in past prices) was higher than is appropriate and should not, therefore, continue. But that, as the Commission argues, does not seek to recover past excessive profits, but to prevent excessive profits from being earned in the future.

[738] In saying that, we note that although we have recorded, as at the close of our hearings, the actual or proposed effect of the Commission's relevant s 52P determinations, the precise basis upon which the Commission set starting prices in those determinations was not explained to us. Nor, based on our reference to those actual and draft decisions, have we reached a clear view on that matter.

[739] What is clear to us is that retrospectivity, and indeed claw-back, of the type prohibited by Part 4 would occur if, the Commission having arrived at the appropriate asset valuation, then reduced that value by an amount sufficient to recover – by reference to lower prices in the future – excessive profits extracted in the past. But that is not what the Commission did. In terms of its concern as to the impact of past revaluation gains, the Commission was influenced in its initial specialised asset valuation decisions by the possible existence of certain revaluation gains that had not in the past been taken to prices and therefore, if included in those initial RAB values, would generate excessive profits in the future. But the Commission did not seek to claw back any such profits that may have been earned in the past.

[740] We also acknowledge that, if the Commission's asset valuation IMs did produce asset values that were not sufficient to provide for the recovery of normal profits (ie generated inadequate revenues), and excessive profits had been extracted in the past, the argument might be made that those inadequate future revenueswould – in effect –recover those excessive past profits. But that argument depends first on establishing that the asset valuation IMs have produced asset values that do not allow the recovery of normal profits. As such, it is more an argument based on an assertion that an IM does not promote the s 52A(1) outcomes than one based on alleged

retrospectivity. We consider that part of Powerco and Vector's arguments in terms of the assertion that the existing regulatory valuations were not fit for purpose under Part 4.

[741] We note one further matter. We do so relatively briefly as this consideration occurred to us whilst writing this judgment and was not subject to argument before us.

[742] That is, it is not clear to us that s 53P(4) applies to the asset valuation IMs at all, as opposed to the s 53P price resetting process. That price resetting process is, as is now very clear, a separate process from that whereby IMs are set. As both Powerco and Vector acknowledged when arguing the asset valuation IM appeals (before the Supreme Court decision in *Vector v Commerce Commission* had, we note, been released), it would not be until the Commission had made its first s 52P determinations based on the relevant IMs that the effect of the asset valuation IMs on prices would actually be determined. Although that has, in fact, now occurred, those s 52P determinations were not – as they could not be – challenged in these appeals. If, when it made those s 52P determinations, the Commission breached s 53P(4), it would have been acting unlawfully, giving rise to judicial review challenges and remedies. On reflection, that would in our view be the obvious way to challenge starting prices for, in fact, effecting retrospective claw-back. That is what Powerco and Vector are essentially doing here.

[743] Be that as it may, we are not persuaded that the Commission's asset valuation IMs for the EDBs and GPBs involve unlawful retrospectivity either generally or more specifically as regards s 53P(4).

Regulatory certainty and investor confidence

[744] An important element of Powerco's challenge to the EDBs and GPBs asset valuation IMs as being contrary to s 52A is founded on an argument that the IM gives rise to regulatory uncertainty thus inhibiting incentives to invest. It supports

its arguments in those regards by reference to a statement of its Chief Executive[426] and statements of its experts.[427]

[745] The Supreme Court saw the certainty arguments advanced by Vector as overstated.[428] We share that view in relation to the certainty arguments advanced by Vector in support of its challenges to the EDBs and GPBs asset valuation IM. While past regulatory regimes may have been perceived as giving rise to uncertainty and, perhaps, inhibiting incentives for investment, deriving Vector's RAB under the current regime from a valuation arrived at under a past regime does not, for the following reasons, carry with it whatever past uncertainties inhibiting investment there may have been.

[746] First, had the existing valuations been the cause of regulatory uncertainty of the magnitude suggested by Vector such as to inhibit investment, the new Part 4 might have mandated new replacement cost-based asset valuations, such as the ODV advanced in Vector's Alternative 1. Rather, the main differences between the purposes of the old and new regimes are:

(a) a change in the overarching purpose from promoting the efficient operation of markets to promoting the long-term benefit of consumers;

(b) the addition of the s 52A(1)(a) requirements that suppliers have incentives to innovate and invest; and

(c) shifting the limitation of excessive profits from subparagraph (a) under the old regime to subparagraph (d) under the new.[429]

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426 *Statement of Simon Mackenzie* (23 August 2010) at [5.36] and [8.77], 36/276/018042.

427 *Statement of Jeffrey Wilson* (21 August 2010), 60/601/030751; *Statement of Jeffrey Wilson* (19 November 2010), 60/625/031183; Synergies Economic Consulting *Selected Issues arising from Commerce Commission's Input Methodologies Discussion Paper: An Expert Statement* (August 2009), 53/400/026852; Jason Ockerby and Dr Tom Hird *Input Methodology for Asset Valuation: A Report for Vector* (August 2010), 58/574/029934; *Report of W Carlton and Gustavo E Bamberger* (23 August 2010), 60/605/030904.

428 *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [73].

429 See what was s 57E and s 52A.

[747] Secondly, the EDBs asset valuation IM provides, in effect, for an investment made under the current regime to be included in the RAB at cost.[430] This ensures a return on future investments. Thus, under the new regime, there is nothing to inhibit the s 52A(1)(a) incentives to innovate and invest.

[748] Thirdly, statements by Vector's experts[431] advanced in support of Vector's arguments that the Commission's approach gives rise to uncertainty inhibiting incentives to invest, are to be read in their chronological context. Read in that context, views expressed in those statements might be regarded as "jumping at shadows". That is, they express concerns about issues seized on at one stage or another in the course of the consultation but those issues have been addressed once the Commission determined its asset valuation IMs and made its s 52P determinations.

[749] Finally, as the Supreme Court noted, the certainty which will provide the s 52A(1)(a) incentives, is to be provided over time.[432] That is, once this round of appeals against the initial IMs under the new regime have been decided there will be a period of regulatory certainty of up to seven years. The new regime so understood by a regulated supplier (such as Vector), and properly explained by it to those from whom it may seek funds to invest in replacement or upgrading of existing assets or in new assets, provides the incentives envisaged by s 52A(1)(a).

[750] We think the real issue is, as Vector and Powerco argue, whether the 2009 regulatory valuations are in and of themselves fundamentally flawed and not suitable for Part 4 purposes, and that therefore new 2010 ODV valuations would be materially better. That is the argument to which we now turn.

Existing regulatory valuations flawed and not fit for purpose?

[751] We have considered and dismissed Vector's and Powerco's various arguments that Part 4 requires, as a matter of statutory interpretation based on text and purpose,

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[430] Or a value determined in accordance with GAAP. See Decision 710 at cl 2.2.11, 1/2/000080.

[431] For example Synergies Economic Consulting *Selected issues arising from Commerce Commission's Input Methodologies Discussion Paper: An Expert Statement* (August 2009), 53/450/026852.

[432] *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [64].

new, current replacement cost-based valuations for initial RAB purposes. That brings us to their argument:

(a) that the 2009 regulatory valuations are flawed and neither credible nor reliable valuations; and therefore

(b) that new valuations are needed to set initial RAB values; and

(c) that given available information, those new valuations must be based on current replacement costs, not historical costs.

[752] It is the first of those propositions that is at issue here: if the 2009 valuations are, as Powerco and Vector argue, flawed, the second and third propositions follow. New valuations would, by definition, be required and – because of a lack of relevant historical information – current replacement costs would have to be used.

[753] To recap, the Commission summarised its decision on initial RAB values in the EDBs-GPBs Reasons Paper as follows:[433]

> EDBs and GPBs must establish their initial RAB values from existing regulatory valuations, namely:
>
> - the regulatory asset values disclosed in 2009 in accordance with applicable information disclosure requirements; or
> - in the case of assets that are subject to the Gas Authorisation, the RAB values determined under the Gas Authorisation as at 30 June 2005, updated to the financial year ending in 2009 for capital expenditure, depreciation and CPI-indexation.

[754] Those disclosed or determined RAB values are:

(a) for the controlled GPBs Vector (Auckland) and Powerco, the RAB values determined under the Gas Authorisation as at 30 June 2005 (2003 (Vector) and 2002 (Powerco) ODVs rolled forward to 2005 for actual capex and depreciation), updated to the financial year ending in 2009 for capex, depreciation and CPI-indexation;[434]

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433 EDBs-GPBs Reasons Paper at Table 4.1, 3/7/001069.
434 EDBs-GPBs Reasons Paper at Table 4.1, 3/7/001069.

(b) for the uncontrolled GPBs being, as relevant here, Vector (NGC), its 2003 ODVs used during the Gas Control Inquiry (adjusted in 2004 and 2005 respectively for upwards accounting "fair value" adjustments), updated in 2009 disclosures for subsequent capital additions and disposals, and depreciation, without indexation;[435] and

(c) for the EDBs, their initial Part 4A RAB values as determined pursuant to the 2004 Electricity ODV Handbook rolled forward for acquisitions and dispositions, depreciation and CPI indexation to 2009 and described by the Commission, albeit with qualifications, as IHC values.[436]

[755] To consider this "flawed and, therefore, not fit for purpose argument", it is necessary to determine the criterion by reference to which it would be proper to conclude in the context of Part 4, and s 52A(1) in particular, that a given initial RAB value was in and of itself flawed and hence not fit for purpose.

[756] The Commission supported its choice of the 2009 regulatory valuations by a series of interrelated propositions. Given the analysis we summarise at [627] and [628], it is the Commission's line in the sand response to these "fit for purpose" appeals that now remains for us to assess. We think the Commission went too far – in terms of that argument – in suggesting that it was justified in adopting the existing 2009 regulatory valuations "simply because" they were existing regulatory valuations. That suggests that the Commission had not considered the purpose of Part 4, when – in fact – it very clearly had.[437] Existing regulatory valuations could only be adopted as initial RAB values if they promoted the s 52A(1) purpose and outcomes.

[757] If they do, they will not be flawed. If they do not, they will be.

[758] We have already explained why we agree with the Commission that initial RAB values have:

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435 EDBs-GPBs Reasons Paper at fn 243, 31/7/001088.
436 EDBs-GPBs Reasons Paper at [F2.3], 3/7/000131.
437 See our analysis in Part 3 of this judgment at [222] and following.

(a) little or no impact on incentives for suppliers to invest in new or replacement assets;[438]

(b) little or no impact on incentives for suppliers to improve efficiency and provide services at a quality that reflects consumer demands;[439] and

(c) little or no impact on suppliers sharing with consumers the benefits of efficiency gains.[440]

[759] What initial RAB values do have a direct impact on is the extent to which suppliers are limited in their ability to extract excessive profits.[441] We also recognise that initial RAB values do have some impact on the general investment environment for regulated industries and, more especially, industries subject to the possibility of regulation.[442] This is a question of reasonable investor expectations. In our view, reasonable investor expectations should be met by the Commission following a carefully considered approach when setting a RAB, subject to there being no evidence that suppliers would be unable to recover the costs of their past prudent and efficient investments.

[760] An initial RAB value would, in our view therefore, be fundamentally flawed if it generated prices that were inconsistent with the achievement of the s 52A(1) purpose and outcomes, in particular if it failed to limit suppliers' ability to extract excessive profits over time.

[761] Powerco asserted in its notices of appeal that the Gas Authorisation's initial RAB value decisions were wrong at the time, as were also – by necessary inference – the Commission's price control decisions. Mr Hodder moved away from that argument during the hearing, saying even if that approach had been available for old

438 Section 52A(1)(a).
439 Section 52A(1)(b).
440 Section 52A(1)(c).
441 Section 52A(1)(d).
442 It is to be noted, however, that those are not interests the Commission is *required* to consider under s 52A(1). Section 52A(1) is directed solely at the interests of consumers of regulated services. Dynamic efficiency considerations suggest, however, that it would nevertheless be appropriate for the Commission to consider the interests of consumers of services which, though not regulated now, might be in the future.

Part 5 price control decisions, it was not open to the Commission under the new Part 4. Mr Hodder argued this was, in part, because the old Part 5 had had a greater emphasis on the interests of acquirers, compared to that now found in the s 52A purpose and outcomes statement. We are not persuaded by that proposition. As reflected in the history of s 52A that we have already outlined, the new Part 4 purpose statement was introduced to make it absolutely clear that Part 4 regulation was about protecting the long-term interests of consumers. Part 4, including s 52A(1)(a), was not introduced to promote suppliers' interests. The s 52A purpose statement makes it clear that in terms of incentives to invest, it is the interests of consumers in suppliers having appropriate incentives to invest that matter, not the interests of the suppliers themselves.

[762] Vector's challenges to the use of the 2009 regulatory valuations, as adopted by Powerco, are directed at the earlier, ODV, valuations from which those valuations were derived. Vector bases those challenges on detailed statements by Messrs Head[443] and Mackenzie[444] of Vector and by Vector's valuation expert, Mr Wilson.[445] Those statements principally comprise, particularly in the case of Messrs Head and Wilson, a detailed critique of the ODV handbooks (the 2000 MED Draft Gas Handbook in the case of the GPBs, and the Commission's 2004 Electricity ODV Handbook in the case of the EDBs). It was by reference to those handbooks that the valuations were prepared. Messrs Head and Wilson critique those handbooks by reference to:

(a) the Commission's 2005 Gas Authorisation ODV Guidelines;

(b) the PwC 2010 ODV Handbook (proposed by ENA for use by the EDBs);[446] and

(c) more general valuation propositions that Vector would, no doubt, expect to see reflected in the updated handbooks that Vector says should be developed by the Commission, in consultation with

443 *Statement of Duncan Head* (23 August 2010), 60/606/030924.
444 *Statement of Simon Mackenzie* (23 August 2010), 36/276/018022.
445 *Statement of Jeffrey Wilson* (21 August 2010), 60/601/030751; *Supplementary Statement of Jeffrey Wilson* (19 November 2010), 60/625/031183.
446 PwC 2010 ODV Handbook, 59/588/030319.

> industry, to derive initial RAB values based on current replacement costs.

[763] Therefore, Vector and Powerco's argument is that the use of earlier handbooks produced fundamentally flawed valuations.

[764] The Commission did not, during the IM consultation process, obtain valuation advice itself or directly engage with Vector's expert valuers. That approach reflects its central "line in the sand" argument, as can be seen from the following passage in the EDBs-GPBs Reasons Papers:[447]

> ODV is a methodology involving a number of choices as to what a hypothetical entrant's costs might be, and the extent to which it is appropriate for the actual circumstances of the incumbent to be taken into account instead. A specification of the ODV methodology that 'accurately' reflects a hypothetical new entrant, cannot at the same time 'accurately' reflect all of a particular regulated supplier's actual circumstances. A wide spectrum of possible methodologies could fall within the broad category of an 'ODV' methodology; each reflecting a different perspective as to what circumstances the 'accuracy' of the methodology entails. Even if it were possible to precisely prepare an ODV valuation in accordance with a particular specification of the ODV methodology, that valuation could be considered inaccurate when compared to a valuation of the same network using a different specification of the ODV methodology.
>
> By contrast, taking an existing valuation and rolling it forward for actual capital expenditure, depreciation and CPI-indexation – despite some uncertainty inherent in the CPI – provides far more predictable valuation outcomes than periodic ODV revaluations going forward. Certainly the resulting value is objectively verifiable and auditable ex post. Prior ODV valuations, by contrast, can always be challenged (just as regulated suppliers are doing now in the context of establishing initial RAB values) on the grounds that the underlying principles and assumptions (many of which are subjective) are 'not fit for purpose'. In any event, apart from urging the Commission to allow them to use ODV one 'final' time to establish initial RAB values, the majority of EDBs and GPBs do not advocate applying ODV ever again in future. Many agree with the Commission's reasoning concerning the advantages of IHC over ODV going forward (paragraph 4.3.82).

[765] Because of that approach, there was little or no expert valuation advice on the record which challenged the evidence of Vector's valuation experts. These appeals, as we have explained, are conducted on a record limited to material before the Commission when it determined the IMs. The Commission was not therefore, in its

[447] EDBs-GPBs Reasons Paper at [F3.19-3.20], 3/7/001337.

submissions to us, in a position to respond in any great detail to Vector's expert witnesses and did not do so. Rather its "primary response to these challenges is that the Commission adopted the prior valuations as a line in the sand, on the reasonable understanding these were sufficiently high to allow at least a normal return on capital for past investments, which was then confirmed by the lack of evidence from suppliers that this would not be the case".

[766] The Commission's reasoning therefore turns on its proposition that none of the regulated suppliers provided evidence that prices based on the Commission's initial RAB values would not allow a supplier to earn a normal return and the inferences it drew from that.

[767] That reasoning is to be found in both the EDBs-GPBs Reasons Paper and the Airports Reasons Paper:[448]

> By contrast, submitters have not provided any factual evidence to suggest that existing regulatory valuations will fail to provide them with the opportunity to earn at least a normal return on the original cost of installing the assets used to supply regulated services. Reference to existing regulatory valuations when establishing initial RAB values under Part 4 should therefore give regulated suppliers no concern about the recovery of future investments. This approach is therefore consistent with s 52A(1)(a).

[768] The Commission acknowledged in a footnote to the first sentence of that extract that some submitters had argued that existing regulatory valuations could, in theory, be inconsistent with suppliers having the opportunity to earn at least a normal rate of return.[449] That would only be possible, the Commission observed accurately, if suppliers had been pricing in a certain way in the past. No submitter – the Commission argued – had provided any evidence to suggest that suppliers had been pricing in this way in practice. That footnote was in response to Mr Balchin's reports of October 2009 for CIAL and Powerco.

[769] For Powerco, given its HNET theory, the Commission was asking the wrong question. Powerco's argument is that if initial RAB values had gone up, that simply reflected what the assets comprising the initial RAB were worth. Prices must,

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448 EDBs-GPBs Reasons Paper at [4.3.7], 3/7/001082; Airports Reasons Paper at [4.3.10], 2/6/000676.

449 At fn 226, 3/7/001082 and at fn 179, 2/6/000676.

therefore, be set by reference to those asset values – hence its argument for new, current replacement cost valuations. For the reasons explained, we do not accept that proposition.

[770] Vector's argument is that it is not possible to provide evidence to address that issue. Vector does, however, point to material on the record which, it submits, shows that the Commission had previously recognised that, for Vector's uncontrolled GPB businesses at least, revaluations were required post 2003 for it to be able to make normal returns.

[771] Vector refers to material generated during the Gas Authorisation process which it had relied on in submissions on the June 2009 IMs Discussion Paper. That material suggests that, in the case of Vector (NGC), unless revaluation gains were allowed it would not make an adequate return on its investment in the period 2004 to 2008 (30 June years). The point is best described as follows:[450]

> The Commission's [Gas Inquiry] model demonstrates that, absent revaluations between 2004 and 2008, both Vector's distribution and transmission businesses [ie the business acquired from NGC] would make less than the Commission's mid-point WACC used in the inquiry. It would also be substantially less than the Commission subsequently calculated in the Gas Authorisations appropriate for gas pipeline businesses (over 9% for that period).

[772] In a footnote to the second sentence of that extract, Vector goes on to explain:[451]

> This can be seen from the Commission's Gas Inquiry model, where setting the CPI forecast equal to zero in the 'CPI data' sheet and calculating the average returns in the sheet's 'NGCD SA' and 'NGCT SA' for 2004 to 2008 (7.7% and 6.2% per annum for distribution and transmission respectively).

[773] As described above, Vector (NGC)'s assets have been revalued upwards for fair value adjustments in 2004 and 2005. Moreover, the Commission now provides for indexation in the years from 2005 onwards. Vector did not, in its submissions, provide any comment on the implications of those adjustments for conclusions based on that earlier model where neither of those adjustments were reflected. We do not

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450 Vector *Submission to Commerce Commission on Input Methodologies Discussion Paper* (14 August 2009) at [167(a)], 53/455/027195 (footnotes omitted).

451 At fn 36, 53/455/027195.

consider, therefore, that that evidence challenges the Commission's basic proposition (that suppliers had not provided any factual evidence during consultation that suggested existing regulatory valuations would not provide for at least normal returns).

[774] The Commission's approach to setting initial RAB values, and to the related issue of revaluation gains, had – as the Commission argues – been on the table since at least the time of the December 2009 Emerging Views Papers. In that context we think the general absence of any suggestion that initial RAB values determined under the asset valuation IMs are in fact set at a level too low to allow recovery of at least normal returns on past investments counts strongly against the appellants' arguments that those initial RAB values are, in Part 4 terms, fundamentally flawed.

[775] In reaching that conclusion, and as already indicated, we agree with the Commission's Experts where they observed:[452]

> We also think that, if there really is something fundamentally amiss with the initial RAB proposals, thought experiments of the type presented by Synergies and CEG would probably be unnecessary.[453] If we had been asked to construct a test of whether the Commission's view on the *initial* RAB was reasonable, we would have framed it around *actual* capital loss. For example, is there evidence on which to form a reasonable expectation that a corrected 2004 ODV would lead to the write off of significant financial capital in the companies concerned? We would also have considered how the 2004 ODV (adjusted as proposed) might affect customers.
>
> Actual financial losses from the initial RAB are crucial to the economic arguments on this issue from experts called by the regulated firms. In essence, they note that it will be difficult for regulated firms to trust the Commission by investing efficiency in future if the IM regime begins by expropriating capital. We fully agree with this proposition.
>
> To repeat, the regulated firms' experts should not need to resort to thought experiments if the Commission's initial RAB proposals would impose financial losses. The regulated firms have had the resources, incentives and opportunity to present any evidence of financial loss. As we understand it, no such evidence has been presented.
>
> In this context, we do not regard the calculations presented by Drs Carlton and Bamberger for Vector as constituting such evidence. These experts start with similar recitals of history as Synergies and CEG, but take things further by predicting (large) dollar values of *consumer* welfare losses arising from

[452] Asset Valuation Report at [40]-[43], 12/57/005344.

[453] Mr Hodder used the phrase "thought experiment" to describe the application of the HNET approach in the context of markets in which, by definition, workable competition is not present.

> insufficient future investment by Vector. We consider these estimates unsubstantiated – no convincing argumentation or evidence links the causes and effects that are claimed; there is, for example, no estimating of the sources and size of the 'rate shock' that it is implied will trigger the later problems – but the fact that they have been presented further underlines our contention that, if they exist, it should be possible to develop and present evidence of any significant financial losses that will be incurred by Vector under the Commission's proposals.

[776] Adopting the appellants' proposals would generate significant revaluation gains, with respect to which we share the Commission's concerns. We note that those revaluation gains would arise not only by reference to the assets subject to the allegedly flawed, prior valuations, but all assets acquired since the time of those prior valuations.

[777] We are, moreover, uncertain as to the relevance of evidence based on the inadequacies of the relevant handbooks when considering the 2009 regulatory valuations in question.

[778] In Vector's case, its 2003 ODV was the value it derived and chose to disclose in its 2003 Gas ID Regulation disclosures. The purpose of those disclosures was – as it always had been – to assist the Commission and others to determine whether, indeed, excess returns were being made. It seems somewhat surprising that, at the very time when the Gas sector was under scrutiny, Vector would have chosen to disclose a regulatory valuation that it now characterises as fundamentally flawed. Indeed, in submissions on the Commission's Gas Control Inquiry Draft Report on 2 July 2004, Vector had agreed "that the 2003 ODV valuation for Vector is robust", going on to note that prior ODV valuations were not robust.[454] Mr Galbraith submitted that acknowledgement of robustness was to be understood only as a comparison to those prior, not robust, valuations. Mr Galbraith did not take the submission any further than that. Having reviewed the Vector submissions from July 2004, it is not clear to us that proposition is correct. The bulk of those submissions address difficulties with earlier valuations, by way of contrast with the robustness of the 2003 valuations.[455] Vector does note a number of other specific issues, but then records that it supports the Commission's approach, that those types of issues were

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[454] Vector *Submission on the Commerce Commission's Gas Control Inquiry Draft Report* (2 July 2004) at [7.9], 45/375/022620.

[455] At [7.9]-[7.16], 45/375/022620-1.

inevitable, and likely to create both "overs" and "unders" of relatively small values. Therefore Vector did not call for further adjustments. It then goes on, as we read the passage to support its 2003 ODV valuations.[456] Vector does, we acknowledge, note that using an updated ODV handbook for gas – as it had generally recommended – would be preferable. Seen in that context, we are of the view that contemporary acceptance of robustness sits uneasily with Vector's current criticisms.

[779] As regards the (former) NGC distribution and transmission assets, the position would appear to have moved on somewhat from NGC's 2003 bespoke ODVs, as those values were revalued upwards in 2004 and 2005 based on upwards accounting fair value adjustments. The significance of those adjustments was not explained, the Commission itself being unsure of that matter.

[780] In Powerco's case its 2002 ODV valuation, based on the 2000 MED Draft Gas ODV handbook, was prepared by expert valuers. Powerco said it had applied the 2000 MED Draft Gas ODV Handbook "to a robust and accurate estimate of the 2002 asset base".[457] Wilson Cook & Co, who carried out that valuation, reported to Powerco, via its solicitors, that since it required an "accurate calculation of asset quantities" and a "fair valuation of the assets at that date" it had "asked Powerco to provide it with a recalculation of the valuation of its assets as at 1 July 2002" and asked Powerco "to ensure that that recalculation was made using the [2000 MED Draft Gas ODV handbook]".[458] If, as Powerco now argues, the use of that handbook in effect produced a non-credible valuation, this sits uneasily alongside the deliberate specification of that valuation methodology by Wilson Cook & Co at the time to produce a "fair valuation".

[781] In the case of the EDBs, first it is significant that Vector alone challenges the EDBs asset valuation IMs.[459] Moreover, the Commission did accept the majority of the specific adjustments to those earlier valuations proposed by EDBs during the

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[456] At [7.18], 45/375/022622.

[457] Powerco *Supplementary Submission* (14 December 2007) at [26], 49/407/024787.

[458] Letter from Wilson Cook & Co to Andy Nicholls, Chapman Tripp (solicitor for Powerco) regarding Powerco Limited: Gas Network Fixed Asset Valuation at 1 July 2002 and Related Regulatory Issues (14 December 2007) at 3, 49/908/024793.

[459] Leaving to one side WELL's argument that the EDBs asset valuation IMs should include capex which is considered by us in Part 10 of this judgment.

consultation process. Vector's challenge needs to be assessed not by reference to the original 2004 initial RAB values, but by reference to the outcome of the asset valuation IM itself, namely those values after providing for the various adjustment EDBs may make.

[782] Mr Wilson provided a statement in November 2010 following the Commission's publication of those proposed adjustments. In that statement Mr Wilson concluded:[460]

> I acknowledge that the "2004" valuations as further adjusted in accordance with the Commission's latest proposals would be of an improved standard but, for the reasons that I give, I consider that there are certain remaining corrections and improvements that still ought to be made to achieve a satisfactory standard of valuation.

[783] By our assessment and given Mr Wilson's own "improved standard" advice, the relatively modest suggestions he then made[461] do not support the contention that the adjusted and updated 2004 initial RAB values, which become initial RAB values for Part 4 purposes under the asset valuation IMs, are fundamentally flawed and not fit for purpose.

Outcome

[784] We therefore conclude that we are not, in terms of s 52Z(4), satisfied that the 2009 EDB and GPB regulatory valuations, as detailed above, are unfit to be used as the basis of initial RAB values and, therefore, nor that adopting Vector's Alternative 1 would result in materially better EDB and GPB asset valuation IMs. We are also not persuaded the Commission made any of the errors of law asserted.

AIAL's not fit for purpose argument

[785] AIAL's 2009 disclosed values were based on valuations undertaken in 2006, updated for subsequent additions, disposals and depreciation. However, its asset base was not indexed. That means, AIAL submits, that it was "highly likely" that a

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460 *Supplementary Statement of Jeffrey Wilson* (19 November 2010) at [2], 60/625/031184.
461 Namely:
- Removal of mandatory maximum planning periods for calculation of optimisation;
- Clarification of the extent of the adjustment for "found" assets; and
- A proposal for the possibility of a further adjustment of multiplier ranges.

portion of its specialised (non-land) asset base is not recognised by the values included in the 2009 disclosures. In oral submissions, Mr Galbraith emphasised that those valuations could be either historical cost or fair value, that they did not have to be approved by anybody and that they were simply what the company showed in its financial statements. That is, they were not economic valuations.

[786] AIAL's use of the phrase "highly likely", without any detail in a context where it challenges the Commission's use of the prior valuations, tells strongly against the strength of this challenge. If there were a flaw in a prior valuation which an Airport intended to address in its next revaluation (as Mr Galbraith suggested was the case in his oral submissions), and that flaw was sufficient to impugn the use of that valuation by the Commission, we would have expected that Airport to have provided details to the Commission in the course of consultation leading to the determination of the Airports asset valuation IM. The Commission's consultation processes provided opportunities for regulated firms to propose adjustments to the prior valuations intended to be used as base valuations in the IMs. In the case of the Airports, and other than on the past conversion costs question, no such proposals were drawn to our attention.

[787] We are not, therefore, persuaded by this argument of AIAL that new, current, ODRC valuations of specialised assets would produce a materially better asset valuation IM for Airports.

Problems with relief

[788] Finally, and in any event, the form of relief sought by Powerco, Vector and the Airports means that we cannot be satisfied in terms of s 52Z that the orders they seek would result in an IM that is materially better in meeting the s 52A and/or the 52R purpose(s).

Powerco and Vector

[789] Powerco and Vector argue as their primary submissions that we should determine these asset valuation IM appeals by referring them back to the

Commission for significant consultation and, ultimately, determination. Vector's draft orders for relief for the GPBs seek:

> (a) pursuant to s 52Z(3)(b)(i) of the Act, amending Part 1 and Part 2, subpart 2 of the Determinations in the manner set out in Schedule One of this memorandum, such that the value of a system fixed asset in the initial regulated asset base is the valuation of that asset as of 30 June 2010, determined in accordance with a 2010 ODV Handbook to be:
>
> i. formulated by the Commission based on its finalised 2005 ODV Handbook [the 2005 Gas Authorisation ODV Guidelines], but amended:
>
> aa to contain updated standard replacement costs, replacement cost multipliers and allowances for previously controlled GDSs [GDBs]; and
>
> ab to apply to GTSs [GTBs] and previously uncontrolled GDSs, including standard replacement costs, replacement cost multipliers and allowances; and
>
> ii. verified and finalised by the Commission in accordance with the report of a valuer...

[790] To enable the formulation of such a handbook Vector seeks orders requiring that:

> i. the Commission request GDSs [GDBs] and GTSs [GTBs] to provide any information required in order to assist with its formulation of the 2010 ODV handbook within [one] month of the date of these orders, such information to be provided within [two] months of the date of that request;
>
> ii. the Commission is to formulate, and the valuer is to verify, standard replacement costs, replacement cost multipliers and allowances using the approach and assumptions set out by Parsons Brinckerhoff Associates in its reports dated 8 August 2006 and 4 February 2007, extended as necessary to apply to previously uncontrolled GDSs [GDBs] and GTSs [GTBs];
>
> iii. before finalising the 2010 ODV Handbook in accordance with the valuer's report, the Commission is to provide interested parties with a copy of the draft 2010 ODV Handbook, and the valuer's report(s), in order for the interested parties to be able to comment on the extent to which the draft 2010 ODV Handbook complies with the orders in paragraphs 3(a) and 3(b)(i) and (ii) above; and
>
> iv. the Commission is to finalise the 2010 ODV Handbook within seven months of the date of these Orders.

[791] Powerco, which also seeks a fresh 2010 ODV for GDBs, supports Vector's approach to relief for GPBs.

[792] Vector's draft orders for relief for the EDBs are slightly more restrained in that they seek to have the PwC 2010 ODV Handbook "finalised by the Commission in accordance with the report of a valuer". This would require the valuer to "assess standard replacement cost multipliers and allowances" and report to the Commission. The report would then be provided to interested parties for comment on its consistency with the Court's directions and the Commission would then finalise the handbook. This, Vector anticipates, would take around four months.

[793] The orders sought involve, as is apparent, significant undertakings and provide little certainty as to outcome. For the GPBs Vector estimates the relief would take seven months to implement and, for the EDBs, four months. Although Vector attempts to reduce the difficulties with its requested relief by requiring the handbooks be based on existing handbooks and specified assumptions; extensive work requiring the GPBs to submit information and the Commission or valuer to formulate certain multipliers and allowances, remains. The need, that Vector perceives, for interested parties to comment on the extent to which the handbooks comply with the specified assumptions, demonstrates the inherent uncertainty in this area even with such limitations.

Airports

[794] The Airports for their part seek to have "the initial RAB value for non-land assets ... be the assets' ODRC valuation as at the last day of the disclosure year 2010".[462] This does not, the Airports submit in reliance on the advice of expert valuers, require that a handbook be developed.[463]

> **ODRC value** means a market value as determined by a **valuer** by applying the **valuation standards** used to determine an optimised depreciated replacement cost value. *Drafting note: The advice of expert valuers is that an ODRC handbook is not required: see Wareham Cameron Commerce Commission Input Methodologies Discussion Paper: Valuation and asset-*

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[462] AIAL "Airport Appellants – Proposed Form of Relief for Asset Valuation" (Handup no. 96, handed up 2 October 2012) at [2] (emphasis as in original).

[463] AIAL "Airport Appellants – Proposed Form of Relief for Asset Valuation" (Handup no. 96, handed up 2 October 2012) at [2] at 7.

related issues, 30 July 2009, at p 14 ***[52:443:026539]****. See also NZAA Submission on Input Methodologies Discussion Paper, 31 July 2009 at p 67* ***[53:448:026815]****].*

[795] NZAA states that:[464]

> Airports regularly update ODRC valuations for GAAP purposes, and can efficiently obtain updates as at 1 July 2010. While the results of these updates is uncertain in the sense that the resulting figures are unknown, the procedures and application of replacement cost methodology to the airport's assets is clear-cut given the regular revaluations for GAAP purposes. No updated ODRC handbooks would be required. This would ensure consistent valuations for all airports akin to competitive market values and ensures no gaming if a future date is applied.

[796] Similarly, Wareham Cameron concludes:[465]

> We do not believe that the development of a Commission mandated ODRC handbook is required for the 3 airports, for the following reasons:
>
> - each airport has already and continues to undertake ODRC valuations
> - there are only 3 entities involved, so ensuring that there is consistency between their ODRC methodologies as applied is readily achieved. In practice there is a concentration of expertise in a limited number of advisors to the airports, which drives a high level consistency.
> - each of the three airports has some unique circumstances which may lead them to each make different (but logically defensible) decisions regarding classification of assets, and depreciation methods/rates for similar assets.

[797] The Commission's Experts in contrast, when asked by the Commission to assess the strength and weaknesses of the ODRC and ORC methodologies commented:[466]

> To the extent that there are strengths associated with implementing these methods (ODRC, ORC), they derive from the use of handbooks that offer guidance on the selection of the necessary assumptions, which offers a measure of predictability, assisting firms subject to regular revaluations to form views about the valuation impact of particular investment projects.

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[464] NZAA *Submission on Input Methodologies Discussion Paper* (31 July 2009) at 67, 53/448/026815.

[465] Wareham Cameron *Commerce Commission Input Methodologies Discussion Paper: Valuation and Asset-related Issues* (30 July 2009) at 14, 52/443/026539.

[466] Yarrow, Cave, Pollitt and Small *Asset Valuation in Workably Competitive Markets A Report to the New Zealand Commerce Commission* (1 May 2010) at 35, 7/28/003129.

[798] Given our view of the uncertainties associated with replacement cost valuations generally and the further uncertainty that not using a handbook introduces – demonstrated in Wareham Cameron's observation that each Airport may take a different "logically defensible" approach - we are not persuaded the outcome of that uncertain process would be a materially better asset valuation IM.

[799] For the reasons articulated at Part 2 of this judgment, the relief sought by Powerco, Vector and the Airports is unavailable. The "reference back" power in 52Z requires the Court – in disposing of an appeal – to provide the Commission with very clear directions as to the substantive nature of the required amendments to particular aspects of an IM, such that the Court is satisfied the outcome of those amendments will be a materially better IM.

[800] The orders for expansive amendments sought by Powerco and Vector and the Airports are too broad for us to be able to conclude that the amended asset valuation IMs would be materially better, and are too wide and uncertain to be capable of characterisation as the determination of an appeal.

[801] For this, if for no other reason, Powerco and Vector's asset valuation; and the Airports' specialised asset valuation, IM appeals must be declined.

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5.5 VECTOR'S ALTERNATIVE 2

Outline

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The Commission's decision

[802] Vector's Alternative 2 is proposed in place of the asset valuation IMs for EDBs and GPBs in their entirety.

Vector's appeal

[803] Vector's Alternative 2 would address the flaws Vector perceives in the initial RAB values produced by the Commission's EDBs and GPBs asset valuation IMs by deriving those values from current prices (ie back solving those values from current prices). In its written submissions, Vector argues that, whilst that would not be the best methodology available, it is what the Commission's reasoning (if accepted) leads to. In particular:

(a) The Commission proposed to adopt current valuations so that prices were not set on a materially different basis.

(b) However, for EDBs and uncontrolled GPBs, there was no connection between existing valuations and prices.

(c) Accordingly, contrary to the Commission's position, the 2003/2004 ODVs would result in upward or downward movement in current prices (and most likely price reductions for Vector). In other words, the continuity the Commission sought would require a line in the sand approach such as Vector's Alternative 2.

[804] Vector's line in the sand approach, reflected in Vector's Alternative 2, would result in initial prices under the new regime being the same as those under the old. Reinforcing that the relief Vector seeks, relying on the inherent jurisdiction of the High Court, includes that we give directions that there are to be no starting price adjustments when the Commission makes its s 52P determination.

[805] Vector argues further that Vector's Alternative 2 would avoid "the mugging" envisaged by Professor Yarrow in the following passage from a conference held during the consultation process:[467468]

> Similarly thinking of the long-term interests of consumers it's difficult to see how it could be in their interests if there was a rate shock the other way, if there was a windfall loss imposed by a judgment about valuation on investors. To put it very crudely, I mean if one is at the start of a new regime, which is hopefully a new beginning and a new partnership, it seems difficult to think that that would work well if it starts with a mugging of one side by the other. So I would say that there is a fairly narrow range actually of possible valuations that will give you a mugging free start.

[806] Finally, Vector argues that Vector's Alternative 2 was raised in the course of the consultation process but that the Commission never addressed it, nor gave reasons why it had not.

Analysis

[807] We think it is fair to say that Vector, reflecting its commitment to Vector's Alternative 1, did not argue for Vector's Alternative 2 with great enthusiasm. Its written submissions covered less than a page and Vector's Alternative 2 was addressed in fairly short order by Mr Galbraith.

[808] Perhaps most tellingly, little or no detail was provided to us as to how such an approach might be applied in practice to derive initial RAB values, not only for Vector, but for all the other EDBs and GPBs. For example, how would such a methodology derive the individual asset values required as a base for ongoing depreciation and indexation. Similarly, how would it reflect the fact that there are likely to have been a range of pricing decisions under the prior regime, especially for

[467] *Input Methodologies Conference: Electricity Distribution Services* (17 September 2009) at 351, 54/467/027698.

EDBs with a level of consumer ownership. These EDBs may well have been temporarily pricing below the Part 4A thresholds in lieu of distributions to their consumer owners. For that reason, if no other, we are not satisfied to the materially better standard required with respect to Vector's Alternative 2.

[809] Having said that, we do recognise that, as Vector submits, it can be argued that there was some inconsistency between the Commission's reasoning underpinning its line in the sand approach and its response to Vector's Alternative 2. In the Draft EDBs Reasons Paper the Commission (showing it did in fact address that proposal) noted that deriving an asset value by "back solving" current prices or revenues would be one way of avoiding price shocks. But it concluded that:[469]

> ... investors and consumers should be more concerned about the overall value of assets, which is the primary determinant of expectations about future prices and revenues, rather than the prices they face in any given period. Thus, the Commission considers that shocks to the value of the asset base are a more important consideration than the effect the asset value may have on prices in the short-term. ...

[810] That explanation is more than a little difficult to reconcile with the Commission's reasoning that adopting existing regulatory valuations, which had not been shown to be insufficient to provide for normal returns, would avoid the effect on prices of the revaluation gains that would accompany new, replacement cost valuations.

[811] But recognition of that inconsistency does not persuade us that Vector's Alternative 2 is materially better.

[812] First, Vector's Alternative 2 does not reflect the reality of the new regime which would take into account a wide range of factors additional to the initial RAB (for example the cost of capital IMs and matters specified in s 53P). Indeed, and as noted, this is emphasised by the orders Vector seeks precluding starting price adjustments. These orders would mean, as we understand the proposal, that to the extent the Commission's WACC IMs would otherwise have influenced starting prices, those IMs, or the influence they might otherwise have had, were to be ignored as well.

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469 June 2010 EDBs Draft Reasons Paper at [4.3.92], 9/37/003658.

[813] Secondly, other than to submit that the Commission's own reasoning supported Vector's Alternative 2, Vector fails to explain why it would be a materially better approach than the Commission's. We infer it takes that view because it would avoid the price decreases the Commission's s 52P determinations produce. But that does not address Vector's Alternative 2 as an asset valuation IM

[814] Thirdly, and as the Commission rightly submits, Vector's Alternative 2 ignores a fundamental tenet of asset valuation in a regulated market. That is, a participant's prices unconstrained by competition would be an inappropriate point of reference because a value so derived may be based on and perpetuate future monopoly pricing or, if based on ill-founded prices set by a regulator, perpetuate future under-recovery. Again, Vector, by advancing Vector's Alternative 2, seeks to avoid the effect of the Commission's s 52P determinations.

[815] Vector itself acknowledges those shortcomings. Vector refers in this regard to an expert's report for Orion and Powerco which commented:[470]

> There are shortcomings to using this method. In particular, a valuation based on existing prices can result in inefficient prices being enshrined in the value of the asset base. For example, if current prices include some form of monopoly profit, then an asset valuation based on current prices will cause these monopoly profits to be maintained into the future. Conversely, if current prices give rise to an under recovery of costs by reference to one or other valuation concepts, then an asset valuation based on current prices will result in those losses persisting into the future. In view of these matters, where this approach is adopted regulators tend also to consider a wider range of factors and results from other valuation methods to ensure that setting an asset value that 'locks in' current prices, returns or revenue is appropriate.

Outcome of Vector's Alternative 2

[816] For all these reasons, we are not satisfied that Vector's Alternative 2 would provide EDBs and GPBs asset valuation IMs that are materially better than those determined by the Commission or that the Commission erred in law in any of the ways Vector asserted here.

[470] NERA and PwC *Initial Value of Regulatory Assets – The Australian Experience: Report for Orion and Powerco* (6 December 2009) at [2.2], 55/486/028193.

[817] As an addendum, it is interesting to place Vector's Alternative 2 in the context of its arguments about the enactment of Part 4 constituting a new start and a break with the past in regulation. On the one hand, it could be said that Vector's Alternative 2 proposes no new start at all; rather a continuation of the same prices, albeit with a different future price path. On the other hand, Vector's Alternative 2 could be said to constitute a new start, so complete that everything before is forgotten, and with no impact until future price changes start to take place. Such a perspective only goes to show that the "new start" characterisation is not as clear-cut as it was portrayed.

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5.6 VECTOR'S ALTERNATIVE 3

Outline

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Introduction

[818] Vector's Alternative 3 seeks certain specific adjustments to the initial RAB values that would otherwise be produced by the Commission's EDBs and GPBs asset valuation IMs.[471]

[471] Vector Appeal 259 at [EDS.AV(1)].

[819] In the case of the EDBs these relate to:

(a) the approach to optimisation; and

(b) the valuation of easements.

[820] In the case of the GPBs these relate to:

(a) the extent to which CPI indexation is allowed;

(b) the approach to optimisation;

(c) an adjustment for finance during construction; and

(d) "multiplier" adjustments.

[821] For Vector, Mr Butler addressed in some detail the issue raised by the Commission's decision to decline CPI indexation for the uncontrolled GPBs between 2003 and 2005. Otherwise, Vector's Alternative 3 proposals received little attention from Vector in its oral submissions. They were only mentioned by Mr Butler in his reply, when we were referred to Vector's written submissions. At the hearing, such understanding as we garnered of these proposals was primarily based on the Commission's response to them. It was Vector's task to persuade us that Vector's Alternative 3 was materially better than the Commission's asset valuation IMs. Inevitably, the way matters were argued at the hearing has had an influence on whether or not Vector succeeded in that task.

[822] On that basis, we deal first with Vector's argument that the Commission's approach to refusing indexation from 2003 to 2005 for the uncontrolled GPBs was retrospective and unlawful. We then deal with the balance of the Vector's Alternative 3 adjustments.

Indexation 2003-2005 for Vector's uncontrolled GPBs

The Commission's decision

[823] The GPBs asset valuation IMs specifically allow the application of indexation from 2005 onwards to the most recent disclosed values for Vector's previously uncontrolled (NGC distribution and transmission) GPB operations.[472] The base valuations for those assets dated to 2003. No indexation is allowed for the 2003-2005 period.

[824] The Commission's reasons may be summarised as follows:

(a) Indexation from 2005 onwards was provided for in the Gas Authorisation for Powerco and Vector's controlled businesses, with revaluation gains being treated as income for pricing purposes.

(b) All other GPBs are implicitly permitted some level of indexation since 2005 reflecting, as we understand it, the way they in fact treated those revaluation gains more or less consistently with the Commission's approach.

(c) Although Vector's uncontrolled NGC distribution and transmission were not subject to the Gas Authorisation and had not necessarily dealt with revaluation gains since 2005 consistently with the Gas Authorisation or the Commission's approach, allowing indexation from 2005 onwards was, though in Vector's favour, reasonable:

(i) for consistency with the treatment of all other GPBs; and

(ii) because Vector may have had an expectation that, if and when its NGC assets were subject to price-quality regulation, those assets might have been indexed post 2005 in the same manner as its controlled Auckland assets.

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472 Decision [2012] NZCC 27 at cl 2.2.1(2)(a), 67/715/033442 and Decision [2012] NZCC 28 at cl 2.2.1(2)(a), 67/717/033835.

Vector's appeal

[825] Vector argues that materially better GPB asset valuation IMs would allow indexation for Vector's uncontrolled NGC distribution and transmission assets from 2003 to 2005, as well as from 2005 onwards. It says that the Commission's decision not to allow CPI indexation for those assets from 2003 to 2005 is retrospective, contrary to good regulatory practice, inconsistent with providing incentives to invest and in breach of s 53P(4) (and therefore unlawful).

[826] The 2003 ODVs for Vector's uncontrolled NGC assets as disclosed in successive years under the 1997 Gas ID Regulations do not include CPI indexation. Vector was disclosing on the basis of GAAP requirements which did not allow indexation. Vector notes the Commission's proposal in its June 2009 IMs Discussion Paper that the initial RAB for Vector's uncontrolled NGC assets would not include CPI indexation from 2003 to 2010. The reason for the Commission's preliminary view was stated to be that it had no evidence that revaluation gains from the revaluations undertaken by Vector (NGC transmission) in 2004 and by Vector (NGC distribution) in 2005 were treated as income in pricing following those revaluations. That is, although under the 1997 Gas ID Regulations revaluations were required to be treated as income when the accounting rate of profit[473] was calculated and disclosed, there was no reconciliation back to prices and, hence, actual income.

[827] Vector compares that to the Commission's consistent approach to MDL, where the Commission adopted the MDL 2006 ODRC valuation (its most recently disclosed valuation) and applied CPI indexation to 2010.

[828] Vector argues here that the Commission's approach (to allow indexation for MDL but not for Vector) was based solely on a judgement that Vector's prices were likely to have been too high during that past period. If past pricing behaviour (and profits incurred during that period) were ignored, as Vector argues is required under the Act, there would be no basis for differentiating the point at which CPI indexation applied to the RAB and, importantly, no basis for the different treatment of MDL compared to Vector. Vector argues the Commission's approach is rightly

473 Accounting rate of profit, like ROI, is a measure of allocative efficiency.

characterised, as it was by Synergies, as the claw-back of earlier excess returns,[474] and hence is retrospective and unlawful. As clarified by Mr Butler, Vector's general retrospectivity argument is that the Commission's approach to revaluation gains is retrospective because it did not allow revaluation gains – to the extent they had not been recognised as income for pricing purposes - to be carried forward as part of the RAB for future pricing purposes. The Act is not prescriptive as to what constitutes "claw-back". Vector says that taking that approach to prior revaluation gains was a prohibited claw-back.

[829] Therefore, Mr Butler argued for Vector, whilst the Commission had been correct when it changed its approach to allow indexation from 2005 onwards, its failure to make that change as regards the period from 2003 to 2005 was, being based on a perception of past excessive profits, an unlawful, retrospective, claw-back of those profits.

Analysis

[830] We have already considered Powerco's and Vector's more general "retrospectivity" argument. The conclusions we reached there apply equally here. To repeat, we do not see how setting an initial RAB value – and in so doing allowing indexation of the relevant base value based on a consideration of how revaluation gains may or may not have been treated prior to the date of that base valuation or some time thereafter – is either retrospective in a general sense or, more specifically, contrary to s 53P(4). The setting of initial RAB values will affect prices going forward, but in our view that is not to claw back earlier profits (excessive or otherwise). Moreover, and again as before, given that s 53P is directed clearly at the process whereby starting prices are reset not at asset valuations in themselves, we do not agree that s 53P(4) provides a basis to challenge the asset valuation IMs.

[831] We recognise that it is not possible to conclude, as the Commission would appear to argue, that its decision had nothing to do with the treatment of revaluation gains and the returns, past or future, of Vector's uncontrolled GPB businesses. By our assessment, the Commission's decision was governed in part by the distinction it

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[474] Vector *Submission to the Commerce Commission on Input Methodologies Discussion Paper* (14 August 2009) at [146], 53/455/027190.

drew between the way in which revaluations for Vector's controlled businesses had, post 2005, been treated as income under the Gas Authorisation and its conclusion that the same approach had not necessarily been applied to Vector (NGC)'s assets. It must, as a matter of logic, be that distinction that resulted in the Commission allowing post 2005 indexation of Vector's uncontrolled NGC assets for the sake of consistency with Vector's controlled assets – not because it was otherwise justified – and not allowing indexation in the period from 2003 to 2005 where it was not required for consistency's sake – and again not otherwise justified.

[832] The decision by the Commission to allow indexation for MDL was made on the same conceptual basis as the decision to allow indexation for Vector's controlled business, namely that actual pricing decisions post 2005 were consistent with that approach. Therefore it was not inconsistent with the Commission's treatment of Vector (NGC) which had a different rationale.

[833] Moreover, and as the Commission argues, we were not persuaded in any event that allowing a further two years of indexation between the period of 2003 and 2005 would result in a "materially better" GPBs asset valuation IM.

Outcome

[834] For all those reasons we conclude that allowing for CPI indexation of the asset values of Vector's uncontrolled NGC assets from 2003 to 2005 would not produce a materially better GPBs asset valuation IMs. Nor was the Commission's decision not to allow indexation from 2003 to 2005 contrary to s 53P(4) or an error of law.

The approach to optimisation – EDBs

The Commission's decision

[835] The EDBs asset valuation IM provides, in effect, that an EDB may modify the value of an asset by reapplying optimisation in light of more up-to-date information that has subsequently become available. It provides an EDB, such as Vector:

(a) the option of reapplying optimisation to the value of its assets for setting the initial RAB; and

(b) the opportunity to increase its initial RAB by including assets previously written down or written off, but which at the end of the 2009 disclosure year remain in service.

[836] While reapplication of optimisation is optional, if an EDB chooses to reapply optimisation it must do so across all assets that were fully or partially written down in the 2004 valuation.

[837] As explained in the EDBs-GPBs Reasons Paper, the Commission's intent is to:

(a) allow EDBs to adjust the value of an asset that was previously written down or written off under the optimisation test and which, at the end of the 2009 disclosure year, remained in service; and

(b) include such an asset where the optimisation had resulted in a reduction or partial write down in value as well as where an asset was excluded or fully written down.

[838] Because, in the Commission's view, its chosen existing valuation sits within a range of valuations consistent with the s 52A(1) purpose, this and other adjustments it made were not for consistency with s 52A(1)'s reference to workably competitive markets, but to:

(a) address concerns raised in the course of the consultation process; and

(b) to reinforce the credibility of its choice of existing valuations to set prices and assess returns.

The adjustments, though not made for consistency with s 52A(1), were in the Commission's view, not inconsistent with the s 52A(1) purpose.

Vector's appeal

[839] Vector argues that if its Alternative 1 or 2 are not adopted, the 2004 ODV upon which the initial RAB is based should be further adjusted by optimisation being reversed rather than reapplied. It contends that such an adjustment would be more consistent with good regulatory practice and incentives to invest.

[840] Vector argues the reapplication of an optimisation is inconsistent with the s 52R certainty purpose statement and is impractical because:

(a) the reference to "more up-to-date information" is highly ambiguous, uncertain and contrary to the purpose of IMs (ss 52R and 52T(2)); and

(b) it is unclear how a re-optimisation exercise could be practically or cost-effectively applied.

[841] Vector contends that a better, more certain, approach would be to unwind the optimisations made in 2004. This, it submits, would mean that there is no portion of an asset value previously written down which is unable to be recovered (even though the assets were likely to be fully utilised in the future).[475] We understand Vector's position to be that the virtue of its proposal, over that of the Commission's, is the greater certainty its approach provides.

[842] Vector supports its submission by reference to:

(a) a statement by its expert, Mr Wilson, that if optimisation were to be retained, maximum mandatory planning periods ought to be removed as such limitations are arbitrary and flawed (and, in practical terms, this is the same as reversing optimisations);

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[475] This somewhat ambiguous submission was put to us in those terms, repeating an identical submission made by Vector during consultation. Vector *Submission in Response to the Commerce Commission's Revised Draft Determinations and Consultation Update papers for Electricity Distribution Businesses and Gas Pipeline Businesses* (12 November 2010) at [14], 60/624/031171.

(b) a statement by its Pricing and Valuation Manager and submissions provided by the Electricity Networks Association (ENA), which are said to support Mr Wilson's position; and

(c) what is described as additional evidence provided by ENA of practical issues associated with reapplying optimisation.

Analysis

[843] In terms of a high level response to Vector's proposal, it is perhaps sufficient to emphasise that the proposal involves the reversal of optimisation without there being any revisiting of the need for optimisation. In other words, a positive value could be applied to an asset that was neither being used in 2004, nor being used currently, nor likely to be used in the future. Notwithstanding the issue of certainty upon which Vector bases this appeal, that proposition is inherently unattractive.

[844] Turning to Vector's certainty argument, the reference to "more up-to-date information" read in its context in the EDBs-GPBs Reasons Paper and cl 2.2.1(5)(a) and (b) of the EDBs asset valuation IM, means "information ... that has subsequently become available". That is not, as submitted by Vector, ambiguous. We accept the Commission's submission in that regard. As explained by the Commission in the EDBs-GPBs Reasons Paper:[476]

> The IM Determination allows EDBs to re-optimise those assets that were fully or partially written down as a result of optimisation in the 2004 ODV valuations, applying the 2004 Handbook but applying 2009 demand data (including load forecasts).

[845] Nor do we accept that re-optimisation would be impractical as suggested by Vector. As the Commission pointed out, PwC for the ENA indicated it had an adequate grasp of what would be required of an EDB that chose to adopt the re-optimisation option:[477]

> The Draft Determination indicates that assets which were excluded in 2004 due to optimisation tests, and which at the end of the 2009 disclosure year

[476] EDBs-GPBs Reasons paper at [E2.27], 3/7/001276.

[477] PwC *Report to the Electricity Networks Association: Adjusting 2009 Information Disclosure Valuations* (9 August 2010) at 9-10, 59/589/030356-030357.

> remain in service, are to be included (after allowing for depreciation and revaluation adjustments since 2004).
>
> ...
>
> Adjustments would not be justified to assets which remain stranded or surplus to requirements. In practice we suggest this task will involve a reassessment of each of the optimisations applied in the 2004 ODV valuation consistent with the requirements set out in paragraphs 2.18-2.47 of the Handbook and each of the optimisation tests set out in Appendix B of the Handbook. It will also require an assessment and confirmation that the assets in question are currently used to provide electricity line services.

[846] Additionally, as observed by the Commission the PwC 2010 ODV Handbook, relating to proposed amendments to the 2004 Electricity ODV Handbook, made the following comments about the feasibility of re-optimisation for EDBs:[478]

> We ... consider that EDBs will be better prepared to undertake the optimisation tests than in 2004, as a number of these were required for the first time in 2004, and the models developed in 2004 can be reused and updated.

[847] Also, as observed by the Commission, Vector's submission that re-optimisation would not be cost effective is addressed by it being a non-mandatory option.

[848] Furthermore, as Ms Casey for the Commission put it, "... Vector essentially wants to take the 'O' out of the ODV for these assets". That is, if optimisation were to be reversed and not reapplied, the methodology could no longer be described as an optimised deprival cost valuation approach. It is to be remembered that optimisation is integral to ODV methodology. ODV results in a hypothetical network. While it includes allowances for costs not incurred by the business (which results in a higher valuation) it also results in optimisations that do not reflect the network as built.

[849] Finally, as PwC noted in one of its reports to the ENA:[479]

> We also observe that in general the optimisation adjustments in the 2004 ODV valuations were insignificant.

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478 PwC 2010 ODV Handbook at 12, 59/588/030332.

479 PwC *Report to the Electricity Networks Association: Revised ODV Handbook* (9 August 2010) at 12, 59/588/030332.

As the Commission observes, that suggests that reversal of the same adjustments will also be insignificant.

The approach to optimisation – GPBs

The Commission's decision

[850] The GPBs asset valuation IMs do not provide for re-optimisation.

[851] Consistent with its reasons for allowing limited adjustments to the GPBs' base valuations, the Commission did not consider re-optimisation was required.

Vector's appeal

[852] Vector argues that, just as for the EDBs, adjustments to optimisations should be allowed for the GPBs. But, as Ms Casey for the Commission points out, the relief Vector seeks is not clear. In its notices of appeal it takes the "reverse and not re-apply approach", and supports that in its written submissions. In its written synopsis, and although not addressed orally, it argues that optimisation should, following reversal, be reapplied on the basis of the Commission's 2004 (Gas Authorisation) Valuation Guidelines. That presents us with obvious difficulties. Given the uncertain position we are in as to what materially better IM is proposed, we cannot be satisfied to the s 52Z(4) standard. Nevertheless, we briefly consider the substance of Vector's argument.

Analysis

[853] If the relief sought is reversal without re-optimisation, then the comments we have made with respect to this matter as it applies to the EDBs apply here with equal force. If the relief sought is re-optimisation in terms of those Gas Authorisation guidelines, the outcome can hardly be increased certainty.

[854] Moreover, the application of optimisation for the controlled and uncontrolled GPBs was not one of the adjustments Mr Wilson, Vector's expert, identified as being required when he reported on the adequacy of the Commission's proposal to use

updated and adjusted earlier ODV valuations to set the initial RAB.[480] On that basis the "materially better" proposition is inherently uncompelling.

Revaluation of easement rights – EDBs

The Commission's decision

[855] The EDBs asset valuation IM provides that the value of an EDB's existing easements will be their value as disclosed by the EDB in 2009, ie determined in accordance with the Commission's 2004 Electricity ODV Handbook and CPI indexed to 2009.

[856] The 2004 Electricity ODV Handbook provides:[481]

> The value to be assigned to easement rights obtained and registered by distribution ELBs [EDBs] against a land title shall, depending on the situation, be either: (i) a nil value reflecting situations where compensatory payments were not made for loss of land use or consequential loss; or (ii) the original cost of purchase (historic cost) of the easements as recorded in the asset register of the ELB. In any case, no depreciation or indexation of easement values shall be applied.

[857] As explained in the 2004 Electricity ODV Handbook, this implies a hypothetical environment where a new entrant has access to existing line routes on the same basis as the incumbent.[482] In other words, the new entrant is assumed not to have to pay market value for easements but historic costs (if any).

[858] The distinction between (i) and (ii) in the 2004 Electricity ODV Handbook reflects the fact that it was only after the introduction of the Electricity Act 1992 that, as from 1 January 1993, EDBs no longer had unlimited access to land for the purpose of constructing and maintaining their networks.

[859] The Commission continued that approach in the EDBs asset valuation IM. It did so because it considered market value at the time of acquisition, ie historic cost,

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480 *Statement of Jeffrey Wilson* (21 August 2010), 60/601/030751.

481 Commerce Commission *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (30 August 2004) at [A.28], 45/377/022708.

482 As set out in the EDBs-GPBs Reasons Paper at [F3.6], 3/7/001333, the typical specification of the ODV methodology in New Zealand involves a hypothetical hybrid entrant that comprises a mix of a HNE's notional characteristics and some of the incumbent's actual characteristics.

should reflect the reasonable costs of establishing easement rights and therefore provide appropriate recovery of, and limitation on, those costs as an input into regulated prices.

Vector's appeal

[860] Vector says that a materially better EDBs asset valuation IM would provide for easement rights currently used to provide electricity lines services, but obtained prior to 1 April 2004 and post 1 January 1993, to be revalued to market value.

[861] Vector reasons that:

(a) The 2004 Electricity ODV Handbook allowed easements to be included at historic cost only where supporting evidence was available and where the cost had been capitalised. That evidential standard did not apply to any of the other assets included in the initial RAB.

(b) The effect of the EDBs asset valuation IM was to set to zero the value of many of the easements held by an EDB which was inconsistent with the requirements of a fit for purpose valuation for price control purposes.

(c) A more consistent approach would be to include easements at their market value, as that value was the best estimate of the costs an EDB would face for the right to provide its regulated service.

[862] As can be seen, this is a very specific application of Vector's more general replacement cost argument.

Analysis

[863] It is difficult to see how Vector's first two stated reasons are relevant to its appeal here. Rather, they principally apply – as the ENA submissions from which they are drawn in our view show – to easements acquired prior to 1 January 1993.[483]

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[483] ENA *Submission 7 – Valuation Input Methodology: Initial Regulatory Asset Base* (20 August

As regards those easements, the ENA acknowledged that as they had been conferred on the EDBs by way of statutory right it was arguably inappropriate for an EDB to secure a return where no payment was made. Given that acknowledgement, and the fact that after 1 January 1993 easements had to be acquired by negotiation (implying records of historic cost would likely be entered into asset registers) the first two reasons would generally, if not almost universally, be applicable only to assets conferred on EDBs by statutory right prior to 1 January 1993 and not easements acquired after that date but before 31 March 2004.

[864] That would appear to leave the more general market value argument.

[865] The more general aspect of that proposition we have already addressed. In terms of any specific issue of retrospectivity, it is difficult to see how setting initial RAB values by taking an earlier historic cost valuation and rolling that forward consistently with the future roll-forward mechanism is impermissible retrospectivity. Rather it would appear to treat the cost of existing and future easements consistently.

[866] As the Commission argues, a revaluation to market value of easements obtained between 1993 and 2004 would recognise costs that an EDB had not incurred in the past or costs where it was likely to have already earned a sufficient return on its investment. Thus, to revalue easements obtained between 1993 and 2004 to market value would be likely to substantially increase the RAB value, with no offsetting benefit in terms of the Part 4 purpose. Furthermore, and as Ms Casey for the Commission pointed out, that approach would appear to treat easements acquired between 1 January 1993 and 31 March 2004 differently from those acquired after that latter date, without there being any apparent reason for the different approach. It would create a block of old easements that were valued differently from any other easements, and at a significantly higher level.

2010) at [133], 59/596/030607.

Finance during construction – GPBs (controlled and uncontrolled)

The Commission's decision

[867] The EDBs asset valuation IM reflects the fact that under the Part 4A ID disclosure regime EDBs established ODV values which excluded finance during construction. An allowance for that cost was represented by the addition of 2.45% to the RAB value. The EDBs asset valuation IM replicates that allowance by providing for initial RAB values to be multiplied by 1.0245. The GPBs asset valuation IMs do not because, the Commission reasons, GPBs' initial RAB values are not established on the same basis as EDBs' initial RAB values.

Vector's appeal

[868] Vector says the GPBs asset valuation IMs should also provide for the 1.0245 finance during construction multiplier. It argues that all regulated suppliers face finance during construction costs; that the omission of such an allowance from the method for determining GPBs' initial RAB values should now be fixed; and that, to the extent that the Commission does not do so because such an allowance was not a feature of the 1997 Gas ID Regulations, but was of Part 4A Disclosure, such omission is retrospective and contrary to good regulatory practice.

Analysis

[869] The approach taken in the EDBs asset valuation IM is, very clearly, a reflection of the way in which the relevant existing or base regulatory values were calculated. That adjustment is therefore one made to initial RAB values so that they do reflect those existing or base, regulatory valuations. To argue here on the basis of consistency, without addressing the substantive effect, is to provide no answer to the Commission's simple point that, as the valuations were established on different bases, to include such a multiplier in the GPBs asset valuation IMs would be to do so without any particular reason. As such, it would provide an unjustified windfall increase in asset values not demonstrated as necessary for consistency with s 52A(1).

[870] As to retrospectivity again, to discriminate between that is to treat regulated suppliers with different regulatory histories differently at the outset of the Part 4

regime, is not retrospective. Rather it reflects a reasoned conclusion that, because of those different backgrounds, different approaches are required to achieve the s 52A(1) purpose and outcomes.

"Multiplier" adjustments[484] – GPBs

The Commission's decision

[871] The EDBs asset valuation IM allows for base values determined under the 2004 Electricity ODV Handbook to be adjusted by applying increased multipliers in a wider range of circumstances relative to the equivalent provisions of that Handbook. The Commission did not make any such provision in the GPBs asset valuation IMs.

Vector's appeal

[872] Vector argues that the same multipliers that apply to EDBs should, as a matter of principle, also apply to GPBs. It notes that:

(a) Vector's 2003 ODVs for its uncontrolled GPB did not use multipliers but instead applied an average adjustment to all assets.

(b) Multipliers for hard rock and business district installations, and traffic management adjustments, were developed in the 2005 Gas Authorisation ODV Guidelines, but were only applied to Vector's controlled 2003 ODVs to a limited extent.

(c) The range and permitted coverage of multipliers and traffic management adjustments included in the 2005 Gas ODV Handbook can be updated to reflect more recent information (as has occurred for the EDBs).

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[484] Multipliers are adjustments to the standard asset replacement costs designed to take account of locational factors such as different ground conditions, rugged terrain, congested CBD areas and different levels of traffic management which make installing assets in these areas materially higher than the standard rates. *Statement of Duncan Ian Head* at [5.10], 60/606/030938.

[873] On that basis it argues that to provide a more accurate estimate of initial RAB values, the GPBs asset valuation IMs should permit application of the multipliers for hard rock and business district installations, and traffic management adjustments, that were developed in the 2005 Gas Authorisation ODV Guidelines, including extended ranges and permitted coverage as appropriate.

Analysis

[874] We do not accept Vector's basic argument that, as a matter of principle, multiplier adjustments provided for in the EDBs asset valuation IM should also apply to the GPBs asset valuation IMs. As before, to treat EDBs and GPBs differently, recognising the different background to the 2009 disclosed values used as the basis of initial RAB values for Part 4 regulation is not, in principle, inconsistent. Furthermore:

(a) the base values for controlled GPBs had, under the Gas Authorisation, been adjusted by reference to considerations relating to relevant multipliers; and

(b) the base values for Vector's uncontrolled businesses did not use multipliers, as Vector itself recognised.

[875] Furthermore, and as the Commission argues, this – again – was not an issue raised by Mr Wilson in his November 2010 report identifying further adjustments that he considered appropriate. Again, on that basis the "materially better" proposition is inherently uncompelling.

Outcome of Vector's Alternative 3

[876] It follows that we are not satisfied that implementation of Vector's Alternative 3 would result in materially better EDBs or GPBs asset valuation IMs or that the Commission erred in law in any of the ways Vector asserted here.

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5.7 THE AIRPORTS' LAND APPEALS

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The Commission's approach

[877] The Airports asset valuation IM requires initial RAB values for land to be determined by reference to the land disclosed and valued in the Airports' 2009 disclosures but using a MVAU method.[485] Schedule A to the Airports asset valuation IM sets out the MVAU methodology the Airports are to use. As there explained, MVAU is the value of land in its highest and best alternative use and can be conceived of as the amount that would be likely to be paid by a developer or investor.

[485] In 2009 the Airports made a disclosure in terms of the Airports ID Regulations as part of the transitional arrangements found in s 56F.

[878] The Airports asset valuation IM provides for those MVAU values to then be adjusted for additions, disposals and CPI to arrive at a 30 June 2010 value. The IM excludes from the Airports' initial RABs, and hence from initial RAB values:

(a) assets held for future use until commissioned;

(b) work under construction, with the capitalisation of holding costs being suspended where construction is suspended; and

(c) past land conversion costs, except those associated with AIAL's seawall and northern runway and WIAL's runway end safety area.

[879] The Commission summarised the Airports' 2009 disclosures as follows in the December 2009 Airports Emerging Views Paper:[486]

(a) AIAL (as at 30 June 2009)

ASSET CATEGORY	$000
Land	565,296
Buildings and Services	396,277
Infrastructure	115,055
Runway, taxiway and aprons	257,788
Vehicles, plant and equipment	11,768
Total	**1,346,134**

(b) WIAL (as at 31 March 2009)

ASSET CATEGORY	$000
Land	145,492
Civil works	117,394
Buildings	93,449
Vehicles, plant and equipment	10,201
Work in progress	12,357
Total	**378,893**

(c) CIAL (as at 30 June 2009)

ASSET CATEGORY	$000
Land	111,074
Buildings	15,480
Terminal facilities	106,702
Sealed surfaces	85,316

[486] December 2009 Airports Emerging Views Paper at Tables B1-B3, 7/20/002751-002752.

Plant and equipment	1,164
Office and computers	1,723
Infrastructure	6,433
Motor vehicles	3,732
Work in progress	18,021
Total	**349,643**

[880] The Commission noted that:

(a) AIAL's most recent revaluation had been undertaken at 30 June 2006, WIAL's at 30 June 2009 and CIAL's at 30 June 2007;[487]

(b) the Airports had generally used a market value existing use (MVEU) approach to value land in their disclosures;[488] and

(c) the difference between MVAU and MVEU was that:[489]

> The MVEU approach tends to produce higher valuations than the MVAU methodology because, as discussed further below, the former includes a premium above MVAU for all past costs of airport specific land conversion (even those incurred in the distant past), whereas the latter does not. That said, land conversion costs may nonetheless be included under a regulatory regime even if an MVAU approach is used, but it would not be recognised in the value of land – the costs would be recognised separately by way of a non-land regulatory asset instead.

[881] The quantum of difference between the MVAU and the MVEU valuations was not provided to us, although AIAL did estimate – based on expert advice – that the exclusion of past conversion costs would remove at least $38.2 million from its RAB.[490]

[882] The Airports asset valuation IM also provides for the Airports' land to be revalued in any year using MVAU with revaluation gains to be treated as income. In

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487 December 2009 Airports Emerging Views Paper at fn 110-112, 7/20/002751-002752.

488 Airports Reasons Paper at [4.3.59], 2/6/000689.

489 Airports Reasons Paper at [4.3.59], 2/6/000689.

490 This estimate is the difference between the optimised replacement cost of reclamation as estimated by OPUS of $123.2 million which AIAL approximates to be $870,000 per hectare, and the MVAU valuation as estimated by Seager and Partners, of $600,000 per hectare multiplied by 141.5 hectares. See OPUS *Auckland International Airport – 2006 Valuation of Reclaimed Land and Seawalls, Runway, Taxiways and Aprons and Infrastructure Assets* (30 June 2006) at [7.1], Table 10, 47/389/023707; Seager & Partners *Valuation Report Land and other Land Assets Auckland International Airport Limited* (30 June 2006) at Table 3, 47/390/023761.

years in which no MVAU revaluation is undertaken land must be CPI indexed. The IM provides for the RAB to be rolled forward each year as follows:[491]

RAB (end of year) = RAB (beginning of year) – Depreciation + Revaluations + Capital Additions – Capital Disposals

[883] Other than with respect to the basis of the inclusion of land held for future use, there is no challenge to those roll-forward provisions.

The Airports' appeals

[884] As first argued, WIAL/CIAL and AIAL challenged similar aspects of the Airports asset valuation IM's approach to land valuation, but proposed different "materially better" approaches to those matters.[492] Those differences reflected different approaches to past conversion costs and how they should be dealt with under the MVAU and MVEU approaches. Subsequently a hand-up, provided in response to a request by us as to the form of relief sought by the Airports, proposed the following terms for the Airports as a group:[493]

> ... to the extent that the Court agrees with the propositions put forward by the Airports, it may be appropriate to:
>
> (a) grant relief by way of a direction to the Commission to amend the IM Determination under s 52Z(3)(b)(iii);
>
> (b) provide the Commission with "in principle" changes as follows:
>
> (i) the initial RAB value for non-land assets shall be the assets' ODRC valuation as at the last day of the disclosure year 2010;
>
> (ii) the initial RAB value for land assets shall be the MVAU value of the land (as determined in accordance with Schedule A of the IM Determination) as at the last day of the disclosure year 2010;[494]

491 Decision 709 at cl 3.3, 1/1/000014.
492 CIAL Appeal 251 at [11]-[14]; WIAL Appeal 249 at [11.1]; AIAL Appeal 820 at [4].
493 *Airports' Proposed Form of Relief for Asset Valuation* (Handup no. 96). Handed up on 2 October 2012.
494 The last day of the disclosure year 2010 differs between the Airports because of their different accounting years. It is 31 March 2010 for WIAL, and 30 June 2010 for AIAL and CIAL.

(iii) assets currently held for future use shall be included in the initial RAB, valued using MVAU for land, and ODRC for non-land assets. Going forward, assets held for future use shall be included in the RAB from the time they are acquired or held;

(iv) land conversion costs, to the extent that those costs are not fully reflected in the MVAU valuation of land and are not fully depreciated, shall be included in the RAB as a separate non-land asset, valued using ODRC; and

(v) the costs of holding works under construction shall be added to the RAB when the works under construction are commissioned, even if those holding costs were incurred during suspension of construction.

[885] We therefore consider these land aspects of the Airports' asset valuation IM appeals in terms of the following issues:

(a) the appropriate date for the MVAU valuations;

(b) the exclusion of land held for future use;

(c) the exclusion of works under construction; and

(d) the exclusion, except as specified, of past land conversion costs.

The valuation date

Issue

[886] Subject to the contested exclusions, the Airports agree with the Commission's MVAU approach to the valuation of land assets as it is consistent with their more general proposition that initial RAB values should be set on the basis of current replacement costs. They differ from the Commission, however, on the date proposed for those valuations. They say that adopting valuation dates of 1 April 2010 for WIAL and 1 July 2010 for CIAL and AIAL would lead to a materially better IM. Their argument is that the initial RAB should be valued at those dates to provide the basis for the first year of disclosure under the Commission's s 52P Airports ID determination, which effectively replaced the old Airports ID Regulations.

Analysis and outcome

[887] In making this argument, WIAL/CIAL does not distinguish between their specialised and land assets: their argument is that new replacement cost valuations are required at the start of the regulatory period.

[888] AIAL, as regards its land assets, separately argues that an MVAU valuation date at, in its case, 1 July 2010, is a materially better approach because, explicit in the MVAU valuation method adopted by the Commission is an in principle acceptance of using current valuations – as reflected in the Airports asset valuation IM allowing an Airport the opportunity to revalue its land assets in any year going forward. AIAL argues that may be seen in the following paragraph in the Airports Reasons Paper:[495]

> The correct incentives to invest in land in future will be provided if Airports expect to be able to earn a return on any investment in land before profits appear excessive that is sufficient to compensate them for the costs of acquiring and holding onto that land. The cost of continuing to hold onto land acquired in the past is measured by the opportunity cost that the Airport incurs today by using the land to supply specified airport services (i.e. instead of using it to supply other services). Providing a signal to Airports that they will be consistently able to earn revenues that compensate them for the opportunity cost of holding land without profits appearing excessive is therefore the appropriate approach when valuing land under Part 4.

[889] The Commission argues that as October 2008 is the commencement of the new regime, it follows that a MVAU valuation of the land assets held by each airport as disclosed in 2009 adjusted for additions, disposals and CPI to arrive at a 30 June 2010 value immediately before the 1 July 2010 commencement of the Airports ID regime is appropriate.

[890] The Commission's rationale for adopting a 30 June 2009 valuation date was further explained by Ms Casey in the following terms:[496]

> The regime bites from when the initial RAB is set, even if it's not used immediately for information disclosure or price setting purposes. When the initial RAB is set, all future revaluation gains will be treated as income, so there is a bite straight away, and there was a principled reason to set that in motion quickly under Part 4.

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[495] Airports Reasons Paper at [4.3.57], 2/6/000688 (footnotes omitted).
[496] Transcript at 2645.

When questioned as to the relationship between this reason, and the Commission's reasoning, Ms Casey acknowledged that her analysis had not featured in the Commission's reasoning.

[891] Whilst October 2008 was the commencement of the new regime, ID disclosure by the Airports was required for the first time for the year commencing 1 July 2010. That would, in this context, suggest a valuation date of 1 July 2010. More importantly, given that – both initially and going forward – under the Airports ID disclosure regime the Airports are to have the cost of continuing to hold land measured by current opportunity cost, we cannot understand the reason for the Commission's choice of 30 June 2009 as the date of the initial MVAU valuation. Finally, on that basis we find Ms Casey's explanation inconsistent with Mr Brown's acceptance that the Airports ID regime is not intended to provide any information about excessive profits that may have been earned prior to 2009.

[892] Therefore, and as AIAL argues, with WIAL/CIAL's support, we consider that a materially better Airports asset valuation IM would provide for the initial MVAU valuation of the Airports' land assets to be undertaken as at, in the case of WIAL, 1 April 2010 and in the case of AIAL and CIAL, 1 July 2010. In our view, such an IM will be materially better as it will be consistent with the underlying principle adopted by the Commission for valuing the Airports' land which will contribute materially to the certainty of the regulatory environment, that is the s 52R purpose, by promoting predictability of outcomes.

[893] As can be seen, that conclusion flows from the Commission's statement of principle referred to in [888] which is, of course, quite different from the approach taken by the Commission (with which we agree) to specialised assets. Hence the different conclusions we have reached here on the question of the appropriate valuation date and the materially better assessment.

Exclusion of land held for future use

Issue

[894] Land is excluded from the RAB unless it is currently used in the supply of specified airport services. This means that land being held or developed for future use is not included in the initial RAB. Once commissioned and in use, land (valued at MVAU together with holding costs) enters the RAB. In the interim, land held for future use is required to be disclosed under the Part 4 ID regime. The s 52P ID determination for ID regulation of Airports prescribes how such land is to be treated during commissioning, including recognition of holding costs. As the Commission comments:

(a) in the Airports Reasons Paper:[497]

> For the purposes of information disclosure, Airports must separately calculate, with respect to future development land: the value of the land (including cumulative revaluations); net revenue derived from the land; holding costs; and cumulative gains or losses arising from period regulatory revaluations (‘tracking revaluations’).

(b) and in its reasons paper for the ID regulation of Airports of the same date:[498]

> The separate disclosure, outside the RAB and financial performance measures, of information on the costs of holding land for future use will inform assessments by interested persons of the prudency and efficiency of Airports’ investment programmes.

[895] The provisions of the Airports asset valuation IM excluding assets held for future use apply equally to land and non-land assets. The Commission’s reasons, and the Airports’ submissions, focus on land held for future use. Accordingly, our analysis also focuses on land, but applies equally to non-land, assets.

[896] In deciding to exclude land held for future use from the Airports’ RABs until the land is commissioned, the Commission noted that:[499]

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497 Airports Reasons Paper at [C3.7], 2/6/000753.

498 Commerce Commission *Information Disclosure (Airport Services) Reasons Paper* (22 December 2010) at [3.141], 40/313/019889 (footnotes omitted).

(a) the reference to workably competitive markets in the s 52A(1) purpose statement does not imply a specific treatment of such land; and

(b) while capacity constraints could cause higher prices to manage congestion using existing land, relationships between an Airport and its customers could be such that the prices would not rise until additional land came into service, or price rises could be delayed even further into the future in order to encourage greater utilisation of the associated assets in the short to medium-run.

[897] That is, as we understand it, prices in workably competitive markets might or might not rise ahead of the introduction of additional capacity, whereas the Airports' proposed approach would tend to imply price rises would always occur ahead of the introduction of additional capacity, reflecting the inclusion of uncommissioned future assets in the RAB.

[898] The Commission reasoned:

(a) Including land held for future use before it is commissioned would provide the Airports with:

(i) little, if any, incentive to avoid investment in land it did not use; and

(ii) greater incentive to invest imprudently.

(b) Requiring that land be commissioned before it enters the RAB places the risk of ultimate non-development on the Airports, ie profits will appear excessive if the Airports attempt to earn a return on the land before it is used to supply services. The Commission accepted that under the Part 4 ID regime the risks of ultimate non-development were modest.

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[499] Airports Reasons Paper at [4.3.76]-[4.3.79], 2/6/000692-3.

(c) Nevertheless, given that the Airports were best placed to manage that risk, it was reasonable that they be required to bear it.

[899] In summary, the Commission's position is that its approach precludes land held for future use from inflating the value of the Airports' RABs in the calculation of ROI under the Part 4 ID regime. In its view, including the value of such land in the ROI may mask excessive profits being generated by the Airports' other assets that are being used to provide airport services.

[900] The Commission reasons that the issue is primarily one of timing – a full return on valuation and costs (including capitalised financing costs) will be recognised without profits appearing excessive under ID, but only once the asset is being used to provide the relevant services.

[901] The Commission also argues that its approach is not a fundamental change from that of the Airports under the prior regime, but more an extension of it. That may be seen, the Commission submits, by reference to:

(a) The following extract from a submission to the Commission by BARNZ during the consultation process:[500]

> While all three airports have included land held for future use in their asset valuations for information disclosure purposes, at the same time all three airports excluded either all or a significant portion of land held for future use from the asset base on which they set prices. Thus the Commission's approach does not represent as fundamental a change from approaches by airports under existing regulatory arrangements as the airports are claiming.

(b) The following submissions by AIAL:

> ... in the last pricing round, pricing was based on a partial recovery (56%) of the investment in the land held for the Northern Runway ... .
>
> An approach which recognises the appropriateness of receiving a partial return now, on assets held for future use, would be

[500] BARNZ *Cross Submission on Commerce Commission Input Methodologies (Airport Services) Draft Determination and Draft Reasons Paper* (3 August 2010) at 24, 59/583/030254.

> consistent with Auckland Airport's previous valuation approach (for pricing purposes)...

[902] To the extent that the relief sought seeks an ODRC outcome for non-specialised assets, it is, for reasons outlined above, declined.

[903] The Airports' challenge to the Commission's exclusion of land held for future use is founded on three main claims:

(a) the AAA precludes it;

(b) it is inconsistent with outcomes in workably competitive markets, in that it fails to provide Airports with appropriate incentives to invest; and

(c) it places Airports (and their investors) at regulatory risk, including because it may lead to "price shocks" when the assets are commissioned.

Analysis

[904] We consider each of those propositions in turn.

Precluded by the AAA

[905] WIAL/CIAL note, correctly, that the statutory definition of specified airport services in s 2 of the AAA includes, on the basis of the way the various activities and services comprising specified airport services are defined, the holding of any facilities and assets for the purpose of providing specified airport services *in the future*. Section 52T(1) requires IMs relating to the provision of specified airport services to include relevant methodologies for "evaluating or determining" the valuation of assets "in respect of the supply of goods or services". On that basis, WIAL/CIAL argue that the RAB for providing specified airport services necessarily includes land held for future use. The Commission, they submit, had itself

recognised that when it commented in the Airports Reasons Paper in the following terms:[501]

> The Commission has given careful consideration to the Airports' arguments that there is a "statutory directive" to include future development land in Airports' RAB values. Even though holding future development land forms part of the regulated services, it does not follow that the Commission must set an IM for the valuation of assets that treats future development land in the same manner as land currently in use. There is no express provision under Part 4 that requires such an approach.

[906] Moreover, they argue, that interpretation of s 52T(1) is consistent with the Part 4 purpose, in particular the promotion of suppliers having incentives to invest.

[907] AIAL stops short of WIAL/CIAL's argument here. It notes, however, that the Commission's exclusion of land held for future use does not sit comfortably with Parliament's recognition in s 2 of the AAA that an aspect of providing airport services is prudently holding assets for future use.

[908] Like the Commission, we are not persuaded by WIAL/CIAL's definitional approach. In our view, and as the Commission argues, Part 4 – by requiring an IM to deal with asset valuation issues for the ID regulation of Airports – does not require that all assets be included, at a positive value, in the RAB. We therefore agree with the Commission's comments set out above. We also consider that, in light of the s 52P Airports ID determination providing for the disclosure and valuation of land held for future use, this definitional argument is a somewhat sterile one. That is, investments in land held for future use will be valued and disclosed, but not as part of the RAB. The extent to which an Airport seeks to recover the costs of assets held for future use, in the pricing it sets under the AAA, remains ultimately a decision for it. To the extent it considers appropriate, it can set prices to recover a return on such an asset, and comment on any apparently excessive ROI when it makes its ID disclosure.[502]

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[501] Airports Reasons Paper at [4.3.79], 2/6/000693 (footnotes omitted).
[502] Decision 715 at sch 1, 40/312/019798.

Inconsistent with workably competitive market outcomes by failing to provide appropriate incentives to invest

[909] The Airports claim that the Commission's exclusion of land held for future use is inconsistent with outcomes in workably competitive markets, and therefore with s 52A, in that it fails to provide Airports with appropriate incentives to invest.

[910] WIAL/CIAL make this argument in reasonably general terms, and in many ways as a subset of their more general argument based on the significance of the workably competitive markets standard for the setting of opening RAB values. More particularly, they argue that in a workably competitive market, assets held for future use have a value, because prudent spare capacity has a market value. They say their approach recognises that economic orthodoxy. Moreover, they argue, there is no evidence to indicate that the Airports acquire assets for future use inefficiently, and nor do they have any incentive to do so. Acquiring assets for future use is fully consistent with workably competitive markets. They drew an analogy with spare transformers, lines and other components built into electricity line networks in order to carry the load in contingencies. By excluding assets held for future use in the RAB, WIAL/CIAL argue, the Airports asset valuation IM fails to provide appropriate incentives to make those prudent investments.

[911] AIAL argues to similar effect, but very much in the context of the land it holds for the development of a second runway. It puts the holding of those land assets in the broader context of the overall history of AIAL, and its role as New Zealand's primary international airport. It cites the following observations from the Court of Appeal in *McElroy v Auckland International Airport Ltd*:[503]

> The historical development of Auckland Airport leaves no room for debate that the entire area of over 1,000 hectares was acquired so that the grand vision of New Zealand's primary international airport could be implemented. From the project's outset, it was the intention of government (and subsequently of local authorities) to create a major gateway airport that would include not merely an airstrip and adjoining terminal, but both air-side and land-side functions, ancillary commercial activity and land available for expansion and development. All the contemporary evidence, and particularly the establishment deeds, reflect a commitment to a major national activity which inevitably would involve ongoing development and

[503] *McElroy v Auckland International Airport Ltd* [2009] NZCA 621 at [49].

> in respect of which flexibility and adaptability to advances in aviation technology and requirements had to be hallmarks.

[912] As we understand it, AIAL's land originally made provision for a second runway at right angles to the first, and current, runway. Land acquired in 1998 provided for a parallel runway – as now proposed – to be developed. AIAL places the 1998 acquisition of that land in the broader context of AIAL's strategic risks and future development needs. The acquisition was in its view, therefore, a responsible and prudent one, providing long-term option value for AIAL. AIAL also points to its recent practice of taking a commercially sensible approach to the timing of returns on such assets. It notes that, in its last pricing round, pricing was based on a partial recovery (56%) of the investment in the land held for the northern runway. Thus, it argues, although AIAL could effectively earn a return on assets not currently used, this would be balanced against lower prices when that asset was commissioned (that is, we understand, lower than what would otherwise be the case).

[913] There can be no argument with the proposition that it can be prudent and sensible for firms to acquire assets for future use. The extent to which that is the case will depend, amongst other things, upon the characteristics of a firm's business and of the market within which it operates. In the case of an infrastructure business such as an airport, acquiring land assets for future use may also, we recognise, involve significant expenditure.

[914] But it is a different question as to when it is appropriate to include such assets in a regulated entity's RAB – here under ID regulation – with the implications that has indirectly for prices and more directly for disclosed profitability. We agree that, as reasoned by the Commission, no specific treatment of land held for future use is implied by the reference in s 52A(1) to workably competitive markets. Therefore, and as the Commission also reasoned, the approach to the inclusion of land held for future use in a RAB should be based on the indirect incentives that treatment is likely to create under the Part 4 ID regime and, in turn, the ability of that regime to promote the Part 4 purposes and the more specific purposes of ID regulation itself. That is, that regime should constrain the incentive the Airports might otherwise have to acquire land for future use imprudently, or to hold such land indefinitely without developing and commissioning it. Requiring that an asset is commissioned before it

enters the RAB provides such constraints and places the development or non-development risk on the Airports. As the Airports are best placed to manage this risk, it is reasonable that they are required to bear it.

[915] By the same token, providing for assets to enter the RAB together with their holding costs, upon commissioning, provides a prudent and rational firm with incentives to make appropriate investments in such assets.

[916] Finally, we note that it is not the Airports' current practice to include the full value of land held for future use in the asset base by reference to which, in consultation with their customers, prices are set. Rather, and as noted in AIAL's case specifically, such assets are only included in part. WIAL/CIAL criticise the Commission's approach as being an "all-or nothing proposition". But so is that proposed by the Airports themselves.

Regulatory risk and price shock

[917] WIAL/CIAL and AIAL argue that the Commission's approach would give rise to the possibility of price shocks when land held for future use was commissioned. The possibility of such price shocks would expose the Airports themselves to risks of non-recovery, based on possible regulatory intervention at the relevant times. WIAL/CIAL and AIAL refer to a report to the Commission on behalf of the New Zealand Airports Association which identified those risks. The report also identified the risk associated with the Airports holding land for long periods of time before developing it, and the prospect of airport regulations changing during that time meaning that, when commissioned, the Airports might not, in fact, be able to recover their full costs.

[918] Price shock is not necessarily the one and only outcome of the Commission's exclusion of land held for future use, as was recognised:

(a) by the Commission when it observed that capacity constraints could cause higher prices for services supplied using existing land before future use assets are commissioned and congestion eased;[504] and

(b) by Alfred E Kahn, on behalf of AIAL, in his statement to the effect that an Airport may in the short-to-medium-run smooth the price path or even delay a price rise in order to encourage greater utilisation of any increase in capacity associated with the commissioning of future use assets.[505]

[919] We agree with the Airports' proposition that price smoothing ahead of the (likely reasonably imminent) commissioning of future assets may be an economically efficient approach. That might suggest, in an ID context,[506] some inclusion of the value of soon to be commissioned assets. Faced, however, with the two alternatives proposed, that of the Commission – exclusion – and that of the Airports – inclusion in full – we think the Commission's alternative places the incentives in the right place. That is, the Airports will not be precluded from price smoothing, but the form of disclosure will require that to be identified and justified. Were future assets to be included in full, that incentive would not necessarily be present and a greater risk of disguising excessive returns (relative to the risk of preventing normal returns) would be present.

[920] Mr Galbraith for AIAL suggested that the inevitable response to that approach would be an assertion of excess charging by the Airport in question. By the same token, it can be argued that adopting the Airports' approach would – as Air NZ suggested – result in the possibility of disguising excessive profits. We think the transparency that the Commission's Airports asset valuation IM will promote around recovering on assets before they are commissioned is the preferable outcome.

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504 Airports Reasons Paper at [4.3.76]-[4.3.79], 2/6/000692-3.

505 *Statement of Alfred E. Kahn on behalf of Auckland International Airport Ltd* (10 August 2001) at 6, 43/365/ 021693.

506 In DPP/CPP, major capex can be accommodated by a CPP.

[921] For all those reasons, we are not persuaded that an Airports asset valuation IM which provides for future assets to be included in the RAB would be materially better.

Exclusion of works under construction

Issue

[922] As well as excluding from the Airports' RABs assets held for future use until commissioned, the Airports asset valuation IM also excludes work under construction until commissioned and, most relevantly here, suspends capitalisation of holding costs if construction is suspended.

[923] The Commission decided that the Airports must exclude works under construction from their RAB because in workably competitive markets an asset that has not been commissioned would not normally be expected to earn a return on capital. Thus, the Commission's approach is to allow the Airports to report the recovery of capex and financing costs incurred during construction from the time the asset is commissioned. This, it said, is consistent with GAAP.[507] Also, as is consistent with GAAP, the Airports must suspend capitalisation of financing costs during periods in which construction of the asset is suspended.[508]

[924] As the Commission explained in the following paragraphs from the Airports Reasons Paper:[509]

> In workably competitive markets, suppliers 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 (in particular s 52A(1)(b)).
>
> ...
>
> [GAAP] 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

507 Airports Reasons Paper at [C4.5], 2/6/000754.
508 Airports Reasons Paper at [C4.1], 2/6/000754.
509 At [C4.8], 2/6/000755 and [C4.16], 2/6/000756.

> provides an incentive for suppliers to limit construction time to that strictly necessary for construction. The Commission has therefore adopted this approach.

[925] A footnote to the paragraph quoted immediately above states:[510]

> The suspension rule would not address situations where airports progress work, but slowly so as to draw out the period over which financing costs accrue. However, the Commission considers that greater transparency around forecast and actual capex, under the information disclosure requirements, should reveal this type of behaviour.

[926] Excluding capitalisation of holding costs if construction is suspended is significant for AIAL because:

(a) in September 2007 it commenced construction of a new northern runway which it suspended in August 2009; and

(b) the Airports asset valuation IM will deny it any holding costs it may incur whilst the period of suspension is continuing.

[927] As Mr Galbraith explained, the land earmarked for the northern runway is valued at $125 million and, whilst construction is suspended, the holding costs for the suspended works under construction are not being accumulated and will never be added to the RAB.

[928] AIAL's challenge to the Commission's exclusion of works under construction was advanced as an alternative in the event that, as has occurred, its challenge to the Commission's treatment of land held for future use was rejected.

[929] AIAL argues that:

(a) the Commission should not apply GAAP, which excludes costs while work is suspended; and

(b) a materially better approach would be for holding costs to be added to the RAB upon works under construction being commissioned, even if

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[510] At fn 314, 2/6/000757.

those holding costs were incurred during a period of suspension of the works.

[930] AIAL challenges the Commission's reasoning that the "suspension" rule provides an incentive for suppliers to limit construction time. It submits that it did not apply in circumstances leading to AIAL suspending construction of its northern runway where construction was commenced in good faith prior to the global financial crisis (GFC) and, following the GFC, suspended for sound reasons, namely, the economic downturn consequential on the GFC and a more efficient use of the existing runway. AIAL submits that:

(a) the Commission's approach would simply discourage suspension of construction because AIAL would be better off nominally continuing construction by doing as little work as possible to not be considered to have suspended construction; and

(b) a materially better IM would avoid such perverse outcomes.

Analysis

[931] There is merit in AIAL's submission that suspending construction of works under construction can be appropriate where it encourages:

(a) maximum utilisation of existing infrastructure;

(b) responsible and sensible timing of infrastructure delivery;

(c) a focus on cost efficiency and capital productivity; and

(d) a sensible response to market conditions and consumer demand.

[932] The alternative IM advocated by AIAL would not, however, provide that encouragement. It does not delineate a threshold or thresholds against which the Airports could make an assessment about whether it would be appropriate to suspend works under construction without invoking the suspension of capitalisation rule.

[933] Rather, the alternative IM advocated by AIAL would result in an all or nothing approach in which the Airports would avoid the suspension of capitalisation rule, irrespective of whether the suspension of works under construction was motivated by the matters AIAL submits should be encouraged and are economically efficient.

[934] We are therefore of the opinion that the inclusion in the initial RAB and the roll-forward provisions, of works under construction or of holding costs whilst construction is suspended, would not result in a materially better IM as advocated by AIAL.

Exclusion of past land conversion costs

The relevant provision and relief sought

[935] In very general terms, the Airports asset valuation IM means that costs incurred in the past when converting land into a form suitable for use to provide airport services (ie land conversion costs) do not form part of initial RAB values. Such costs do become part of those values when incurred in the future. Again, there is no issue with that future treatment. The appeal here is against the exclusion of past land conversion costs.

[936] The effect of the IM is that, whether disclosed as land or non-land assets in the 2009 disclosures, land conversion costs are not part of the RAB, other than to the extent of "[AIAL's] costs of seawall construction". In addition:[511]

(a) The past conversion costs of WIAL's Runway End Safety Area are "classified as civil works in WIAL's disclosure statements, and so will already be included in the initial RAB value".[512]

(b) $17.3 million of past costs associated with AIAL's second (northern) runway are included as a work under construction.

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[511] Airports Reasons Paper at [C2.7], 2/6/000752.

[512] In light of the definition of included assets we do not understand this. But WIAL proceeded on the basis that that was indeed the position.

(c) In its submissions, the Commission acknowledges that some $5 million of noise mitigation costs associated with the development of AIAL's second (northern) runway should also be included in the initial RAB. The Airports asset valuation IM would be amended to correct that error.

The Commission's reasons

[937] The following paragraphs from the Airports Reasons Paper set out the Commission's reasons for its treatment of land conversion costs:[513]

> In the main ... past investments in the conversion of land for use as an airport will have contributed to the value of land in an alternative use. These costs will therefore be reflected in a higher MVAU valuation than would otherwise have been the case (e.g. levelled land is typically more valuable than unlevelled land and the value of land will rise during the period in which it is held). ...
>
> Inclusion of the majority of these land conversion items as separate non-land assets in the RAB is unlikely to have any effect on Airports' incentives to invest in future. Airports are likely to have already fully recovered these costs in the past. Since the value of any costs that remain outstanding will be captured at the start of information disclosure regulation under Part 4 by the fresh valuation of land (if indeed any of these costs have not yet been fully recovered), it is appropriate that profits appear excessive if Airports attempt to recover an amount for these costs that exceeds the amount implied by the MVAU valuation of land. While inclusion of the majority of these items will not enhance Airports' incentives to invest in future, their exclusion will not harm those incentives either.
>
> ...
>
> There are, however, some exceptions to the general proposition outlined above. Recognition of past investments is required where the expenditure has been incurred relatively recently and would not be expected to affect the value of land in an alternative use. In these cases, profits will appear excessive if Airports attempt to recover these costs unless these items are included in the RAB and assigned a value.

[938] This was not a new position. In the 2002 Airports Inquiry, the Commission had reasoned similarly and, at that stage, concluded that provision should only be made for AIAL's seawall costs. In consultation on the Airports asset valuation IMs, the Commission sought further submissions on the matter, as a result of which it added the further "exceptions" already enumerated. Once again, it did not accept

[513] Airports Reasons Paper at [4.3.62]-[4.3.63] and [4.3.65], 2/6/000689-000690 and similarly at [C2.4]-[C2.5], 2/6/000751.

AIAL's proposition that the historical costs of reclaiming land from the sea (seabed reclamation costs) to create runways, aprons and taxiways had not already been recovered, or would not be included in MVAU. Neither did it accept WIAL's proposition that expenditure over the past decade on replacement of protection works along the western perimeter, major repairs to the concrete breakwater and periodic repair of holes in the "Akom" layer should be included. In doing so, it commented that WIAL:[514]

> ... did not provide specific details as to how this expenditure is classified in existing regulatory valuations, nor did they provide evidence as to the total value of such expenditure (neither accounting cost under GAAP, nor depreciation up to the 2009 disclosure year) ...

[939] The Commission's Experts supported the Commission's approach to land conversion costs.

[940] In reviewing the Airports Reasons Paper, Professor Cave observed that:[515]

> In relation to land conversion costs, I note that the Commission makes distinctions between, and addresses in different ways conversion costs which increase and do not increase the value of land in alternative uses, and between recent and fully recovered conversion. This seems a logical approach which will preserve investment incentives in the future.

The Airports' challenges

[941] AIAL and WIAL/CIAL challenge the exclusion of past conversion costs from the initial RAB.[516]

[942] The Commission acknowledges that the following description by AIAL of the Commission's position is accurate:

> Recognition of past investments in land conversion costs is required, and the inclusion of those costs in the initial RAB is justified, where:
>
> (a) the expenditure would not be expected to affect the value of land in an alternative use; and

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514 Airports Reasons Paper at [C2.7], 2/6/000752.

515 Martin Cave *Expert Review of Reasons Papers of the New Zealand Commerce Commission relating to Electricity Distribution and Gas Pipeline Services and to Airports* (13 December 2010) at 6, 13/65/005835.

516 CIAL did not formally appeal this aspect of the Airports asset valuation IM. It does not have any conversion costs that would be affected, but it supports WIAL's appeal.

(b) the costs have not been fully recovered, through depreciation or otherwise.

[943] AIAL agrees with that approach. AIAL's position is, however, that that statement of principle should have been reflected in the Airports asset valuation IM. Rather, the Commission had (by AIAL's contention) erroneously applied that principle, as reflected in the Commission's limited exceptions to its general exclusion of past conversion costs. AIAL argues that the Commission's recognition of its error, as regards noise remediation costs, shows that the matter was better left at the level of principle.

[944] WIAL/CIAL argues here, as elsewhere, by reference to the HNET approach advocated by Mr Balchin. They present the same criticisms of the Commission's general reasons as we have analysed above. They argue, by reference to that approach, that exclusion of land conversion costs was wrong as a matter of fact and law. In support of that submission, they claim that the workable competition standard in s 52A(1) provides a clear directive that Airports should recover past land conversion costs by their inclusion in the MVAU valuation of land assets (or, alternatively, added to the overall asset base valuation as a specialised asset at current, ODRC, values).

[945] More specifically, and relying on a joint airports valuers' report,[517] WIAL/CIAL submit that:

(a) in accordance with valuation standards, MVAU should be estimated in isolation of all improvements and transformation costs (such as resource consent, levelling and holding costs) but these should be added to MVAU to reflect the market value of the land; and

(b) if such costs are excluded from the land value, they should be treated as a separate asset within the RAB.

[517] Chung, Horsley, Seagar, Stanley and Vessey *Commerce Commission Input Methodologies Emerging Views (Airport Services) Workshop Cross Submission Airport Valuation Issues* (8 March 2010), 57/522/028983.

[946] That is, the MVAU valuation should, in WIAL's case, be applied to the original hills and other land on which WIAL currently sits.

[947] WIAL/CIAL and AIAL originally proposed forms of relief reflecting their different positions that:

(a) for WIAL, all past conversion costs should be included in the RAB at ODRC; and

(b) for AIAL, only past conversions not reflected in the MVAU land values need to be included.

[948] During the hearing, WIAL aligned its position with that of AIAL, so that the joint relief they seek reflects AIAL's original position.

[949] As we understand matters, this reflects WIAL's acceptance that, in principle – and not completely consistent with the valuation advice it had originally relied on – at least some of those past conversion costs would be reflected in the MVAU value of its land.

[950] This would appear to better reflect the Commission's MVAU methodology. As set out in sch A,[518] the MVAU does include conversion costs "included in" or "necessary for" converting the original land to the relative (highest and best) alternative use.

Analysis

[951] In general terms, the Airports accept the Commission's statement of principle, but challenge its application. Moreover, they say the Commission should have only expressed the principle in the Airports asset valuation IM, rather than determining its application in the way that it did.

[952] We agree with the Commission, and Air NZ in support, that the Commission's approach provides greater certainty within the IM than that of the

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518 Decision 709 at sch A [A9], 1/1/000041.

Airports. Given, however, that there are many circumstances in which the application of the IMs involves applying principles – here by independent valuers – that would not be sufficient to uphold the Commission's approach, were we of the view that the Airports were right to criticise the way the Commission had applied it. In other words, certainty could not prevail over material, specific inaccuracy.

[953] But on the specific matters of concern to AIAL and WIAL, we are not persuaded that is the position.

[954] AIAL's principal specific issue is with recovery of the historical costs of seabed reclamation. It argues that those costs would not be recovered by the MVAU value of its land, and should be valued today on the replacement cost basis. Given that what is being valued is reclaimed land, it is difficult to see how the value of that land would not incorporate and reflect costs which had been involved in its reclamation. As the Commission put it during the Airports Inquiry:[519]

> Without the reclamations, a large part of AIAL's airfield land would not exist in its present form. As unreclaimed seabed, it would have an opportunity cost of zero. However, as reclaimed land, it has a number of potential alternative uses. The reclamation costs associated with the development of AIAL's operational airfield (both pre- and post-vesting) add to the opportunity cost value of the land. As such, the Commission considers that the reclamation costs are captured in its estimate of the opportunity cost of the land. No additional value needs to be allowed for reclamation costs.

[955] In the case of WIAL, we were not persuaded – on the basis of the material before us – that the Commission had wrongly judged the extent to which it was appropriate to include past conversion costs in addition to WIAL's MVAU land values. Compensating WIAL for the hypothetical current cost of undertaking past conversion work that it will not in fact incur, would, by our assessment risk double-counting; first in terms of the hypothetical cost and secondly in terms of the increased MVAU value of the land. WIAL would in effect be provided with a windfall benefit to the detriment of its customers. Moreover, like the Commission, we were not persuaded as regards the inclusion of more recent expenditure.

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[519] Airports Inquiry Report at [8.124], 44/367/021928.

[956] We are, therefore, not persuaded that providing for the recovery of past conversion costs in the Airports asset valuation IM in the manner sought by the Airports would result in a materially better IM.

5.8 AIR NZ'S APPEAL

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Introduction

[957] Air NZ argues that revaluation gains that have been recognised by the Airports since the time of the 2002 Airports Inquiry should only be included in initial RAB values to the extent they can be demonstrated as having been treated as income for pricing purposes.[520] It submits that to include post-2002 revaluation gains that have not been so treated would be to embed into initial RAB values the ability for the Airports to continue to make excessive profits after 2010 which Part 4 disclosure would neither reveal nor discipline, contrary to the purpose of Airports ID regulation.

[958] The issue which Air NZ's proposed IM would address is reflected in the following paragraphs of its submission:

> Of most relevance to the Court is the existence within the AAA of an unprecedented legislative right ... for each airport to "set such charges as it from time to time thinks fit". This statutory right existed unconstrained for the 20 or so years prior to the regulation which is the subject of this appeal, and remains unconstrained under [the] Part 4 information disclosure regime.
>
> This unique combination of the right to set charges as airports saw fit, and the absence of regulatory control under the Act, had many and varied consequences. At issue in this appeal, however, is that the airports were unaccountable in the valuation of their monopoly assets. Hundreds of millions of dollars of paper "windfall gain" revaluations were made and

[520] Air NZ Appeal 802 at [28]-[29].

higher airport landing charges imposed on the basis of these artificially inflated asset valuations.

[959] Air NZ says that the approach it proposes as materially better is consistent with:

(a) the approach to revaluation gains the Commission articulated in the October 2007 Draft Authorisation, in essence that revaluation gains can result in windfall profits in future periods;[521] and

(b) the approach the Commission proposed to initial RAB values of specialised assets in the June 2009 IMs Discussion Paper, namely 2002 values rolled forward.

[960] Thus, Air NZ says that a materially better Airports asset valuation IM would adopt the Commission's approach to determining which of the Airports' land and non-land assets would be included in their initial RABs and would establish initial RAB values by: [522]

(a) valuing such of those assets as were valued by the Airports for the purposes of the 2002 Airports Inquiry (ie assets associated with identified aircraft activities), at those 2002 values;

(b) valuing such of those assets as then existed but were not so valued (ie assets associated with aircraft and freight activities and specified passenger terminal activities), at the GAAP values disclosed in the Airports' 2002 AAA disclosures;

(c) updating those 2002 values to 30 June 2010, consistently with the roll-forward mechanism in the Airports asset valuation IM, for

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[521] The October 2007 Draft Authorisation at [264], 48/401/024371.

[522] This description of Air NZ's Airports asset valuation IM proposal is based on Air NZ's original notice of appeal as supplemented by Mr Farmer in submissions, notably in reply when he handed up an outline of the approach Air NZ was by then advocating. Mr Farmer acknowledged that the material in that outline had not been put before the Commission during the IM consultation process.

additions and depreciation using information from the Airports' actual AAA disclosures; and

(d) adding 'treated revaluations' (ie those revaluations which can be established, from the Airports' periodic consultation materials provided to the airlines, as having been treated as income for pricing purposes).

[961] Air NZ submits that this valuation exercise can be carried out practicably and that this is demonstrated by:

(a) submissions from BARNZ on behalf of the Airlines in August 2010;[523] and

(b) observations by the Commission in the June 2009 IMs Discussion Paper which read as follows:

(i) for land assets: [524]

> Where an earlier valuation is adopted ... it is proposed that a 2002 valuation would be a suitable valuation date for assets in existence at that time. This value would be updated to 2010 to establish the initial value of land contained within the RAB, by taking account of subsequent additions and disposals during that period on an un-indexed basis, but including revaluations from 2002 onwards (to the extent to which [they] have been included as 'income' for price-setting purposes) to be included in the updated initial RAB value at 2010.

(ii) for specialised assets:[525]

> In the absence of specific details of the extent to which asset revaluations have been treated as 'income' for pricing purposes and the basis on which the forecast or actual revaluation amounts could be independently verified, the Commission's preference is to require regulated suppliers to adopt an earlier ODRC valuation for specialised assets, with the proviso that subsequent revaluations will be included as part of the methodology for updating the value of the RAB

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523 BARNZ *Airport Monitoring Spreadsheet 2009* (3 August 2010) at 4, 34/248/017166; BARNZ *Cross Submission on Commerce Commission Input Methodologies (Airport Services) Draft Determination and Draft Reasons Paper* (3 August 2010), 34/249/017196.

524 June 2009 IMs Discussion Paper at [10.79], 6/14/002370.

525 June 2009 IMs Discussion Paper at [10.89]-[10.90], 6/4/002373.

> to 2010 to the extent that these revaluations can be demonstrated to have been taken into account in setting prices ... In the first instance, the Commission considers it reasonable to request information to support the treatment of revaluation gains from regulated suppliers due to the information asymmetry that currently exists between some interested persons and the Commission.
>
> ... All of the airports undertook ODRC/DRC revaluations of their assets in 2002, which, in the Commission's view, makes 2002 a possible earlier 'base valuation' date to adopt for present purposes if revaluation gains from that point are considered under the mechanism discussed [above].

[962] Air NZ's concern with the effect of the Airports' right to set prices under the AAA is best understood in the context of how Air NZ claims the Airports have factored forecast revaluations into their pricing decisions when setting their charges at the commencement and conclusion of a price setting period.

[963] At the commencement of the period, the Airports make a forecast of any revaluations along with other pricing inputs, such as opex and demand. Forecast revaluations have effectively been treated as income and, absent a "wash-up" agreement between the Airports and their customers about sharing the risk of the forecasts:

(a) if the actual revaluation exceeds the forecast, the Airports benefit by treating the excess as a capital gain, thus increasing their capital base for the next price setting period; and

(b) if the forecast revaluation exceeds the actual, the customers benefit from the higher forecast having been treated as income during the price setting period.

[964] It is Air NZ's submission that the Airports' treatment of revaluation gains leads to excessive profits, contrary to s 52A(1)(d) and means that there is no sharing of gains with consumers whether in the form of lower prices or higher quality products, contrary to s 52A(1)(c).

[965] Air NZ claims that:

(a) the overall material effect is, in round figures, an additional $[confidential] in land revaluations and up to an additional $[confidential] in non-land revaluations that the Airports had not treated as income for price-setting purposes between 2002 and 2009; and

(b) the revaluations that the Airports had, Air NZ claimed, not treated as income for price-setting purposes between 2002 and 2009 are, compared to the Airports' 2009 regulatory book value as recorded in the December 2009 Airports Emerging Views Paper:

(i) [confidential] for AIAL;

(ii) [confidential] for WIAL; and

(iii) [confidential] for CIAL.

[966] Air NZ argues that the Supreme Court decision in *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* supports its approach to revaluation gains.[526]

The Commission's response

[967] The Commission's view of how the Airports have factored forecast revaluations into their pricing decisions was articulated by it at the September 2009 Airports Conference as follows:[527]

> … in principle … if the airports had set the prices ex-ante on a reasonable basis and they were reasonable forecasts at the time, and there was an understanding that they bear the risks of the upside and the downside, then it would be reasonable for the ex-post returns to be retained by the airports.

[968] The Commission's main response to Air NZ's appeal is a simple one. As Mr Brown put it:

> The Commission's stance is that once the initial RAB is established using existing regulatory asset values then the line in the sand, if I can mix my

[526] *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153.
[527] *Input Methodologies Conference Airport Services* (15 September 2009) at 93, 54/464/027432.

> metaphors, effectively wipes the slate clean of any excessive returns earned prior to the initial date. They may be there, but henceforth they are irrelevant. The information disclosure regime [for Airports] will not provide any information about excessive profits [that] have been earned prior to 2009, and nor is it intended to.

[969] Mr Brown acknowledged, referring to the Productivity Commission again, the rough justice of that approach. But that was a small price to pay in comparison with the effect of Air NZ's approach, which would involve a write-down of regulatory values that would have a chilling effect on investment in the future.

[970] The Commission bases its reasoning on the fact that significant downwards adjustments to Airports' regulatory (ie disclosed) asset values would be contrary to s 52A(1)(a). At the same time – again – there was no suggestion by the Airports that those values, going forward, would not allow at least normal profits. They would also provide a basis in the future to reveal excessive profits – at least relative to those initial RAB values. Hence they would also meet the s 52A(1)(d) purpose.

The Airports' response

[971] The Airports support the Commission's reasoning.

[972] In addition, they emphasise that Air NZ does not correctly characterise the relationship between the Airports and airlines under AAA consultation in the past. There had been considerable compromise, agreement and – where disagreement – a significant arbitration.[528] The outcome of that arbitration had not supported the approach Air NZ now advocates. Air NZ was, therefore, considerably over-simplifying – if not misrepresenting – the interaction between the Airports and airlines in the past, and the outcome of that interaction – particularly in terms of the treatment of revaluation gains in pricing. Revaluation gains had, to an agreed extent, been treated as income for pricing purposes, and the risk of the accuracy of those forecast estimates allocated after consultation. Air NZ's proposed asset valuation IM would essentially re-open those past arrangements: that is neither justified nor practicable.

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528 *Wellington Airport Ltd v Air NZ Ltd, Qantas Airways Ltd, Air Pacific Ltd, Polynesian Airlines (Holdings) Limited and Tasman Pacific Ltd (in Receivership and Liquidation) (Award)* Hon Sir Ian Barker QC, 23 September 2002, 94/369/022325.

Analysis

[973] The issue in this appeal is whether the IM proposed by Air NZ is materially better than the Commission's Airports asset valuation IM. We note that the 2002 valuations advocated by Air NZ are valuations which were considered appropriate by the Commission as a result of its Airports Inquiry. The 2002 valuations have never been used by the Airports. Unlike the disclosure regime applicable to the EDBs, the AAA disclosure regime did not require the Airports to disclose profitability indicators. Accordingly, it is not possible to ascertain from publicly available information the extent to which revaluation gains since 2002 have been "treated as income" for price setting purposes.

[974] Thus understood, the focus is on the future under the parallel AAA and Part 4 regulatory regimes, not what may or may not have occurred in the past as between the Airports and their customers under the prior AAA regime. In this context, the following observation by the Commission's expert, Dr Small, has much to commend it:[529]

> … airports and airlines have been actively engaged in discussions over valuation and pricing issues for many years. The real bargaining power in these discussions has belonged mainly to the airports, but there is nevertheless a long-term business relationship between airlines and airports.
>
> … the IM process can perhaps best be characterised as changing the context for the future: a new law is altering some of the background rules for future consultations. If these changes were negotiated commercially rather than being imposed by law, I think it likely that negotiators would seek to draw a line under past disputes and focus on shaping the future environment in a fair and balanced way that is acceptable to all parties.

[975] It is generally accepted that if we were to make the order sought by Air NZ and strip out of the Airports' initial RABs past revaluations that Air NZ claims were not taken to income, there would be a material downward change to each of the Airports' initial RABs compared to the RAB as valued under the Commission's asset valuation IM. The confidential figures provided by Air NZ confirm the material downward change.

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529 Martin Small *Expert Review of Input Methodology Reasons Papers* (14 December 2010) at [35]-[36], 13/66/005846-7.

[976] Our analysis has two parts:

(a) first, we consider the Commission's decision in light of the s 52A(1) purpose and outcomes; and

(b) second, we consider problems with relief sought by Air NZ.

[977] We address each in turn. We then consider whether the *Vodafone* case supports Air NZ's argument.

Drawing a line

[978] In many ways the Air NZ appeal can be seen as a mirror image of the appeals of the Airports. They seek to have the RAB based on new 2010 valuations. Air NZ seeks to go back to a 2002 valuation. The Commission's decision calls, in the case of specialised assets, for use of valuations derived from 2009 disclosures. For land, the MVAU approach is to be applied. The Airports seek a higher RAB with more revaluation gains built in. Air NZ seeks a lower RAB with some past revaluation gains stripped out.

[979] To that extent then, the issues in this appeal are virtually the same as in our earlier consideration of the Airports appeals (and those of Powerco and Vector). Our reasoning in those appeals similarly applies here. Nevertheless, because the historical setting has been such a large part of the way in which these appeals were argued by all parties – and looms so large in Air NZ's approach in particular – we take up the story after our earlier discussion of the history in Part 5.2.

[980] In the June 2009 IMs Discussion Paper, the Commission took the view that revaluation gains or losses should only be included in the initial RAB if they had been treated as income for price-setting purposes. The Commission considered recent valuations and recognised that the adoption of an existing valuation may:[530]

(a) result in a windfall gain for a supplier where, absent appropriate adjustments, past upward revaluations have flowed through to prices;

[530] June 2009 IMs Discussion Paper at [6.72]-[6.78], 6/14/002221-4.

(b) not be consistent with the s 52A(1)(b) or (d) purposes (promoting efficiency and limiting excessive profits, respectively); and

(c) be contentious, as establishing the appropriate date to use as a basis for the initial RAB value will always be a contentious matter.

[981] The Commission referred in this regard to the Australian Productivity Commission's 2006 review of airports services which addressed the revaluation issue by drawing a "line in the sand" such that any revaluations that had been undertaken past a certain earlier date would be netted out of the asset base used to monitor rates of return.[531] The basis for the Productivity Commission's approach was that while it would likely involve an element of "rough justice" it "… represents a reasonable compromise between the competing interests".

[982] The following observations made by the Productivity Commission when reaching its decision also resonate in the New Zealand context:

(a) the Government specified when introducing a light handed approach to Airport regulation in Australia, that one of the overarching principles was that the airports and airlines should operate primarily under commercially negotiated agreements (a principle also underlying the parallel AAA regime); and

(b) if the matter of the treatment of revaluations is not removed from the bargaining table, it will continue to frustrate the further development of commercial relationships and thereby the effectiveness of the light handed approach.

[983] Following its consideration of submissions and cross-submissions on the June 2009 IMs Discussion Paper and the September 2009 Airports Conference, the Commission adopted a view similar to the Productivity Commission's and discarded its view that revaluations (gains or losses) should only be included in the initial RAB if they had been treated as income for price setting purposes. In the December 2009

531 Australian Productivity Commission *Review of Price Regulation of Airports Services* (PCIR 40, 14 December 2006) at XXIII, 47/395/023925.

Airports Emerging Views Paper prepared for the Airports February 2010 workshop the Commission indicated a preference for an initial RAB determined by reference to the 2009 valuations and addressed revaluations only in relation to rolling forward the RAB.[532] This was confirmed in the Commission's May 2010 Airports Draft Reasons Paper.[533] In brief, the Commission's preference was founded on its view that s 52A(1)(a) and (d) are the key regulatory objectives relevant to setting the Airports asset valuation IM.

[984] Like other parties in other contexts in these appeals, Air NZ was critical of the change in the Commission's approach to the treatment of revaluation gains. The Commission's change of view is not our focus in this appeal. As observed, our focus is on:

(a) the Commission's final reasons; and

(b) whether the order sought by Air NZ will result in a materially better IM.

[985] The same applies to Air NZ's claim that:

(a) there was an inconsistency with the Commission's practice in other sectors of including revaluations in the RAB only if they had been treated as income, as in the EDBs regime and the 2008 Gas Authorisation; and

(b) including revaluation gains not treated as income in the initial RAB also creates an internal inconsistency within the Airports IM Determination in relation to the roll-forward of the RAB.

[986] As to s 52A(1)(a), the Commission considered that the Airports would be less likely to have appropriate incentives to invest in the future if they consider that existing regulatory arrangements have no standing and are subject to arbitrary change at any time. Arbitrary write-downs of past regulatory values can, it said, lead

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532 December 2009 Airports Emerging Views Paper at [68] and 35, 7/20/002714 and 002721.
533 May 2010 Airports Draft Reasons Paper at Table X2, 8/31/003186.

to perceptions of increased risk associated with future regulatory values, which would be expected to reduce incentives to invest in the future. This, it said, cautions against material downwards adjustments to regulatory values unless there is clear reason to do so.

[987] The Commission had strong support from its Experts in taking this view. Nevertheless, even in the Airport Reasons Paper, the Commission considered that the airlines' submissions had "clearly some merit" in some respects.

[988] As can be seen from our discussion of the argument for new and current valuations in Parts 5.3 and 5.4 of this judgment, we are somewhat sceptical. It might be noted that there is no reason why write-downs should be 'arbitrary". Nor do we consider that they must be opportunistic, as the Commission submits. There is substance in Air NZ's submissions that:

(a) investment incentives are provided through the roll-forward of the RAB rather than in the establishment of the initial RAB; and

(b) in any case, the necessary level of certainty contemplated by the Part 4 regime will be established once the IM for the valuation of the initial RAB is finalised.

[989] We repeat our view that the value of the initial RAB has minimal impact on incentives for a supplier to invest in new or replacement assets. Furthermore, we record that in taking that view we were agreeing with the Commission's conclusions. It is puzzling that the Commission should take an opposite view in arguing against a lower RAB.

[990] Beyond that, we need repeat only that we consider that the Commission was correct to draw a line, and that there are no faults with where or how it drew the line such as to render its decision inconsistent with the s 52A(1) outcomes. Moreover, Air NZ has failed to make a case that its proposal would lead to a materially better IM.

[991] In our view, and as Mr Brown submitted, Part 4 ID regulation is simply not designed to address what Air NZ perceives as the gravamen of its appeal; namely, the Airports' over-recovery prior to the commencement of Part 4 by means of airport landing charges imposed on the basis of artificially inflated asset valuations.

Problems with relief

[992] Notwithstanding Mr Farmer's submission in reply, in relation to sub-clause (1)(d) of Air NZ's alternative IM, it is unclear how the Commission would adjust the asset value arrived at pursuant to its clause (1). It is not, as submitted by Mr Farmer, simply a matter of taking the 2009 valuations and stripping out the revaluations that have not been taken to income. There would be a need to:

(a) determine whether the valuation was arrived at appropriately; and

(b) appropriately reflect the actual allocation of risk between an Airport and its customers from time to time.

[993] That would, in our view, require a series of judgements to be made by the Commission in the light of submissions put to it – in effect a consultation process.

[994] The Commission argues that it would be "… to a very significant extent impractical …" and "…a very involved exercise" to, in respect of each Airport:

(a) first, unravel which revaluations had been treated as income and which had not;

(b) secondly, determine whether the treatment was correct taking into account the occasions when it may have been appropriate for the Airport not to treat the difference between expected and actual revaluation gains as income; and

(c) thirdly, determine the actual allocation of risk between each Airport and its customers from time to time, and then carry forward the 2002 figures into a meaningful initial RAB.

[995] There may be some hyperbole in the Commission's oral submissions, given the apparent equanimity with which it viewed the prospect of that exercise in the June 2009 IMs Discussion Paper. On the other hand, the Commission had noted in its December 2009 Emerging Views Paper that submissions had raised such issues. But it is clear from the asymmetry in the Commission's and Airports' respective knowledge and understanding of the industry and its history, together with the not uncommon negative regulator/regulated relationship, that it would, no doubt, be a time-consuming and costly exercise.

[996] Referring to our discussion of problems with relief in Part 2, we consider that we could not grant the relief sought by Air NZ because it would not constitute a determination of the appeal in terms of s 52Z.

Vodafone v Telecom

[997] We do not accept Air NZ's submission that *Vodafone New Zealand Ltd v Telecom New Zealand Ltd*[534] is authority for its proposition that application of a workably competitive market standard does not allow a windfall for a firm in terms of an enhanced return on and of capital employed. In advancing the proposition, particular reliance was placed on the following passage from the judgment of Blanchard J (on behalf of McGrath and Gault JJ):[535]

> The Commission has committed a second error of law of the *Edwards v Bairstow* type in the determinations to which the appeals relate by declining to change its model to include mobile technology because of its belief that it would then need to allow compensation to Telecom for the effect of the change, namely the stranding of some legacy assets. The Commission declined to introduce the mobile technology because Telecom would not then receive the return on and of its legacy assets which it could expect to get under the Commission's model. But, as those assets had been overvalued, Telecom had no case for compensation. What the change would deprive it of, for the future, was a continuation of a windfall benefit (from the overvaluation) which it should never have had in the first place. The perceived need for any compensation, which was thought by the Commission to preclude the introduction of mobile technology into its model, thus arose as a consequence of the overvaluation of legacy assets.

534 *Vodafone New Zealand v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153.
535 At [75] (footnotes omitted).

[998] The *Vodafone* case focused on the meaning of "net cost" as defined in the Telecommunications Act 2001 in the context of a challenge by Vodafone to the Commission's determination of the amount Telecom could recover from other service providers for providing home line services to commercially non-viable customers. The formula for this recovery is based on the net cost to "an efficient service provider", rather than Telecom's actual costs. In that context, Blanchard J distinguished the issue before him "…the calculation of an amount of net cost …" from the issue in *Unison Networks Ltd v Commerce Commission*[536] describing it as involving "…the use of a broadly expressed power designed to achieve economic objectives …".[537]

[999] That distinction makes it clear that the Vodafone case is not an authority at large for the stripping out of windfall gains wherever they may be found as the submission advanced by Air NZ would have it. The *Vodafone* case has, as Blanchard J observed, "…no value as a precedent because of the unique nature of the Part 3 regime …".[538]

Outcome

[1000] We are not satisfied that Air NZ's proposed Airports asset valuation IM would be materially better in meeting the purpose of Part 4, the purpose of s 52R, or both.

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536 *Unison Networks Ltd v Commerce Commission* [2007] NZSC 74, [2008] 1 NZLR 42.
537 *Vodafone New Zealand v Telecom New Zealand Ltd* [2011] NZSC 138, [2012] 3 NZLR 153 at [57].
538 At [64].

APPENDIX

EDBs and GPBs – The 1994 Electricity and 1997 Gas ID Regulations

[1001] Up until 1992 the gas supply industry in New Zealand was subject to price control implemented by the Commission. The Commission periodically determined the prices that gas utilities were permitted to charge for the bundled supply of natural gas. The Commission's last price determination was in February 1992. The gas industry was deregulated by the Gas Act 1992.

[1002] Traditionally central government, through the New Zealand Electricity Department (the Department), owned and operated the infrastructure whereby electricity was generated and transmitted nationally. Local government, operating through municipal electricity departments and power boards as electricity supply authorities, owned the local distribution networks. Supply authorities purchased electricity from the Department and sold and distributed that electricity to customers connected to their local distribution networks. Effectively, the Department had a monopoly at the national level whilst each supply authority had a monopoly in its particular region. The Electricity Act 1994 deregulated the electricity market. Supply authorities were replaced by energy companies and their historic franchised areas opened to competition.

[1003] The Gas and Electricity Acts provided for what was known as "light handed regulation" of those industries. An October 1995 Ministry of Commerce note explained:[539]

> Light-handed regulation consists of three components:
>
> - use of the existing competition policy regime, i.e. the Commerce Act 1986, to deal with anti-competitive behaviour, including the possibility of court action by private parties or the Commerce Commission;
>
> - extensive information disclosure, to make transparent the performance of electricity and gas businesses with market power; this will facilitate both negotiations with these businesses and recourse to the provisions of the Commerce Act; and

[539] Ministry of Commerce *Light-Handed Regulation of New Zealand's Electricity and Gas Industries* (1 October 1995) at [2], 43/356/021399.

- the threat of further regulation, such as introduction of price control, if market dominance is abused.

[1004] Disclosure regulations were enacted in 1994, for electricity,[540] and 1997, for gas.[541] Both sets of regulations required disclosure of a wide range of information, to enable a firm to calculate its ARP by reference to a specified formula.[542] In that calculation, revaluation gains were treated as income.

[1005] From the outset, the 1994 Electricity ID Regulations mandated that an ODV methodology be used for valuing assets each year, including for calculating ARP, and required the use of an official 1994 MED Electricity ODV Handbook.[543] That 1994 handbook did not contain much on the economic underpinning of the ODV methodology (the lesser of ODRC and EV) it prescribed, but was focussed on technical, valuation issues. The handbook did explain, however, that the ODV methodology values relevant assets "at the level at which the business could be sustained in the long term, and no more", based on "deprival value rules". Moreover "as a [lines business] is a natural monopoly, its value will be a major determinant of the line charges" and that – except where some external constraint applied – "it should be able to support tariffs based on the ODRC of its assets".[544]

[1006] The ODV approach to the valuation of system fixed assets continued to be a feature of the various iterations of the 1994 Electricity ID Regulations[545] until those regulations were revoked in April 2004, following the enactment of Part 4A.

[1007] No asset valuation methodology was mandated by the 1997 Gas ID regulations.

[1008] In January 2000 MED published the 2000 MED Draft Gas ODV Handbook for consultation.[546] That handbook anticipated revised 1997 Gas ID regulations. Those regulations would have required the GPBs to complete a valuation based on

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540 1994 Electricity ID Regulations.
541 1997 Gas ID Regulations.
542 Electricity ID Regulations, sch 1, pt 2(1)(c); Gas ID Regulations, sch 1, pt 2(1)(c).
543 The 1994 MED Electricity ODV Handbook.
544 At [2.1]–[2.3].
545 The Electricity ID Regulations were amended in 1998, 1999, 2000 and 2001.
546 The 2000 MED Draft Gas ODV Handbook, 43/357/021404.

an ODV methodology as at 31 March 2001. Thereafter, the regulations would have required GPBs to complete a valuation based on an ODV methodology at least every three years or, if earlier, when there was a cumulative increase or decrease of 10% or more in the capacity of the gas pipeline system since the last ODV. The purpose of the 2000 MED Draft Gas ODV Handbook, once finalised, would have been to provide that methodology.

[1009] Work on that handbook was overtaken by the announcement in November 2000 of a review of the natural gas sector. Thus that draft was never finalised. Nevertheless, the Commission subsequently described the 2000 MED Draft Gas ODV Handbook as the "de facto" ODV methodology for the gas sector.[547] That handbook contains the following, again relatively early, description of an ODV methodology:[548]

> The aim of applying the ODV methodology is to value the assets at the level at which they can be commercially sustained in the long term, and no more. The resulting value should be equal to the loss to the owner if they were deprived of the assets and then took action to minimise their loss.
>
> The value of the assets derived in this way may differ from their current book value. Book value is typically based on expenditures made over the years and may bear little resemblance to the ODV value.

[1010] The March 2001 terms of reference for the Gas Sector Review explained the use of ODVs in the electricity and gas sectors up until that point in time:[549]

> - ODVs were chosen for use in the electricity information disclosure regulations for the following reasons:
>   - there was a lack of a good set of book values as the start-point for any form of historical cost based valuation;
>   - to facilitate cross-company comparisons;
>   - ODV mimics asset values in a perfectly contestable market; and
>   - the constraints imposed by the maximum asset values/lives, optimisation and economic valuation rules substitute for a regulator overseeing investment decisions.

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547 Energy Market Consulting Associates *Report to Commerce Commission – Gas Control Inquiry: Consistency Review of ODV Network Asset Valuations* (1 February 2004), 45/372/022449.

548 At [2.2]-[2.3], 43/357/021416.

549 MED *Terms of Reference for Review of Gas Sector NZ* (15 March 2001) at 3, 43/363/021655.

- Pipeline owners have adapted ODVs for use in the gas industry. However, since the Government has not specified an ODV methodology for gas pipelines, there is no assurance of the quality of the valuations. On 1 May 2000, Cabinet authorised drafting to begin on an amendment to the gas information disclosure regulations to incorporate a standardised ODV methodology. Work on promulgating the new regulations is in abeyance.

Alternatives

- There are alternatives to using ODV to value sunk assets. These include depreciated historical cost, indexed depreciated historical cost, depreciated replacement cost, optimised depreciated replacement cost, or the market value of the assets if line charges were held constant in real terms.

- The costs and benefits of using ODVs for utility industries has been the subject of some recent reviews.[550] The efficiency and wealth transfer effects of any changes in asset valuation methodologies should be considered.

[1011] Thus, up to that point there would appear to have been two principal reasons for using an ODV methodology:

(a) first, it facilitated cross-company comparisons in an environment where there was a lack of historical information; and

(b) it provided values which mimic asset values in perfectly contestable markets and substituted for a regulator overseeing investment decisions, thus providing an appropriate base for the calculation of ROIs designed to assist the discovery of excessive pricing.

[1012] Importantly, that methodology was used in an environment where any revaluation gains included in disclosed values were required to be treated as income for the purpose of the calculation of ROIs. Valuations based on the ODV methodology were not, however, required to be used for tariff setting.

EDBs – The Commerce Amendment Act (No 2) 2001 – Part 4A

[1013] Following the split of electricity line and energy businesses affected by the Electricity Industry Reform Act 1998, the Government commissioned an inquiry into

[550] Simon Terry Associates Ltd *Lining up the Charges* (July 2000); NZIER *The Origins of ODV – Report to Air NZ* (August 2000).

the electricity industry. The result, the June 2000 Caygill Report,[551] recommended that the Commerce Act should be amended to provide a strengthened ID regime and a new, targeted, price and quality control regime. As a result, Part 4A was enacted in 2001 and came into force on 26 May 2001.

[1014] Subpart 1 of the new Part 4A empowered the Commission to:[552]

(a) set ID requirements;

(b) set thresholds for the declaration of control in relation to EDBs (thresholds were a screening mechanism to identify a supplier whose performance may warrant further investigation by the Commission);[553]

(c) investigate breaches of the thresholds to determine whether to declare price control (post-breach inquiry);[554] and

(d) if necessary, impose price control.

[1015] Asset valuation issues were of relevance to each of those Commission roles. Reflecting that, and further that this was the first time the Commission had been charged with specific regulatory oversight of the EDBs, s 57ZD of Part 4A required the Commission to "carry out a review of valuation methodologies for lines businesses' system fixed assets as soon as practicable". That 2001 statutory direction initiated a process of review that was still in progress when the Commission began consulting on the IMs in December 2008. As much of the ground covered during that period was ploughed again in the IM decision-making process too much detail can, as we found during the hearing, confuse rather than clarify. But an analysis of that process focussing on two issues is, we think, of relevance. First, why the

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[551] MED *Inquiry into the Electricity Industry: Report to the Minister of Energy* (1 June 2000), 43/359/021470.

[552] December 2008 Provisions Paper at [104]-[107], 5/12/001840-1.

[553] Commerce Act 1986, Part 4A, subpart 3, particularly s 57T (substituted by Commerce Amendment Act 2008, s 4).

[554] Vector submitted a "key principle" of the thresholds regime was that "thresholds are not intended to be an instrument of [price] control": see, for example, Commerce Commission *Regulation of Electricity Lines Businesses: Targeted Control Regime Threshold Decisions (Regulation Period Beginning 2004)* (1 April 2004) at [106], 63/657/031493.

Commission continued for at least a large part of that period to favour regularly updated ODVs – a position it had moved away from by December 2008. Secondly, the Commission's consistent approach, throughout that period and subsequently, to treating revaluation gains as income for pricing purposes.

[1016] A lengthy (117 page) October 2002 discussion paper on asset valuation issues for the EDBs was an early major step.[555] The paper's executive summary identified the following issues of ongoing relevance (amongst many others):

(a) An appropriate asset valuation methodology should support efficient outcomes, facilitate identification of excessive profits and be cost effective.[556]

(b) Opportunity cost was not an appropriate valuation approach for the EDBs' system fixed (sunk) assets: either historic or replacement cost approaches were called for. The Commission distinguished its approach to opening asset values and to future asset values. The opening asset value chosen could have implications for embedding existing excessive profits into the future and for perceptions of regulatory risk by investors, affecting future investment.[557]

(c) Possible approaches to opening assets values included book value, audited historic cost, ODV valuations audited by the Commission in 2002 or new ODV or ODRC valuations based on a new handbook. New assets would enter the RAB at cost.[558]

(d) In terms of the impact of the excessive profits criterion on the methodology chosen, the Commission observed that it had not, to date, assessed the links between opening valuations and assessment of profits in respect of individual EDBs. It observed:[559]

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555 Commerce Commission *Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets Discussion Paper* (1 October 2002).
556 At 5.
557 At 6.
558 At 7.
559 At 11.

> Aside from the issue of opening valuation, in respect of constraining excessive profits going forward, the Commission considers that both historic cost and ODRC/ODV valuation methods could be suitable if used appropriately and consistently in valuing the future asset base. A significant issue in achieving consistency is dealing appropriately with inflation. Both historic and replacement cost approaches could deal with this issue if combined with an appropriate rate of return and/or if revaluation gains and losses are otherwise appropriately accounted for.

[1017] In discussing the ODRC/ODV approach the Commission touched briefly on underlying economic theories, anticipating subsequent debate at issue here. ODRC was claimed, the Commission noted, to have efficiency benefits, as – mimicking behaviour observed in competitive markets – it established investments a hypothetical efficient new competitor would make, thus setting maximum revenues and prices an incumbent could charge while avoiding creating incentives for inefficient by-pass. But others disputed the theoretical justification for ODRC, especially where competition was unlikely.[560]

[1018] On the revaluation issue the Commission commented:[561]

> If revaluations caused by inflation are not matched by income forgone, then a real WACC should be used (with the revaluations providing compensation for inflation). If revaluations are not treated as income (income forgone) and a nominal WACC is used to determine the return on capital, investors would earn more than their cost of capital. This discussion assumes that the inflation premium contained in the nominal WACC matches inflation in asset values. If it does not, investors may earn more or less than a normal rate of return.

[1019] Of more passing interest the paper noted:

(a) the ODV methodology was also mandated by Rating Valuations made by the Valuer-General under the Rating Valuations Act 1998; and

(b) whilst the Commission had not reached a view on the claim of excessive profits being earned,[562]

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[560] At [5.34]-[5.35]. See also PR Carpenter *Asset Valuation and the Pricing of Monopoly Infrastructure Services: A Discussion Paper* (submission to Commerce Commission's Airports Review, 2000).

[561] At [5.38].

[562] At [10.91].

> Nonetheless, one view is that the purpose of a control regime is to protect consumers from the market power that could be exercised by monopoly businesses, subject to efficiency considerations. The acceptance of this view might lead to DHC being favoured on distributional grounds.

[1020] By August 2004 the Commission had determined new ID requirements under Part 4A,[563] and prepared the 2004 Electricity ODV Handbook.[564]

[1021] All lines businesses were to prepare "opening" valuations of their system fixed assets as at 31 March 2004 using the handbook. Those values would also be a "starting point" for inquiries following a breach of thresholds. Going forward lines businesses could use either ODV or DHC methods to value system fixed assets. The Commission explained the choice of an ODV asset valuation methodology in these terms:

(a) It allowed valuations of system fixed assets to be prepared that were consistent with contestable market outcomes, thereby providing an implicit restriction on monopoly pricing as well as incentives for efficient investment.[565]

(b) It measured the economic value of system fixed assets to a lines business on the basis that the business operated in an efficient manner that was sustainable over time, where the business was not able to extract monopoly rents. To this end, the ODV method assumed a hypothetical operating environment where the relevant market was contestable and there were no material barriers to entry into that market by an alternative service provider or efficient new entrant. In such a situation the incumbent lines business's revenue could not exceed the amounts customers would need to pay an efficient new entrant employing a sustainable, cost-reflective pricing strategy.[566]

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[563] 2004 Electricity ID Requirements.
[564] 2004 Electricity ODV Handbook, 45/377/022677.
[565] Electricity Lines Business Companion Report at 6, 45/379/022806.
[566] Electricity Lines Business Companion Report at [96], 45/379/022827.

[1022] We note again the references to contestable market outcomes and to the way that the costs of the efficient new entrant effectively cap the revenue of incumbent firms and, in turn, the value of their assets.

[1023] Between August 2004 and December 2008, and as the Commission progressed the full implementation of the Part 4A regime, the Commission's approach to the use of an ODV methodology for asset valuation under Part 4A changed.

[1024] In December 2004 the Commission confirmed its approach of allowing EDBs to choose ODV or IHC valuation methodologies going forward.[567]

[1025] In October 2005,[568] consistent with industry submissions, the Commission moved away from allowing alternative asset valuation methodologies, and required system fixed assets to be valued using the ODV methodology set out in the new 2004 MED Electricity ODV Handbook. EDBs would not be allowed to choose another method. ODVs were to be updated in the year preceding a threshold reset. On the then current timetable that would be 31 March 2008, and every five years thereafter.

[1026] On the revaluation issue, the Commission noted that:[569]

> ...where ODV revaluations have lead to increases in the RAB value, then if ELBs [EDBs] have not taken these into account then they are likely to have earned what the Commission would deem to be excess returns. Prior to the threshold reset, this will emerge only where ELBs [EDBs] have breached their threshold and are subject to investigation. Otherwise these matters will not need to be reconsidered until the time that the threshold is reset and the Commission will form its views at that time.

[1027] In April 2006 the Commission confirmed its earlier decisions regarding the use, and frequency, of ODV valuations under Part 4A.[570] That document did,

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567 October 2005 EDBs RAB Decision Paper at fn 4, 46/383/023330, citing Commerce Commission *Regulation of Electricity Lines Businesses: Implementing Valuation Choice for System Fixed Assets; Draft Decisions and Discussion Paper* (24 December 2004). See also the June 2009 Discussion Paper at [11.52], 6/14/002399.

568 October 2005 EDBs RAB Decision Paper, 46/383/023319.

569 At [146], 46/383/023355.

570 Commerce Commission *Valuation of the RAB (Implementation Matters) for EDBs – Decision Paper* (13 April 2006) at [23]-[26], 47/387/023627-8.

however, note supplier concerns that specified ODV replacement costs were often below actual incremental replacement costs, and the associated disincentives.[571]

[1028] By this time the Government's review of Part 4A was underway. As part of that review, in July 2007[572] the Commission made its submissions on the MED's April 2007 DiscussionDocument.[573] The Commission commented as follows on the use of the ODV methodology under Part 4A:[574]

> The Commission is aware that many of the concerns raised by distribution businesses about investment incentives specifically relate to the implications of the current implementation of the optimised deprival (ODV) method for valuing distribution network assets. ... While the majority of distribution businesses originally supported retaining ODV – over alternatives such as indexed historic cost – further experience with ODV has drawn attention to a number of concerns with the method as currently implemented.
>
> Notably, there is some evidence that the costs of undertaking incremental investments on a day-to-day basis might exceed the assumed standard replacement costs and multipliers in the ODV Handbook (which are based on large-scale construction assumptions). ... in the lead up to the 2009 threshold reset, the Commission intends re-consulting and seeking evidence relevant to the appropriateness of ODV on an ongoing basis, in the wider context of ensuring that appropriate incentives for future efficient investment are preserved.

[1029] In September 2007 the Commission advised that it did not intend to require the EDBs to undertake the then required 31 March 2008 ODV update for ID purposes. The Commission's proposal was to postpone that update until 31 March 2009. As a consequence, at the same time, the Commission proposed that the then scheduled 2009 thresholds reset would not be based on fully updated ODVs. Rather:[575]

> It is proposed that any valuations used[576] would be based on rolling forward the 2004 ODVs through the addition of actual capital expenditure and

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571 At [177], 47/387/023658.

572 Commerce Commission *Review of Regulatory Provisions under the Commerce Act 1986: Submission on MED's Discussion Document* (6 July 2007).

573 Ministry of Economic Development *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document* (1 April 2007), 63/622/031613.

574 At [232]-[233].

575 Commerce Commission *Update on the Review of the Information Disclosure Regime and Proposed Change to ODV Disclosure Date* (27 September 2007) at [12], 48/400/024192.

576 We infer the reference to "any valuations used" reflects the possibility that, as had previously been the case, the 2009 threshold reset could have been undertaken on the basis of prices, rather than asset values. That is, in fact, what did happen. See "Commerce Act (Electricity Distribution Thresholds) Amendment Notice 2009" (26 March 2009) 40 *New Zealand Gazette*

> indexed based on the movements in the consumer price index. How these valuations would be used in resetting the thresholds would also be considered as part of the threshold reset process.

[1030] The Commission consulted on this proposal, and related issues throughout the rest of 2007 and into 2008. The EDBs-GPBs Reasons Paper contains a detailed account of that process.[577] As there reflected, the matter is not without controversy. Some put the Commission's change of approach down to its concern at the size of revaluation gains being revealed around that time in the Gas Authorisation process. At the same time, there clearly was industry concern with the prospect of periodic ODV revaluations. Some indication of the issues involved are reflected in a December 2007 companion paper to an exposure draft on revised Part 4A ID requirements:[578]

> For instance, the average change in ODV standard replacement costs (after adjustment for various multipliers reflecting local environmental conditions and so on) might be higher than, or lower than, cumulative inflation from 2004-2008. If the change in replacement costs were greater than inflation this would lead to a revaluation gain, which ought to be treated as income. Likewise, if the change were less than inflation then this would lead to a devaluation, which ought to be treated as an expense. Given the inevitability that such adjustments would be necessary, the Commission set out in the Draft Valuation Roll-Forward Paper its proposals as to how the rolled forward valuations would be reconciled with ODV valuations in those years that a full revaluation would be required.

[1031] By December 2008 the Commission had decided not to require periodic ODV revaluations under Part 4A. At the same time, the Commission indicated it was open to that possibility under the new Part 4.[579]

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577 EDBs-GPBs Reasons Paper at [F4.21]-[F4.29], 3/7/001343-7.

578 Commerce Commission *Review of the Information Disclosure Regime Companion Paper to the Exposure Draft of the Revised Information Disclosure Requirements* (20 December 2007) at [326].

579 EDBs-GPBs Reasons Paper at [F4.29], 3/7/001347, citing Commerce Commission *Update Notice, Regulation of Electricity Lines Businesses, Information Disclosure Requirements, Update on Amendments to the Requirements* (19 December 2008).

GPBs – the Gas Control Inquiry and the Gas Control Authorisation

The 2004 Gas Control Inquiry

[1032] In April 2003 the Government formally requested the Commission to report on whether goods and services supplied in markets related to gas transmission and gas distribution systems should be controlled.[580] The Gas Control Inquiry followed.

[1033] To determine whether control should be recommended, the Commission was required to investigate the efficiency, or otherwise, of the prices charged for gas transmission and distribution services. An assessment of whether normal returns were, or were not, being earned over time was therefore necessary. Accordingly, the issues of asset valuation methodologies and the treatment of revaluation gains received considerable attention during the Gas Control Inquiry. Much of the debate between the Commission and the industry, and in particular Powerco and Vector, during that inquiry and the subsequent authorisation process foreshadowed the substantive issues raised by these appeals.

[1034] In its November 2004 final inquiry report, the Commission, as it had done when considering asset valuation issues in the electricity sector, explained why a replacement, not an opportunity, cost approach was appropriate. Valuing sunk assets at their very low, or even scrap, values would deter future investment: historic and replacement cost values were the theoretical alternatives. Relevant information to determine original historic cost valuations was in short supply. Basing historic cost on transaction values risked capitalising expectations of monopoly earnings. A replacement cost approach (the lesser of ODRC or EV):[581]

> ...reflects the value of an asset to consumers hypothetically, if they were faced with deprival, and assuming they had the option of constructing or acquiring another asset of equivalent service potential. Alternatively, it could be considered the 'shadow price' a cost-minimising asset manager would give to an existing asset, when considering whether to replace or refurbish it. It also reflects the price that a hypothetical new entrant would pay for assets to enter the market and satisfy existing demand.

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[580] This request was made by letter from the Minister of Energy on 30 April 2003 and required a response from the Commission by 1 November 2004.

[581] Commerce Commission *Gas Control Inquiry Final Report* (29 November 2004) at [8.18], 46/380/023026.

[1035] The Commission summarised matters in the following way:[582]

(a) Normal returns could be assessed using either an historic cost or replacement cost asset valuation methodology as long as the relevant methodology is applied consistently using an NPV=0 principle.

(b) During the Gas Control Inquiry the Commission had relied on the ODV-based methodology, largely because of the greater availability of more robust and comparable data for this methodology compared with the historic cost approach.

(c) The major weakness of using ODV was the possibility of obscuring excessive returns that might have arisen for those businesses that switched from historic cost to ODV valuation prior to the period of analysis, and did not adjust prices accordingly.

[1036] In the course of its analysis the Commission:

(a) acknowledged that the HNET approach provided useful insights into the analysis and supported to some extent the use of the ODRC/ODV approach;

(b) recorded its concern at the possibility businesses had incorporated revaluation gains into asset values, without treating those gains as income for pricing purposes; and

(c) noted support for the use of ODRC/ODV was not unanimous, Powerco for example argued that acquisition values should be used.

[1037] Based on its assessment of returns, and taking account of the cost of controls, the Commission recommended that:

[582] At [8.78]-[8.80], 46/380/023036.

(a) the GPBs of Nova Gas, as well as a number of small pipeline systems in Taranaki, could not be controlled because the requirements of s 52[583] were not met;

(b) the GPBs of NGC Transmission, NGC Distribution, Wanganui Gas and MDL should not be controlled (though the requirements of s 52 were met); and

(c) the GPBs of Powerco and Vector (Auckland) should be controlled because Powerco and Vector had been earning significant excess profits, and the net benefits to acquirers of declaring control of Powerco's and Vector's gas pipeline services would be substantial.

[1038] During the Gas Control Inquiry the Commission generally accepted the firms' own ODV valuations, either as published for disclosure purposes or as updated during the Gas Control Inquiry.

[1039] The Government accepted the Commission's recommendations and, as noted, imposed control as of 25 August 2005.

[1040] After the Gas Control Inquiry was completed Vector acquired the NGC network transmission and distribution systems. Thus it was only Vector's Auckland pipeline business that was subject to control when the new Part 4 came into force on 14 October 2008.

2005 – 2008: The Gas Authorisation

[1041] Once goods and services are controlled, a firm requires an authorisation to be able lawfully to supply those goods and services. Therefore, on 25 August 2005 the Commission made the Provisional Authorisation. The Provisional Authorisation imposed immediate price reductions of 9% for Powerco and 8.5% for Vector, and

583 Goods or services could be controlled under s 52 if:
(a) competition is limited or likely to be lessened in a relevant market; and
(b) control is necessary or desirable in the interests of persons who acquire or supply the goods or services in the affected market or markets.

subsequently held prices constant in real terms. Being set by reference to previous prices, the Provisional Authorisation did not directly raise asset valuation issues.[584]

[1042] Those issues loomed large, however, as the Commission moved towards the Gas Authorisation itself, a process that was only completed on 30 October 2008, shortly after the enactment of Part 4.

[1043] An early step in the process that led to the making of the Gas Authorisation in October 2008 was the publication, in January 2006, of a discussion paper on asset valuation issues.[585] The Commission confirmed it would continue to use an ODV methodology for the purpose of the Gas Authorisation for the same reasons as it had done so during the Gas Control Inquiry. In doing so, it commented – in terms which reflect Powerco's position then and now and which provide the Commission's clearest adoption of the HNET approach:[586]

> Determining the ODV involves aggregating the component asset values of the network, using the lesser of ODRC or EV for each asset. The ODV methodology is designed to produce valuations for network assets consistent with contestable market outcomes, thereby providing an implicit restriction on monopoly pricing of services as well as incentives for efficient investment. Therefore the ODV method measures the economic value of system fixed assets to a business on the basis that the business operates in an efficient manner that is sustainable over time and is not able to extract monopoly rents.
>
> To this end, the ODV method assumes a hypothetical operating environment where the relevant market is contestable and there are no material barriers to entry into that market by an alternative service provider or efficient new entrant. In such a situation the incumbent business's revenue could not exceed the amounts customers would need to pay an efficient new entrant employing a sustainable, cost reflective pricing strategy.

[1044] On 3 October 2006, the Commission published the decisions it had reached and the valuation methodology it had determined following consultation.[587] The Commission confirmed its choice of the ODV methodology. The Commission said

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584 Decision 555, 46/381/023220.

585 Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Regulatory Asset Base – Methodology Discussion Paper* (30 January 2006), 46/384/023375.

586 At [102]-[103], 46/384/023397.

587 2005 Gas Authorisation ODV Guidelines, 47/393/023815; Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base – Valuation Methodology* (3 October 2006), 47/394/023866..

the methodology was generally "in its final form and reflects final decisions by the Commission",[588] although decisions on unit replacement costs and construction condition multipliers were yet to be finalised. On the same day, and by reference to that valuation methodology, the Commission required Powerco and Vector to commence valuation work and to prepare ODV valuations for control purposes as at 30 June 2005.

[1045] The papers published in October 2006 are relatively light on the economic theories underpinning the ODRC/ODV approach. Having repeated its analysis from the Gas Control Inquiry report, the Commission saw no reason to change its approach.[589] Provided revaluations were treated appropriately, the Commission took no issue with rolling forward the RAB using periodic revaluations.[590]

[1046] In February 2007 the Commission made final decisions on replacement costs and allowable multiplier ranges.[591] Although concerned directly only with those issues, the Commission took the opportunity to restate its approach to initial asset valuation issues more generally in that decisions paper.[592] Replacement costs for determining opening RAB values would have an impact on incentives to invest. The use of ODV to determine opening values would result in values consistent with NPV=0 and the FCM principle. It would allow suppliers to recover the value of their sunk investments and give them a commercially realistic return "consistent with both the statutory framework and the GPS". The form of price control subsequently to be decided on (the Commission not having made that decision or a decision as to how the opening valuations would be rolled forward) did not impact on determining the replacement cost of the pipelines as at 30 June 2005. The need to have an efficient opening value was independent of the form of control to be imposed.

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588 2005 Gas Authorisation ODV Guidelines at [317], 47/393/023861.
589 At [70]-[71], 47/389/023829.
590 At [282], 47/389/023856.
591 Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base – Valuation Methodology* (15 February 2007), 47/396/024113; Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base: Replacement Costs and Allowable Multipliers – Decisions Paper* (15 February 2007), 63/661/031556.
592 Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Decisions Paper* (15 February 2007) at [82]-[86], 63/661/031572-3.

[1047] In all of this, the Commission did not refer to the issue of how revaluation gains should be dealt with, even when that question seemed to be on point. At one juncture the Commission commented:[593]

> The Commission considers that the ODV approach provides a GPB with an uplift in value relative to a depreciated historic cost approach because of the updating of values to efficient replacement costs current at the valuation date. To ensure that those replacement costs values are efficient, the Commission considers that it is important that independent data is utilised.

[1048] By 11 April 2007 Powerco and Vector had prepared their 30 June 2005 ODVs as required by the Commission. Powerco calculated an ODV of its system fixed assets of $377,349,127 and of its total network of $390,352,585. For Vector the equivalent values were $397,960,322 and $407,524,642 respectively. The Commission commissioned PBA to review those valuations, to report on the extent to which they were consistent with the valuation methodology developed by the Commission and to assess the magnitude of any associated revaluation gains. PBA provided those reports on 23 July 2007. The following comment, found in each of the valuation reports, provides helpful background:[594]

> The increase in the value of the network between this date [ie for Vector, 31 March 2003 ODV, for Powerco, 30 June 2002] and the latest valuation (30 June 2005) is well in excess of any capital expenditure on the network over the interim period and therefore represents a substantial revaluation gain. Under a control scenario where the price setting for gas distribution services is directly influenced by the value of the opening regulatory asset base of the gas distribution network, such a gain has a significant impact. The Commission is therefore considering how to deal with this revaluation gain.
>
> PBA was requested to assist the Commission with the estimation of the extent of the revaluation gain implicit to the recommended 30 June 2005 ODV value of Vector's gas distribution network.

[1049] PBA's overall conclusion on each of Powerco and Vector's valuations was identical:[595]

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[593] At [98], 63/661/031575.

[594] PBA *Gas Control – Estimate of the Revaluation Gain between 30 June 2003 and 30 June 2005 included in the valuation of Powerco's Gas Distribution Assets* (Commerce Commission, 23 July 2007) and PBA *Gas Control – Estimate of the Revaluation Gain between 30 June 2003 and 30 June 2005 included in the valuation of Vector's Gas Distribution Assets* (Commerce Commission, 23 July 2007) at 2.

[595] PBA *Gas Control – Review of the Valuation of the Opening RAB of Vector* (Commerce Commission, 23 July 2007) at 26, 47/399/024190, PBA *Gas Control – Review of the Valuation of the Opening Regulatory Asset Base of Powerco Limited* (Commerce Commission, 23 July

> Overall PB Associates considers the Valuation is comprehensive, and that it generally adheres to the principles described in the Valuation Methodology. While we did not carry out an audit or detailed review of the valuation calculations, the descriptions in the Valuation Report of the valuation methodology and the assumptions supporting this are reasonable. Furthermore, we accept that an appropriate level of quality control and verification was applied by [Powerco/Vector] and its advisers.
>
> The Valuation Report and supporting information is of a high standard and fulfils the requirements stated in Part Seven of the Valuation Methodology.

More specifically:

Vector

Valuation

(a) PBA recommended that the Commission accept Vector's June 2005 ODV valuation, adjusted by PBA for weak rock multiplier, of $305,771,459 (system fixed assets only).

Revaluation

(b) PBA took Vector's 31 March 2003 ODV of $191,413,775 and rolled that valuation forward to June 2005 (for estimated capex and depreciation but without indexation) to give a derived value of $207,111,195.

(c) PBA therefore calculated a 2003 to 2005 indicated valuation gain of $98,660,264 as at 23 July 2007.

2007) at 20.

Powerco

Valuation

(a) PBA recommended that the Commission accept Powerco's June 2005 ODV valuation, adjusted by PBA for weak rock multiplier, of $359,008,825 (system fixed assets only).

Revaluation

(b) PBA:

(i) aggregated the (depreciated to June 2002) earlier March 1999 (Wellington, Palmerston North, Horowhenua and Hawkes Bay), March 2001 (Taranaki) and June 2001 (Hutt Valley, Porirua) ODVs to produce an opening ODV value of $200,495,625 as at 30 June 2002; and

(ii) rolled that valuation forward for escalation to June 2002, and for estimated capex and depreciation to June 2005 without indexation, to give a derived valuation of $221,723,806 as at 30 June 2005.

(c) PBA calculated a 2002 – 2005 indicated revaluation gain of $137,285,019 as at 23 July 2007.

[1050] The Commission released the October 2007 Draft Authorisation on 4 October 2007.[596] When implemented, that authorisation would replace the Provisional Authorisation and set control terms for the initial control period of 25 August 2005 to 30 June 2012. A subsequent, 2012 – 2016, control period was anticipated.

[1051] The Commission proposed accepting Powerco and Vector's June 2005 ODV valuations as adjusted by PBA. At this point the issue of revaluation gains assumed prominence. In the executive summary the Commission observed that those resulting valuations were "substantially higher than a roll forward of the previous

[596] The October 2007 Draft Authorisation, 48/40/024193.

valuations, leading to a sizeable opening revaluation gain".[597] Those revaluation gains were to be treated as income consistent with the approach taken in the Gas Control Inquiry. Not to do so would allow Powerco and Vector to receive significant unwarranted windfall profits at the expense of gas consumers "inconsistent with Part 5".[598] The Commission would achieve that by amortising those gains:

(a) Vector's $98.7 million revaluation gain would be amortised over 50 years (average residual life of assets) at an annual value of $9.27 million; and

(b) Powerco's $137.28 million revaluation gain would be amortised over 44 years (average residual life of assets) at an annual value of $12.9 million.

[1052] In response, in a submission of 30 November 2007, Powerco clearly identified its concern that the Commission was reacting to ODV valuations that had generated inappropriately high RABs:[599]

> It was only after the final calculation of the opening RAB consistent with the Commission's new standardised methodology was performed by Powerco and Vector that the Commission proposed referring the opening RAB to an earlier valuation. In doing so, the Commission has risked giving the impression it is reacting to an opening RAB that is "too high" to support the price reduction implemented in the provisional authorisation.

[1053] On 14 December 2007 Powerco – in what Mr Hodder acknowledged was something of a rearguard action – proposed a number of alternative ways to calculate a 2002 ODV for Powerco, and thus to reduce the revaluation gain identified by PBA and the subject of the Commission's "amortisation" proposal. One of these comprised a valuation of its 2002 assets using the 2000 MED Draft Gas ODV Handbook.

[1054] Powerco concluded:[600]

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597 October 2007 Draft Authorisation at ii, 48/401/024200.
598 October 2007 Draft Authorisation at [E.51], 48/401/024211-2.
599 Powerco *Submission on Commerce Commission Draft Decisions Paper* (30 November 2007) at [98], 49/406/024706.
600 Powerco *Supplementary Submission* (14 December 2007) at [36], 49/407/024788.

> The Commission has accepted a valuation from Vector that involves the application of the draft 2000 Handbook in March 2003. Powerco's valuation, as set out in this section, is consistent with Vector's approach. It would be inconsistent were the Commission not to accept Powerco's valuation while accepting Vector's.

[1055] The reference is to the ODV valuation for Vector used by the Commission in the Gas Control Inquiry.

[1056] A conference on asset valuation and other issues was held in February 2008. During that conference the Commission Chair commented on Powerco's alternative 2000/2002 valuation in the following terms:[601]

> Just noting that Powerco has also recently submitted a revised ODV valuation of its assets of 2002 which Powerco says is based on the ODV methodology prevailing at that time. We'd like to know whether Vector considers that this could provide the Commission with a more consistent starting point for both Powerco and Vector.
>
> You may recall when we looked at the earlier valuations the big issue at the time was Powerco's valuation not Vector's, and Powerco seems to have provided a solution which is one of the reasons this issue is now on the table, Powerco has provided a means to address a previous concern. So we are interested in Vector's view on whether you consider the consistency issues between Powerco and Vector's valuations to be an important consideration for the Commission in setting the RAB.

[1057] Vector indicated it would consider that matter.

[1058] Later in the conference the Chair of the conference summarised the Commission's position on the "revaluation" debate as follows:[602]

(a) Regulated monopolists should be able to make a return on and of at least the historical cost of their assets in real time over the life of the assets. This was consistent with the Commission's understanding of the FCM principle. Prices based on DHC and a nominal WACC would be sufficient to meet that principle. ODV was largely derived

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601 Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Vector Ltd and Powerco Ltd – Conference on Draft Decisions* (18 February 2008) at 64, 49/409/024871-2.

602 Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Vector Ltd and Powerco Ltd – Conference on Draft Decisions* (20 February 2008) at 197-198.

from a contestable markets framework. It was not necessarily consistent with New Zealand's workable competition framework.

(b) Workable competition involved a notion of entry whereby hypothetical new entrants could achieve an equal footing with the incumbent monopolist. By contrast, rather than ascribe the characteristics of the incumbent to the hypothetical entrants, ODV mostly ascribed the characteristics of hypothetical entrants to the incumbent, with the exception of the age of the assets.

(c) Nevertheless ODV could be implemented consistent with FCM as long as revaluation gains or losses were consistently treated as income or an expense over the lifetime of the assets involved. However if ODV revaluations were permitted with no compensating offset for acquirers then a natural monopoly would be rewarded simply for the underlying cost characteristics that made it a natural monopoly in the first place.

(d) Therefore to allow Powerco and Vector to increase their prices to a level supported by the 2005 ODVs, without treating the revaluation gains as income in some manner, would provide the regulated businesses with windfall profits.

[1059] Vector's response to the October 2007 Draft Authorisation is, for our purposes, found in written submissions it made on 17 March 2008. Vector raised similar issues to Powerco, emphasising both the relevance of the HNET/ODV approach to valuation and the need for fresh, as at June 2005, valuations as its 2003 ODV valuation had not been prepared for the purposes of price control and was not sufficiently robust to be used for that purpose.

[1060] In cross-submissions following the conference Powerco encapsulated much of the argument it made before us by reference to s 52A(1)(a)-(d):[603]

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[603] Powerco *Cross-submission on Commerce Commission's Draft Authorisation Decision Paper* (18 March 2008) at [36]-[37], 49/414/025110 (footnotes omitted).

> To be clear, the HNET does not mimic the outcome of actual new entry, nor does the HNET aim to set price conditions conducive for new entry. The HNET is designed to be used where competition is unlikely. The fact that competition is unlikely in most gas distribution markets is not an obstacle in using the HNET – it is the reason the test is used.
>
> The logic of the HNET relates directly back to the workable competition standard. In a workably competitive market, the price level is set by the forward looking costs of the potential new entrant. This is not a statement about the HNET, it is a statement about outcomes in workably competitive markets, and this is the price level that the Commission must mimic in this authorisation. Where competition and new entry is not feasible, the HNET says the workably competitive price level is best measured by assessing the forward looking cost of a *hypothetical* new entrant that instantaneously takes the market away from the incumbent (and the incumbent ceases to operate).

[1061] In July 2008 the Commission sought further submissions from Powerco and Vector. The Commission's remarks, setting out the background to that request, provide a useful explanation of the Commission's reasoning, which carried forward to its approach to the determination of the asset valuation IMs:[604]

> As discussed at the conference, the Commission considers that determining the RAB at the start of the initial control period by rolling forward Vector's 2003 ODV valuation and Powerco's revised 2002 ODV valuation to 2005 would:
>
> - be consistent with the Commission's statutory framework;
> - safeguard the interests of acquirers by preventing Powerco and Vector from making windfall profits in the future. The Commission considers that such windfall profits would be to the detriment of acquirers while not improving economic efficiency;
> - would better promote efficiency in the supply of the controlled services by being closer to the allocatively efficient level over time, and promoting dynamic efficiency by allowing the businesses to recover the efficient costs of their investments;
> - be consistent with the regulatory regime for the gas pipelines industry that has been in place for more than a decade;
> - be the right approach in principle, as control under Part 5 and the resulting Authorisation process had its origin in the Part 4 Gas Control Inquiry that gave rise to the concerns about behaviour of both of the companies; and
> - be equivalent in net present value terms to using the 2005 ODVs and amortising the revaluation gains, but would have the advantage of being a simpler approach and better address the regulatory commitment issue

[604] Commerce Commission *Further Opportunity for Submissions on Asset Valuation and Update on the Authorisation* (25 July 2008) at 2, 50/417/025177.

> that the Commission cannot guarantee that Powerco and Vector would continue to amortise revaluation gains in years subsequent to the expiry of the Order in Council in 2016.
>
> The option of determining the RAB at the start of the initial control period by rolling forward Vector's 2003 ODV valuation and Powerco's revised 2002 ODV valuation to 2005 is still under active consideration by the Commission. …

[1062] Vector provided brief comments in response, emphasising its general position overall. It did not engage further with the details. Any response by Powerco was not placed before us.

[1063] The Commission released its final authorisation for the control of the supply of natural gas distribution services by Powerco and Vector on 30 October 2008.[605] Overall, the Commission's view was that Powerco and Vector had continued to make monopoly profits (ie excess returns) in respect of the supply of the controlled services and that excess returns should continue to be limited going forward. Further average price reductions of 11.1% for Powerco and 3.7% for Vector would be required when the Authorisation was implemented on 1 January 2009. Prices would then be held constant in real terms for the remainder of the control period to 2012 (price changes of CPI – 0% per annum).

[1064] In doing so the Commission confirmed the view it had first exposed at the February conference, and which it had elaborated on in its July request for further submissions. It adopted Vector's 2003 ODV and Powerco's revised 2002 ODV valuations, rolled forward to 2005: ie the values calculated and recommended by PBA on 23 July 2007 of $98,660,264 and $137,285,019 respectively. Thereafter those opening values would be updated or "rolled forward" during the control period by providing an allowance for capex and depreciation, on a CPI-index basis, and using straight-line depreciation. Indexed revaluations would be treated as income, in order to maintain the value of the investment and to prevent the business from obtaining compensation for inflation twice.

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605 Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd Decisions Paper* (30 October 2008), 50/423/025233.

[1065] This, the Commission acknowledged, involved setting aside the 2005 ODV valuations for all purposes. Therefore there was no need to amortise revaluation gains between the 2002/2003 ODVs, as accepted for control purposes, and those 2005 ODVs.

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PART 6 - THE COST OF CAPITAL APPEALS

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6.1 INTRODUCTION

Outline

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Cost of capital in Part 4 regulation

[1066] The cost of capital IMs provide the methodology to determine the acceptable regulatory rate of return, the cost of capital. In DPP/CPP and IPP regulation the cost of capital determines a regulated supplier's return on capital, as part of the calculation of BBAR. (BBAR also takes account of asset valuation, depreciation, opex, tax, revaluation gains and other income.) In ID regulation a firm's disclosed ROI will be compared to the regulatory cost of capital.

[1067] The Commission takes an industry-wide, rather than firm-specific, approach to the cost of capital. The Commission explained that approach in the Principal Reasons Papers in this way:[606]

> When estimating the cost of capital for suppliers in a workably competitive market, a number of the parameter estimates, such as the risk-free rate and the tax-adjusted market risk premium, will be common across services regulated under Part 4 of the Act. To the extent that there are differences between the cost of capital estimates across services, sectors, or industries in workably competitive markets, this should reflect differences in the level of

606 EDBs-GPBs Reasons Paper at [H1.32]-[H1.33], 3/7/001378-79; Airports Reasons Paper at [E1.30]-[E1.31], 2/6/000787.

> systematic risk that they face. Parameters that may differ across services, reflecting variability of returns or risk include the measure of systematic risk in the cost of equity (i.e. the beta estimates) and estimates of the debt premium.
>
> Therefore, cost of capital estimates across different types of regulated services, such as those provided by Airports, EDBs, GPBs and Transpower, reflect differences in the risk profiles associated with the supply of these services.

[1068] The cost of capital IMs, whether for the EDBs, GPBs, Transpower or the Airports, adopt the same methodology to calculate the cost of capital for Part 4 purposes. We now outline that methodology.

Calculating the cost of capital – the WACC

[1069] The cost of capital a firm faces is the financial return that investors require from an investment in the firm, given the risk. Investors have choices, and will not invest in an asset unless the expected return is at least as good as that they might expect from a different investment of similar risk.

[1070] There are two main sources of capital: debt and equity. Both involve a cost to the firm.

[1071] Debt capital involves the firm promising to make specific payments – including (generally) to repay the debt on demand or on a given date - to the debt provider, which are specified when the debt capital is first provided. Firms may raise debt by, for example, issuing bonds or borrowing from a bank. The "cost" of debt capital includes both the future interest payments agreed at the time the debt is issued and the costs incurred when issuing that debt (debt issuance costs).

[1072] Equity capital does not usually involve promises of specific (or unconditional) payments. There is – in general terms and absent liquidation – no promise or expectation of repayment by the firm. Instead, equity holders have a degree of actual or potential control over the firm and expect to obtain a return related to the success of the firm. Firms may raise equity by, for example, issuing shares that can be traded on the stock exchange, or by retaining earnings. The "cost" of equity capital is the expectation of dividend payments, and where profits are

retained and reinvested, the expectation of larger dividend payments some time in the future.

[1073] Debt is generally less expensive than equity. The methodology for calculating the cost of capital reflects the different costs of debt and of equity, and the respective portion of each that is used to fund the firm in question. The cost of capital is therefore referred to as the weighted average cost of capital, or “the WACC”.

[1074] The WACC can be expressed:

(a) in nominal or real terms; and

(b) in vanilla or post-tax terms.

[1075] A nominal WACC includes inflation, whereas a real WACC does not.[607]

[1076] A (nominal or real) vanilla WACC is calculated using the before-tax cost of debt, whereas a (nominal or real) post-tax WACC is calculated using the after-tax cost of debt.[608]

[1077] The Commission uses nominal vanilla WACC estimates in DPP/CPP and IPP regulation when setting price quality paths and uses both nominal vanilla and nominal post-tax WACC estimates for the purposes of ID regulation.[609] Nominal vanilla WACC estimates are used in DPP/CPP and IPP regulation to ensure consistency with the approach to regulatory tax in the DPP/CPP and IPP IMs. Both nominal vanilla and nominal post-tax WACC estimates are calculated for ID regulation to ensure interested persons can understand and utilise them. Nominal post-tax WACCs are more common in New Zealand and thus better understood, while nominal vanilla WACCs are more common in many overseas jurisdictions.[610]

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[607] Airports Inquiry Report at [6.54], 44/367/021874.

[608] EDBs-GPBs Reasons Paper at [6.7.1], 3/7/001148; Airports Reasons Paper at [6.7.1], 2/6/000737.

[609] EDBs-GPBs Reasons Paper at [6.7.2], 3/7/001149; Airports Reasons Paper at [6.7.2], 2/6/000737.

[610] EDBs-GPBs Reasons Paper at [6.7.2], 3/7/001149; Commerce Commission *Information Disclosure (Airport Services) Reasons Paper* (22 December 2010) at [3.31], 40/313/019870.

[1078] Because a nominal WACC incorporates inflation, CPI indexation of the RAB must be offset in allowed revenue where such a WACC is used to avoid double counting the effects of inflation.[611]

[1079] The cost of capital IMs:

(a) provide that the Commission will determine the WACC in accordance with the formula:

Cost of Capital = $r_d L + r_e(1\text{-}L)$

where:

- r_d is the cost of debt;
- r_e is the cost of equity; and
- L is the leverage ratio, being the proportion that debt capital represents of a firm's total capital (eg, a leverage ratio of 40% would mean that a firm's capital comprised was 40% debt and 60% equity);[612] and

(b) stipulate the rules, or methodologies, for determining the terms of that formula.

[1080] While the Commission's use of the WACC formula to measure the appellants' respective costs of capital is not challenged, its application of the formula and its determination of the fixed and variable parameters, that is the terms, within it are the subject of many challenges. We explain the formulas used by the Commission to determine the cost of debt and cost of equity components of the above WACC formula, along with other formulas necessary to an understanding of those challenges, next.

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611 EDBs-GPBs Reasons Paper at [2.8.15], 3/7/001028; Airports Reasons Paper at [2.8.15], 2/6/000642.

612 See, for example, Decision [2012] NZCC 27 at cl 2.4.1(1)(c), 67/715/033459.

The cost of debt formula

[1081] The cost of capital IMs express the cost of debt formula as follows:[613]

Cost of debt $= r_f + p + d$

where:

- r_f is the risk-free rate;
- p is the debt premium; and
- d is debt issuance costs.

For example, if the risk-free rate is 3.0%, the debt premium is 2.0%, and debt issuance costs are 0.5%, then the cost of debt is 5.5%.

The cost of equity formula

[1082] The cost of equity is a forward-looking concept and cannot be directly observed. It is therefore more difficult to estimate than the cost of debt and has to be based on an analytical model. There are a number of different models that can be used to estimate the cost of equity. When a preferred model is chosen, the inputs for that model have to be estimated.[614] A common model is the capital asset pricing model (the CAPM).

[1083] The CAPM is based on a distinction between specific risk and systematic (or market) risk and theories of portfolio diversification. The CAPM recognises that an investment has two types of risks. First, risks that are specific to the project or firm involved, called specific, unique, or unsystematic risks. Secondly, risks associated with the overall market, called systematic, or market risks. An investor can "diversify away" specific risk by holding a diversified portfolio of investments. Diversification works because the nature of the risk of investments within a portfolio varies; the returns do not move in lockstep but depend on a wider variety of unique factors. That is, the risks are not perfectly correlated.

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613 See, for example, Decision [2012] NZCC 27 at cl 2.4.1, 67/715/033459.
614 EDBs-GPBs Reasons Paper at [6.4.1]-[6.4.2], 3/7/001127.

[1084] The CAPM assumes that investors hold fully diversified portfolios and have diversified away specific risk. Thus the CAPM only uses a measure of systematic risk and excludes specific risk from the model. Systematic risk measures the extent to which the returns on a company fluctuate relative to the equity returns in the stock market as a whole.

[1085] The CAPM therefore proposes that the cost of equity can be modelled as comprising a risk-free component (that is, the expected return for investment free of systematic risk) and a premium for systematic risk relating to the particular firm. The CAPM postulates a positive linear relationship between the expected return on an asset and the systematic risk associated with holding that asset.

[1086] The classical (tax-free) version of the CAPM formula is:

Cost of equity $= r_f + (r_m - r_f)\,\beta_e$

where:

- r_f is the risk-free rate;
- r_m is the expected return on the market portfolio (an unobservable portfolio comprising all available assets in the market, so $r_m - r_f$ is the market risk premium (MRP)); and
- β_e is the equity beta.

[1087] Thus, for any particular firm it is the equity beta which is the firm-specific input, r_f and r_m being generic parameters applicable to all firms in the market.

[1088] In the CAPM a firm's equity beta assesses an investor's exposure to systematic risk associated with investing in that particular firm, ie the extent to which returns on that investment fluctuate relative to the equity returns in the market as a whole. A firm whose systematic risk equals that of the market overall will be ascribed an equity beta of one. If a given (comparatively less risky) firm's beta is 0.5, the expected premium over the risk-free rate from an investment in that firm will be half the identified expected MRP.

[1089] For example if the risk-free rate is 3.0%, the MRP is 7.0% and the equity beta is 0.50, then the cost of equity is 6.5%.

[1090] In determining the cost of capital IMs the Commission adopted a particular variant of the CAPM, namely the Simplified Brennan-Lally CAPM (the SB-L CAPM). The SB-L CAPM adapts the classical (tax free) CAPM to take account of New Zealand's taxation system. It recognises the presence of imputation credits, assumes that they are fully utilised and also assumes that capital gains are tax-free. The formula for the SB-L CAPM is:

Cost of equity = $r_f\,(1 - t_i) + \beta_e$ x TAMRP

where

- r_f is the risk-free rate;
- t_i is the investor tax rate;
- β_e is the equity beta; and
- TAMRP is the tax adjusted MRP (the premium an investor may expect to earn over the risk-free rate for bearing systematic market risk adjusted to take account of the tax faced by investors on equity returns).

[1091] An outline of the Commission's approach in the cost of capital IMs to determining each term of the cost of debt and the SB-L CAPM formulas starting with the common term, the risk-free rate, follows.

The parameters of the WACC formulas

The risk-free rate

[1092] The risk-free rate is a core component of the cost of capital IMs.

[1093] Although the cost of debt formula is expressed by reference to the risk-free rate, the debt premium and debt issuance costs, the cost of debt – excluding debt issuance costs – is in practice derived directly from a relevant corporate bond rate. That is, a particular firm's cost of debt is calculated by reference to the cost of

corporate bonds issued by firms with comparable risk characteristics. The debt premium is identified by deducting the risk-free rate from that corporate bond rate.

[1094] The risk-free rate is, however, the base rate by express reference to which the cost of a firm's equity capital is calculated.

[1095] The risk-free rate is the rate of interest expected when there is no risk of default. The risk-free rate is typically approximated by the expected return on a very safe asset, such as government issued debt. The determination of the methodology for calculating the risk-free rate requires a choice of term.

[1096] Noting that the rate of interest on government issued debt can generally be readily observed from trading on the debt market, the Commission adopted the rate of interest on debt issued by the New Zealand Government denominated in New Zealand dollars as the risk-free rate for all the cost of capital IMs.[615] The term of the risk-free rate chosen by the Commission matches the regulatory period (typically five years).[616]

The debt premium

[1097] The debt premium is the additional interest rate, over and above the risk-free rate, which is required by suppliers of debt capital to compensate them for being exposed to the additional risks of corporate debt. The debt premium is found by deducting the risk free rate from an appropriate corporate bond rate. The debt premium varies between sectors. A choice of term is also involved in calculating the debt premium.

[1098] The Commission calculated the debt premium by reference to publicly traded bonds used by a portfolio of comparable firms with a Standard and Poor's long-term credit rating of:

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615 See, for example, Decision [2012] NZCC 27 at cl 2.4.1(4), 67/715/033460.

616 In the case of the Airports which do not have a regulatory period, the Commission adopted a five-year period aligned to the Airports' pricing agreements.

(a) BBB+, in the case of the cost of capital IMs for the EDBs, GPBs and Transpower; and

(b) A–, in the case of the cost of capital IMs for the Airports,

and an original term of five years, reflecting the term of the risk-free rate.

Debt issuance costs

[1099] Debt issuance costs provide an allowance for the costs, additional to the interest rate paid on the debt, that firms incur when issuing debt capital. Debt issuance costs are a fixed parameter, applying across all sectors.

[1100] The Commission's estimate, for all the cost of capital IMs, of the cost of issuing debt (separate from and in addition to the interest to be paid on the debt itself) is 0.35%, based on the cost of issuing publicly traded bonds.[617]

The investor tax rate

[1101] The investor tax rate is fixed for all sectors. The investor tax rate was specified by the Commission as the maximum prescribed investor tax rate under the Portfolio Investment Entity (PIE) tax regime (30% until 30 September 2010 and 28% thereafter). Changes in the prescribed rate will flow through to future WACC estimates automatically.

The equity beta – asset betas and leverage

[1102] As determined by the Commission, the equity beta is a sector specific parameter. Beta is notoriously difficult to estimate. Standard practice, which the Commission followed, is to look to history as a guide, assuming betas remain relatively stable over time. The Commission took a set of comparable businesses, obtained standard Bloomberg data relative to those comparators over a number of periods, and used standard approaches to first estimate and then test an average beta for the relevant industry groups. It looked to other available information to inform its consideration. The resulting estimates were then subjected to reasonableness

617 See, for example, Decision [2012] NZCC 27 at cl 2.4.2(6), 67/715/033460.

checks. Due to the uncertainty associated with beta estimates, the Commission estimates the standard error for the asset beta from the portfolio of comparable firms.

[1103] The process adopted by the Commission for estimating the equity beta (or measure of exposure to systematic risk) is not challenged. The starting point is the identification of a sample of comparators. A given firm's equity beta is influenced by – amongst other things – leverage. To derive a sector notional equity beta from the chosen sample of comparator firms it is necessary first to remove the effect of gearing from a firm's equity beta, which results in what is known as the firm's asset beta. The asset beta reflects an assumption that all a firm's capital is equity. Where that assumption applies, a firm's beta is lower than it would be if part of the firm's capital comprised debt as all the firm's cash flows are available to service its equity. Of necessity, where that is not the case, a firm's equity returns will be relatively more volatile, resulting in a higher beta.

[1104] The asset beta is calculated by multiplying the equity beta by (1 – leverage).[618] Firm specific (albeit averaged over time for that firm) leverage estimates are used at this point. A sector-specific asset beta can then be calculated, and a sector-specific equity beta derived by adjusting for debt on a sector-wide basis, ie by applying the sector estimate of leverage. That process was summarised in the Principal Reasons Papers as follows:[619]

- Step 1: identify a sample of relevant comparator firms. This includes:
    - New Zealand firms from the industry in question;
    - New Zealand firms from industries with a similar risk profile;
    - overseas firms from the service in question; and
    - overseas firms from industries with a similar risk profile.
- Step 2: estimate the equity beta for each firm in the sample;
- Step 3: de-lever each equity beta estimate to get an estimated asset beta for each firm in the sample;
- Step 4: calculate an average asset beta for the sample;

618 Assuming a debt beta of zero.
619 EDBs-GPBs Reasons Paper at [H8.14], 3/7/001493; Airports Reasons Paper at [E8.14], 2/6/000898.

- Step 5: apply any adjustments for regulatory differences or differences in systematic risk across services to the average asset beta for the sample;
- Step 6: re-lever the average asset beta for the sample to an equity beta estimate using the Commission's assumed notional leverage.

[1105] Determining the sector-specific equity beta therefore involves determining a sector average asset beta and sector notional leverage.

[1106] The Commission determined sector average asset betas of:

(a) 0.34 for the EDBs and Transpower;[620]

(b) 0.44 for the GPBs;[621] and

(c) 0.60 for the Airports.[622]

[1107] The Commission determined its asset beta estimate for the GPBs by adding 0.1 to its estimate for the EDBs. That increment was intended to reflect the GPBs' perceived greater exposure to systematic risk. There is no challenge to that incremental approach.

[1108] Based – in each case – on the average leverage of the sample of comparator firms used to estimate the sector equity beta, the Commission determined notional industry leverage:

(a) for the EDBs, GPBs and Transpower of 44%;[623] and

(b) for the Airports, of 17%.[624]

[1109] Based on those sector asset beta and leverage estimates, the Commission determined sector equity beta estimates of:

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620 EDBs-GPBs Reasons Paper at [6.5.31], 3/7/001144.
621 EDBs-GPBs Reasons Paper at [6.5.31], 3/7/001144.
622 Airports Reasons Paper at [X32], 2/6/000601.
623 Decision [2012] NZCC 28 at cl 2.4.2(1), 67/717/033851; Decision [2012] NZCC 27 at cl 2.4.2(1), 67/715/033460; Decision [2012] NZCC 26 at cl 2.4.2(1), 67/716/033651; Decision [2012] NZCC 17 at cl 2.4.2(1), 42/351/021049.
624 Decision 709 at cl 5.2(1), 1/1/000026.

(a) 0.61 for the EDBs and Transpower;[625]

(b) 0.79 for the GPBs;[626] and

(c) 0.72 for the Airports.[627]

The TAMRP

[1110] The TAMRP is a parameter applying across all sectors. The TAMRP is common to all assets in the economy. But, being a forward-looking concept, it is not directly observable. There are a number of options for estimating it, each requiring an exercise of judgment. Consistent with the use of a five-year term for the risk-free rate, the IMs also use a five-year risk-free rate when estimating the TAMRP. The Commission assessed the TAMRP at 7%. As explained by the Commission:

(a) this reflects estimates from a range of sources reflecting both historical and forecast estimates of the return on equity investments with average risk; and

(b) is consistent with the average assumption used by New Zealand investment banks.[628]

The Commission also allowed an uplift of 0.5% to the TAMRP giving a TAMRP of 7.5% until the end of June 2011, to take into account the impacts of the GFC.

Cost of capital range

[1111] The ideal for the Commission in determining the cost of capital for a regulated supplier is the "Goldilocks' outcome": that is, an estimate that is "just right" or, as the Commission described it, consistent with the cost of capital faced by

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625 Decision [2012] NZCC 27 at cl 2.4.2(5), 67/715/033651; Decision [2012] NZCC 17 at cl 2.4.2(5), 42/351/021050.

626 Decision [2012] NZCC 27 at cl 2.4.2(5), 67/715/033460; Decision [2012] NZCC 28 at cl 2.4.2(5), 67/717/033851.

627 Decision 709 at cl 5.2(5), 1/1/000026.

628 EDBs-GPBs Reasons Paper at [X32], 3/7/000980; Airports Reasons Paper at [X31], 2/6/000600.

suppliers in workably competitive markets which is neither too high, nor too low, so that the objectives in s 52A(1)(a) to (d) may be achieved.[629]

[1112] With that objective in mind, the Commission calculated a cost of capital range to recognise: (1) the imprecision and uncertainty associated with WACC calculations; and (2) its view that the adverse impact of setting prices too low is large over the long-term, relative to the impact of setting prices too high.

[1113] It calculated a cost of capital range by making estimates of the standard errors of individual parameters and combining them. From the so-called mid-point estimates, it could then calculate upper and lower percentile estimates. Having calculated a cost of capital range, and having regard to a range of factors, the Commission considered it appropriate to:

(a) choose a range between the 25th and 75th percentiles of that range for ID regulation of the EDBs, GPBs and Transpower; [630]

(b) specify a point estimate based on the 75th percentile of that range for DPP/CPP regulation of the EDBs and GPBs and for IPP regulation of Transpower;[631]and

(c) estimate the WACC at the 25th and 75th percentiles of that range for ID regulation of the Airports.[632]

Cost of capital cross-checks

[1114] Finally, as is normal practice, the Commission conducted cross-checks to determine whether its methodology produced a commercially realistic estimates of the cost of capital.[633]

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629 EDBs-GPBs Reasons Paper at [H1.23], 3/7/001377; Airports Reasons Paper at [E1.23], 2/6/000786.
630 EDBs-GPBs Reasons Paper at [H11.59], 3/7/001552.
631 EDBs-GPBs Reasons Paper at [H11.65], 3/7/001553.
632 Airports Reasons Paper at [6.7.9], 2/6/000738.
633 EDBs-GPBs Reasons Paper at [6.8.6] and [6.8.11], 3/7/001152; Airports Reasons Paper at [6.8.2], 2/6/000739.

The TCSD

[1115] The cost of capital IMs provide for another debt related cost that a regulated supplier may bear, namely the term credit spread differential (the TCSD). The TCSD is an allowance provided to a qualifying supplier on the basis of the weighted average length of its debt portfolio.

[1116] In determining the cost of capital IMs, the Commission recognised that:

(a) a regulated supplier may issue debt with a term exceeding the Commission's nominated five years to manage its refinancing risk;

(b) such debt will typically have a greater debt premium due to the longer term; and

(c) a regulated supplier which issues such long-term debt may also incur costs entering into interest rate swaps to reduce its initial interest rate re-pricing period from the length of the bond to a shorter period.[634]

[1117] The TCSD allowance accommodates the additional debt premium and the interest rate swap execution costs that a regulated supplier may incur if it issues debt with a term exceeding five years, irrespective of whether the supplier actually incurs those costs. The TCSD only applies to a regulated supplier with a debt portfolio, as of the date of its most recent audited financial statements, that has a weighted-average tenor greater than five years.[635] It is, therefore, not part of the WACC itself. Accordingly the TCSD allowance was not included in the Commission's point and range estimates of WACC in its Principal Reasons Papers and will not be included when the Commission determines WACC pursuant to the cost of capital IMs in the future. Similarly, the TCSD was not reflected in the point WACC estimates which the Commission used when cross-checking the WACC estimates produced by the application of the cost of capital IMs.

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[634] EDBs-GPBs Reasons Paper at [H6.1]-[H6.2], 3/7/001456; Airports Reasons Paper at [E6.1]-[E6.5], 2/6/000862.

[635] EDBs-GPBs Reasons Paper at [H6.3]-[H6.5], 3/7/001457; Airports Reasons Paper at [E6.3]-[E6.5], 2/6/000862.

[1118] The TCSD allowance is, however, in effect part of the cost of debt for qualifying suppliers. It was an integral part of the Commission's determination and reasoning in respect of term issues in the cost of capital IMs. It is treated as an adjustment to cash flows (under ID and DPP regulation)[636] and an element of BBAR (under CPP[637] and IPP regulation[638]).

636 Decision 710 at cl 4.1.9, 1/2/000108; Decision [2012] NZCC 22 at cl 4.1.9; Decision 711 at cl 4.1.9, 1/3/000275; Decision 712 at cl 5.3.2, 1/4/000436; Decision 715 at sch 2, 40/312/19800.

637 Decision 710 at cl 5.3.2, 1/2/000112; Decision 711 at cl 5.3.2, 1/3/000279; Decision 712 at cl 5.3.2, 1/4/000441.

638 Decision 714 at sch D, 64/685/032460.

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6.2 OVERVIEW

[1119] The appeals against the cost of capital IMs fall into two categories.

[1120] The first category involves challenges to "in principle" decisions made by the Commission that:

(a) it would determine a cost of capital IM for the Airports, notwithstanding that the Airports are only subject to ID regulation;

(b) the Transpower cost of capital IM would not specify Transpower's actual cost of capital; and

(c) cross-checks the Commission undertook of WACC estimates produced by the cost of capital IMs "strongly supported" or "supported" its conclusion that those IMs produce reasonable and commercially realistic WACC estimates.

[1121] The Airports challenge the Commission's decision to determine their cost of capital IM. Transpower challenges the Commission's decision not to specify its actual cost of capital as its regulatory WACC. The Energy Appellants, Transpower, WIAL and CIAL all challenge the validity of the Commission's cross-checking exercise.

[1122] We address those challenges in Parts 6.3 to 6.5 of this judgment.

[1123] The second category involves challenges by various of the appellants to all the components of the cost of debt and cost of equity formulas, other than the investor tax rate which is, of course, legislatively specified.[639] The TCSD determination is also challenged, as are the Commission's decisions reflected in its determination of the cost of capital range, on how to address the possibility of model error in the SB-L CAPM, and how to deal with the phenomenon of what are described as asymmetric risks.

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[639] The risk-free rate, the debt premium, debt issuance costs, the equity beta and the TAMRP.

[1124] We address that second category of challenges in turn in Parts 6.6 to 6.17 of this judgment.

6.3 SHOULD A COST OF CAPITAL IM HAVE BEEN SPECIFIED FOR THE AIRPORTS?

Outline

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The Commission's decision

[1125] The Commission is required to determine a cost of capital IM where such an IM is applicable to the type of regulation under consideration.[640] The Commission's preliminary view in the June 2009 IMs Discussion Paper was that it would not initially determine a cost of capital IM for Airports ID regulation. It expressed that view in the following terms:[641]

> ... it will not develop input methodologies on pricing methodologies and cost of capital for specified airport services by 30 June 2010, as they are not required to be applied by suppliers of these services. The Commission may determine these input methodologies at a later date, if it considers it would be appropriate.

[1126] A different view is found in the December 2009 Airports Emerging Views Paper.[642] Following submissions to that effect by Air NZ and BARNZ, the Commission decided that it would initially (ie on 22 December 2010) set a cost of capital IM for Airports ID regulation. Doing so would assist in meeting the purposes of ID regulation. The Commission maintained that view in its Airports Reasons Paper and determined a cost of capital IM for Airports ID regulation.[643]

[1127] That IM is applied by the Commission to estimate a WACC as at the first working day of the disclosure period for each of the Airports, being the first working day of April in the case of WIAL and the first working day of July for AIAL and

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[640] Section 52T(1)(a)(i).
[641] June 2009 IMs Discussion Paper at [10.8], 6/14/002353.
[642] December 2009 Airports Emerging Views Paper, 7/20/002682.
[643] Airports Reasons Paper at ch 6, 2/6/000705; Decision 709 at pt 5, 1/1/000025.

CIAL. It then publishes those estimates within one month of the start of the disclosure period. The Commission's estimates take the form of a WACC range (from the 25th to the 75th percentile) for each of the vanilla and post-tax WACCs. The Airports Reasons Paper states that, in assessing profitability for the Airports, an appropriate starting point for an assessment will be the 50th percentile (the mid-point) of the range.[644] The Commission's s 52P determination for ID regulation of Airports requires, in sch 1, that the Airports "report on return on investment". That report requires the ROI to be compared to the Commission's post-tax and vanilla WACCs.[645]

Appeals

[1128] The Airports argue that, criticisms of particular aspects of the Airports cost of capital IM aside, the Commission was wrong to have developed such an IM.[646] The materially better approach would be not to have an Airports cost of capital IM at all.

[1129] ID, the Airports argue, is not price control. Determining a cost of capital IM and applying that IM to determine a WACC range by reference to which the Commission will analyse the Airports' financial performance over time, would promote a de facto, or shadow, price control regime. That is, they submit, incompatible with the regime under the AAA that was continued by Parliament notwithstanding the enactment of Part 4 whereby the Airports are free, subject to consultation, to set prices as they individually think fit.[647] The Airports emphasise their different business context, compared with that of the EDBs, GPBs and Transpower. They are required to consult with major customers which have significant countervailing power, particularly Air NZ. Those consultations had, especially more recently, produced real compromises in terms of charging. Moreover, AIAL submits it has no incentives to invest inefficiently.

[1130] The Airports argue that the Commission's approach is likely to make it appear that disclosed returns are unduly high with the associated adverse consequences that:

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644 Airports Reasons Paper at [E14.3], 2/6/000957.
645 Decision 715 at sch 1, 40/312/019798.
646 AIAL Appeal 820 at [4]; CIAL Appeal 251 at [19]; WIAL Appeal 249 at [23].
647 AAA, s 4A(1).

(a) airlines might simply refuse to pay the charges set by the Airports under the AAA;

(b) the Commission might wrongly take the view that further regulatory intervention is appropriate and justified; and

(c) the Airports might have to reduce returns to avoid such risks, at the expense of prudent investment strategies and the long-term benefit of consumers.

[1131] The Airports say that the Commission's earlier decision, that it would not set a cost of capital IM for them, was correct. They point to a decision by the Australian Productivity Commission which had spoken of the need, to encourage responsible negotiation between airports and their customers, for there to be a non-regulated "space" in which those negotiations could occur.[648] Setting a cost of capital IM would fill that space, and detract from a useful tension that would otherwise be present in negotiations. Airlines and other interested parties would simply point to the Commission's WACC and say that it was, in effect, binding on the Airports. The Airports also suggest that there is a confusing mismatch between the five-year price review period as applied by them under the AAA regime, and the annual publication of ex ante WACC estimates. The Airports place considerable reliance on s 53F(1)(b) and its explicit recognition that, as they are only subject to ID regulation, they do not have to apply a cost of capital IM.

Analysis

[1132] The Commission's response is essentially simple. That is:

(a) Section 53F clearly authorised the Commission to set a cost of capital IM for the Airports.

(b) Whilst s 53F(1) makes it clear that, for suppliers that are subject only to ID regulation, methodologies for evaluating or determining the cost

[648] Australian Productivity Commission *Review of Price Regulation of Airports Services* (PCIR 40, 14 December 2006) at [4.1], 47/395/023996.

of capital did not have to be applied, at the same time s 53F(2) clearly provides:

> However, to avoid doubt, subsection (1) does not affect anything else in this subpart, and in particular does not affect—
>
> (a) section 53B(2) (which means the Commission may use the input methodologies referred to in subsection (1) to monitor and analyse information); and
>
> (b) section 53C(2) (which means that suppliers may still be required to disclose information about the pricing methodologies, and methodologies for evaluation or determining the cost of capital, that they do in fact use).

[1133] This is not, the Commission argues, de facto price control. As s 53F demonstrates, unlike in price control, the cost of capital IM is not binding on the Airports. Nevertheless, determining a cost of capital IM for ID regulation is consistent with the s 52A(1) purposes, in particular that found in subsection (d), that suppliers of regulated goods or services be limited in their ability to extract excessive profit. The AAA regime through which an airport has have the power to set charges as it thinks fit is preserved but the cost of capital IM, when used in Airports ID regulation, provides a guide by reference to which each airport's ability to extract excessive profits can be assessed over time. Moreover, the provision of a specific cost of capital IM contributes to regulatory certainty, the purpose of the IMs more generally. The Airports, and consumers, know how the Commission views the regulatory cost of capital and the methodology it applies in determining the same.

[1134] Air NZ, as an interested party, supports the Commission's decision and its reasons. It argues more generally that providing a cost of capital IM for the Airports is consistent with the legislative history, which evinced Parliament's clear intention to add substantially to what Air NZ regards as the ineffective AAA regime. Further support for the Commission's decision can be found in s 56G. That section requires the Commission to review information disclosed by the Airports under Part 4 after they set new prices in or after 2012. The Commission is also required to report to the Ministers as to how effectively the ID regime is working to promote the s 52A purposes of the Act. The Commission's determined WACC will provide a necessary and useful tool for that purpose.

[1135] Therefore, in both the Commission's and Air NZ's view, determining a cost of capital IM for Airports ID regulation is a materially better outcome than not having such a determination, as the Airports argue.

[1136] Clearly, ID is not price control. But, most importantly for this aspect of the Airports' appeals, we do not accept their basic argument that the Commission was wrong to determine an Airports cost of capital IM because of the implications of the parallel AAA regime. In our view, s 56G acknowledges that it is currently an open question whether the Part 4 ID regime will, when combined with the AAA regime, be sufficient to achieve the s 52A purpose.

[1137] In our view, by determining a cost of capital IM for Airports ID regulation, the Commission has made explicit, and given greater certainty to, the approach it would inevitably have to take under s 56G. We do not see how the Commission could adequately undertake that task unless it has a view of the appropriate WACC, or WACC range, for the Airports, by reference to which it could analyse and assess the efficacy of the ID regime.

[1138] A similar conclusion can be drawn by reference to s 53B(2). That subsection provides:

> If a supplier of goods or services is subject to information disclosure regulation the Commission –
>
> (a) may monitor and analyse all information disclosed in accordance with the information disclosure requirements; and
>
> (b) must, as soon as practicable after any information is publicly disclosed, publish a summary and analysis of that information for the purpose of promoting greater understanding of the performance of individual regulated suppliers, their relative performance and the changes in performance over time.

[1139] Given the s 53A purpose statement, the objective of the Commission in monitoring, analysing, and publishing summaries and analyses, is to ensure sufficient information is readily available to assess whether the Part 4 purpose is being met. Again, it is difficult to see how the Commission could perform that function without having a view on an Airport's WACC.

[1140] On that basis, we respond to other aspects of the Airports' argument fairly succinctly.

[1141] We think the Airports overstated the chilling effect on negotiations under the AAA, or elsewhere, of the Airports cost of capital IM. Just as the Airports were able to explain to us the relationship between annual calculation of WACC, their forward-looking calculations of WACC for five-year pricing periods, and the revenue smoothing that might exist within a five-year pricing period, so would they be able to in their consultation with the airlines, their discussions with the Commission and – to the extent required – in the public domain. The Commission itself recognised the caution needed when comparing ROIs with a regulatory WACC. Regulatory assessments of economic returns give approximations and the Commission recognised that a long view, which avoids overreacting to changes in ROIs in the shorter term, is necessary.

[1142] To argue, as AIAL does, that it has no incentives to invest inefficiently is, in our view and with respect, to gild the lily. AIAL, and the other Airports, have a degree of market power, as recognised by their being subject to Part 4. That, and the associated ability to make higher than normal returns on investment, provide an incentive for "gold plating".

[1143] The Airports place considerable emphasis on the Commission's preliminary decision that there would not be a cost of capital IM for Airports ID regulation. (Similar preliminary decisions were also made as regards ID regulation of the EDBs and GPBs).[649] But, as noted by the Commission at the time, it anticipated determining such an IM subsequently. Therefore, that it decided to make that determination along with the other initial IM determinations in December 2010 is, in our view, neither here nor there.

[1144] Nor do we think that s 53F(1)(b) provides any support for the Airports' argument here. We acknowledge that s 53F(1)(b) is statutory recognition that, because a business is not under price control, it need not apply the Commission's WACC to set its prices. At the same time, and as s 53F(2)(a) recognises, the

[649] June 2009 IMs Discussion Paper at [10.8], 6/14/002353.

Commission may use a cost of capital methodology to "monitor and analyse" information made available by regulated suppliers. The scheme of those provisions, by our assessment therefore, anticipates the Commission determining a cost of capital IM for ID regulation. The Commission will use that as acknowledged by s 53F(2)(a). Regulated suppliers do not have to apply it when setting prices.

[1145] Moreover the legislative history acknowledges that the Commission would develop such an IM. The Explanatory Note first observed that a sound regulatory regime would enable the regulator to identify the extent of monopoly pricing by airports. The then current regime for airports failed to do that. The key problem was the lack of credible ID, exacerbated by a lack of guidelines on the desired outcomes and on appropriate IMs (for example how to value assets and calculate the cost of capital) to provide guidance on appropriate regulatory outcomes.[650] The Expanatory Note thus noted:[651]

> The Commission would also develop additional input methodologies on pricing principles and cost of capital or capital that the Commission would use for monitoring and reporting on the information disclosed by airports.

[1146] The Explanatory Note provides some further context, where it observes:[652]

> The input methodologies required for robust information disclosure (such as asset valuations, revaluations, and allocation of common costs) would be binding, while methodologies such as pricing principles and how to calculate the cost of capital (which are required for monitoring and analysis) would be in the form of guidelines against which the disclosed information would be assessed. This would allow airports and airlines and other customers to reach commercial agreements taking into account efficiency, productivity, investment, and other issues while providing clear guidance to assist commercial negotiations.

[1147] That anticipated approach is reflected in the combined effect of s 53F(1)(b) and 53F(2)(a), albeit that the concept of "guidelines" is not one explicitly referred to in Part 4.

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650 Explanatory Note at 33-34.
651 At 40.
652 At 41.

Outcome

[1148] We are therefore not persuaded that it would be materially better if there were not a cost of capital IM for Airports ID regulation.

[1149] We note finally that the Commission argued we had no jurisdiction to revoke an IM without replacing it. It based that argument on the terms of s 52Z(3)(b) which provide that, where we allow an appeal, we may amend an IM, revoke it and substitute a new one or refer the IM back to the Commission with directions. Given the view we have reached on the substance of this appeal, it is not necessary for us to decide that issue here.

6.4 SHOULD THE TRANSPOWER COST OF CAPITAL IM SPECIFY TRANSPOWER'S ACTUAL COST OF CAPITAL

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Introduction

[1150] Transpower is subject to ID and – alone presently – IPP regulation. Pending the Commission making the s 52P determination for ID regulation of Transpower, it is Transpower's IPP regulation – as Transpower's arguments reflect – that provides the context for its appeals against its cost of capital IMs.

[1151] The central features of that regulation are as follows. Compared to the complexity of Part 4's stipulation of the characteristics of ID, DPP and CPP regulation, in the case of IPP regulation s 53ZC simply provides:

> **53ZC Price-quality path for individual businesses**
>
> (1) If individual price-quality regulation applies to goods or services supplied by a supplier, 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.
>
> (2) The following provisions of subpart 6 apply (with all necessary modifications) where individual price-quality regulation is imposed:

(a) sections 53M[653] and 53N:[654]

(b) section 53ZB.[655]

[1152] The drafting of s 53ZC is a little unusual: there is no provision in Part 4 that expressly requires a price-quality path where a supplier is subject to IPP. See, by contrast, s 53L(1)(a) in the case of DPP/CPP regulation. But that one is required is reflected by the provisions of ss 52B(2)(c)(ii) and 53ZC. Nor – we note further – is there a specific purpose statement applying to IPP regulation. Notwithstanding that, the Commission has – in a way which Transpower does not challenge – described the main features of IPP regulation as it applies to Transpower in the following terms:[656]

- capital and operational expenditure is examined and approved on an ex-ante basis;
- input methodologies, applicable to Transpower, are applied;
- a maximum allowable revenue model, based on a full building blocks approach, is used to set Transpower's maximum allowable revenue for the duration of the regulatory period;
- the maximum allowable revenue model factors cash-flows, approved capital and operational expenditures, as well as any necessary ex-post reviews and other adjustments into the revenue allowance;
- incentive mechanisms for operational expenditure and quality improvements can be applied; and
- quality standards are determined for each regulatory control period.

[1153] We have already explained in Part 2 of this judgment the regulatory arrangements applying to Transpower at the time Part 4 came into force, how Part 4 applies to Transpower and Transpower's position under Part 4 when the hearing of these appeals ended. As that explanation reflects, by February 2013 the Commission had not only determined a range of IMs for Transpower's ID and IPP regulation, but had made a number of s 52P determinations including, in January 2012, resetting Transpower's IPP contemporaneously with the Commission's determination of Transpower's capex IM.

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653 Content and timing of price-quality paths.
654 Monitoring compliance with price-quality paths.
655 What happens when IMs change.
656 Commerce Commission *Recommendation to the Minister of Commerce regarding the type of regulation to apply to Transpower* (13 April 2010) at [X4], 32/213/015733.

[1154] By and large – noting that Transpower does have appeal rights against the determination of its IPP – Transpower accepts all those decisions. In these proceedings, Transpower only appeals the Commission's cost of capital IM determinations for its ID and IPP regulation and the Commission's associated decision to provide the TCSD allowance.

The Commission's decision

[1155] The Commission's approach to determining the cost of capital IMs for Transpower was very similar to that the Commission adopted in determining the cost of capital IMs for the EDBs and the GPBs. The cost of capital chapter of the Transpower Reasons Paper (Chapter 6) is but four pages long and relies on a one and a half page table to set out the components of the cost of capital IM for Transpower.[657] That table summarises the Commission's approach and its estimates of various parameter values. The table cross-references the EDBs-GPBs Reasons Paper, where the Commission's decisions as regards relevant estimates of, and methodologies for determining, those parameter values are set out in detail.

[1156] On that basis, the Transpower cost of capital IMs replicate the parameter value estimates and methodologies found in the EDBs cost of capital IMs.[658]

[1157] In the Transpower Reasons Paper the Commission explained that approach in these terms:[659]

> 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.
>
> 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

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[657] Transpower Reasons Paper at [6.1]-[6.2.6] and Table 6.1, 4/8/001716-9. The EDBs-GPBs Reasons Paper states at fn 28, 3/7/000993:

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

[658] Transpower Reasons Paper at Table 6.1, 4/8/001717-18.

[659] Transpower Reasons Paper at [6.1.2]-[6.1.4], 4/8/001716.

> substantively duplicate that reasoning in this document, the reader is instead referred to the EDB/GPB Reasons Paper.
>
> 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.

[1158] Transpower's cost of capital is, therefore, calculated on the same basis as is the cost of capital for the EDBs. It is that approach to which Transpower objects. MEUG, as an interested party, supports the Commission's approach.

Transpower's appeals

[1159] Transpower's principal challenge is to the Commission's decision not to stipulate what Transpower describes as its "actual" cost of capital as its regulatory cost of capital, but rather to estimate its regulatory cost of capital on the same basis as for the EDBs.[660] That challenge was, in turn, based on the broader, overarching, proposition that the Commission had, in determining the Transpower cost of capital IMs, unlawfully failed to take into account Transpower's actual circumstances and the regulatory framework applicable to it. On that basis Transpower challenges what it says should be supplier-specific factors in the cost of debt and the cost of equity formulas, namely the risk-free rate, the debt premium and leverage. Transpower says parameter values for those factors derived from Transpower's actual circumstances would be materially better and – if used – the TCSD would be unnecessary in its case.

[1160] Transpower accepts that a sector-wide approach was necessary for the determination of its equity beta, but supports Vector's challenge to the Commission's analysis of the average beta in the comparator company sample.

[1161] Transpower also challenges aspects of the Commission's decisions on TAMRP, standard error and the Commission's cross-checking analysis.

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660 Transpower Appeal 1656 at [17]; Transpower Appeal 1032 at [12].

[1162] In its notice of appeal and in its written submissions Transpower argues that the 90th percentile of the WACC range should be used in place of the 75th percentile. In oral submissions, however, Transpower abandoned that aspect of its appeal. We therefore do not consider that issue further.

[1163] The relationships between Transpower's challenges and those of the Energy Appellants and MEUG present something of an organisational challenge. We have, in Part 6.3, already dealt with Transpower's challenge to the Commission's cross-check analysis. We now set out how, given those relationships, we address the balance of those challenges:

(a) We address in this Part 6.5 of our judgment Transpower's overarching challenge, based on the Commission's asserted failure to consider Transpower's actual circumstances and the regulatory framework applicable to it.

(b) A significant part of Transpower's appeal was directed at the Commission's decisions on the regulatory leverage parameter.[661] In its written and oral submissions, Transpower not only engaged with the Commission's decision, but also with MEUG's leverage appeal. We consider Transpower's leverage arguments in Part 6.14, where we address the leverage issue in the context of Transpower's appeals against its cost of capital IMs, MEUG's appeals against the EDBs and Transpower cost of capital IMs, and the Commission's and the Energy Appellants' responses.

(c) We consider Transpower's other, supplier-specific, parameter value challenges (the risk-free rate – including the TCSD, and the debt premium) in Part 6.7 along with the other supplier appellants' challenges to those parameter values.

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[661] Specifically the regulatory leverage parameter features – directly or indirectly – in the calculation of the cost of capital:
(e) to weight the estimate of the cost of debt and the estimate of the cost of equity in adding them to estimate a firm's WACC; and
(f) to re-lever the estimated asset beta to derive an estimate of equity beta for use in the SB-L CAPM.

(d) We address Vector's, and hence Transpower's, challenge to the Commission's beta decision in Part 6.12 of this judgment.

(e) We consider TAMRP challenges, including Transpower's, in Part 6.15 of this judgment.

(f) Finally, we deal with model error issues, including those raised by Transpower, in Part 6.16 of this judgment.

Do Transpower's actual circumstances require the Commission to recognise and accept its actual cost of capital for regulatory purposes?

Transpower's general proposition

[1164] Transpower's argument is that IPP regulation – as that term itself reflects – focuses on the position of an *individual* supplier. Transpower says that in determining the Transpower cost of capital IMs the Commission failed to pay appropriate attention to Transpower's individual or actual circumstances. In emphasising the significance of its actual circumstances, Transpower identifies four facts which it characterises as uncontroversial and which it says make it unique amongst the suppliers regulated under Part 4. Those facts are that Transpower:

(a) is a state-owned enterprise (SOE) and is wholly owned by the New Zealand government;

(b) is the sole supplier in its industry, being the owner and operator of New Zealand's sole high voltage transmission network;

(c) is subject to a regulatory regime in which nearly all its transmission-related activities are regulated (including both revenue and capex decisions);[662] and

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[662] In addition to Part 4 IPP and ID regulation, Transpower:
(i) is subject to s 54R which empowers the Commission to approve, in accordance with an IM developed pursuant to s 54S, Transpower's capex;
(ii) must set its prices in accordance with a transmission pricing methodology approved by the Electricity Authority under the Electricity Industry Act 2010; and
(iii) must comply with grid reliability standards maintained by the Electricity Authority under the Electricity Industry Participation Code 2010.

(d) has a significant regulator-approved investment programme in its grid assets, to be primarily funded through a capital-raising programme in overseas markets.

[1165] Transpower elaborates, at some length, on those facts and their implications, emphasising in particular the "unprecedented" nature of its capital-raising programme, the "transformational" nature of its investment programme, its status as a SOE and its consequent reliance on debt funding.

[1166] Those very general assertions do little, in our view, to advance Transpower's appeal. All of the Commission's decisions relating to the regulatory framework to be applied to Transpower can be seen as reflecting the Commission's acceptance of Transpower's very particular, individual, circumstances. As Transpower itself acknowledges, that acceptance is most obviously seen in the Commission's decision in April 2010 to recommend, with Transpower's support, that Transpower should be subject to IPP regulation.[663] The Commission's key reasons for that decision were that:[664]

(a) A full building blocks, rather than a default, approach was necessary to tailor the price-quality path to Transpower's expenditure requirements because:

(i) accommodating Transpower's large and uncertain capex programme into a revenue path in a way that was consistent with statutory constraints on setting a DPP (such as low cost, and rates of change based on productivity analysis), would likely be problematic;

(ii) accommodating the approval of large projects, with uncertain timing and cost, would be difficult;

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663 Commerce Commission *Recommendation to the Minister of Commerce regarding the type of regulation to apply to Transpower* (13 April 2010), 32/213/015729.

664 At [X2], 32/213/015732.

(iii) tailoring an incentive mechanism to apply to opex and the base capex would be difficult; and

(iv) Transpower would be very likely to propose a CPP so the costs of developing a DPP would likely be wasted.

(b) Whilst a building blocks approach could be applied under either CPP or IPP regulation, IPP regulation would be superior to CPP regulation because:

(i) it would avoid the costs of having to first set a DPP, despite this path not being suitable for Transpower;

(ii) it would better allow the Commission to address the difficulties that arise because Transpower's forecasts may not be robust in the early regulatory periods;

(iii) it would allow the Commission a more adequate period of time for reviewing and consulting on Transpower's allowed capex and opex; and

(iv) it would provide a more stable environment for setting and implementing long-term performance incentives.

[1167] As can be seen, those reasons reflect Transpower's individual circumstances as articulated by Transpower in terms of its four "uncontroversial facts". Similarly, whilst the Commission's approach to determining the cost of capital for Transpower is very similar to the approach it adopted in determining the cost of capital for EDBs and GPBs, the Commission nevertheless decided to make separate cost of capital IMs for Transpower. That decision reflected the Commission's assessment of the significance of:

(a) Transpower's large capex programme;

(b) Transpower's limited experience preparing and providing multi-year capex forecasts and complying with multi-year capex expenditure allowances set by the Commission;

(c) Transpower transitioning off an administrative settlement that was finalised after extensive consultation and which would likely have informed expectations of how regulation of Transpower might be implemented under Part 4; and

(d) the transitional nature of the legislative framework relating to Transpower, both under Part 4 and the Electricity Industry Act.[665]

Again, those factors reflect aspects of Transpower's individual circumstances.

[1168] In our view, there is little doubt that in general terms, and as reflected by Transpower's limitation of its challenges to the Commission's cost of capital IM determinations, the Commission has reflected Transpower's actual circumstances in the regulatory framework it has developed for Transpower under Part 4. We make that somewhat obvious point because the emphasis in Transpower's oral submissions on the significance of its individual circumstances, and the transformational nature of its capex programme, did not make that clear.

Transpower's specific proposition

[1169] The focus of our analysis of this part of Transpower's appeal is, therefore, on the far more specific proposition that in terms of its ID and IPP regulation, Transpower's regulatory cost of capital should be its "actual" cost of capital. Transpower, in its written submissions, expressed that proposition in the following terms:

> In an individual price-quality regulation context, the starting position should be that the relevant normal return required is the regulated firm's actual cost of capital (ie Transpower's actual cost of capital):
>
> (a) in contrast with default/customised price-quality regulation, in which the need to provide a "relatively low cost" form of regulation in the

665 Transpower Reasons Paper at [2.3.10], 4/8/001657.

context of a multi-firm sector justifies prescribing an input methodology that estimates a notional electricity distribution businesses (EDB) WACC, rather than WACCs for each individual EDB, the regulatory WACC for individual price-quality regulation should be the WACC of the individual business (ie Transpower's regulated business);

(b) if Transpower cannot obtain its actual cost of capital on capital investments (which are required to be efficient by virtue of regulatory control of Transpower's capital investment programme), it will be deterred from investing – and the Part 4 purpose will not be met; and

(c) given the significant regulation of Transpower's business (including regulation of its capital investment programme), there is no reason to assume generally that Transpower's actual cost of capital is inefficient.

[1170] Transpower acknowledges that, as is generally the case, Transpower's actual cost of capital could not be observed, and so needed to be estimated. But, in estimating Transpower's cost of capital, the object Transpower argues was to model Transpower's actual WACC. If a departure from that approach was necessary to recognise any inefficiency in Transpower's capital structure or treasury practices, that should be assessed, on a parameter by parameter basis, in relation to the parameter reflecting the alleged inefficiency. Accordingly, in selecting models and parameter estimates:

(a) the Commission's starting point should be to choose a model and parameter estimate that best fits Transpower's actual circumstances, which, in the case of firm-specific parameters (such as leverage) will be the observed or estimated parameter for Transpower; and

(b) adjustments should only be made if the Commission, after due inquiry and on the basis of probative evidence, concludes that Transpower's actual position in relation to that relevant parameter is inefficient.

[1171] Transpower asserts there is no reason to assume Transpower's actual cost of capital is inefficient, nor any evidence that Transpower's leverage is inefficient. Therefore the Commission, in estimating Transpower's cost of capital, should have

had as its objective estimating Transpower's normal cost of capital. The starting point is that this should be Transpower's actual cost of capital. The Commission should not, therefore, have calculated Transpower's WACC on the basis of parameter value estimates for the EDBs.

Analysis

[1172] It is helpful to be clear what, in this context, Transpower means by its "actual cost of capital".

[1173] As can be seen from the cost of capital formulas discussed in Part 6.1, the following parameter values are central to the calculation of a firm's cost of capital:

(a) the leverage ratio;

(b) the risk-free rate and the corporate bond rate by reference to which the appropriate debt premium is calculated; and

(c) a given firm's equity beta estimate and the TAMRP.

[1174] In effect, the purpose of the cost of capital calculation is to determine:

(a) for the purpose of estimating the cost of a firm's debt capital, the relevant risk-free and corporate bond rates from which the firm's debt premium is deduced; and

(b) for the purpose of estimating the cost of a firm's equity capital, the firm's equity beta which, when applied to the TAMRP, will determine the premium over the risk-free rate to be paid by the firm for its equity capital.

[1175] In that context, the significance of leverage is as follows:

(a) A firm's leverage is the proportion of its capital for which it will be assumed to pay the risk-free rate plus the debt premium: the higher a

firm's leverage, the greater proportion will be assumed to attract that relatively lower rate compared to the cost of equity capital.

(b) Equity betas are sensitive to leverage – the higher leverage is the higher an equity beta will be. Thus higher leverage will increase the assumed "cost" of a firm's equity capital.

[1176] In that context, Transpower says that its – acknowledgedly relatively high (reflecting its (SOE) dependency on debt) – actual leverage should be used in the weighting process and to fix its equity beta. Similarly, to reflect its actual borrowing costs, a 10-year term should be assumed to calculate the risk-free rate and the comparative corporate bond rate to derive the debt premium: in a positive yield environment 10-year debt is, of course, more expensive than five-year debt.

[1177] In the Commission's cost of capital IMs the relevant comparative corporate bond rate assumes a BBB+ rating. Transpower actually has a rating of A-. Transpower does not suggest that individual parameter should be used. We agree with the Commission's decision to use a BBB+ rating for Transpower (on the basis of our agreement – discussed subsequently – that it is appropriate to base Transpower's cost of capital on the same comparator samples as were used for the EDBs). A BBB+ rating, of course, produces a higher comparator corporate bond rate than would an A– rating. We cannot but note, as MEUG points out, the inconsistency in Transpower's approach.

[1178] Against that background we first observe that there is no direct support in the Act for Transpower's contentions. To the contrary, there is nothing in the Act suggesting that IPP regulation is intended to be lighter-handed than DPP or CPP regulation, nothing to give a supplier's individual circumstances the presumptive significance Transpower argues for, and nothing to suggest that IMs specified for IPP regulation should be approached differently from those for other forms of regulation.

[1179] Transpower placed considerable emphasis on the "individual" focus of IPP regulation in arguing for the adoption of its actual cost of capital. It pointed to the Explanatory Note's description of IPP regulation as "… a conventional price control

regime for individual businesses". As far as we are aware, conventional price control regimes for an individual business do not use the business' actual WACC or CAPM parameters in estimating its cost of capital. Given the Commission's approval of Transpower's capex, which drives the amount of capital it must raise, an efficient cost of capital is central to providing an IPP that will promote the s 52A(1) purpose and outcomes which govern IPP regulation. That is even more the case when the regime is an incentive based regime of the kind found in Part 4.

[1180] Contrary to the thrust of Transpower's submissions, therefore, the role of a cost of capital IM under IPP regulation is not fundamentally different from the role of such an IM in DPP/CPP regulation. As the Commission submits, the content and timing of price-quality paths (whether DPP/CPP or IPP) is governed by s 53M and the way in which they are monitored for compliance is governed by s 53N. The Act makes no distinction between the three types of regulation in these basic respects.

[1181] Nor do we accept Transpower's submissions to the effect that CPP regulation is such a different concept from IPP regulation that the rationale in the EDBs-GPBs Reasons Paper as it relates to the cost of capital for an EDB under a CPP does not apply to Transpower. None of the differences between the CPP and IPP regimes suggest that the Commission should have approached the determination of Transpower's cost of capital in a way different from the way it determined the EDBs' cost of capital. Moreover, we accept the Commission's assessment 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.

[1182] The fact that a price-quality path is developed for a particular supplier (be it a CPP or IPP) should not influence the determination of the cost of capital. It is an axiom of the CAPM model that an investor does not require compensation for the idiosyncratic risks faced by a particular supplier because the investor may neutralise those risks by diversification, leaving only the correlation of the supplier's cash flows with the market as requiring compensation – which is the role of the price-quality path.

[1183] We note that this approach to a firm's cost of capital is not based on what the firm's owners actually do in terms of diversification of their asset holdings, but what they could do. The basic notion is that the market will not provide higher returns for actions by a firm than its shareholders could undertake for themselves. In the case of government ownership of a firm, the argument remains the same. Just as the government owner should not be expected to accept lower returns because the firm can borrow more cheaply with a government guarantee (explicit or implicit), it should not be able to reap higher returns because it does not necessarily own a diversified portfolio of assets. The firm's cost of capital relates to the riskiness of its investments.

[1184] More fundamentally, estimating Transpower's cost of capital in reliance on its data alone (as advocated by Transpower relying on Powerco's "workably competitive market" submission) would not promote the Part 4 purpose. Indeed, such a proposition flies in the face of the Part 4 purpose. Given that Transpower is the sole supplier of transmission services, determining its cost of capital by starting with its actual cost of capital and applying its directly observed parameters would go very little distance to "… promoting outcomes that are consistent with outcomes in competitive markets".[666] That is because Transpower simply does not operate in a workably competitive market. As a SOE monopoly there is no basis for presuming that Transpower operates efficiently. The administrative settlement and the transitional provisions which preserved it,[667] the Commission's recommendation that Transpower be subject to IPP regulation, the Minister's acceptance of the recommendation and the s 52N Order in Council giving effect to it, all tell strongly against such a presumption.

[1185] Nor do we think Transpower is correct when it submits that, because of Transpower's actual circumstances and the way the rest of the Part 4 regulatory framework applies to, and affects it, we can in effect assume – in the absence of probative evidence to the contrary – that its leverage and cost of capital are efficient. In our view, the decision to make Transpower subject to Part 4 tells against that proposition. Put very simply, just because Transpower as an SOE may – in effect –

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666 Section 52A(1).
667 Section 54M.

be required to borrow more than might otherwise be the case to meet its transformational capex programme does not make that level of debt efficient. Moreover, there can be no assumption that its costs of capital, be it debt or equity, are efficient.

Outcome

[1186] For the reasons stated above, we are not satisfied that a cost of capital IM for Transpower which would estimate Transpower's cost of capital on the basis of Transpower's actual cost of capital, as submitted by Transpower, would be materially better in meeting the s 52A and/or s 52R purpose(s). Nor are we persuaded the Commission erred in law when setting the Transpower cost of capital IM.

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6.5 THE CHALLENGED WACC ESTIMATES AND THE CROSS-CHECK APPEALS

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The challenged WACC estimates – an overview

[1187] The asset valuation IM appeals involve fundamental challenges to the Commission's methodology for setting opening RAB values. By contrast, the cost of capital IM appeals, subject to the Airports' and Transpowers' in principle challenges we have just addressed, in large part accept the Commission's methodology: they instead involve challenges to parameter values determined by the Commission and to the methodologies used by the Commission in that process. It is helpful to consider the impact of particular parameter value challenges on the cost of capital estimates produced by the application of the cost of capital IMs as a whole. That, in turn, is a helpful context in which to consider the appeals against the cross-checks that the Commission carried out of its cost of capital estimates.

[1188] The three formulas that underpin the cost of capital IMs, that is for the WACC, the cost of debt and the cost of equity, give an appearance of mathematical precision. The reality is, however, far from that. As these appeals show, the parameters in those formulas, far from being measurable or otherwise certainly determinable, reflect estimation processes of varying degrees of complexity. Those parameters can only be determined based on a range of judgements, the validity or appropriateness of which is open to debate. The Commission considered that the debt premium, asset betas and the TAMRP had significant uncertainty associated with them, by contrast with the estimation or determination of the risk-free rate, debt

issuance costs, leverage and the tax rate. Its use of standard errors for those parameters reflected that.[668] Nevertheless, and as these appeals show, judgement and uncertainty is a feature of the estimation of all cost of capital parameter values.

[1189] In determining WACC, precision is therefore an elusive and perhaps non-existent quality. Setting WACC is, we suggest, more of an art than a science. The use of WACC, in conjunction with RAB values, to set prices and revenues in price-quality regulation gives a significance to WACC estimates that may not exist outside this context. In the context of ID regulation, the Airports point to the, inappropriate they say, normative significance of the Commission's WACC estimates. When the question, as here, is whether one approach to determining cost of capital is materially better than another, we think it is sensible to keep at least one eye on what may be a search for spurious precision.[669]

[1190] What is fundamental to these cost of capital IM appeals is the regulated suppliers' contentions that the Commission's estimates of WACC are too low, so that they will not be able to recover their cost of capital. Those inappropriately low WACC estimates would lead to prices that were also too low. On that basis, the fundamental contention here is, therefore, the same as in the asset valuation IM appeals. MEUG, representing large customers of the EDBs and Transpower, says that the resulting WACC estimates, and therefore prices, will be too high.

[1191] Between them, the regulated supplier appellants challenge the Commission's approach to every one of the parameters of those three formulas except for the tax rate. Some parameter decisions, for example the choice of term as it affects the risk-

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[668] EDBs-GPBs Reasons Paper at [H11.51], 3/7/001550.

[669] The Commission itself recognised the inherent uncertainty of WACC estimates:

> In estimating the cost of capital, the Commission recognises that this is an estimation process, which is likely to be imprecise. The aim of the Commission therefore is to estimate a cost of capital that, when applied under Part 4, promotes outcomes as regards to quality and pricing of the regulated services that are consistent with those produced in workably competitive markets: Airports Reasons Paper at [E1.28], 1/6/000786; EDBs-GPBs Reasons Paper at [H1.29], 3/7/0001378.

Similarly, WIAL and CIAL claim that the Commission was, by determining a WACC IM, attempting to import a "spurious precision" into the assessment of whether the Airports were earning normal or excessive profits, referring to the use of that phrase in *South Yorkshire Transport Ltd and another v Monopolies and Mergers Commission and another* [1993] 1 All ER (HC) at 295.

free rate, face challenges from virtually all the supplier appellants.[670] Others, for example the debt premium being based on New Zealand issued debt only, are challenged by only one of those appellants.[671] On each occasion, the proposed alternative approach is said to, by itself or in conjunction with alternative approaches to other parameters, produce an IM which, as a whole, is or will be materially better at meeting the purpose of Part 4, the purpose in s 52R, or both. Each regulated supplier, when its various challenges are taken together, argues for a materially higher WACC than that which would be produced by the Commission's IMs.

[1192] The table below compares the Commission's estimates of WACC as at September 2010 as set pursuant to the cost of capital IMs, to the Commission's estimates of those that would result if these appeals were allowed.[672] The figures in this table are taken from Annex 2.3 of Volume 2 (Cost of Capital) of the Commission's written submissions, as amended for the EDBs and Transpower in the Commission's *September 2012 Revised Annex 2.3* and as further updated, as regards Transpower, in a 25 October 2012 joint memorandum of counsel for the Commission, Transpower and MEUG.

EDBs and Transpower						
	Commission	Vector(1)	Powerco(2)	WELL(3)	Transpower(4)	MEUG
Cost of debt	6.99%	9.18%	8.80%	8.80%	7.60%	6.64%
Cost of equity	7.66%	10.70%	9.60%	8.11%	12.80%	5.68%
Vanilla(5) WACC	8.09%	11.44%	10.97%	9.14%	10.42%	5.68%
Post tax(5) WACC	7.22%	10.29%	9.87%	8.04%	8.87%	5.68%

Airport Companies			
	Commission	AIAL(7)	WIAL/CIAL(7)

[670] The term of the risk-free rate is challenged by Powerco, Vector, WELL, Transpower, WIAL, CIAL and AIAL.

[671] Powerco alone challenges the source of debt in the debt premium.

[672] Estimates of WACC vary over time. The WACCs determined by the Commission for the 2013 disclosure year are significantly lower than the Commission's 2010 estimates. The Commission determined a 75th percentile post-tax WACC of 6.56% for the EDBs as compared to the 2010 estimate of 7.22%. Similarly for the Airports, the Commission determined a 50th percentile post-tax WACC of 6.49% for AIAL and CIAL and, demonstrating the variability of WACC, a 50th percentile post-tax WACC of 7.06% for WIAL, which has a later disclosure year. These estimates are lower than the 2010 estimate of 8.06% for the Airports. Decision [2012] NZCC 10 and [2012] NZCC 20.

Cost of debt	7.06%	7.60%	7.68%
Cost of equity	8.68%	11.87%	11.87%
Vanilla WACC(6)	8.40%	12.16%	12.19%
Post Tax WACC(6)	8.06%	11.30%	11.32% (8)

NOTES:

(1) The Commission calculates Vector's WACC using the figures provided by Vector in its table at page 105 of its Cost of Capital Submissions. In that table, however, Vector does not give figures for the debt premium or the risk-free rate. Rather, it describes the methodology it says is materially better. The Commission calculates those parameter values for Vector (2.90% and 5.25% respectively) using Vector's proposed methodologies. Elsewhere, however, Vector provides estimates of 2.41% and 6.14% for those parameter values. We are not in a position to reconcile those differing estimates.

(2) The Commission's estimates for Powerco are lower than Powerco's own calculations of what it is seeking. Powerco's calculations give a vanilla WACC of 11.94% and a post tax WACC of 10.68%, based off a cost of debt of 10.05% and a cost of equity of 10.23%. Again, we are not in a position to reconcile those differences.

(3) WELL does not specify alternative values for the parameters it appeals. The Commission's estimates of the WACC sought by WELL are calculated using the methodologies specified by WELL for the parameters appealed.

(4) Transpower proffered three optional, materially better, approaches to calculating its WACC. The Table reflects Option (b) which uses Transpower's actual leverage and a debt beta of 0.8% (see Part 6.17 of this judgment at [23]). This is the mid estimate of Transpower's three options and produces a post-tax WACC of 8.87% as compared with 8.95% for Option A and 8.84% for Option C.

(5) The point estimates of vanilla and post tax WACCs for the Energy Appellants and Transpower are, except in the case of the MEUG results, based on the 75th percentile, as provided for in the cost of capital IMs and as not challenged by them. MEUG's results are based on the 50th percentile, as MEUG argues would be materially better.

(6) The Commission's point estimates of vanilla and post tax WACCs for the Airports are based on the 50th percentile consistent with the Airports cost of capital IM which specifies a mid-point estimate of WACC and a range of 25th to 75th percentile.

(7) The Airports all propose a 1–2% ad hoc adjustment to WACC to take account of model error. The Commission's estimates shown in the Table reflect such an adjustment.

(8) In reliance on a PwC analysis of airports that gave an average leverage of 26%,[673] WIAL/CIAL also argue, as an alternative to their primary argument for leverage of 40%, for leverage of 26%. This would result in a post-tax mid-point WACC of 10.11%.

[1193] As is apparent, no figures are provided for the GPBs. This reflects the approach taken by the Commission, and accepted by all relevant parties, to cost of capital issues for the GPBs. The Commission concluded that there was a lack of helpful comparative information for the GPBs. They were, however, in a generally

[673] PwC *Analysis of Airport Asset Betas* (3 August 2010) at 29, 34/253/017324.

similar position to the EDBs, although facing greater systematic risk. The Commission therefore concluded that their cost of capital IMs would be the same as those for the EDBs, but with an equity beta that was higher by 0.1 to account for that greater risk. That approach is accepted by Vector, where it appeals in its capacity as a GPB against the cost of capital IMs. In this judgment our analysis is based on the EDBs. That analysis applies equally to the GPBs.

[1194] The Commission justified the robustness of its cost of capital IMs by reference to a range of WACC estimates for businesses that were both similar and dissimilar to those regulated under Part 4. The Commission presented the results of those cross-checks in a number of places in the Reasons Papers.[674] It consolidated that information in the following figures in the Principal Reasons Papers which, reflecting the very similar structure and texts of those papers, were both numbered Figure 6.6 (although they differ from each other):[675]

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674 See for example EDBs-GPBs Reasons Paper at [H13.28]-[H13.34], 3/7/001567; Airports Reasons Paper at [E13], 2/6/000946,

675 EDBs-GPBs Reasons Paper at Figure 6.6, 3/7/001154; Airports Reasons Paper at Figure 6.6, 2/6/000740.

Figure 6.6 Testing the Reasonableness of the IM Estimates of the WACC Against Comparative Information

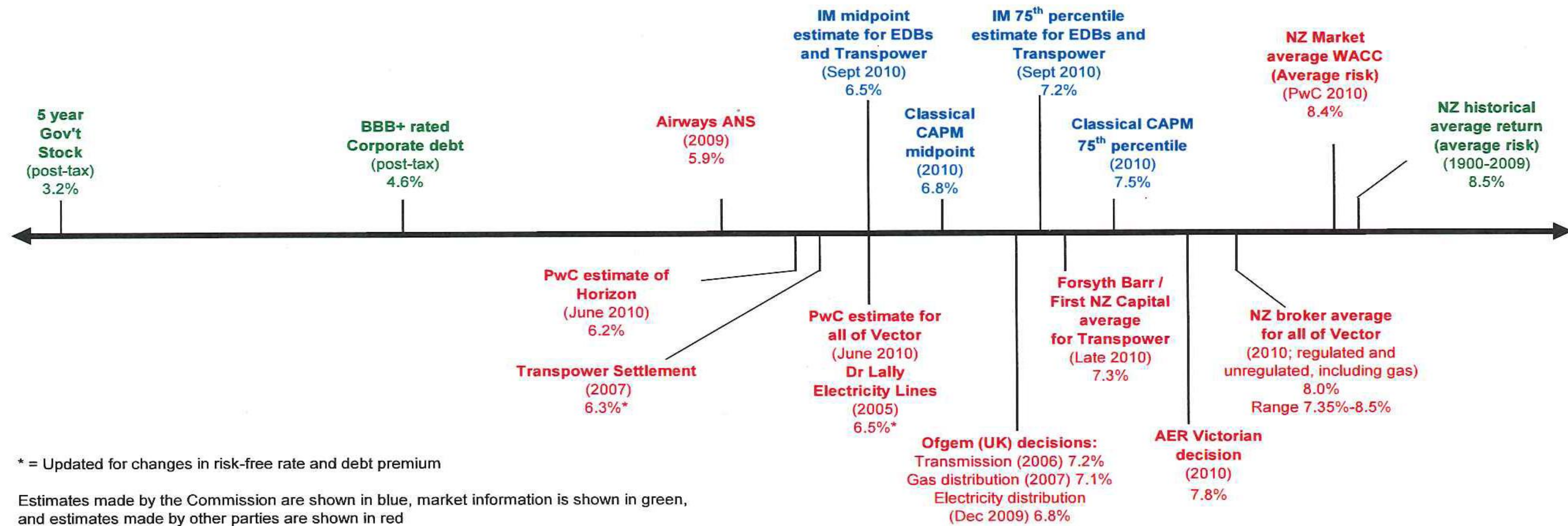
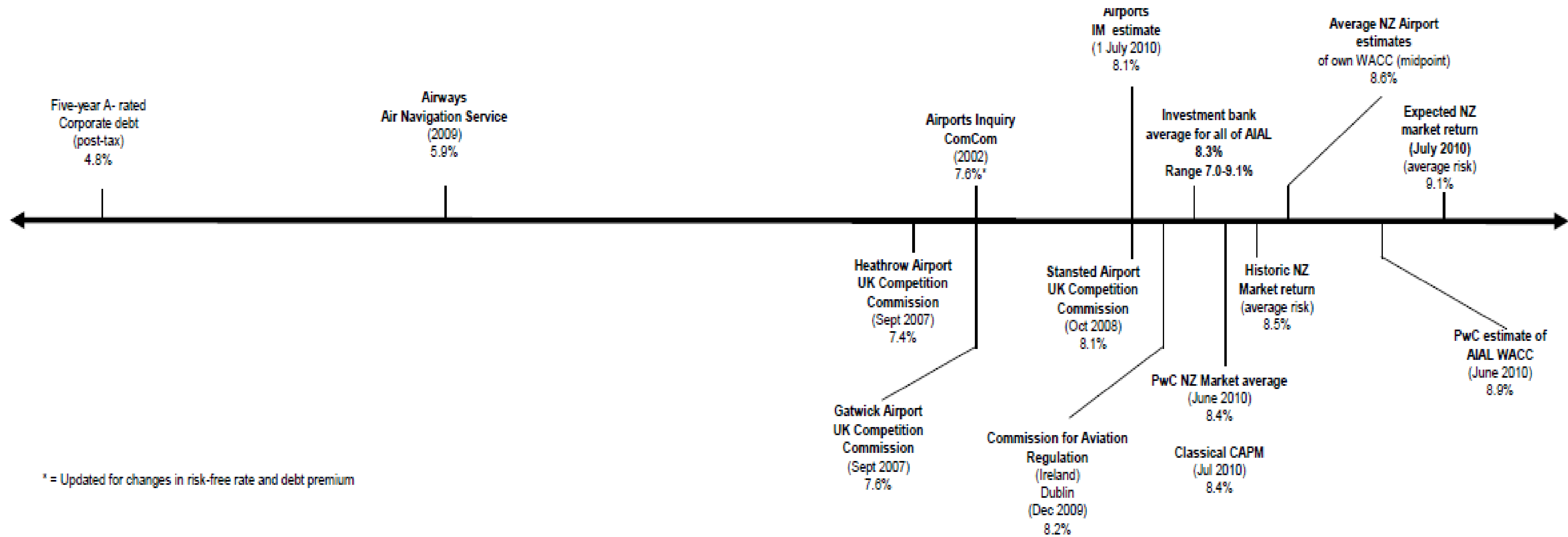


Figure 6.6 Testing the Reasonableness of the IM Estimates of the WACC Against Comparative Information



[1195] The Commission concluded – by reference to the information summarised in those figures that, considered individually and as a whole, the cross-checks "strongly supported" the conclusion that the IMs produce reasonably and commercially realistic estimates of the post-tax WACCs for the EDBs and Transpower, and "supported" that conclusion in the case of the Airports.

[1196] If we agree with those propositions, that would constitute an important element in our consideration of these appeals. That is:

(a) If we agree that the cross-check information does (strongly) support the Commission's WACC estimates as reasonable and commercially realistic, it would be more difficult to conclude – given the magnitude of the WACC increases sought and the overall purpose of Part 4 and of the IMs within that – that to allow the appeals would result in materially better cost of capital IMs.

(b) If, however, we disagree with the Commission's overall conclusion, that clearly leaves more open a conclusion that to allow one or a number of these appeals would produce materially better cost of capital IMs.

No doubt such thinking underlies the appellants' challenges to the cross-checks, given that they are not part of the cost of capital IMs.

[1197] Before going further it is therefore appropriate to consider the appellants' challenges to the Commission's cross-checks.

The cross-check appeals

The Commission's "decisions"

[1198] The Commission based its "strongly supported" and "supported" WACC estimates conclusions on the following more detailed assessment of those WACC estimates relative to the information summarised in its Figures 6.6.

EDBs and Transpower:

[1199] The Commission concluded that its estimates for the EDBs and Transpower were reasonable as:[676]

> [they fall] appropriately between the post-tax cost of debt and the cost of capital for the average New Zealand firm (based on historic and forecast estimates, and assuming 30% gearing). This is reasonable because:
>
> - EDBs and Transpower have much lower exposure to risk than the average New Zealand firm. Accordingly, the cost of capital for these regulated suppliers could be expected to be well below the cost of capital for a New Zealand firm of average risk; and
> - the cost of capital for an EDB or Transpower must be well above the cost of debt as the cost of capital includes the cost of equity (which is greater than the cost of debt).

[1200] The estimates were:[677]

(a) above or very close to Ofgem's estimates for like regulated firms in the UK;

(b) above the estimates of the self-regulating Air Navigation Service (part of Airways Corporation NZ) and similar to (though generally above) estimates implied in previous Commission decisions;

(c) close to two recent independent estimates for Transpower; and

(d) above those of PwC's quarterly cost of capital report for Vector and Horizon (PwC publishes quarterly estimates for some 70 listed companies and the Commission based this observation on the most recent available to it, namely, June 2010).

The Airports:

[1201] The estimates were:[678]

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676 EDBs-GPBs Reasons Paper at [6.8.6], 3/7/001153.
677 EDBs-GPBs Reasons Paper at [6.8.6], 3/7/001153.
678 Airports Reasons Paper at [6.8.5], 2/6/000741.

(a) above the UK Competition Commission's estimates for Heathrow and Gatwick and similar to estimates for Stansted and the Irish regulator's estimate for Dublin airport;

(b) above the estimates of the self-regulating Air Navigation Service and the estimate implied in the Commission's Airports Inquiry;

(c) slightly below the New Zealand investment banks' average estimate for all of AIAL's business (including unregulated services which would be expected to have a higher WACC)[679] and the estimate using the classical CAPM (which assumes imputation credits have no value); and

(d) below the estimate of the historic returns on NZ investments of average market risk, the Airports' average estimate of their own WACC, PwC's estimate for all of AIAL's business (including unregulated services which would be expected to have a higher WACC) and its expected estimate for NZ average market risk.

Appeals

[1202] Vector, Powerco, Transpower and WIAL/CIAL appeal the Commission's cross-check analysis.[680] MEUG does not separately appeal against that analysis. It argues, as part of its appeals against the use of the 75th percentile to determine WACC for the EDBs and Transpower, that the cross-checks did not support that approach. We deal with MEUG's arguments in that context.

[1203] The supplier appellants generally argue that the Commission was wrong to have compared its 75th percentile WACC result with other mid-point estimates, that the comparisons were circular to the extent they involved other Commission WACC

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679 The Commission observed in this regard that: "The investment bank estimates seek to estimate AIAL's cost of capital over the life of its assets and some use a 10 year risk-free rate which is higher than the current market average, while the Commission's IM is for a specified five year regulatory period, and is explicitly linked to market interest rates." Airports Reasons Paper at fn 286, 2/6/000741.

680 Vector Appeal 259 at [EDS. WACC (13)]; Powerco Appeal 180 at [14]; Transpower Appeal 1656 at [27]; WIAL Appeal 249 at [34]; CIAL Appeal 251 at [25].

estimates, and that – particularly as regards overseas information – the Commission overlooked more relevant comparators or misapplied the ones that it did use.

[1204] More particularly, in their written submissions:

(a) Vector suggests a number of specific additions, alterations and deletions to the Commission's Table H14.[681]

(b) Powerco argues the Commission's analysis was flawed by being based on biased assumptions and arbitrary and insufficiently insensitive cross-checks.

(c) Transpower points to analyses by Officer and Bishop and Cameron Partners[682] which, it argues, establish that the Commission's Transpower cost of capital IM systematically underestimates Transpower's WACC. For example, the Cameron Partners' analysis estimated a mid-point post-tax WACC of 8.1%.

(d) WIAL and CIAL argue that the comparator estimates that did not lack credibility (namely the PwC estimate and the Airports' own estimate) were significantly higher than the Commission's IM estimates.

[1205] A number of the appellants drew our attention to the fact that the Commission had not explicitly consulted on its cross-checking process. Such a claim had formed part of the generally unsuccessful judicial review challenges Clifford J heard in 2011. In the course of dismissing that challenge, in which decision the policy behind the "closed record" provisions of s 52ZA(2) was an important factor, Clifford J observed:[683]

> Here, I think it is relevant that the High Court on appeal comprises two experts. Those experts will be well placed to assess for themselves the

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[681] EDBs-GPBs Reasons Paper, 3/7/001480.

[682] Officer and Bishop *Independent Review of Commerce Commission's WACC Proposals for Transpower* (5 August 2010), 34/254/017330; Cameron Partners *Report to Transpower New Zealand Ltd relating to a market based rate of return assessment* (16 August 2010), 36/275/017993.

[683] *Wellington International Airport Ltd v Commerce Commission* HC Wellington CIV-2011-485-1031, 22 December 2011 at [262](b).

> robustness or otherwise of the Commission's cross-checks, and also to assess the practical significance of the fact that the Commission did not expose those cross-checks to the Airports or Transpower for comment.

The Commission, and several of the appellants, reminded us of those remarks of Clifford J. We bear them in mind as we consider these challenges to the Commission's cross-checks.

[1206] The cross-check appeals did not receive much attention in the oral submissions we heard. We acknowledge that the appellants and the Commission had considerable ground to cover in those oral submissions. Generally we were referred by the parties to their written submissions and we have considered these issues on that basis accordingly. We note two particular matters. First, the Commission objected to some of the material Vector relied on, in its written submissions, in support of proposed additions to the Commission's Table H14.[684] The Commission said that material was inadmissible as it was not part of the closed record. Mr Myers, for Vector, only briefly referred to Vector's cross-check submissions, and did not respond to the detail of the Commission's objection. Our approach to the cross-check material is based, for the reasons we give shortly, on New Zealand data. The data in question all came from overseas. It is therefore not necessary for us to address that matter further. Secondly, in the context of Transpower's leverage appeal, Mr Shavin accepted the Commission's assessment that no weight could be placed upon the Cameron Partners' analysis. Transpower took that position to challenge Dr Lally's leverage analysis, to the extent it relied on the Cameron Partners' report. Therefore, Transpower cannot expect us to place any weight on that report either.

Analysis

[1207] The Commission's first response to these challenges is to assert that, as the cross-checks were not called for by the IMs themselves and did not involve a determination of the Commission, they are not appealable under either of s 52Z or s 91(1B).

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[684] EDBs-GPBs Reasons Paper at Table H14, 3/7/001480

[1208] We agree that the cross-checks are not appealable in and of themselves. But they were definitely a part, and a not unimportant part, of the Commission's reasoning process leading to its IM determinations. As is recorded in Clifford J's judgment in the judicial review challenges to the Commission's process, one of the IM members of the Commission acknowledged that, if the cross-checks had indicated an "oddity" that had not previously been apparent, that might have led the Commission to change the IM.[685] A successful challenge to the Commission's cross-checking process – successful in that we are persuaded by the appellants' arguments – would mean that the cross-checks did not, as the Commission concluded, support or strongly support its cost of capital IM determinations. That would, in our view, be something we should give appropriate weight to in considering these appeals, and in particular the appeals against the cost of capital range in Part 6.11 of this judgment.

[1209] We therefore turn to the substance of the appellants' challenges.

[1210] The comparative information against which the Commission tested its WACC estimates comprised:[686]

(a) yields on five-year Government stock and BBB+ corporate debt;

(b) estimates of the long-run historical returns earned by New Zealand investors on investments of average risk (over the period 1900-2009);

(c) estimates of future returns expected by New Zealand investors on investments of average risk;

(d) estimates of post-tax WACC in other regulatory contexts especially in New Zealand, Australia and the United Kingdom;

(e) independent estimates of the post-tax WACC for New Zealand monopolies; and

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[685] *Wellington International Airport Limited v Commerce Commission* HC Wellington CIV-2011-485-1031, 22 December 2011 at [258].

[686] EDBs-GPBs Reasons Paper at [H13.8]-[H13.9], 3/7/001563; Airports Reasons Paper at [E13.8]-[E13.9], 2/6/000947-8.

(f) estimates of the post-tax WACC using other approaches including the classical CAPM.

[1211] Yields on Government stock and corporate debt, as the Commission submits, set lower bounds. They are not otherwise helpful in this context.

[1212] We accept, as a number of appellants submit, that cross-checking by the Commission against its earlier regulatory decisions is not an independent process. Nor is cross-checking against estimates generated by the Commission on the basis of its own (disputed) parameter estimates as used to generate its classical CAPM, WACC estimates. We are not persuaded that Airways Corporation NZ's self-estimate for its self-regulating air navigation services business is particularly helpful. As the Commission submits, considerable care has to be taken when comparing New Zealand WACC estimates with those from other regulatory contexts. Clearly considerable adjustment is required before applying regulatory estimates from, for example, the United Kingdom and Australia, to the New Zealand context. The debate between the Commission and Vector on that issue in written submissions, largely unaddressed before us orally, evidences that. Regulated suppliers' own estimates also lack independence for cross-checking purposes.

[1213] By our assessment, therefore, the most helpful comparative material for cross-checking purposes comprises independent assessments of WACC in the New Zealand context. In saying that, we agree with the Commission's submission that:

> Primary weight should be given to New Zealand sourced estimates of the cost of capital since these reflect the cost of capital in a New Zealand context giving proper regard to expectations of returns on debt and equity from New Zealand investors; the particular characteristics of New Zealand's tax regime; New Zealand market conditions; and New Zealand investment alternatives. Further, New Zealand sourced estimates are more reliable in the sense that they require significantly fewer adjustments (with less potential to introduce errors) to ensure comparability with the IM estimate.

[1214] The Commission used the following such information:

	Post-tax WACC Estimate
Dimson, Marsh and Staunton: Historic NZ post-tax average risk WACC estimate 1900-2009[687]	8.5%
PwC: June 2010 estimate of average NZ post-tax WACC[688]	8.4%
PwC: June 2010 estimate for Horizon Distribution[689]	6.2%
PwC: June 2010 estimate for Vector Limited[690]	6.5%
NZ Brokers: Aug-Sep 2010 estimates for Vector[691]	7.35%-8.5% Average 8.0%
NZ Brokers: Oct-Nov 2010 estimates for Transpower[692]	7.2%-7.35% Average 7.3%
PwC: June 2010 estimate for AIAL[693]	8.9%
NZ Brokers: June-July 2010 estimates for AIAL[694]	7.0%-9.1% Average 8.3%
PwC: June 2010 estimate for NZ ports sector[695]	8.6%

[1215] We first address the relatively few criticisms by the appellants of those particular estimates.

[1216] Vector argues the PwC estimates for market average, and Horizon and Vector specific, WACCs should not be used because Vector's cost of capital report, from which they were taken, adopted a high level "turn the handle" approach. PwC did not, Vector argued, analyse individual firms in detail and its estimates were below those by brokers (for example the New Zealand broker average estimate for Vector of 8%, and the Forsyth Barr/First NZ Capital estimate for Transpower of 7.3%). But PwC is a highly respected firm. It puts its name to its annual cost of capital report. That its individual firm estimates are below those of others is, in and of itself, neither here nor there. We reject Vector's criticisms of the PwC estimates.

[1217] Transpower argues that the estimates for Horizon and Vector are not relevant to it. The Commission's answer is that those firms both provide electricity lines services as defined in s 54C, as does Transpower. The Horizon and Vector estimates

687 Airports Reasons Paper at [E13.12], 2/6/000949.
688 Airports Reasons Paper at [E13.12], 2/6/000949.
689 EDBs-GPBs Reasons Paper at [Table H27], 3/7/001575.
690 EDBs-GPBs Reasons Paper at [Table H27], 3/7/001575.
691 EDBs-GPBs Reasons Paper at [Table H27], 3/7/001575.
692 EDBs-GPBs Reasons Paper at [Table H27], 3/7/001575.
693 Airports Reasons Paper at [E13.30], 2/6/000952.
694 Airports Reasons Paper at [E13.30], 2/6/000952.
695 Airports Reasons Paper at [Table E26], 2/6/000953.

are, in our view, of less relevance to Transpower than the Transpower specific estimates, but at the same time are of some cross-checking relevance.

[1218] WIAL/CIAL criticise the Commission for not identifying in the Airports Reasons Paper the brokers who provided the estimates for AIAL. The point of that criticism is unclear. As the Commission notes, given the relatively small number of New Zealand investment banks who provide such research, we infer it would not have been difficult for WIAL/CIAL to identify the authors. In any case, the relevant reports are in the record for these appeals.[696] As regards the Commission's use of the PwC estimate on AIAL; WIAL/CIAL – but not AIAL – challenge the Commission's assessment that the post-tax WACC of the regulated services could be expected to be lower than that of the overall company. As they put it, "it is quite possible that the aeronautical aspect of AIAL's business in fact has a higher WACC than its overall average". We regard that proposition, for which no reason is given, with more than a little scepticism. The Commission's assessment is to us far more plausible for no other reason than the fact that it is the aeronautical aspects of AIAL's business that are regulated services, being ones provided in markets regulated under Part 4. It is something of a truism to observe that investors' risks in such markets are generally considered to be lower than in more competitive markets.

[1219] We therefore conclude that the cross-check information used by the Commission, referred to by us at [1214], is appropriate to be used for that purpose.

[1220] Moreover, and confirming the relevance of that information, we agree with the following assessments by the Commission of the relative "riskiness" of the business of the supply of regulated services in the EDBs-GPBs Reasons Paper:[697]

> EDBs (and Transpower) ... provide essential services, with very stable demand, face no real substitutes and have no or limited competition. As providers of essential services, used 24 hours a day 365 days a year by

[696] Goldman Sachs *Auckland International Airport Limited, VY10: Guidance Flyby* (26 August 2010). 60/607/030960; Credit Suisse *Auckland International Airport Targeting double digit EPS growth* (27 July 2010), 36/291/018250; Deutsche Bank *Auckland International Airport Improving fundamentals* (25 June 2010), 32/221/16217; Macquarie Bank *Auckland International Airport Solid outlook, but in the price* (25 August 2010), 36/280/18145; email from Wade Gardiner to John Groot regarding copy of recent reports re VCT/AIA (15 September 2010), 64/683/032432.

[697] EDBs-GPBs Reasons Paper at [H13.22], 3/7/001566.

> virtually every consumer in the country, they have locked-in users with no choices and little bargaining power. Such firms face significantly lower systematic risk than the average firm, and are the quintessential low risk business. Equity investors in such companies would expect to earn a lower return on their investments, than in an average NZ company. This conclusion is supported by the empirical estimates of beta by the Commission and of the expert advisors who provided beta estimates. No advisor submitted the equity beta for EDBs should equal one, or be above one (that is, no advisor submitted that EDBs face average or above average systematic risk).

[1221] And in the Airports Reasons Paper:[698]

> Airports regulated services have below average risk. While they have considerable pricing power, and have users with limited alternatives, they are exposed to a number of demand risks which are a function of systematic factors.

[1222] In each case the Commission's overall conclusion, with which we agree for the reasons given, was that given that relative riskiness, a reasonable expectation would be for the Commission's WACC estimates for EDBs, Transpower and the Airports to be, as they are, below the average risk WACC estimates listed above. How much below is, we accept, the more difficult question. But what is clear is that those average risk WACC estimates provide no support whatsoever for the proposition that, as manifested in the estimated WACC outcomes outlined at [1192], the appellants' alternative IMs would be materially better. Rather, they support the conclusion that those IMs would produce estimates of WACC levels materially above ones which would be consistent with achieving the statutory purposes.

[1223] In our view, the same conclusion can be drawn by reference to the more specific independent WACC estimates listed above.

[1224] In the case of the EDBs and Transpower, the relevant estimates are:

(a) the PwC cost of capital reports for Horizon and Vector (6.2% and 6.5%);

(b) the NZ Broker estimates for Vector (7.35%-8.5%: average 8%); and

[698] Airports Reasons Paper at [E13.20], 2/6/000950.

(c) the Forsyth Barr/First NZ Capital estimates for Transpower (7.2%-7.35%: average 7.3%).

[1225] The analysis is, by reference to the table at [1214], reasonably straightforward. The Commission's 7.2% WACC estimate for the EDBs and Transpower sits comfortably within the range of those estimates. Moreover, and in terms of the materially better proposition the appellants must establish, the WACC estimates that would be produced by their alternative cost of capital IMs sit markedly outside that range.

[1226] With respect to the submissions we heard from Transpower in particular, the position it takes on cost of capital in these appeals is, given the Forsyth Barr/First NZ Capital assessments, difficult to accept. Remember, Transpower proposes post-tax 75th percentile WACCs of 8.95%, 8.87% or 8.84%, compared with the Commission's equivalent estimate of 7.22%. In September 2010 the New Zealand Treasury, on behalf of Transpower's Crown owner, commissioned the Forsyth Barr/First NZ Capital independent valuations. As relevant, First NZ Capital summarised its assessment in this way:[699]

> We assume no change to the current regulatory model and that a regulated return of 7.06% is applied from 1 July 2011 in terms of our DCF valuation. This compares to our assessed WACC of 7.35%, meaning Transpower is earning less on its regulated assets than we think the listed market would require.

Forsyth Barr did so in these terms:[700]

> Transpower is a low-risk investment that we expect will provide strong dividend growth once the near-term capital expenditure plans are complete.
>
> ...
>
> Our estimated long-term WACC for Transpower is 7.2%, approximately 60 bp below our estimates of the CC's long-term WACC of 7.5%. The key difference is that the CC adds a premium onto its base WACC estimate to counter the regulatory risk of underinvestment.

[1227] In the case of the Airports, the relevant estimates are:

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[699] First NZ Capital *Transpower: A Valuation Perspective* (29 October 2010) at 3, 39/298/019405.
[700] Forsyth Barr *Transpower Powering Up* (5 November 2010) at 1, 39/300/019427.

(a) the PwC June 2010 8.9% estimate for AIAL; and

(b) the NZ Brokers June-July 2010 estimates for AIAL of 7.0-9.1% with an average of 8.3%.

[1228] Again, the very straightforward analysis in the case of the Airports is that the Commission's post-tax WACC estimate of 8.1% is supported by those estimates. Again, the fairly obvious conclusion is that the WACC estimates that would result from the use of the Airports' proposed IMs find no support from that cross-check information.

Outcome

We therefore agree with Commission's conclusion that those independent estimates support the robustness and reasonableness of its WACC estimate. They do not, to use the Commission's words, identify any oddity or other like outcome in the Commission's estimates, such as might have required the Commission to change its approach. Moreover those independent estimates strongly suggest that the WACC estimates that would result from allowing in full the appellants' appeals against the Commission's cost of capital IMs would be considerably in excess of those that would be appropriate given the Part 4 purposes. This conclusion provides an important context for our consideration of the individual appeals against the Commission's determination in the cost of capital IMs of WACC parameter values. Having said that, this conclusion clearly cannot be determinative of our assessment of those appeals. Rather, each of those appeals needs to be considered by reference to its individual merits.

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6.6 COST OF DEBT APPEALS - OVERVIEW

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Introduction

[1229] As noted, the Commission's cost of capital IMs for each sector set the rules for determining each of the components of the cost of debt formula, namely:

(a) the risk-free rate;

(b) the debt premium; and

(c) debt issuance costs.

[1230] The Commission also provided in the cost of capital IMs for the debt related TCSD allowance.

[1231] Air NZ supports the Airports cost of capital IM, and the Commission's reasons for that decision. As such, we do not need to mention Air NZ's interested party submissions on these appeals.

[1232] We now outline the appeals against those determinations.

The risk-free rate and the TCSD

[1233] All the supplier appellants challenge the Commission's decision to determine the risk-free rate on the basis of a five-year term.[701] The Energy Appellants and

[701] To be clear, that is the Energy Appellants (Powerco, Vector and WELL), Transpower and the Airports. Powerco Appeal 180 at [12.1]; Powerco Appeal 248 at [17.1]; Vector Appeal 259 at [EDS.WACC (1)]; WELL Appeal 229 at [1]; Transpower Appeal 1656 at [22]; AIAL Appeal 820 at [4]; WIAL Appeal 249 at [29]; CIAL Appeal 251 at [22.2].

Transpower also challenge the Commission's related decisions to determine the debt premium on the basis of a five-year term, and to provide the TCSD.[702]

The debt premium

[1234] The Energy Appellants and the Airports challenge other aspects of the Commission's debt premium decisions applying to them.[703]

Debt issuance costs

[1235] Vector, MEUG and WIAL/CIAL challenge the Commission's debt issuance costs decision.[704] Powerco supports Vector's appeal against that decision. There is no challenge to that decision by WELL, Transpower or AIAL.

[1236] We consider the challenges to each of these determinations in the following Parts 6.7 to 6.9 of this judgment.

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[702] Powerco Appeal 180 at [12.2]; Powerco Appeal 248 at [17.2]; Vector Appeal 259 at [EDS.WACC(2)]; WELL Appeal 229 at [1]; Transpower Appeal 1656 at [23].

[703] Powerco Appeal 180 at [12.3]-[12.4]; Powerco Appeal 248 at [17.3]-[17.4]; Vector Appeal 259 at [EDS.WACC(4)]; WELL Appeal 229 at [1]; AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.3]; WIAL Appeal 249 at [30].

[704] Vector Appeal 259 at [EDS.WACC(4)]; MEUG Appeal 268 at [1]; MEUG Appeal 1660 at [1]; MEUG Appeal 269 at [1]; WIAL Appeal 249 at [26]; CIAL Appeal 251 at [22.3].

6.7 THE RISK-FREE RATE AND THE DEBT PREMIUM TERM AND THE TCSD

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The Commission's decisions

[1237] In the cost of capital IMs the Commission's methodology for determining the risk-free rate provides that:

(a) New Zealand Government bond rates current around the time the cost of capital is determined are the best proxy of risk-free interest rates;[705]

(b) yields to maturity rather than spot rates are used;[706]

(c) a calendar month averaging period is adopted to strike an appropriate balance between the need to obtain a current market estimate of the risk-free rate and the desire that the estimate be representative of its level more generally;[707]

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705 EDBs-GPBs Reasons Paper at [H4.4], [H4.9] and [H4.10], 3/7/001417 and 3/7/001419-20; Airports Reasons Paper at [E4.13]-[E.4.19], 2/6/000826-7.

706 EDBs-GPBs Reasons Paper at [H4.14]-[H4.20], 3/7/001420-1; Airports Reasons Paper at [E4.20] and [E4.26], 2/6/000827-8.

707 EDBs-GPBs Reasons Paper at [H4.21] and [H4.27], 3/7/001421-001422; Airports Reasons Paper at [E4.27], 2/6/000828.

(d) the risk-free rate-parameter will be updated each time the Commission estimates the cost of capital for regulatory purposes;[708] and

(e) the term of the risk-free rate – five years – is matched to the typical five-year regulatory period in the case of the Energy Appellants and Transpower[709] and the five-yearly basis on which the Airports' pricing agreements are reviewed and reset.[710]

[1238] All the supplier appellants challenge the last step in that analysis, namely the Commission's decision to adopt a five-year term for the risk-free rate, and hence for the debt premium as well.[711]

[1239] The Commission gave five reasons for that decision:

(a) Firstly, consistency with its previous decisions.[712] The Commission explained that it has always matched the term of the risk-free rate to the regulatory period.[713]

(b) Secondly, to ensure a normal rate of return.[714] As explained by the Commission, it will typically set prices or evaluate returns over a

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708 EDBs-GPBs Reasons Paper at [H4.28], 3/7/001422; Airports Reasons Paper at [E4.28], 2/6/000828.

709 EDBs-GPBs Reasons Paper at [H4.29], 3/7/001422. While s 53M(5) provides that the Commission may set a period (not less than four years) shorter than five years if it considers that it would better meet the purposes of Part 4, the default position mandated by s 53M(4) is five years. However, a three or four year term may be required if a CPP applicant were to seek such a term – see EDBs-GPBs Reasons Paper at [6.3.4], 3/7/011121.

710 Airports Reasons Paper at [E4.29], 2/6/000828.

711 Because the debt premium is the difference between the risk-free rate and the relevant corporate bond rate, the term of both of those rates – and hence of the debt premium – must be the same.

712 EDBs-GPBs Reasons Paper at [H4.30], 3/7/001422; Airports Reasons Paper at [E4.29], 2/6/000828.

713 Past regulatory periods had ranged from one year (in its determinations in relation to the Telecommunications Service Obligation) to seven years (in the Gas Authorisation). Also, in the Airports Inquiry, the Commission set the term of the risk-free rate at five years, being the period for which the Airport companies typically set their prices. See Commerce Commission *Determination for TSO Instrument for Local Residential Service for period between 20 December 2001 and 30 June 2002* (17 December 2003), and every year since with the latest – at the time of the EDBs-GPBs Reasons Paper – being Commerce Commission *Draft TSO Cost Calculation Determination for TSO Instrument for Local Residential Telephone Service for period between 1 July 2008 and 30 June 2009* (4 December 2009); and Airports Inquiry Report at [6.18]-[6.24], 44/367/021865-6.

714 EDBs-GPBs Reasons Paper at [H4.32], 3/7/001423; Airports Reasons Paper at [E4.31], 2/6/000829.

given horizon – the five-year regulatory period. The risk-free rate may either increase or decrease with term. Matching the term of the risk-free rate to the term of the regulatory period ensures that there is no expectation that a supplier may earn a profit that is greater (or lower) than a normal rate of return. In published papers, Dr Lally had demonstrated that not matching the term of the risk-free rate to the term of the regulatory period implies ex ante returns above or below a normal rate of return.[715]

(c) Thirdly, the Commission's Expert Panel supported that approach.[716]

[1240] The Commission's fourth and fifth reasons were by way of response to submissions it received stating that a term of the risk-free rate which matches the regulatory period would be too short and would under compensate suppliers. These submissions, the Commission reasoned, overlooked:

(a) the ability of a supplier to reset prices at the end of the regulatory period to compensate for changes in risk-free rates; and

(b) the widespread use of interest rate swaps.[717]

[1241] The Commission reasoned that a supplier may use swaps to:

(a) re-price its interest costs (earlier than the debt's maturity term) and lower its overall interest costs; and

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715 Lally "Regulation and the Choice of the Risk Free Rate" (2004) 17 Accounting Research Journal 18, 16/79/006963; Lally "Regulation and the Choice of the Risk Free Rate: Implications of Corporate Debt" (2007) 20 Accounting Research Journal 73, 19/102/008309.

716 At the November 2009 Cost of Capital Workshop, Commissioner Mazzoleni summarised the advice as follows:

> … the three panel members … put the term … of [the] cost of debt … at the regulatory period, although none of them agreed what the regulatory period would be, we had different forecasts of a range between three and five years...: Cost of Capital Workshop *Transcript* (13 November 2009) at 127, 27/181/013330.

Thus, although the Commission's Expert Panel differed on their view as to what would or should be the regulatory period, they concurred with aligning the term of the risk-free rate with that regulatory period, whatever it was.

717 EDBs-GPBs Reasons Paper at [H4.38], 3/7/001425; Airports Reasons Paper at [6.3.9], 2/6/000711.

(b) enjoy the benefits of long-term debt (secured funding and reduced refinancing risk) without having to pay the full cost of long-term debt finance.[718]

[1242] Thus, the Commission concluded a supplier's prices should not reflect a premium for the uncertainty of risk-free rates beyond the length of the regulatory period. At the same time, it is a tenet of the Commission's reasons that interest rate swaps are widely used to hedge the risk-free rate component of a supplier's debt portfolio, leaving the debt premium component matched to the debt's original term to maturity.[719]

[1243] In its written submissions, the Commission commented that, in deciding on a five-year term for the risk-free rate it sought to balance the following, potentially conflicting, considerations:

- that the term of the risk-free rate should match the regulatory period to avoid compensating suppliers for costs and risks they do not bear;
- that the Commission's decisions as to term should recognise that the issuance of long-term debt is prudent and in the interests of consumers.

[1244] The following extract from the Principal Reasons Papers summarises the Commission's reasoning and conclusions on the five-year term:[720]

> The period of focus for regulatory purposes is the regulatory period, which is generally five years, not the life of the asset or business. Setting the term of the risk-free rate equal to the term of the regulatory period ensures that regulated suppliers are compensated for the risk they are exposed to during the regulatory period and that regulated suppliers are able to have the expectation of earning a normal return in the long-run. The regulated supplier also knows what the risk-free rate is for the duration of the regulatory period and can plan and manage its business accordingly.
>
> Setting the term of the risk-free rate at 10 years, when there is an inverse yield curve, would under-compensate suppliers. Conversely, when there is a positive yield curve, a 10 year term of the risk-free rate would over-compensate suppliers.

---

718 EDBs-GPBs Reasons Paper at [H4.43], 3/7/001426; Airports Reasons Paper at [E4.42], 2/6/000832.

719 See for example, EDBs-GPBs Reasons Paper at [H4.47], 3/7/001427.

720 EDBs-GPBs Reasons Paper at [H4.52-H4.55], 3/7/001428; Airports Reasons Paper at [E.4.51]-[E4.54], 2/6/000834-5.

> When suppliers reset their prices at the end of each regulatory period to reflect changes in WACC including changes in interest rate, the premium for uncertainty in long-term risk-free rates is borne by consumers, not suppliers. The use of a risk-free rate with a term longer than the pricing period would compensate suppliers for an uncertainty they do not bear.
>
> New Zealand suppliers make widespread use of interest rate swaps to manage interest rate risk. As suppliers can and do shorten the interest rate re-pricing period through the use of interest rate swaps, the term of the risk-free rate should not be based on a 10 year term.

[1245] In a handup summarising its decision on the term of the risk-free rate the Commission emphasised its fundamental reason for using a five-year period as being that prices are reset every five years to reflect prevailing risk-free rates.[721]

[1246] Linked to the Commission's acknowledgement that its decisions as to term should recognise that the issuance of long-term debt is prudent and in the interests of consumers, and its position that interest rate swaps are widely used to hedge, the Commission introduced the TCSD allowance. The TCSD had not previously featured in the Commission's decisions to align the term of risk-free rate with that of the regulatory period. The Commission explained:[722]

> The term credit spread differential has been included in the cost of capital IM to recognise and compensate for the greater debt premium some regulated suppliers may actually incur on their debt portfolio. Regulated supplies will qualify for this allowance where their average debt tenor (and therefore debt premium) is more than five-years.

And, further:[723]

> For such suppliers, the allowance will apply in respect of individual bond issues which have an original tenor exceeding five years ('qualifying debt issues').

[1247] The TCSD allowance represents:

(a) the additional credit spread over swap on long-term debt versus that on five year debt as at the date of pricing;

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721 Commerce Commission "Term of the Risk-free Rate Parameter in the Cost of Capital IM" (Handup no. 72, handed up 24 September 2012).

722 EDBs-GPBs Reasons Paper at [H4.56], 3/7/001429; Airports Reasons Paper at [E4.55], 2/6/000835.

723 At [H6.5], 3/7/001429; to identical effect, at [E6.4], 2/6/000863.

(b) the execution costs of an interest swap; and

(c) a downward adjustment in relation to the annual notional debt issue costs to reflect the longer term of the qualifying debt issue.

[1248] For the purposes of the EDBs and GPBs cost of capital IMs the TCSD allowance is treated as an adjustment to a supplier's cash flows under the ID and DPP regimes (or an allowable building block under a CPP). For Transpower's IPP it is also treated as an allowable building block. For Airports, the TCSD allowance is included in the Airports ID Determination, rather than their cost of capital IM.[724]

[1249] The TCSD allowance is available to qualifying regulated suppliers irrespective of whether relevant swap costs are incurred. This reflects, we infer, a conclusion by the Commission that whilst there are proper reasons for a supplier having debt with a weighted average pricing period longer than the regulatory period, in those circumstances the TCSD represents the appropriate compensation for the additional costs of that debt, rather than regulated suppliers receiving (where a rising yield curve applies) the higher interest rate costs associated with the longer underlying term of the debt.

These appeals

The Energy Appellants

[1250] The Energy Appellants' alternative cost of capital IMs call for a 10-year risk-free rate term. On that basis they say there would be no need for the TCSD.

[1251] In their written submissions each of the Energy Appellants presented – often in fairly summary terms – a range of arguments in support of their challenge to the Commission's adoption of a five-year term for the risk-free rate. Those arguments covered a considerable number of specific points. Those points were addressed to a greater or lesser extent in oral submissions. Having regard to the range of points thus addressed, in our view those arguments of Powerco, Vector and WELL, taken together, may be fairly summarised as involving two main contentions.

---

[724] Airports Reasons Paper at [6.3.30], 2/6/000715.

[1252] The first is that a risk-free rate determined on the basis of a five-year term would produce a material underestimation of the cost of capital for the Energy Appellants because:

(a) their assets generally have long lives; and

(b) reflecting that their real world borrowing practices – supported by finance theory and expert advice – involve long-term borrowings; and

(c) many of their investors similarly have a long-term horizon and demand a return on their investment that is commensurate with the higher returns that are available on other long-term investments (given a rising yield curve).

Hence, they argue, the Commission should have adopted a 10-year term for the risk-free rate.

[1253] The second is that the Commission was in error in its estimate of the availability, effectiveness or relevance of the use of swaps to enable regulated suppliers to re-price longer-term debt to the five-year regulatory period.

[1254] The Energy Appellants supplement those basic propositions with a range of other arguments, including:

(a) the use of longer-term debt is consistent with maintaining appropriate credit ratings (Vector, WELL);

(b) the desirability of a more stable benchmark cost of capital, than that provided by a five-year risk-free rate (Vector); and

(c) the desirability of setting the term of the risk-free rate in closer alignment with the term of debt issued by those firms used in the comparator sample to establish the equity beta (WELL especially, and Powerco and Vector).

Transpower

[1255] Transpower, reflecting its overarching proposition, argues that a 10-year term of the risk-free rate would better reflect the tenor of its (actual efficient and prudent) debt-raising practices, which it described in the following terms:[725]

> As a State-owned enterprise, Transpower is currently wholly owned by the New Zealand Government and is thus precluded from raising capital through the equity markets. Instead all capital is currently raised through debt and this mainly occurs offshore. Typically around one third of Transpower's capital requirements are raised in New Zealand and around two thirds offshore. The New Zealand capital markets are simply too thin to be able to provide the entire funds to be raised domestically.
>
> The debt is raised in whatever capital market is offering the best deal at the relevant time. Tranches of NZ $100m to NZ$200m are raised in markets such as the Swiss (franc), Japanese (yen), Hong Kong ($), Canadian ($), and United States ($). The terms of Transpower's September 2010 capital raising were typical of its funding approach. In short:
>
> > Maturity up to 15 years;[726]
> >
> > In order to avoid roll over risk, Transpower ensures that no more than NZD$500m matures in any one year and the term of its funding is arranged accordingly;
> >
> > All debt is swapped back to floating rate NZD.
>
> A major consequence of Transpower's need to raise finance predominantly off shore, is that it inevitably needs to hedge against currency risk. This is done by swapping all capital raised back into NZD at an NZ floating interest rate. This currency and interest rate swap significantly reduces the foreign exchange risk of offshore borrowing. There are transaction costs associated with this arrangement – notably bank and counterparty fees. These costs do not appear to have been taken into account by the Commission.

[1256] Transpower notes, additionally, that since November 2010 Transpower has continued to keep its treasury practices under consideration, including in light of the Commission's decision-making in relation to the Transpower cost of capital IM.

[1257] Like the Energy Appellants, Transpower argues that a five-year term for the risk-free rate and the debt premium would underestimate its cost of capital, a

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725 Transpower *Submission on Updates to Input Methodologies (Transpower) and Individual Price-Quality Path (Transpower)*: *Appendix 2 – Note on Transpower's Treasury Practices* (26 November 2010) at [8]-[10], 39/299/019424.

726 In its written submissions Transpower stated at this point "maturity is typically 12 – 15 years".

10-year term would be materially better and, on that basis, that the TCSD was not required.

The Airports

[1258] The Airports, in respect of the term of the risk-free rate, made submissions similar to those of the Energy Appellants and Transpower. They, too, refer to the long lives of their assets, to their debt raising practices which – accordingly – feature long-term debt and, therefore, to the inappropriateness of a five-year term for the risk-free rate.[727] The resulting cost of capital would reflect neither the Airports' actual cost of capital nor, accordingly, the reasonable expectations of equity investors for returns on long-term investments.

[1259] The Airports do not expressly challenge the TCSD.

[1260] As the Commission's decision on the term of the risk-free rate, the term of the debt premium and the availability of the TCSD were inter-related, the Energy Appellants and Transpower challenge the appropriateness of the TCSD as part of their challenge to the Commission's decision on term. They say the TCSD allowance is unnecessary and, if applied, will not achieve its intended goal. We too will assess those challenges in that context.

Analysis

A five-year term for the risk-free rate/debt premium produces a material underestimation of the cost of capital

[1261] In our view, these arguments of the supplier appellants fail to come to grips with the relevant parts of the Commission's reasoning. They effectively ignore the fact that prices are reset with each new five-year regulatory pricing period. As a

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[727] AIAL and WIAL/CIAL relied on a series of reports by Uniservices (Dr Alastair Marsden) and comments by LECG. Uniservices *Comments on Air New Zealand's and BARNZ's Submissions to the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (3 August 2010), 34/251/017231; Uniservices *Comments on the Commerce Commission's Approach to estimate the Cost of Capital* (2 December 2009), 28/193/013917; Uniservices *Comments on the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (for NZAA) (12 July 2010), 33/233/016503; and Irwin, Murray, Shephard and van Zijl (LECG) *Comments on Commerce Commission Input Methodologies Discussion Paper* (for NZAA) (31 July 2009), 25/154/012027.

matter of principle we agree with the basic proposition that the fact that prices are reset every five years makes actual asset lives, and claims about what investors demand, irrelevant. That principle is well explained by Lally in two papers relied on by the Commission,[728] and in a paper by Schmalensee referred to in Dr Lally's 2004 paper.[729]

[1262] At the price reset, both the risk-free rate and the debt premium are reset. Thus suppliers – term of debt decisions aside – are in effect hedged to the five-year period of the regulatory cycle for both the risk-free and debt premium components of their cost of debt. In our assessment, arguing that they borrow for terms longer than five years and should be recompensed accordingly, simply amounts to a call for a higher rate of return. This ignores the fact that investors in other long-term assets are subject to interest rate risk and debt premium risk that are obviated by the price resets.

[1263] The argument that suppliers in fact borrow long (actually some of them – small ones – borrow from the bank) ignores their ability to use interest rate swaps. Given price resetting, firms that choose not to match their borrowing to the regulatory period are, so it seems to us (and subject to the arguments raised against the reliance the Commission placed on the availability and use of swaps) voluntarily taking on risk. If they need to be rewarded for taking on that risk, it should not be through higher prices paid by users.

[1264] Moreover, we also consider it most unlikely that, were the yield curve inverse at the time the risk-free rate was being set, the supplier appellants would still be arguing for a 10-year term, and the lower rate that would result. And yet their arguments purport to be independent of whether the current yield curve is rising or falling.

[1265] Nor do we consider that the supplementary arguments the supplier appellants advance are valid criticisms of the Commission's core decision.

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728 Lally "Regulation and the Choice of the Risk Free Rate (2004) 17 Accounting Research Journal 18, 16/79/006963; Lally "Regulation and the Term of the Risk Free Rate – Implications of Corporate Debt" (2007) 20 Accounting Research Journal 73, 19/102/008309.

729 Schmalensee "An Expository Note on Depreciation and Profitability Under Rate-of-Return Regulation" (1989) 1 Journal of Regulatory Economics 293, 63/652/031319.

[1266] In particular, and as regards WELL's argument based on the need for consistency between the term of the risk-free rate and the equity beta,[730] we observe:

(a) It has not, as far as we are aware, been suggested much less shown that short-term debt is less risky in a Modigliani and Miller sense than longer-term debt.

(b) The argument seems to proceed on the basis of varying degrees of riskiness in the risk-free rate, which is paradoxical to say the least.

(c) Whilst for unregulated firms there may be a relationship between the weighted average term of their debt and the appropriate risk-free rate, that is not necessarily the case for regulated firms where the purpose is to determine a regulatory WACC, not to estimate the firm's actual WACC.

(d) The implication of WELL's argument is that the risk-free rate must be that corresponding to the average term of the debt of the sample of firms from which betas are estimated. No evidence is produced by WELL that analysts use that procedure in estimating the WACC. That is, there is no evidence that analysts specify or identify a term of debt, rather than simply providing an estimate of the WACC.

[1267] Generally, we consider that WELL's argument lacks evidence that analysts who estimate equity betas from firm-specific data adjust those betas according to the firm's borrowing term. Taken overall, we do not consider that WELL's argument was presented with appropriate support from capital market experts.

The implications of interest rate swaps – the TCSD

[1268] As noted, integral to the Commission's decision to adopt a five-year term for the risk-free rate (and the debt premium) was its view as to the significance of the availability of swaps. In other words, the Commission acknowledged that for a

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730 A number of the appellants made similar arguments. WELL articulated the submission in the greatest detail.

variety of valid reasons firms might not actually borrow all their debt on a five-year, roll-over basis but could, in effect, re-price to that period. Moreover, in terms of a regulated firm, that would be an efficient approach. For our part the basic principle, namely that to avoid over and under compensation the risk-free rate should be matched to the term of the regulatory period, is sufficiently compelling for us to be less certain than the Commission appears to have been of the importance of the actual use by regulated firms of swaps to match their debt to the regulatory period, and of the need for the TCSD. We return to that uncertainty in comments we make below.

[1269] In the Principal Reasons Papers the central part of the Commission's reasoning on the availability of interest rate swaps was expressed in the following terms: [731]

> Firms have a mix of debt maturities to manage re-financing risk, including issuing long-term debt. This spreads a firm's re-financing requirements over a longer period and reduces the amount of debt that needs to be refinanced in any one year. Reducing re-financing risks has benefits for consumers, but long-term debt typically has a greater cost than medium or short-term debt.
>
> The use of fixed-rate long maturity debt would, in the absence of a swap market, fix a firm's interest rate for the term of the loan, say 10 years. But many firms do not want their interest rate fixed for 10 years, especially when the rate of interest on shorter-term debt is typically lower. Therefore the firm will use an interest rate swap, typically at the same time as the debt finance is raised, to shorten the period for which their interest rate is fixed. This can result in a lower rate of interest – the trade-off being that the firm does not know what interest rates will be at the time of the re-pricing.
>
> The use of interest rate swaps allows the firm to choose the interest rate re-pricing period it faces, independently of the maturity date of the debt. For example, Transpower explained at the Cost of Capital Workshop that its target interest rate repricing period was 2 years, even though it raises debt capital with a longer maturity.[732]
>
> Interest rate swaps are widely used. This was evidenced in the information on debt profiles that the Commission obtained from regulated suppliers. Specifically, this showed that regulated suppliers were using swaps extensively to shorten their interest rate repricing periods.

731 EDBs-GPBs Reasons Paper at [6.3.12]-[6.3.15], 3/7/001122; Airports Reasons Paper at [6.3.11]-[6.3.14], 2/6/000712 (footnotes omitted).

732 During the course of the hearing the Commission accepted that was a misstatement of Transpower's position. Transpower provided information to the Commission which confirmed that the weighted average materiality of its debt was considerably in excess of two years.

[1270] The information on debt profiles referred to in the final paragraph of the above quoted passage came from a 2010 confidential survey (the 2010 Confidential Survey)[733] which showed that:

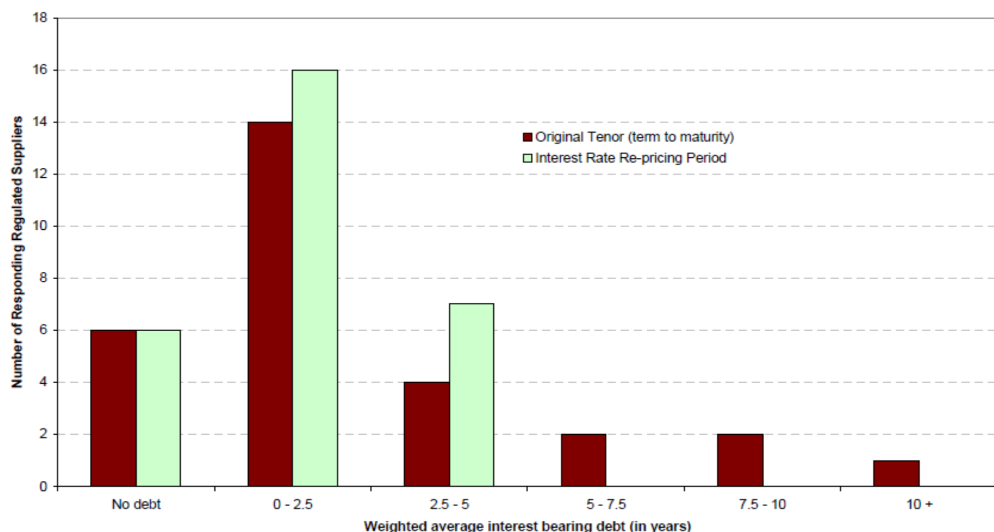
(a) the interest rate re-pricing period was shorter than the average term to maturity of the debt portfolio;

(b) suppliers were using interest rate swaps extensively; and

(c) many suppliers had an interest rate re-pricing period of less than five years, with the weighted average interest rate re-pricing period being 3.3 years in 2010, a period much shorter than the term of the regulatory period.

[1271] The Commission illustrated its analysis of the regulated suppliers' 2010 debt profiles by reference to the following figure:[734]

Figure H3 Regulated suppliers' debt portfolios: Weighted average original term to maturity vs. weighted average interest rate re-pricing period (2010)



733 Commerce Commission *Confidential Debt Survey Documents – Commerce Commission Request and Supplier Reply* (1 October 2010), 62/633/031251. The way the Commission published the results of that survey preserved the confidentiality of individual respondents.

734 EDBs-GPBs Reasons Paper at figs 6.1 and H3, 3/7/001123 and 3/7/001427; Airports Reasons Paper at figs 6.1 and E3, 2/6/000713 and 2/6/000833.

[1272] That figure shows that, by the Commission's assessment:[735]

(a) Of the 29 suppliers, 16 had an average interest rate re-pricing period that was less than 2.5 years, and none had an average re-pricing period greater than five years.

(b) Five suppliers (identified by the Commission in submissions as Powerco, Vector, Transpower, AIAL and WIAL) had a debt portfolio with a weighted average tenor (original maturity) greater than five years.

(c) Of those five suppliers, 3 had a weighted average tenor greater than 7.5 years, but after accounting for interest rate swaps, no supplier had an average interest rate re-pricing period which was greater than five years.

[1273] Based on that data, the Commission concluded:[736]

> The data on the actual interest rate re-pricing faced by regulated suppliers illustrate regulated suppliers' ability to use swaps to alter their interest rate re-pricing period, and to set it to a term consistent with or shorter than the regulated period. As such, it is inappropriate to set the term of the risk-free rate longer than the term of the regulatory period (and it should not be set at 10 years). That is, doing so would (assuming a positive yield curve) over-compensate suppliers as they would receive a (higher) risk-free rate in their regulatory cost of capital when their actual interest costs have been re-priced to a much shorter term (lower rate) by the use of interest rate swaps.
>
> The widespread availability and use of interest rate swaps means the term of the risk-free rate should not exceed the term of the regulatory period (and should not be set at 10 years).

[1274] The supplier appellants challenge those conclusions.

[1275] Vector argues that Figure 6.1/H3 is misleading and wrong:

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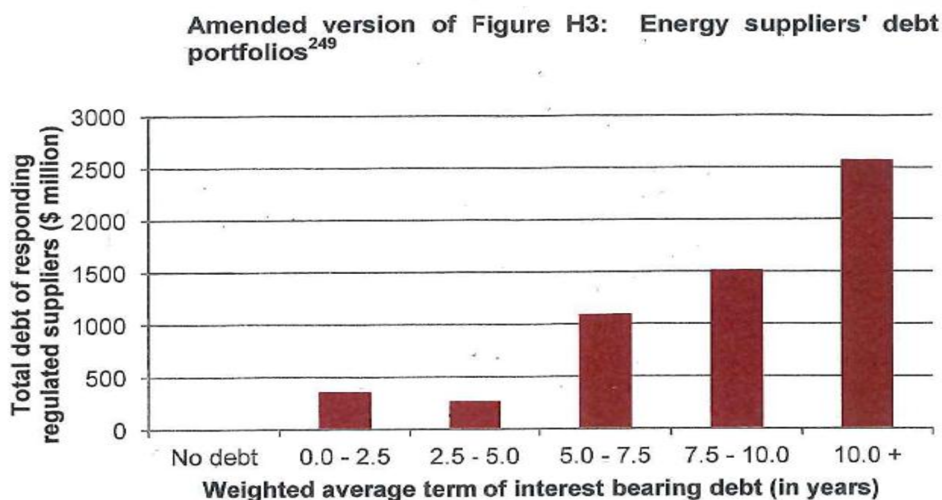
735 EDBs-GPBs Reasons Paper at [H4.45], 3/7/001426; Airports Reasons Paper at [E4.44], 2/6/000833.

736 EDBs-GPBs Reasons Paper at [H4.46]-[H4.47], 3/7/001427; Airports Reasons Paper at [E4.45]-[E4.46], 2/6/000833-4.

(a) It is misleading because, being presented on the basis of term by number of suppliers, it fails to show the true picture of the weighted average term of debt by volume. Vector's amended version of Figure 6.1/H3 follows:

Amended version of Figure H3: Energy suppliers' debt portfolios[249]



(b) It is wrong, because – contrary to the Commission's assertion that although three suppliers had weighted average terms to maturity greater than seven years, "no supplier had an average interest rate re-pricing period which was greater than five years" – Vector's own weighted average re-pricing period was around [confidential] years.

[1276] The Commission accepts Vector's identification of its error, but argues that does not affect its basic point: firms could and did use interest rate swaps to re-price their debt.

[1277] We think Vector's representation of the figure, in terms of the weighted average term by volume, rather than by supplier, is informative. Moreover, the Commission cannot rely on its erroneous statement that no supplier had an average interest rate re-pricing period which was greater than five years. The question therefore becomes the reliability and relevance of the Commission's assertion that firms could and did use interest rate swaps to reprice their debt.

[1278] That proposition is not challenged by Vector. Vector's own evidence, as reflected in a statement by its Group Treasurer[737] and in its own analysis establishing its [confidential] year average repricing period, evidences the use of swaps. [confidential]. Moreover, and as the Commission asserts, the use of swaps is a commonplace technique used to manage debt exposure, including amongst the supplier appellants. Other than Vector and Transpower, no supplier appellant challenged the accuracy of the Commission's re-pricing analysis.

[1279] Given the Commission's linkage of its risk-free rate term decision with the use of swaps and the availability of the TCSD, the issues for us become: (1) the availability and efficacy of swaps as a way of matching, should a firm choose to do so, the (pricing) term of its debt to the term of the risk-free rate; and (2) the efficacy of the TCSD as an allowance to address the costs involved in those swaps, and of the higher premium for longer term debt.

[1280] These are issues on which, we acknowledge, we have faced considerable difficulties in arriving at a satisfactory analysis.

[1281] Taken overall:

(a) Both Vector and WELL advance similar arguments against the TCSD as a matter of principle. Vector argues that adding the TCSD to a current five-year debt premium results in an unprincipled amalgam of historical and current market data, and is therefore unlikely to result in an appropriate cost of debt. WELL is of the view that the TCSD allowance, being based on historical market conditions at the time of the debt issuance by a specific supplier, means the Commission's approach combines an estimate of the cost of debt based on the prevailing cost of issuing five-year debt with a number of potential term premiums for issuing debt at certain historical points.

(b) More specifically, Vector submits that suppliers cannot lock in the benchmark rate and cites as evidence in support of that submission:

[737] Binaifer Behdin *Statement (for Vector)* (13 August 2010), 35/267/017733.

(i) The following extract from Bancorp Treasury Services' *Expert Report for Vector* (the August 2010 Bancorp Report):[738]

> ... if [suppliers] sought to manage their treasury risk to the regulatory period we are of the view that they would face a materially higher debt premium to reflect both the volume of supply in the context of the New Zealand market and a risk premium to reflect the level of risk associated with managing funding and interest rate risk in that manner.

(ii) The following extract from its Group Treasurer:[739]

> While the details of the regulatory regime are among the myriad of factors considered by Vector in setting its Treasury Policy, they are not generally of major significance. That is because it would not be prudent for Vector to seek to manage its debt portfolio in accordance with industry-wide and possibly arbitrary cost of debt parameters established by the Commerce Commission through the regulatory process, and if it did Vector's overall cost of debt would be likely to increase markedly, not least through the likelihood of a credit rating downgrade. Rather, Vector seeks to manage its debt portfolio having regard to the funding, liquidity and interest rate risks described above.

(c) Transpower, too, identifies what it sees as a number of technical shortcomings in the TCSD, as part of its argument that the TCSD is unnecessary and ineffective.

(d) Vector and Transpower do not, however, seek any adjustments to the TCSD in the relief they propose. WELL does: in criticising the TCSD for similar reasons to Vector, Powerco and Transpower it argues, amongst other things, that the TCSD should be available to all, not just qualifying, suppliers.

(e) The Airports make similar submissions. But they do not rebut the observation in the Airports Reasons Paper that a number of suppliers, including AIAL and CIAL, use a term for the risk-free rate which matches their five-year pricing agreement period when estimating

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738 Bancorp Treasury Services *Expert Report for Vector* (August 2010) at [2.3], 34/245/017037 [August 2010 Bancorp Report].

739 Binaifer Behdin *Statement* (for Vector) (13 August 2010) at [48], 35/267/017742.

their cost of capital.[740] Nor, as observed, do the Airports challenge the TCSD.

(f) Nevertheless, we have the acceptance by Mr Hodder, for Powerco, that although Powerco regards the TCSD as unnecessary, nevertheless – when used:

> ... the TCSD is, is not unhelpful to us in terms of the pragmatics. It gets us to about the place where we say we ought to be.

(g) Moreover, Powerco's submission notes that:

> ... if the average term at issuance of an EDB's debt equals 10 years then the Commission's allowance entitled the "term credit spread differential" would result in the same WACC that would result from assuming a 10 year term.

[1282] We think it is appropriate to place weight on Powerco's acceptance of the practical effect of the TCSD insofar as Powerco and Vector submit that the TCSD will not adequately compensate suppliers. At the same time we record the concerns of regulated suppliers with aspects of the TCSD's design and that an implication of the Commission's approach is that all of a supplier's debt would roll over (in a pricing if not maturity sense) every five years.

[1283] We observe more generally that the TCSD was developed by the Commission very late in the piece: the concept of a TCSD was first mentioned in the Airports Consultation Update Paper of 1 October 2010. A TCSD methodology first appeared in the Revised Draft IM Determination for the EDBs released on 22 October 2010. Thus, unlike other aspects of the IMs, the TCSD was only subject to comment on technical drafting. As noted, a TCSD has not featured previously in the Commission's risk-free rate term decision.

[1284] We accept the submissions of the regulated suppliers that the concept of the TCSD, and more particularly its implementation, were not well explained by the Commission. For example, the Commission responded to criticisms by Vector[741] of

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[740] Airports Reasons Paper at [E4.50], 2/6/000834.

[741] Based on Dr Hird (CEG) *Review of updated input methodologies* (for Vector) (30 November 2010) at [2.3], 40/310/019590-019596 in which Dr Hird questions the feasibility of using swaps.

the feasibility and efficacy of swaps to re-price long-term debt to the regulatory period with what can be described as the "two swap" example. But, at no point, did the Commission explain the relationship between that example and the TCSD. Moreover, Ms Scholtens at one point acknowledged that there was no evidence of the availability of a "five year swap product" which appeared to be another type of swap the Commission had in mind.

[1285] Given the view we take of the basic issue of principle (that to avoid under and over compensation the risk-free rate should be matched to the regulatory period), the material before us has not persuaded us of the need for a TCSD at all. But no regulated supplier argued that, if we uphold the Commission's decision on the term of the risk-free rate and the debt premium, the TCSD should not be available.

Outcome

[1286] In these circumstances, the conclusions we have reached are as follows.

The term of the risk-free rate/debt premium

[1287] We are not persuaded that it would be materially better for the term of the risk-free rate/debt premium to be fixed at 10 years or that the Commission made an error of law in setting a term of five years. We reach that conclusion essentially because of our assessment of the strength of the principle that the term of the risk-free rate should be aligned to the regulatory term to avoid over and under compensation. Nor were we persuaded by the range of supplementary arguments made by the supplier appellants. We therefore dismiss the appeals of the supplier appellants against the Commission's term of the risk-free rate and the debt premium.

The TCSD

[1288] We:

(a) are not satisfied in terms of s 52Z(4) that eliminating the TCSD allowance from the cost of capital IMs applicable to the Energy Appellants or Transpower, and substituting in lieu thereof a 10-year term for the risk-free rate and debt premium, nor extending its

application to all EDBs as WELL argued, would be materially better in meeting the s 52A and/or s 52R purpose(s); and

(b) would expect the Commission to review the structure and efficacy of the TCSD and, in so doing, undertake further empirical research on the nature and availability of swaps for regulated suppliers so that a TCSD – where necessary – may be able to be better articulated and connected with market practice.

On that basis we also dismiss the supplier appellants' challenges to the TCSD.

6.8 THE DEBT PREMIUM

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The Commission's decision

[1289] The second component of the cost of debt is the debt premium. The debt premium is a variable parameter and reflects the additional risk a lender accepts when lending to a borrower other than the government. As explained by the Commission:[742]

> The amount of the debt premium principally depends on the creditworthiness of the borrower, but also reflects the inferior liquidity of corporate bonds relative to Government bonds.

[1290] As noted, although the cost of debt formula is expressed by reference to the risk-free rate, the debt premium and debt issuance costs, the cost of debt – excluding debt issuance costs – is in practice derived directly from a relevant corporate bond rate. The debt premium is, in turn, identified by deducting the risk-free rate from that corporate bond rate. Each of the Commission's cost of capital IMs provides a

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742 EDBs-GPBs Reasons Paper at [6.3.21], 3/7/001124.

methodology for the determination of a sector-specific (as opposed to supplier-specific) notional debt premium.

[1291] As a sector-specific debt premium cannot be directly observed, the cost of capital IMs provide that the Commission will estimate a debt premium by reference to the spread between a notional, publicly traded vanilla[743] corporate bond denominated in NZD and the risk-free rate.

[1292] The following explanation of the Commission's approach to determining the debt premium appears in the Principal Reasons Papers: as indicated in italics in the following passage, the only material difference between the two texts is the reference to the long-term credit rating, BBB+ in the case of the EDBs-GPBs and A– in the case of the Airports, that the Commission considered appropriate:[744]

> There are potentially significant costs and risks to consumers if a supplier becomes financially distressed. For example, a supplier in financial distress may curtail maintenance spending or reduce or defer efficient investment in network assets. This, in turn, may adversely affect the quality and reliability of service experienced by consumers. Excessive levels of debt are not in the long-term interests of consumers.
>
> Credit ratings are an indication of a borrower's creditworthiness. The higher the rating, the lesser the assessed likelihood of default. A notional rating is specified as if suppliers' actual credit-ratings were used, they would have an incentive to increase gearing with adverse implications for consumers.
>
> Standard & [Poor's] minimum long-term credit rating to be considered investment grade is BBB-. The Commission considers the debt premium should be estimated by reference to a bond with a Standard & [Poor's] long-term credit rating of *[BBB+]/[A–]* (or equivalent rating from another recognised agency). A Standard & [Poor's] long-term credit rating of *[BBB+]/[A–]* is sufficiently high to ensure there is an adequate buffer against the possibility that economic downturns or shocks can lead to financial distress, whilst providing regulated suppliers with some flexibility over the level of gearing and the choice of debt instruments.
>
> New Zealand has only a limited number of bonds that are publicly traded. This can make it difficult to estimate accurately the debt premium for an [EDB or GPB] [airport] with a credit rating of *[BBB+]/[A–]* and a remaining term to maturity of five years. The IM Determination allows the

743 For example, the EDBs IM defines vanilla NZD denominated bonds to mean senior unsecured nominal debt obligations denominated in New Zealand dollars without callable, puttable, conversion, profit participation, credit enhancement or collateral features. EDBs-GPBs Reasons Paper at fn 982, 3/7/001436.

744 EDBs-GPBs Reasons Paper at [6.3.22]-[6.3.25], 3/7/001124; Airports Reasons Paper at [6.3.21]-[6.3.24], 2/6/000714.

> Commission to consider a wider range of credit ratings and issuers than just *[BBB+]/[A–]* rated bonds issued by an *[EDB or GPB]/[airport]*, when estimating the debt premium.

[1293] More specifically, and again in materially identical terms, the Commission explains:[745]

> ... the debt premium will be estimated by taking account of the average debt premium that would reasonably be expected to apply to publicly traded vanilla New Zealand dollar denominated corporate bonds that are issued by *[an EDB or GPB]/[a supplier of airport services]* that is neither majority owned by the government nor a local authority, with a Standard and [Poor's] (S&P) long-term credit rating of *[BBB+]/[A–]*, or equivalent rating from Moody's or Fitch;

The suppliers' appeals

[1294] Responding to various elements of that analysis:

(a) Powerco and WELL challenge the Commission's decision to determine the EDBs debt premium by reference to bonds issued by an EDB with a BBB+ long-term credit rating.

(b) The Airports likewise challenge the Commission's decision to determine their debt premium by reference to bonds issued by an airport with an A– long-term credit rating.

(c) Powerco challenges the Commission's decision to calculate the debt premium on the "simple" approach, that is by reference only to debt issued in the New Zealand corporate bond market.

(d) Vector argues that the debt premium should be calculated by reference to Bloomberg fair value curves, not what it says is the Commission's subjective approach. Powerco and WELL support that approach but modify it to reflect their own circumstances.

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745 EDBs-GPBs Reasons Paper at [H5.4], 3/7/001430; Airports Reasons Paper at [E.5.4], 2/6/000836.

The ratings appeals

The Commission's decision

[1295] The Commission explained its reasons for adopting the BBB+ and A– long-term credit rankings for the comparator bonds for the EDBs and GPBs and the Airports in, again, very similar terms. The Commission noted, amongst other things:[746]

(a) that it had initially proposed to benchmark allowed debt premiums against premiums paid on bonds of a reasonable long-term investment grade from a major credit rating agency, for example Standard and Poor's/Moodys A–/A3 or BBB+/Baa1;

(b) regulated suppliers had argued for lower benchmark ratings; and

(c) it was standard practice amongst overseas regulators to specify, for the service in question, an appropriate long-term credit rating to determine the debt premium.

[1296] The Commission considered matters specific to the EDBs/GPBs and the Airports by reference to the practice of overseas regulators.

[1297] In the case of the EDBs/GPBs:[747]

> The AER in estimating the cost of debt to Australian energy businesses has applied a [Standard & Poor's] long-term credit rating of BBB+. In its draft decision for Jemena the AER concluded that there was not sufficient evidence to depart from the past regulatory practice of using a [Standard & Poor's] long-term credit rating of BBB+ and considered that its conclusion in its 2009 WACC review remained valid.
>
> Ofgem's approach, for electricity, is to base the cost of debt on the yield from a mixture of bonds of utility companies with a [Standard & Poor's] long-term credit rating of BBB and A. In its 2009 electricity price control review Ofgem included a small margin to allow for a range of factors e.g. transaction costs. Ofgem's approach for gas has been:

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[746] EDBs-GPBs Reasons Paper at [H5.46]-[H5.59], 3/7/001439-42; Airports Reasons Paper at [E5.44]-[E.5.57], 2/6/000845-48.

[747] EDBs-GPBs Reasons Paper at [H5.55]-[H5.56], 3/7/001441-2 (footnotes omitted).

> In line with previous price controls, our financial model makes no assumptions about the structure of the debt. However, we have assessed financeability based on whether a GDN funded with nominal debt is likely to be able to achieve financial ratios that are, as a package, consistent with a comfortably investment grade credit rating.

[1298] In the case of the Airports:[748]

> The UK Competition Commission's approach, for airports, is to base the cost of debt on the yield from a mixture of bonds of utility companies with a Standard and [Poor's] long-term credit rating of BBB and A. The UK Competition Commission noted that the choice of the credit rating can never be entirely scientific.
>
> In its 2007 price control review of Heathrow and Gatwick the UK Competition Commission, using a number of different considerations, took the view that these airports should be able to obtain a Standard and [Poor's] rating of BBB+.
>
> The issue was considered again in the price control review for Stansted. The UK Competition Commission decided that Stansted should have a Standard and Poors long-term credit rating of a. The UK Competition Commission decided that Stansted should have a Standard and [Poor's] long-term credit rating of A–.

[1299] The Commission concluded:[749]

> The Commission considers that a Standard and [Poor's] long-term credit rating of [BBB+]/[A–] (or equivalent rating from Moody's or Fitch) is appropriate for benchmarking the allowed regulated service wide debt premium on the debt of [EDBs, GPBs and Transpower] [airport services]. The Commission considers that the notional long-term credit rating used for estimating the regulated service side notional debt premium should reflect a prudent long-term level of exposure to credit default risk. Specifically, the notional long-term credit rating should be, and remain, comfortably within an 'investment grade' credit rating as defined by the major credit rating agencies, and a Standard and [Poor's] long-term credit rating of [BBB+]/[A–] (or equivalent rating from Moody's or Fitch) is the minimum notional long-term credit rating that provides an adequate margin of safety with respect to [EDBs, GPBs and Transpower] [Airport services]. Setting the minute notional long-term credit rating at, for example, BBB (being only one notch above BBB–, the lowest investment grade long-term credit rating) provides a materially lower margin of safety that a reasonable investment grade is maintained in the long-term.
>
> A Standard and [Poor's] long-term credit rating:

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748 Airports Reasons Paper at [E5.52]-[E5.54], 2/6/000847 (footnotes omitted).

749 EDBs-GPBs Reasons Paper at [H5.57]-[H5.58], 3/7/001442; Airports Reasons Paper at [E.55]-[E.56], 2/6/000847.

- [in the Airports Reasons Paper] of A–is consistent with the approach adopted by the UK Competition Commission in a recent decision of Stansted
- [in the EDBs-GPBs Reasons paper] of BBB+ is consistent with the approach adopted by the AER in Australia and is within the range considered by Ofgem in the UK.

Powerco and WELL

[1300] Powerco and WELL argue that the use of a BBB credit rating to calculate the debt premium would result in a materially better cost of capital IM.

[1301] WELL's appeal, like Vector's, argues for the use of Bloomberg (BBB) value curves to determine that premium. Powerco supports that approach as well. We consider the rating issue here, and the methodology issue in the context of Vector's appeal.

[1302] A BBB credit rating:

(a) for Powerco, is derived by using either a firm's own credit rating (BBB in its case) or the credit rating of the majority of EDBs and GPBs respectively (also BBB); and

(b) for WELL, is a prudent, long-term rating, materially better than BBB+.

[1303] Adopting a BBB+ rating, which would produce a lower cost of debt, would – by contrast – result in the regulatory cost of capital underestimating the actual cost of capital faced by the EDBs and GPBs. BBB+ is an aspirational credit ranking. Only Vector, of all the EDBs and GPBs, has a BBB+ ranking. Vector is not, therefore, the appropriate benchmark. WELL points to analysis by Bancorp that as at July 2010:[750]

(a) almost 70% of the total number of businesses in the Standard and Poor's electric utilities global ratings summary had a credit rating of

[750] August 2010 Bancorp Report at 27, 34/245/017060.

BBB or above, while just under 50% had a credit rating of BBB+ or above; and

(b) similarly, almost 70% of the total number of businesses in Moody's electric utilities global ratings summary had a credit rating of BBB or above, while just over 50% had a credit rating of BBB+ or above.

[1304] This, WELL submits, indicates that a substantially higher number of electricity and gas distribution firms worldwide have a BBB rather than a BBB+ credit rating, suggesting that a credit rating of BBB is more likely to be commercially realistic for a notional New Zealand EDB.

The Airports

[1305] The Airports argue, in not dissimilar terms, that a BBB+ rather than A– reference was the appropriate bond rating. That is, the A– rating did not reflect the real world position of the Airports in New Zealand. Both AIAL and CIAL have long-term ratings of A–. In CIAL's case that is said to derive from its local authority and central government ownership. WIAL has a long-term rating of BBB+. AIAL, which does not refer to its own long-term rating, is concerned that WIAL's cost of capital would be underestimated.

Analysis

[1306] The Commission's reference credit rating decisions for the EDBs and GPBs, and for the Airports, have three elements. First, that the notional debt premium should reflect a prudent long-term level of exposure to credit default risk and, more specifically, should remain comfortably within an "investment credit rating". There is no challenge to that proposition. Secondly, that setting that rating at BBB would provide an unsatisfactory margin of safety for the maintenance of such a rating in the long term. Thirdly, that the BBB+ and A– ratings were the appropriate investment grade levels to be used. The challenges here are to the second and third of those conclusions, the argument being that in each case the reference level chosen is, in effect, unnecessarily high, and will result in a material under-estimation of the cost of debt.

[1307] Dealing first with the Airports, we note that both AIAL and CIAL have long-term credit ratings at or equivalent to the comparator A– long-term rating specified by the Commission. WIAL's long-term rating is BBB+. In those circumstances, and given that DPP regulation applies to a group of firms and that, when used as part of ID regulation, the cost of capital IM will assist the Commission and others to determine whether the Part 4 purposes are being met, we are simply not persuaded that adopting a BBB+ comparator credit rating for the Airports cost of capital IM would result in that IM being materially better. The Commission's judgement that A– was the appropriate comparator long-term credit rating can be seen as reflecting the current ratings of two of the three Airports, and being not inconsistent with the approaches of other regulators. If, in WIAL's case, the use of the A– comparator actually results in a material underestimation, in the ID regime applicable to the Airports, commentary by WIAL may address that.

[1308] Turning to the BBB+ comparator long-term credit rating stipulated for the EDBs and GPBs, we note that a debt premium estimated by reference to a BBB corporate bond would be greater, and result in a higher WACC, than if it were estimated by reference to the difference between the risk-free rate and a BBB+ corporate bond.

[1309] It is to be remembered that:

(a) The cost of capital IMs are sector wide, for EDBs and GPBs generally. They are not supplier specific and are to be assessed having regard to the Part 4 and s 52R purposes.

(b) For Powerco and WELL to succeed in their challenges to the Commission's choice of a BBB+ credit rating they must satisfy us that substituting a BBB rating would produce materially better IMs in respect of EDBs and GPBs generally having regard to those purposes.

[1310] The Commission's choice of a BBB+ notional credit rating reflects its estimate of a sector wide notional risk premium based on its assessment of a supplier's prudent exposure to default risk. That estimate and assessment are but further illustrations of the Commission exercising its judgement in performing a task that is more art than science – an exercise of judgement which the Commission claimed is consistent with the approach of the AER in Australia (BBB+) and within the range (BBB to A) considered by Ofgem in the UK.

[1311] International comparisons need to be made with caution, and having regard to differences between countries. Notwithstanding WELL's submissions, we consider that the AER and Ofgem comparisons give the Commission some minimal support, and do not help WELL (or the other Energy Appellants) at all.

[1312] Powerco's proposal is at odds with the s 52A purpose: simply compensating an EDB or GPB for its actual costs as advocated by Powerco would be contrary to that purpose because it would provide no incentive to improve efficiency or limit a supplier's ability to extract excessive profits (s 52A(1)(b) and (d)).

[1313] In any case, as the majority of EDBs and two of the four GPBs do not have credit ratings, we do not consider Powerco's proposal that either the actual credit rating of each EDB and GPB or the credit rating of the majority of EDBs and GPBs be substituted for the references to BBB+ in the cost of capital IM for EDBs and GPBs, to be workable.

[1314] Both BBB+ and BBB may be investment grade and whether the difference in margin of safety between them is best described as "small", as WELL submits, rather than "materially lower", as described by the Commission, WELL's submission does not satisfy us that substituting a BBB rating would be materially better in meeting the Part 4 and/or s 52R purpose(s) than the Commission's notional BBB+ credit rating.

[1315] We also reject Powerco's challenge to the Commission's margin of safety based on observations in PwC's report for the ENA to the effect that the Commission's choice of a notional BBB+ credit rating "… will have the effect of reducing the margin of safety for a firm's debt financiers" for the following reasons. First, it has no regard to the s 52A purpose and objectives. Second, it ignores the Commission's observation about the adverse effects that a lower notional credit rating may have on the long-term interests of consumers. Third, it ignores the fact that a firm's financiers will assess a firm's credit worthiness independently of the Commission's notional credit rating.

Powerco's "simple approach" appeal

The Commission's decision

[1316] In deciding on the methodology for calculating the debt premium the Commission observed:[751]

> In principle, there are two generic ways of estimating the debt premium. The 'simple approach' only considers credit-rated publicly traded corporate bonds denominated in New Zealand dollars when calculating the debt premium. The 'complex approach' acknowledges that firms may raise debt capital through a number of channels in addition to issuing bonds in New Zealand.

[1317] The simple approach, adopted by the Commission for estimating the debt premium, involved the following three steps:[752]

> i. identify credit-rated publicly traded vanilla corporate bonds denominated in New Zealand dollars, issued by the regulated service in question in New Zealand and, as a cross-check, issued by other

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751 EDBs-GPBs Reasons Paper at [H5.29], 3/7/001436.

752 EDBs-GPBs Reasons Paper at [H5.30], 3/7/001436 (footnote omitted).

infrastructure businesses which are not the regulated services in question, in New Zealand.

ii. obtain the wholesale market yield to maturity on these bonds and the contemporaneous risk-free rate, and estimate the debt premium by taking the difference between these two.

iii. estimate, by interpolation, what the debt premium would be for a term to maturity equal to the regulatory period, consistent with a specified [Standard & Poor's] long-term credit rating, or equivalent rating from Moody's or Fitch, for bonds issued by the regulated service in question.

[1318] The complex approach to estimating the debt premium would have involved, first, estimating the debt premium for each option by which firms may raise debt denominated in (or swapped back to) New Zealand dollars and, secondly, estimating the overall debt premium by making assumptions about the weighting of each borrowing option in a notional debt portfolio.[753]

[1319] The Commission saw advantages in using the simple approach to estimating the debt premium because:[754]

(a) it is relatively simple and easy to understand;

(b) it is transparent and objective as it only uses publicly available data; and

(c) its generic nature means it requires fewer subjective assumptions (for example, regarding treasury risk management policies or market issuance capacity).

[1320] While the Commission noted that:

(a) a disadvantage of the simple approach compared to the complex approach was that the simple approach does not recognise means other than publicly traded corporate bonds by which a firm may raise debt (eg: bank debt or overseas bonds); and

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753 EDBs-GPBs Reasons Paper at [H5.33], 3/7/001437.
754 EDBs-GPBs Reasons Paper at [H5.31], 3/7/001437.

(b) ignoring the other means may result in estimating a debt premium unrepresentative of a firm's actual debt premium,

its preference remained for the simple approach because data for the other means is not publicly available.

[1321] The Commission also concluded that it should use the simple approach because:[755]

(a) For the following reasons, it is relatively favourable to suppliers:

(i) first, for any maturity period up to approximately four years, the all-up debt costs (debt premium and issuance costs) on a bank loan are likely to be lower than such costs on publicly traded corporate bonds;[756] and

(ii) second, in practice, firms rarely borrow directly from a bank for a five-year term and the actual all up debt costs incurred by a firm on a bank loan (unless the firm were deemed particularly un-creditworthy) would most likely be less than the all-up debt costs on a publicly traded corporate bond with five years to maturity.

(b) Australian regulators (for example, AER, IPART, QCA), have consistently adopted the simple approach to estimating debt premiums.

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755 EDBs-GPBs Reasons Paper at [H5.42] and [H5.44]-[H5.45], 3/7/001439.

756 A footnote to this passage observed: "Against this, bank loans usually require compliance with a range of more onerous financing terms (including regular reporting to the bank) and covenants. In addition, this is one of the main reasons that new publicly traded corporate bonds are rarely issued for an original period to maturity of less than four years." EDBs-GPBs Reasons Paper at fn 986, 3/7/001439.

Powerco's appeal

[1322] Powerco challenges the Commission's use of the simple approach for two principal reasons:

(a) That approach did not reflect the limited capital that is available from the New Zealand corporate bond market and the necessity for larger entities like it to source debt from overseas. Powerco supported its claim by reference to statements by Prime Infrastructure and Vector's Group Chief Executive.[757]

(b) Insofar as the simple approach was founded on difficulties in looking at actual sources of debt and the use of non-public information:

  (i) information on overseas debt raising by New Zealand firms is accessible to finance practitioners and advisors in New Zealand, as evinced by the Commission's knowledge of AIAL's sale of USD 150 million of notes in the United States' private placement market to refinance debt; and

  (ii) the interest rates paid overseas are either public or available in subscriptions.

Analysis

[1323] We accept the Commission's preference for the simple approach based on its premise that as the primary source of EDB and GPB funding is local, not overseas, New Zealand sourced estimates are the benchmark.[758] Support for the Commission's premise is found in a report prepared for Unison by Asia Pacific Risk Management Ltd and in the 2010 Confidential Survey.

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[757] Prime Infrastructure *Cost of Capital – The Investor Perspective: Response to the New Zealand Commerce Commission's Draft Reasons Paper Input Methodologies – Electricity Distribution Services* (13 August 2010) at [2.1]-[3.1], 35/265/017705 and 35/265/017705; and Simon MacKenzie *Statement* (23 August 2010) at [5.6], 36/276/018036.

[758] EDBs-GPBs Reasons Paper at [H5.90]-[H5.92], 3/7/001448.

[1324] Asia Pacific Risk Management Ltd's report expressed a view that:[759]

> ... EDB's would "tap" these funding markets when considered favourable relative to the NZ debt market. Any decision to issue in an international market would be considered relative to what could be achieved in the NZ market. It is unlikely that an EDB would have an ongoing bond programme in an international market; rather issues are less frequent and privately placed with wholesale investors. An ongoing funding programme, such as Powerco's, is more likely in the NZ debt markets.

[1325] Also the 2010 Confidential Survey showed that almost three-quarters of the debt by value raised by the survey's respondents was raised in New Zealand dollars.

[1326] Information on overseas debt raisings by New Zealand firms may be available as Powerco submits, but the complexities and lack of transparency in utilising it tell strongly against such use when the primary source of EDB and GPB funding is local. Thus, the availability of such information does not satisfy us that the cost of capital IMs for EDBs and GPBs based on the complex approach would be materially better at meeting the s 52A and/or s 52R purpose(s).

The Bloomberg "fair value curve" appeals

The Commission's decision

[1327] The Commission acknowledged that, because of the small numbers of bonds issued by EDBs/GPBs or Airports that are not majority owned by the Government or a local authority and which have the required BBB+ or A– credit rating, some expansion of its reference bond category was required. The cost of capital IMs prescribe that expansion as involving:[760]

> - ... progressively expanding the range of publicly traded bonds considered to include:
>   - those which are not issued by [*an EDB or GPB*]/[*a supplier of airport services*];
>   - those with a [Standard & Poor's] long-term credit rating other than [*BBB+*]/[*A-*]; and

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759 EDBs-GPBs Reasons Paper at [H5.90], citing the Asia Pacific Risk Management Ltd *Unison Networks Ltd: Commerce Commission Cost of Debt Funding Submission* Report (for Unison) (12 August 2010) at 2, 35/256/017444.

760 EDBs-GPBs Reasons Paper at [H5.4], 3/7/001430; Airports Reasons Paper at [E5.4], 2/6/000836.

- those issued by an entity majority owned by the government or a local authority;

but in each case adjusting the observed debt premium to approximate the debt premium that is likely to have been observed had the bond been of the type first described.

[1328] The IMs specify, in considerable detail:

(a) the date and point of estimation (within one month of the start of each disclosure year for ID; no later than six months prior to the start of each DPP regulatory period, for DPP; each September for CPP);[761]

(b) the dates to be used for calculation (each business day in the month preceding the start of the disclosure year for ID; each business day in the month eight months prior to the start of the DPP, each business day in the preceding August for CPP);[762]

(c) the market from which estimates are sourced (New Zealand wholesale market) and the type of yields to be used (bid yields);[763]

(d) the remaining term to maturity (five years);[764]

(e) the method of estimation (by taking account of the average spreads identified in accordance with the methodology);[765]

(f) the method of interpolation (linear):[766]

(g) how to combine the months' estimates (simple average of the business day observations).[767]

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761 See for example Decision [2012] NZCC 26 at cls 2.4.4(2)(b), 2.4.4(3), 5.3.25(2) and 5.3.25(3), 57/716/033652 and 67/716/033706..

762 See for example Decision [2012] NZCC 26 at cls 2.4.4(3)(b) and 5.3.25(3)(b), 67/716/033652 and 67/716/033706.

763 See for example Decision [2012] NZCC 26 at cls 2.4.4(3(b)(i) and 5.3.25(b)(i), 67/716/033652 and 67/716/033706.

764 See for example Decision 710 at cl 2.4.4(3)(d)(iv), 1/2/000092.

765 See for example Decision 710 at cl 2.4.4(3)(d), 1/2/000092.

766 See for example Decision 710 at cls 2.4.4(3)(b)(i) and 5.3.25(3)(b)(ii), 1/2/000092 and 1/2/000130.

767 See for example Decision 710 at cl 2.4.4(3)(c), 1/2/000092.

[1329] The Commission concluded, responding to a submission by Vector:[768]

> The Commission does not accept that the methodology is subjective. The Commission considers that its methodology for estimating the debt premium strikes an appropriate balance between:
>
> - promoting certainty for consumers and suppliers in relation to the estimation of the debt premium; and
>
> - providing the flexibility necessary to ensure the methodology is workable for the duration of the IM, given the number of publicly traded bonds in New Zealand and that the composition of those bonds will change over time.

[1330] The Commission provided a worked example of its methodology in the Principal Reasons Papers.[769] That worked example resulted in a debt premium for the EDBs, GPBs and Transpower of 2.0%.

The Energy Appellants' appeals

[1331] Vector's appeal here – and hence those of Powerco and WELL in support – is based on two propositions.

[1332] First, that the Commission's methodology is subjective, leaves the Commission too much discretion and may result in the Commission producing, consciously or unconsciously, idiosyncratically low results compared with debt premiums calculated by regulators in other jurisdictions. Vector, supported by commentary by Dr Hird,[770] points to the Commission's worked example, and in particular the Commission's decision to exclude what it saw as an anomalous WIAL bond from the sample, as demonstrating that likely outcome. For Vector, not only is the subjective nature of the methodology contrary to the s 52R purpose, but the likely underestimation of the true mid-point debt premium will reduce incentives to invest, contrary to the s 52A purpose.

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768 EDBs-GPBs Reasons Paper at [H5.67], 3/7/001444; Airports Reasons Paper at [E5.65], 2/6/000849.

769 EDBs-GPBs Reasons Paper at [H5.109]-[H5.135], 3/70021452-6; Airports Reasons Paper at [E5.107]-[E5.132], 2/6/ 000858-62.

770 CEG *Review of updated input methodologies* (for Vector) (November 2010) at [66]-[67], 40/310/019604.

[1333] Secondly, the Bloomberg fair value curve approach uses information (the Bloomberg fair value curves) prepared by experts in the provision of market information and analysis which is publicly available. This removes any subjectivity on the Commission's part and is consistent with the practices of Australian regulators.

[1334] Vector proposes that either:

(a) the Bloomberg New Zealand A fair value curve be used as the reference curve, with an adjustment in respect of the difference in debt premium for a BBB+ rating and an A rating (that adjustment would be estimated from the difference between the Bloomberg Australian BBB and A fair value curves because Bloomberg does not publish a New Zealand BBB+ fair value curve); or

(b) the Bloomberg Australian BBB fair value curve be used as the reference curve, with this curve then being swapped back into New Zealand dollars and expressed as a margin over the risk-free curve.

[1335] Vector prefers the methodology in subparagraph (a) above because the base curve is a New Zealand curve which, it notes, the Commission had in the EDBs-GPBs Reasons Paper recognised as historically having been a reasonable proxy for utility debt premiums.[771]

[1336] Vector reinforces its arguments by contrasting the Commission's worked example, which produced a five-year premium of 2.0% based on data for August 2010, with:

(a) the value of the Australian Bloomberg BBB fair value curve as at 31 July 2010, swapped into New Zealand dollars which produced a debt premium of 2.97%;

[771] EDBs-GPBs Reasons Paper at fn 1024, 3/7/001450.

(b) the value of the New Zealand Bloomberg A fair value curve as at 31 July 2010, adjusted upwards for the difference between a BBB+ and A rating based on the difference between the Australian Bloomberg BBB and A fair value curves which produced a debt premium of 2.51%; and

(c) a CEG analysis of debt premiums in 31 US and 17 Australian regulatory decisions between January 2009 and July 2010 which averaged 4.0% and 3.4% respectively with the average of all decisions being 3.8%.

[1337] Whilst supporting Vector's appeal, both Powerco and WELL argue for the BBB curve, consistently with their credit ratings appeals.

Analysis

[1338] We accept neither of Vector's propositions, namely that the Commission's methodology is unduly subjective and that the use of Bloomberg's fair value curve introduces objectivity and certainty.

[1339] A sector-specific debt premium cannot be directly observed and an estimate is required. That estimation requires a degree of judgement and the exercise of discretion. As can be seen from the Commission's specification of its methodology, the cost of capital IMs circumscribe the Commission's judgement and discretion in considerable detail. We are satisfied that that circumscription provides sufficient guidance for a supplier to understand the Commission's approach and, contrary to Dr Hird's observation, provide certainty "... as to what answer the Commission might come up with" (to use his words).[772]

[1340] As to Vector's submission that the cost of capital IMs are likely to produce idiosyncratic results significantly below the debt premiums in other jurisdictions, we accept the Commission's submission to the effect that it is guided by the s 52A

[772] Hird (CEG) *Review of updated input methodologies* (for Vector) (30 November 2010) at [66], 40/310/019604.

purpose, not consistency with debt premiums set by other regulators in other jurisdictions.

[1341] Nor do we accept the submission that the Bloomberg fair value curves are objective and remove subjectivity from the process. As may be seen from the following observation by Mr Balchin (on behalf of Powerco and CIAL) Vector's preferred Bloomberg fair value curves are not, compared to the Commission's approach, transparent:[773]

> Bloomberg takes the source of information, opinions from banks about the yield of corporate bonds on any particular day, Bloomberg then converts that using a proprietary algorithm into its price for those bonds, ... It then fits a curve to those using again another proprietary algorithm, part of which is identifying and excluding outliers.

[1342] Vector, moreover, fails to demonstrate on evidence sourced from the record that the Bloomberg Australian fair value curves data is likely to be representative of debt premiums that would be observed in New Zealand for the benchmark bond. Debt premiums differ from one market to another for a variety of reasons, including different sovereign credit ratings.

Outcome

[1343] For all the above reasons, we are not persuaded that upholding any of the Energy Appellants' or the Airports' challenges to the Commission's debt premium decision would produce materially better cost of capital IMs. Nor are we persuaded the Commission erred in law in any of the ways asserted in these appeals.

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773 Cost of Capital Workshop *Transcript* (13 November 2009), 27/181/013355.

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6.9 DEBT ISSUANCE COSTS

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The Commission's decision

[1344] The third component of the cost of debt in the WACC formula is a notional allowance for debt issuance costs – costs incurred when a firm raises new debt that are additional to the interest on the debt and therefore not reflected in the debt premium. As debt normally has a finite period to maturity, and is re-financed regularly, the allowance is an annual allowance.

[1345] The Commission's Expert Panel was divided on how the Commission might approach debt issuance costs. Dr Lally was in favour of debt issuance costs being regulated as a component of the cost of capital because that approach would assign the costs across the entire life of the debt rather than concentrating them (unless amortised) in the year in which they were paid. Professor Myers was in favour of treating them as cash investments to be amortised over the life of the issue and handled through the regulatory cash flows, not the WACC.[774]

[774] Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [125]-[133], 5/11/001755.

[1346] So long as a supplier would be compensated only once for its debt issuance costs, the Commission was indifferent to whether such costs were regulated as a component of the WACC or allowed as part of a supplier's cash flows.[775] Its reasons for including debt issuance costs as a component of the WACC appear in the Principal Reasons Papers as follows:[776]

> The cost of capital IM provides a supplier with compensation for a notional cost of debt capital rather than its actual cost of debt capital. As such, it should also incorporate the debt issuance costs as a notional amount in the cost of debt capital rather than as an actual cost in the cash flows. On this basis, the appropriate way to allow for debt issuance costs is by adding a margin on the cost of debt capital, rather than the alternative of requiring estimation of nominal debt capital so as to derive a dollar cash flow value of debt issuance costs.

[1347] Consistent with its approach to determining the debt premium, the Commission determined an allowance for debt issuance costs of 0.35% per annum[777] in each of the cost of capital IMs based on:

(a) the costs of issuing publicly traded bonds – as the Commission saw it, data on such costs was the only publicly available data and use of non-public data would be likely to impede the ability of suppliers and interested parties to independently replicate the debt issuance cost estimation process; and

(b) amortising the debt issuance costs over the same period as the term of the debt premium (five years).[778]

[1348] In arriving at its allowance of 0.35% per annum for debt issuance costs the Commission had regard to the following figures:

(a) 0.30% allowed in the Gas Authorisation and in its 2006/2007 and 2007/2008 TSO determinations based on advice from Dr Lally;[779]

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775 EDBs-GPBs Reasons Paper at [H5.93], 3/7/001449; Airports Reasons Paper at [E5.91], 2/6/000854.

776 EDBs-GPBs Reasons Paper at [H.94], 3/7/001449; Airports Reasons Paper at [E5.92], 2/6/000585.

777 See for example Decision 710 at cls 2.4.2(6) and 4.1.2(5), 1/2/000090 and 1/2/000094.

778 EDBs-GPBs Reasons Paper at [6.3.37] and [H5.95], 3/7/001126 and 3/7/001449; Airports Reasons Paper at [6.336] and [E5.93], 2/6/000716 and 2/6/000855.

(b) 0.37% per annum based on PwC's analysis of 17 prospectuses for NZD bonds, which figure was supported by Asia Pacific Risk Management Ltd;[780]

(c) 1.06% per annum incurred by some small firms as revealed by PwC's analysis; and

(d) 0.47% per annum based on Bancorp's analysis of 23 prospectuses for NZD bonds.[781]

[1349] In its consideration of the PwC and Bancorp figures the Commission:[782]

(a) noted that:

(i) their analysis has been based on the amount of debt offered; and

(ii) there was significant over-subscription for half the offers they identified; and

(b) concluded that:

(i) over-subscription would lower the actual basis point per annum equivalent of the average debt issuance costs incurred below PwC's and Bancorp's respective estimates; and

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779 EDBs-GPBs Reasons Paper at [H5.81], 3/7/001446; Airports Reasons Paper at [E5.79], 2/6/000851.

780 EDBs-GPBs Reasons Paper at [H5.82], 3/7/001446 citing: PwC *Electricity Networks Association: Submission on the Cost of Capital Parameter Estimates in the Commerce Commission's (Draft) Electricity Distribution Services Input Methodologies Determination 2010* (for ENA) (13 August 2010) at 34, 35/256/017460, and Asia Pacific Risk Management Ltd *Unison Networks Ltd: Commerce Commission Cost of Debt Funding Submission Report* (for Unison) (12 August 2010) at [4.2], 35/256/017460; Airports Reasons Paper at [E5.80], 2/6/000851.

781 EDBs-GPBs Reasons Paper at [H5.82], 3/7/001446 citing August 2010 Bancorp Report at table 12.5, 34/245/017060; Airports Reasons Paper at [E5.80], 2/6/000851.

782 EDBs-GPBs Reasons Paper at [H5.83]-[H5.84], 3/7/001446-7; Airports Reasons Paper at [E5.81]-[E5.82], 2/6/000852.

(ii) adjusting the issuance costs for the debt actually raised, PwC's report implies an average actual debt issuance cost of 0.33% per annum and Bancorp's implies 0.34% per annum.

[1350] The Commission dismissed the figure of 1.06% per annum, incurred by some small firms revealed by PwC's analysis, as irrelevant because:[783]

(a) the small firms were not subject to Part 4 regulation nor do they have the same risk profile as the EDBs, GPBs or Transpower;

(b) three of the bonds were issued in 2001; and

(c) it considered it likely that the small firms issued bonds, rather than obtain bank loans, to avoid compliance with a range of potentially more onerous financing terms (including regular reporting to the bank) and covenants imposed by banks. Setting the allowance for debt issuance costs based upon this evidence would imply, amongst other things, that consumers of the type of regulated services covered under Part 4 of the Act should be required to pay the costs of decisions by small firms to remain inefficiently small.

[1351] Notwithstanding that it had some issues with the quality of data regarding the costs of issuing publicly traded bonds in New Zealand, the Commission considered it provided an improved basis for estimating debt issuance costs and increased the allowance to 0.35% per annum from the 0.30% in the May-June 2010 Draft Reasons Papers.[784]

[1352] The Commission considered the 0.35% per annum debt issuance costs allowance "… a generous allowance" because:[785]

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783 EDBs-GPBs Reasons Paper at [H5.87], 3/7/001447; Airports Reasons Paper at [E5.85], 2/6/000852-3.

784 EDBs-GPBs Reasons Paper at [H5.85], 3/7/001447 and June 2010 EDBs Draft Reasons Paper at [6.7.3], 9/37/003772; Airports Reasons Paper at [E5.83], 2/6/000852; May 2010 Airports Draft Reasons Paper at [6.7.3], 8/31/003378.

785 EDBs-GPBs Reasons Paper at [6.3.39], 3/7/001127; Airports Reasons Paper at [6.3.38], 2/6/000717.

(a) many suppliers make extensive use of bank loans which would generally have a cost below the cost of public bond issues;

(b) it is greater than the levels allowed by overseas regulators; and

(c) the results of the 2010 Confidential Survey indicate that the average debt issuance cost for publicly traded bonds was 0.22% per annum.

[1353] The Commission justified its generosity by reference to:[786]

(a) bank debt possibly having more onerous covenants than a public bond issue; and

(b) the smaller relative debt issues by New Zealand's suppliers compared to their overseas counterparts which may result in issue costs being a larger percentage of the debt amount.

Appeals

[1354] Vector challenges the 0.35% per annum debt issuance costs allowance, submitting that substitution of a figure of 1.03% would result in an IM that would be materially better in meeting the s 52A and/or s 52R purpose(s). While Powerco does not appeal the debt issuance costs allowance, it supports Vector's challenge. MEUG challenges the Commission's treatment of debt issuance costs as a component of the WACC. WIAL/CIAL accept the Commission's 0.35% estimate for public bond issues, but say an increment of 10 to 15 basis points should be added for the costs of bank standby (liquidity) facilities and debt underwriting. WELL, Transpower and AIAL do not challenge the debt issuance costs allowance.

[1355] We consider MEUG's challenge first. If we agree that, as MEUG argues, debt issuance costs should be treated as operating expenses, the other challenges must fail.

[786] EDBs-GPBs Reasons Paper at [6.3.39], 3/7/001127; Airports Reasons Paper at [6.3.38], 2/6/000717.

MEUG

Appeal

[1356] MEUG's submission challenging the Commission's debt issuance costs allowance is brief:

> MEUG submits that if the Commission is concerned to ensure that debt issuance costs be allowed then the IM should treat debt issuance costs in the same way as other operating costs, and not as an increment in cost of capital.

[1357] Ms Pender's oral submissions on behalf of MEUG did no more than refer us to the above quoted paragraph in MEUG's submissions.

Analysis and outcome

[1358] As Vector and Powerco's appeals show, debt issuance costs may be peculiar to each supplier. Insofar as they are, there is a superficial attractiveness in MEUG's submission to the effect that such costs be treated as operating costs.

[1359] However, MEUG did not expand on its submission and we accept the following reasons for the Commission's treatment of debt issuance costs as a component of the WACC:[787]

(a) As the cost of capital IMs provides a supplier with compensation for a notional cost of debt capital rather than its actual cost of debt capital, they should also incorporate debt issuance costs by adding a margin to that notional amount of debt capital rather than as an actual cost in the cash flows.

(b) As estimated by it at 0.35% pa, the Commission's allowance would have little effect on a supplier's cost of capital as a small difference in debt issuance costs is likely to be immaterial to the final allowed rate of return (or, as Dr Lally put it in relation to his estimation of 0.30% pa, "trivial").[788]

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[787] EDBs-GPBs Reasons Paper at [H5.79], [H5.94] and [H5.96], 3/7/001445 and 3/7/001449; Airports Reasons Paper [E5.78], [E5.92] and [E5.94], 2/6/000851 and 2/6/000854-5.

[788] M Lally *The Weighted Average Cost of Capital for Gas Pipeline Businesses* (28 October 2008) at

(c) The Commission's treatment allocates the costs to all periods rather than concentrating them in the periods in which they are paid.

[1360] Moreover, the simplicity of the Commission's approach is, in a regulatory context, attractive compared to each supplier being required to estimate its nominal debt capital to derive a dollar cash flow of debt issuance costs and the Commission being required to be satisfied of the estimate.

[1361] Furthermore, the use of a notional figure is consistent with the sector-wide DPP regulatory regime, whereas the adoption of supplier-specific debt issuance costs and compensating each EDB and GPB for such costs would be inconsistent with the regime and, indeed, the treatment of opex in that regime.

Vector and Powerco

[1362] Vector's argument for a 1.03% per annum allowance for debt issuance costs is based on claims for:

(a) a 0.48% allowance for out of pocket expenses (in lieu of the Commission's 0.35%);

(b) a 0.15% new issue premium;

(c) a 0.16% allowance for funding liquidity costs; and

(d) a 0.24% allowance for interest rate management costs.

[1363] We analyse each claim in turn.

Out of pocket expenses

[1364] Vector submits that the Commission's estimate of out of pocket expenses is flawed because:

22, 22/123/010187.

(a) No discount rate was applied in amortising the upfront cost data from the PwC and Bancorp reports to derive its figures of 0.33% and 0.34%. Correctly amortising the time value of money would produce figures of 0.42% and 0.43%, respectively.

(b) The Commission's figure excluded credit rating fees estimated by Bancorp at 0.12% per annum. For reasons which Mr Myer was at loss to explain, Vector sought half of this estimate.

(c) In amortising the upfront cost data from the PwC and Bancorp reports the Commission ignored a correlation between issue size and upfront costs as suggested by Bancorp and recognised by PwC. Taking account of that correlation would have resulted in debt issuance costs of 0.61% for a five-year term and 0.36% for a 10-year term.

[1365] Vector's claim for an out of pocket expenses allowance of 0.48% is, as can be seen, the sum of its 0.42% and 0.6%.

[1366] Vector also challenges the Commission's reasons for describing its figure of 0.35% for out of pocket expenses as "generous", submitting that:

(a) the Commission had no basis to conclude that the costs of bank debt are likely to be lower than the costs of public bond issues – it argues that if that were so, a supplier would use bank debt only;

(b) having estimated the debt premium by reference to the New Zealand market, debt issuance costs should also be estimated by reference to the cost of issuing debt in that market; and

(c) the Commission's conclusion based on its 2010 Confidential Survey that actual debt issuance costs averaged 0.22% was, for a variety of reasons, flawed.

[1367] The fact that Vector with a BBB+ credit rating is the only EDB or GPB to challenge the cost of capital IMs' debt issuance costs allowances and Powerco with

its BBB credit rating is the only EDB or GPB to support the challenge is not without significance.

[1368] Again, it is to be remembered that the cost of capital IMs are sector-wide for EDBs and GPBs generally, they are not supplier-specific and are to be assessed having regard to the s 52A and/or s 52R purpose(s).

[1369] There is substance in Vector's claim that the debt issuance costs allowance fails to recognise the time value of money. However, the Commission's description of its allowance as "generous" is accurate. Increasing the allowance as proposed by Vector to recognise the time value of money would make it even more generous.

[1370] In concluding that the Commission's "generous" description of its debt issuance costs allowance is accurate we had regard to:

(a) The figures in [1348] and the Commission's consideration of those figures as outlined in the paragraphs that follow [1348].

(b) The absence of an explanation why Vector seeks only half of Bancroft's estimate of credit rating fees ([1364](b)).

(c) The Commission's reasons outlined in [1352]-[1353] for so describing the allowance and, in particular, the 2010 Confidential Survey of 29 regulated suppliers which indicated average debt issuance costs of 0.22% per annum, which suggests that the Commission's allowance of 0.35% per annum is a more than adequate allowance for EDBs and GPBs generally.[789] Support for that suggestion is to be found in the following extract from Vector's cross-submission on the June 2009 IMs Discussion Paper:[790]

> … Vector is broadly comfortable with the Commission's estimate of 0.30% per annum for debt issuance costs …

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789 EDBs-GPBs Reasons Paper at [6.3.39], 3/7/001127.

790 Vector *Additional Information for Vector's cross-submission on the Input Methodologies Discussion Paper* (31 August 2009) at 3, 26/170/012646.

(d) The Commission's 2010 Confidential Survey which also showed that the all up debt premium (debt premium plus annual allowance for debt issuance costs) allowed under the EDBs and GPBs cost of capital IMs was comparable with the all up debt premium actually incurred on debt capital that had then been recently raised by suppliers.[791] This leads us to reject Vector's submission that the Commission's conclusions based on the 2010 confidential survey are flawed.

(e) A report from Auckland Uniservices Ltd (Uniservices) that:[792]

(i) estimated actual debt issuance costs incurred by AIAL (in October 2009) and WIAL (in early 2009) of 0.32% per annum and 0.30% per annum, respectively; and

(ii) described the allowance of 0.30% per annum for debt issuance costs in the Commission's May-June 2010 Draft Reasons Papers as "reasonable".

New issue premium[793]

[1371] Vector supports its claim for a new issue premium allowance of 0.15% by reference to Bancorp's November 2010 report *Debt Issuance Cost Analysis* (November 2010 Bancorp Report) that provided a conservative estimate of the actual costs over 10 years of 0.15% per annum compared to Asia Pacific Risk Management's range of 0.10 – 0.60% per annum and suggested mid-point of 0.35% per annum.[794]

[1372] In Vector's submission, because the Commission calculated the debt premium on the assumption that suppliers have the benefit of an investment grade credit rating

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791 EDBs-GPBs Reasons Paper at [H5.99], 3/7/001450.

792 Alastair Marsden (Uniservices) *Comments on Air New Zealand's and BARNZ's Submissions to the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (3 August 2010) at 13-15, 34/251/017243-5.

793 The difference between the yield at which a bond trades in the secondary market and the yield that would need to be offered to attract buyers to a new issue of the same bond.

794 Bancorp Treasury Services *Debt Issuance Cost Analysis* (for Vector) (16 November 2010) at [4.1], 39/304/019481 [November 2010 Bancorp Report].

of BBB+, the debt issuance costs allowance should account for the additional costs borne by a supplier in achieving and maintaining such a credit rating.

[1373] The November 2010 Bancorp Report, upon which Vector bases its claim for inclusion of a new issue premium in the cost of capital IM for EDBs and GPBs, does not focus on Vector's costs or the costs of regulated suppliers. Nothing was put to us that directly rebuts the conclusion in the EDBs-GPBs Reasons Paper that the details of the costs actually incurred by regulated suppliers, obtained by the Commission in response to the 2010 Confidential Survey, indicate that the all up debt premium (debt premium plus an annual allowance for debt issuance costs) under the IMs is comparable with the all up debt premium actually incurred on debt capital recently raised by them.[795]

Funding liquidity costs

[1374] Relying on the November 2010 Bancorp Report Vector supports its claim for 0.16% funding liquidity costs by submitting it is necessary to maintain "headroom", or undrawn credit lines, in order to maintain an investment grade credit rating in accordance with a July 2010 Standard and Poor's report which considered the ratio of, and difference between, liquidity 'sources' and 'uses'.

[1375] As Vector puts it in its submissions, for every dollar of debt, an issuer with a BBB+ credit rating needs an additional amount of undrawn debt in order to support its credit rating. This undrawn debt, it submits, involves a variety of costs.

[1376] We note in relation to Vector's claim for funding liquidity costs (which is also based on the November 2010 Bancorp report):

(a) Vector's own funding liquidity costs are lower than Bancorp's estimate of those costs;

(b) the November 2010 Bancorp report under this sub-heading does not focus on Vector's costs or the costs of price regulated suppliers;

795 EDBs-GPBs Reasons Paper at [H5.99], 3/7/001450.

(c) nothing was put to us that contradicts the conclusion in the EDBs-GPBs Reasons Paper that details of the costs actually incurred by regulated suppliers obtained by the Commission in response to the 2010 Confidential Survey indicate that the all up debt premium (debt premium plus an annual allowance for debt issuance costs) under the IMs is comparable with the all up debt premium actually incurred in their recent raisings;[796] and

(d) the claim focuses on costs peculiar to Vector and Powerco as the only two EDBs and GPBs with a credit rating.

Interest rate hedging costs

[1377] Vector's view is that interest rate hedging costs are best reflected as an additional allowance in relation to debt issuance costs, providing for all hedging costs incurred in relation to issued debt, rather than by way of the Commission's TCSD allowance.

[1378] Vector, again, bases its claim for a 0.24% hedging costs allowance on the November 2010 Bancorp Report. That 0.24% would cover – by Bancorp's assessment and as a mid-point estimate – a normal bid/offer spread of 0.05%, "executor spread" of 0.03% - 0.10% and a credit spread of 0.05% to 0.20%.

[1379] While Powerco did not appeal against the Commission's determination of 0.35% for debt issuance costs, it supports Vector's appeal for increased debt issuance costs.

[1380] Powerco submits that:

> ... the costs to which Vector refers apply to any investment grade rated entity, not just those rated BBB+ (and would include those rated BBB such as Powerco)

[1381] Powerco also submits that while a small part of the additional hedging costs referred to by Vector would be provided as a part of the TCSD allowance, if (as was

796 EDBs-GPBs Reasons Paper at [H5.99], 3/7/001450.

its preference) the debt premium were to be estimated on a 10-year term it would remove any need for inclusion of a TCSD allowance. But Powerco's submission in that regard is to be weighed against its submission (quoted above in our consideration of the TCSD) as to the practical effect of the TCSD.

[1382] The TCSD allowance does provide (albeit noting our reservations as regards that allowance) for interest rate swap execution or the hedging costs embraced by Vector's claim under this sub-heading. Vector's submissions in support of the claim simply fail to make a case why, if the hedging costs sought by it were included in the EDBs and GPBs cost of capital IMs as a component of the WACC rather than the TCSD allowance, those IMs would be materially better in meeting the s 52A and/or s 52R purpose(s).

Outcome

[1383] For the reasons stated above we are not satisfied that substituting Vector's figure of 1.03% per a nnumin lieu of the Commission's 0.35% per annum for debt issuance cost allowance would result in cost of capital IMs for EDBs or GPBs that would be materially better in meeting the s 52A and/or s 52R purpose(s) for EDBs and GPBs generally. Nor that the Commission erred in law in making these decisions.

The Airports

Appeal

[1384] WIAL/CIAL submits that the best evidence of debt issuance costs is not comparator studies but the actual costs of the relevant Airport as summarised in the Uniservices' August 2010 report which shows that for a publicly traded bond issue, AIAL incurred 0.32% per annum debt issuance costs and WIAL incurred 0.30% pa.[797] WIAL/CIAL note that Uniservices' advice was to the effect that:

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[797] Alistair Marsden (Uniservices) *Comments on Air New Zealand's and BARNZ's Submissions to the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (Prepared for NZAA) (3 August 2010) at 13-15, 34/251/017243-017245.

(a) while the Commission's estimate of debt issuance costs of 0.35% per annum in relation to a public traded bond issue is reasonable, an increment should be added to that estimate to allow for debt underwriting agreements and bank standbys that the Airports negotiate with banks to provide funding liquidity and certainty; and

(b) an increment to debt issuance costs of 10 to 15 basis points per annum should be included for bank standby and underwriting costs.[798]

Analysis and outcome

[1385] For WIAL/CIAL to succeed in its challenge to the debt issuance costs allowance it must satisfy us that substituting its 0.425% per annum allowance for the Commission's 0.35% pa allowance is materially better in meeting either or both of the Part 4 and s 52R purpose(s) in respect of all Airports.

[1386] We are not so satisfied. As already noted:

(a) The 2010 Confidential Survey of 29 regulated suppliers indicated average debt issuance costs of 0.22% per annum which suggests that the Commission's allowance of 0.35% per annum is an adequate allowance for the Airports with a leverage of 17%.[799]

(b) The Commission's 2010 Confidential Survey showed that the all up debt premium (debt premium plus annual allowance for debt issuance costs) allowed under the cost of capital IM for the Airports was comparable with the all up debt premium actually incurred on debt capital that had then been recently raised by suppliers.[800]

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798 Alistair Marsden (Uniservices) *Comments on the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (Prepared for NZAA) (12 July 2010) at 31, 33/233/016533.

799 EDBs-GPBs Reasons Paper at [6.3.39], 3/7/001127; Airports Reasons Paper at [6.6.38], 2/6/000852.

800 EDBs-GPBs Reasons Paper at [H5.99], 3/7/001450; Airports Reasons Paper at [E5.97], 2/6/000855.

(c) We accept the Commission's reasons outlined above for describing its allowance of 0.35% per annum for debt issuance costs as "generous".

[1387] We therefore dismiss WIAL and CIAL's challenge to the Commission's debt issuance costs allowance.

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6.10 THE COST OF EQUITY APPEALS – OVERVIEW

Outline

Introduction 465

Introduction

[1388] The Commission's cost of capital IMs for each sector set the rules for determining each of the components of the cost of equity formula, other than the investor tax rate, namely:

(a) the risk-free rate (term);

(b) the equity beta; and

(c) the TAMRP.

[1389] The cost of capital IMs reflect additional determinations. Determining sector equity betas involves determining sector asset betas and leverage. Reflecting the Commission's approach to the possibility of standard error, a range of WACC estimates are derived. The IMs for DPP regulation and Transpower's IPP regulation stipulate the 75th percentile estimate as the WACC. The IMs for ID regulation stipulate the 25th and 75th percentiles for disclosure purposes. The cost of capital IMs also reflect the Commission's approach to the questions of model error and asymmetric risk.

[1390] Each of those determinations is challenged by one or more of the Energy Appellants, Transpower, MEUG and the Airports. The challenges overlap. We address those appeals on the following basis:

(a) The challenges to the risk-free rate have been addressed in Part 6.7.

(b) We address first, because of their centrality to the Commission's WACC estimates, in Part 6.11 the Commission's decision on the

relevant point estimates and ranges for WACC and the challenges to those decisions by MEUG – in the case of the Energy Appellants and Transpower – and Transpower and the Airports respectively.[801]

(c) We address the challenges of Powerco, Vector, Transpower and MEUG to the Commission's asset beta determinations in Part 6.12,[802] and those of the Airports in Part 6.13.[803]

(d) We address the challenges to the Commission's leverage decisions, by MEUG only in the case of the Energy Appellants, by MEUG and Transpower in Transpower's case, and by the Airports in Part 6.14.[804]

(e) The Airports, Vectors' and Transpower's challenges to the TAMRP are addressed in Part 6.15.[805]

(f) Vector, Powerco and Transpower challenge the Commission's decisions on model error. We address those appeals in Part 6.16.[806]

(g) Finally, in Part 6.17 we address the Airports' challenge to the Commission's approach to asymmetric risks.[807]

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801 MEUG Appeal 1660 at [2(i)]-[2(m)]; MEUG Appeal 268 at [2(d)]-[2(f)]; Transpower Appeal 1656 at [26.1]-[26.2]; AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.1]; WIAL Appeal 249 at [31].

802 Powerco Appeal 180 at [12.5]; Powerco Appeal 248 at [17.5]; Vector Appeal 259 at [EDS.WACC(5)]; Transpower Appeal 1656 at [25]; MEUG Appeal 1660 at [2(u)]-[2(v)]; MEUG Appeal 268 at [2(p)]-[2(r)].

803 AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.2]; WIAL Appeal 249 at [11].

804 MEUG Appeal 1660 at [2(r)]-[2(t)]; MEUG Appeal 268 at [2(m)]-[2(o)]; AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.4]; WIAL Appeal 249 at [25].

805 AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.2]; WIAL Appeal 249 at [27]; Vector Appeal 259 at [EDS.WACC(6)]; Transpower Appeal 1656 at [24.1].

806 Vector Appeal 259 at [EDS.WACC(7)]; Powerco Appeal 180 at [12.6]; Powerco Appeal 248 at [17.6]; Transpower Appeal 1656 at [20.2].

807 AIAL Appeal 820 at [4]; CIAL Appeal 251 at [22.1]; WIAL Appeal 249 at [32].

6.11 COST OF CAPITAL RANGE

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The Commission's decision

[1391] Because the components of the WACC, for example, the cost of equity, cannot be observed directly, the WACC must be estimated. This raises the prospect of error since it is not possible to know the true cost of equity. To allow for this estimation error, the Commission's practice is to estimate standard errors for certain parameter values in the WACC equation and thus to derive its estimate for the WACC as a range.[808]

[1392] The Commission estimated standard errors for the debt premium, asset beta and the TAMRP and assumed the other parameter values had no standard error.

[808] The Commission in fact stated that this was "usual practice" (EDBs-GPBs Reasons Paper at [6.7.3], 3/7/001149). We are not persuaded that is necessarily the case. Because the determination of individual parameter values, and the WACC itself, involves a significant exercise of judgement, the adoption of standard errors (which would suggest an underlying statistically valid methodology) is not – in our experience – usual practice. The Commission's Expert Panel expressed similar reservations (Franks, Lally and Myers *Recommendation to the New Zealand Commerce Commission on Appropriate Cost of Capital Methodology)*(18 December 2008) at [143]-[144], 5/11/001788).

[1393] By reference to its expression of its WACC estimates as a range, for the EDBs, GPBs and Transpower, the Commission decided that:

(a) a range between the 25th and 75th percentiles of the cost of capital is to be used for ID purposes; and

(b) a point estimate based on the 75th percentile of the cost of capital range is to be used for DPP/CPP and IPP purposes.

The higher the standard error for a particular parameter, the higher the standard error for the WACC; and the higher the standard error for the WACC, the higher the 75th percentile (while the mid-point or 50th percentile remains the same).

[1394] For the Airports, the Commission decided that a range between the 25th and 75th percentiles of the cost of capital is to be used for ID purposes. It also stated in the Airports Reasons Paper that, in assessing profitability, an appropriate starting point is the 50th percentile (mid-point) of that range. That statement is not part of the Airports cost of capital IM.

[1395] In relation to the EDBs, GPBs and Transpower, the Commission's reasoning, in summary, was that:

(a) The cost of capital cannot be directly observed, but must be estimated. Estimates are subject to error. The Commission needed to apply judgement to dealing with such error.

(b) It cannot be known whether an estimate is in error or not but, using statistical methods, a confidence level can be assigned to how likely it is that the true value of the WACC is above or below a particular value. For example, if standard errors are correctly calculated, there is a three-in-four chance that the 75th percentile estimate exceeds the true value of the WACC, and a one-in-four chance that the 75th percentile estimate is below the true value of the WACC.

(c) The Commission considered that the social costs of underestimating the WACC outweigh the social costs of overestimating it.

[1396] In more detail, in the EDBs-GPBs Reasons Paper, the Commission stated:[809]

> The reason for the Commission adopting a cost of capital estimate that is above the mid-point for default/customised price-quality regulation, is that it considers the social costs associated with underestimation of the cost of capital in a regulatory setting involving constraining price to end users (as opposed to information disclosure applications and situations involving competition among suppliers), are likely to outweigh the short-term costs of overestimation (i.e. if the cost of capital is set too low, the incentives for suppliers to undertake efficient investments will be reduced, which would be inconsistent with the long-term benefit of consumers). That is, the Commission is acknowledging that where there is potentially a trade-off between dynamic efficiency (i.e. incentives to invest) and static allocative efficiency (i.e. higher short-term pricing), the Commission will always favour outcomes that promote dynamic efficiency. The reason is that dynamic efficiency promotes investment over time and ensures the longer term supply of the service, which thereby promotes the long-term benefit of consumers (consistent with outcomes in workably competitive markets).

[1397] This was an explicit exercise of judgement regarding the elements of the s 52A purpose set out in paragraphs (a) and (d). Incentives to invest and innovate were given greater weight than limiting suppliers' ability to extract excessive profits.[810] The Commission noted in particular the following specific factors potentially affecting its mid-point estimate of the WACC:[811]

(a) the SB-L CAPM might under-estimate the returns on low-beta stocks;

(b) the use of a domestic CAPM (simplified Brennan Lally) may lead to higher estimates than appropriate; and

(c) the estimated asset beta and debt issuance costs may be above their true values.

[1398] In relation to the Airports, the Commission stated in concluding that the mid-point is the appropriate starting point that it "… recognises that returns in competitive markets often fall below or exceed the mid-point of the cost of

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809 EDBs-GPBs Reasons paper at [H1.31], 3/7/001378.
810 EDBs-GPBs Reasons Paper at [6.7.12], 3/7/001151.
811 EDBs-GPBs Reasons Paper at [H11.54], 3/7/001551

capital".[812] The use of a range "recognises uncertainty in the estimation of the cost of capital" and "also recognises that profitability measures (such as the ROI) can fluctuate on a yearly basis".[813]

Appeals

[1399] The appeals against the cost of capital range fall into three categories:

(a) challenges by Vector and Transpower to the Commission's estimates of standard errors;

(b) challenges by MEUG and Transpower to the choice of the 75th percentile for DPP/CPP and IPP regulation; and

(c) challenges by the Airports to using the 25th to 75th percentile range for ID regulation.

Challenges to estimates of standard errors

[1400] Vector submits that, in estimating the cost of capital range, the Commission underestimated the standard errors of the debt premium, the TAMRP and the asset beta. It submits that a materially better IM would reflect:

(a) a standard error for the debt premium "calculated by reference to all the market data from which the debt premium has been calculated, rather than by reference to only a small subset of that data";

(b) a standard error of the TAMRP of 3.0% rather than the 1.5% used by the Commission; and

(c) a standard error of the asset beta of 0.20 rather than the 0.13 and 0.14 used by the Commission for EDBs and GPBs respectively.

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812 Airports Reasons Paper at [E11.58], 2/6/000938.
813 Airports Reasons Paper at [E11.60], 2/6/000938.

[1401] Transpower submits that the Commission erred in its estimates of the standard errors for leverage, the risk-free rate and the TAMRP. However, in oral submissions, the appeal in respect of TAMRP was withdrawn. It proposes a standard error for the risk-free rate of 1.06% and a standard error for leverage of 11% in place of zero as determined by the Commission in both cases. Transpower's submission is made firmly within the framework of its broader claim regarding the need to take its particular circumstances into account in the manner it says is required. There is no need to return here to our consideration of that issue.

[1402] Counsel for Vector only alluded to this part of its appeal in passing. Counsel for Transpower took us to estimates of the impact of its claims, but not to the merits of them. They were addressed by Mr Laurenson for the Commission. In those circumstances, we shall be fairly brief.

[1403] As mentioned above, the effect of all the proposals would be to increase the 75th percentile WACC estimate, and thus the BBAR. In effect, the appellants submit that the degree of uncertainty in the WACC estimate is greater than that estimated by the Commission and that their allowable revenues ought to be higher as a result.

Standard error of the debt premium

[1404] The Commission's decision was to calculate the standard error for the debt premium (using an accepted formula) from an observation of bonds rated BBB+ that are issued by EDBs and GPBs and that are majority owned by neither the Crown nor a local authority.[814] If no bonds meet the criteria, an appropriate floor for the debt premium is 0.15%.

[1405] Vector submits that a wider sample of bonds ought to be used, arguing that the Commission should have regard to bonds that do not meet the strict criteria in determining the debt premium. The determination of the debt premium is dealt with in Part 6.8 of this judgment. Expanding the sample as Vector proposes would generate greater variability in the debt premiums and raise the standard error.

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814 EDBs-GPBs Reasons Paper at [H5.73]-[H5.76], 3/7/001445.

[1406] We accept the Commission's argument that the standard error is to be calculated for the benchmark bond; in its consideration of a bond beyond the benchmark in determining the debt premium, it would be seeking to adjust that bond's debt premium to arrive at the benchmark premium. Taking account of a wider sample would no longer be estimating the standard error of the benchmark, but estimating the standard error of a more variable set of bonds.

[1407] Moreover, we note the Commission's point that eliminating or doubling the 0.15% figure changes the WACC by only 0.01%. Having regard to the fact that this issue was not addressed by Vector orally, we consider that in any case the change it proposes could not be significant enough to lead to a materially better IM.

Standard error of the TAMRP

[1408] The Commission's decision[815] to determine a standard error of the TAMRP of 1.5% derives from advice it received from Dr Lally in the Gas Control Inquiry. However, in making its decision the Commission considered later survey information, criticism of Dr Lally's approach by Professor Guthrie and further advice from Dr Lally.

[1409] Vector's argument is that Dr Lally's approach provides an estimate of the long-term variability in the TAMRP, whereas what is needed is an estimate of variability during the regulatory period, which would be higher. It proposes a figure of 3% based on a report by CEG, with PwC and Professor Guthrie supporting a similar figure reached by different means.

[1410] The Commission submits that CEG's estimate of 3% is unsupported by any analysis. Dr Lally considered Professor Guthrie's analysis and found fault with it. The PwC estimate comes from a single survey rather than a comprehensive analysis. The later survey information supports the Commission's estimate.

[1411] We acknowledge that there is substantial uncertainty about the level of the TAMRP, but incline to the view that the uncertainty is not particularly related to

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815 EDBs-GPBs Reasons Paper at [H7.124]-[H7.131], 3/7/001490.

variability in its value over the short to medium term. The Commission fully considered the question, and we consider that, having done so, it had no good reason to depart from its estimate. Once again we note that counsel for Vector made no attempt to persuade us otherwise.

Standard error of the asset beta

[1412] Again, the Commission's decision to determine a standard error of the asset beta of 0.13 for EDBs and 0.14 for GPBs,[816] had its genesis in advice provided by Dr Lally in the Gas Control Inquiry. In the EDBs-GDBs Reasons Paper the Commission exhibited estimates using the sample from which it estimated the asset beta but with two data frequencies and two sampling periods.[817] From this it estimated a standard error of 0.13 for EDBs and adjusted that upward to 0.14 for GPBs to reflect their perceived greater riskiness.

[1413] Vector submits that the Commission's analysis ignores potential sources of uncertainty other than the variability in its sample, such as the regulatory risk that overseas comparator companies in its beta study operate under different risk regimes. It proposes that a "reasonable increment" would be to increase the estimate to 0.20.

[1414] In the absence of oral argument against the Commission's submissions, we accept that Vector found no recent empirical evidence to support the implicit suggestion that firms in overseas regulatory regimes have lower risk. The procedure used by the Commission seems to us to be straightforward and sensible. We do note, however, that it involves elements of comparison and judgement, and consequently that the estimates of standard errors produced may not have the statistical properties that are usually associated with the technical use of that term. We return to that issue below.

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816 EDBs-GPBs Reasons Paper at [H8.215]-[H8.216], 3/7/001535.
817 At [H8.199]-[H8.206], 3/7/001531-3.

Standard error of the risk-free rate

[1415] The Commission's view was that although the risk-free rate varies over time, there is no uncertainty about what it is at any one time.[818] In reliance on Professor Guthrie, Transpower submits that the cost of capital is affected by intra-cycle variance in the risk-free rate, so that the actual risk-free rate at the time of investment during the regulatory period could be above or below the risk-free rate determined for the regulatory period.[819] He estimated a standard error of 1.06% based on observed data in the five-year period to June 2009.[820]

[1416] The Commission considered this submission in the Principal Reasons Papers,[821] relying in part on advice from Dr Lally that intra-cycle changes are so much less significant than estimation errors in other parameters that they can reasonably be ignored. It also considered that financial market instruments allow a supplier to manage any variation in the risk-free rate within the regulatory period and beyond.[822]

[1417] In our view, Transpower's submission is misconceived. Its concern is not properly to be characterised as uncertainty about the risk-free rate which is observable at any point in time.

Standard error of leverage

[1418] The level of leverage is the subject of a number of appeals and is dealt with in Part 6.14 of this judgment. As explained there, the Commission's decision, with which we agree, was to determine a notional leverage of 44% for the EDBs, GPBs and Transpower, and 17% for the Airports. That decision was made in the context of overcoming an anomaly whereby in the SB-L CAPM the WACC increases with leverage. In the Commission's view, setting the standard error of leverage to zero

818 EDBs-GPBs Reasons Paper at [H11.47], 3/7/001550; Airports Reasons Paper at [E11.46], 2/6/000935.
819 Guthrie *Measurement Error and Regulated Firms' Allowed Rates of Return* (report prepared for Transpower) (14 August 2010) at [18]-[20], 35/272/017843.
820 At [58], 35/272/017854.
821 EDBs-GPBs Reasons Paper at [H11.48]-[H11.49], 3/7/001550; Airports Reasons Paper at [E11.47]-[E11.48], 2/6/000935-6.
822 EDBs-GPBs Reasons Paper at [H11.49], 3/7/001550; Airports Reasons Paper at [E11.48], 2/6/000936.

was a simple corollary; if it were non-zero, WACC would vary with leverage, contrary to its (and the generally accepted) view that it should not.

[1419] Transpower submits that the use of a single level of leverage leads to a relatively large estimation error because the optimal leverage for a prudent firm may, and in Transpower's case does, differ from the Commission's chosen value.

[1420] Transpower's submission in respect of leverage itself, as opposed to the standard error of leverage, is dealt with in Part 6.14. In our view, the Commission has chosen a (notional) leverage, and the idea that there is any uncertainty about it, as embodied in a positive standard error, is mistaken.

Estimates of standard errors – outcome

[1421] For the reasons explained above, we do not accept that any of the proposed alternative values of standard errors would lead to materially better cost of capital IMs or that the Commission erred in law when selecting those values.

Challenges to chosen percentiles

[1422] This section of our judgment deals with challenges by:

(a) MEUG and Transpower to the 75th percentile for price-quality path regulation of the Energy Appellants and Transpower;[823] and

(b) the Airports to the range to be reported for ID regulation of airport services.[824]

[1423] MEUG submits that the cost of capital IMs for the Energy Appellants and Transpower should be amended to use the 50th percentile (mid-point) of the WACC range in place of the 75th percentile; or alternatively, that the 75th percentile be applied only to new investment (the "two-tier proposal"). Vector and Powerco – as interested parties – support the Commission's decision.

[823] MEUG Appeal 1660 at [2(i)-(m)]; MEUG Appeal 268 at [2(d)-(f)]; Transpower Appeal 1656 at [26.1]-[26.2].

[824] AIAL Appeal 820 at [4]; WIAL Appeal 249 at [31]; CIAL Appeal 251 at [22.1].

[1424] Transpower claims in its notice of appeal and in its written submissions that the 90th percentile of the WACC range should be used in place of the 75th percentile. In oral submissions, however, Transpower did not pursue the 90th percentile issue. Rather, counsel acknowledged that choosing a point within the range was a matter of judgement, and took no further issue with the Commission's exercise of its judgement. We therefore do not consider that matter further.

[1425] The Airports submit that the same factors leading to use of the 75th percentile for price-quality path regulation apply to ID, and the Commission should require them to report the 75th to 85th percentile range, or an upper band materially higher than the 75th percentile.

MEUG's appeal

[1426] There are several elements to MEUG's appeal.

[1427] First, MEUG argues that the IMs contain many "generosity allowances" which are then added to by the 75th percentile choice. It identifies 12 instances where it claims that the Commission erred expressly in favour of suppliers. In addition, MEUG identifies two examples of what it considers to be generous treatment in *Input Methodologies (Transpower) Supplementary Reasons Paper for Leverage in the Cost of Capital IM* (the Transpower Supplementary Reasons Paper).[825] MEUG's argument is that these claimed generosities amplified the effect of the choice of the 75th percentile, adding to its view that the choice was unnecessary and inappropriate.

[1428] Secondly, MEUG submits that the Commission's "supplier bias" lacked a proper foundation and was unbalanced. MEUG accepts that whether there is an asymmetric risk is a real concern worthy of consideration, but says that the Commission's conclusions reflected no genuine assessment of the question: rather, they were based on nothing more than untested opinion and speculation.

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[825] Commerce Commission *Input Methodologies (Transpower) Supplementary Reasons Paper for Leverage in the Cost of Capital IM* (29 June 2012), 42/352/021073 [the Transpower Supplementary Reasons Paper].

[1429] Finally, in dealing with the arguments for giving greater weight to incentives to invest than to limiting excessive profits, MEUG submits that:

(a) only persistent mis-setting of the cost of capital should justify a methodical supplier bias;

(b) allowing excess returns on the whole asset base does not correspond with the primary outcome of a workably competitive market;

(c) the Commission's decision would lead to over-pricing in the long term, with nothing to confine the effects to the short or medium term;

(d) the incentive is to over-invest with little or no downside for suppliers; and

(e) higher than efficient prices would have dynamic efficiency costs to users of regulated services; the Commission did not know or attempt to assess efficiency costs on the consumer side relative to those on the producer side.

[1430] In relation to Transpower only, MEUG also submits that:

(a) there is evidence that Transpower's major capex was already committed before the IM determination and not contingent on a higher WACC; and

(b) the regulatory regime is capable of identifying any real risk of underinvestment and applying a range of responses other than providing higher returns.

[1431] MEUG relies in part on a case before the Australian Competition Tribunal in relation to setting the WACC for Telstra.[826] (In its written submissions, it referred to this case only in its Transpower appeal but its oral submissions were not so limited.)

[826] *Re Telstra Corporation Ltd (No 3)* [2007] ACompT 3.

[1432] MEUG provides estimates of the impact of the choice of the 75th percentile over the 50th percentile.[827] The Commission's post-tax WACC estimates for the mid-point and the 75th percentile were 6.49% and 7.22% respectively. Based on a combined EDB/Transpower RAB of $12.7 billion, MEUG calculated that applying the mid-point would cost customers $128.8 million per annum less than if the 75th percentile were applied. Its two-tier approach would (naturally) have almost as large an impact in the initial years.

The Commission's response to MEUG

[1433] The Commission acknowledges in it submissions that its choice of the 75th percentile "does mean that the expected outcome is that regulated entities earn above normal returns". However, it also states that it "does not accept its cost of capital IMs reflect a bias in favour of suppliers". The "judgements it made in determining the cost of capital IMs were made with the s 52A purpose in mind – of promoting the long-term benefit of consumers".

[1434] The Commission argues further that all its judgements, other than the choice of the 75th percentile, reflected its best estimate of the parameter. It thus denies having provided any "generosities", although as noted above, it specifically drew attention to this possibility in the Principal Reasons Papers.

[1435] In its written submissions the Commission interprets MEUG's two-tier proposal as applying the higher cost of capital only in the regulatory period in which new capital is acquired. On that basis it considers that the proposal:

(a) may distort investment patterns, discouraging investment towards the end of each regulatory period;

(b) offer insufficient protection to consumers from the risk of underinvestment, since the higher WACC would apply for only a short part of the life of assets; and

(c) be administratively burdensome, involving the tracking of assets.

[827] MEUG "What's at Stake?" (Handup No 6, handed up 3 September 2012).

[1436] There had, in the past, been support for the Commission's approach from its experts. In December 2008, when Dr Lally recommended that the Commission choose a point higher than the mid-point, Professors Myers and Franks agreed that the Commission should set the WACC equal to or greater than the mid-point, with Professor Franks recommending that the Commission evaluate how far above the mid-point on a case-by-case basis.[828] That advice was, however, expressed in very conclusionary terms and neither Professors Myers nor Franks, nor Dr Lally, explained their reasoning in any detail.

[1437] The Commission drew attention to two decisions of the United Kingdom Competition Commission to use estimates above the mid-point for the WACC of regulated airports. The Competition Commission gave similar reasons for its decision to those of the Commission,[829] although without reference to innovation and dynamic efficiency.

[1438] In its *Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital* (Revised Draft Guidelines) the Commission referred to a submission made to it by Professor van Zijl (LECG) on behalf of WIAL proposing that the Commission use a loss function in selecting an appropriate point along the WACC range. The loss function would estimate the social harm done by overestimating and underestimating the WACC and provide guidance as to where the expected harm would be minimised. The Commission rejected that approach on the grounds that it would have to make large theoretical assumptions, and considered that the approach is "too mechanical and suggests a misplaced sense of precision and mathematical rigour".[830]

[1439] In oral submissions, the Commission argued that the fact that using a loss function had been raised during the consultation process and rejected by the

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[828] Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [21], 5/11/001790.

[829] United Kingdom Competition Commission *BAA Ltd: A Report on the Economic Regulation of the London Airports Companies (Heathrow Ltd and Gatwick Airport Ltd): Report for the Civil Aviation Authority* (28 September 2007) at [4.106]-[4.109], 19/107/008535-6; United Kingdom Competition Commission *Review of Stansted Airport: Q5 Price Control: Report for the Civil Aviation Authority* (23 October 2008) at [11.57]-[11.58], 21/121/010039.

[830] Commerce Commission *Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital* (19 June 2009) at [242], 5/13/002025 [Revised Draft Guidelines].

Commission put the parties on notice that the Commission was not going to employ that approach. If MEUG or any other party considered it possible, it could have undertaken the analysis itself.

Vector and Powerco's response to MEUG

[1440] Although the Commission did remarkably little in the Principal Reasons Papers or its submissions to justify its assertions about the relative costs of over and underestimating the cost of capital, suppliers did point to material in the record that provided some further support.

[1441] Vector, in reply to MEUG's submissions, notes that it has been unable to find any example of the two-tier approach being used by a regulator. It claims that regulators often adjust for the asymmetric risk of regulatory error implicitly through cautious parameter choices, equivalent to the Commission's 75th percentile approach. Vector also argues that MEUG's two-tier approach would be seen by suppliers as opportunistic and result in suppliers being concerned that the Commission would be willing to apply different rules once an investment was sunk. It finally states that MEUG has provided no evidence or analysis to the contrary, such as the loss function referred to by Professor van Zijl at the November 2009 workshop on the cost of capital (the Cost of Capital Workshop). The Cost of Capital Workshop is discussed further below.

[1442] Powerco also submits against MEUG's proposals with similar arguments. It claims that the asymmetric impacts of risk in the cost of capital calculation are "real, generally known and accepted…" relying on a submission by Professor van Zijl (LECG), prepared for ENA, in response to the Commission's June 2010 EDBs Draft Reasons Paper .[831]

[1443] In oral submissions, counsel for Vector provided references to a number of submissions by economic experts on behalf of regulated suppliers endorsing the Commission's approach or, in some cases, calling for a higher point in the range than the 75th percentile.

[831] Tony van Zijl *Response to Commerce Commission's Draft Cost of Capital Input Methodology: Report for the Electricity Networks Association* (13 August 2010), 35/257/617517.

[1444] Vector also showed that the Commission had held its view about asymmetric costs of over and underestimating the WACC since at least 2004 in the Gas Control Inquiry, agreeing with the advice of Dr Lally to that effect, who suggested that as a consequence the Commission should "choose a WACC value from the higher end of the scale".[832]

[1445] Vector also noted that Dr Lally had specifically addressed MEUG's two-tier proposal in the context of the Gas Authorisation, saying:[833]

> Such a course of action will damage the investment incentives of firms that are contemplating investment in areas that are currently unregulated, but which may be subject to regulation at some future point.

[1446] Moreover, at the Cost of Capital Workshop, the Commission's own expert adviser, Dr Lally, suggested that "the 75th percentile is probably the lower bound on what you might choose."

[1447] The suppliers also considered that a 75th percentile was appropriate because, contrary to MEUG's submissions (and those of the Commission), the Commission had erred in individual WACC parameter decisions in a manner unfavourable to the suppliers.

MEUG's appeal – analysis and outcome

[1448] In considering MEUG's appeal here, and that of the Airports, further background to the Commission's approach to the cost of capital range is of some assistance. The Commission considered four possible methodologies, including Monte Carlo simulation, which had been raised during the consultation process. In the end, it adopted what it called the "complex analytical approach". This involved estimating the uncertainty associated with individual parameters used in the WACC estimate, and combining them to obtain standard errors for the WACC. This is a common statistical method, if not one commonly used by regulators.

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832 Lally *The Weighted Average Cost of Capital for Gas Pipeline Businesses* (14 May 2004) at 43, 16/80/007011.

833 Lally *The Weighted Average Cost of Capital for Gas Pipeline Businesses* (28 October 2008) at 97, 22/123/010197.

[1449] There was a considerable variance in views on the appropriate approach during the consultation process and even into the appeals. However, at the hearing, no party pursued any variation to the Commission's basic approach.

[1450] In the light of advice from Professors Myers and Franks the Commission acknowledged that its use of standard errors had involved the making of judgements (rather than the pure application of statistical estimation techniques).[834] It also involved assumptions about the probability distributions of the estimates. Consequently, the resulting confidence intervals and percentile figures should not be considered as having the precision that is implied by the terminology.

[1451] While much of the discussion before us ignored this caution, in the end it may be said that the Commission used what it called standard errors and a percentile range in a way so as to arrive at a WACC estimate that it considered was likely to comfortably overestimate the WACC. Calling that estimate the 75th percentile is, by our assessment, really a shorthand form of reference, recalling the provenance of that estimate, but not intended to be taken as statistically precise. Nevertheless submissions, understandably and unavoidably, made use of expert advice framed in terms of the statistical properties of standard errors and percentile ranges.

[1452] The point is that the Commission's estimate was explicitly chosen so as to likely be higher than the unobservable true WACC. The precise likelihood cannot be estimated, but the Commission and parties proceeded on the basis that the estimate had some of the statistical properties associated with its terminology.

[1453] Reference has been made above to submissions regarding the Commission's past practice with regard to choosing a point estimate of WACC from within a range. The Commission introduced the topic in the Cost of Capital Workshop by noting that it had opted for the 75th percentile in the Gas Authorisation and for the 50th percentile in the Gas Control Inquiry.

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[834] EDBs-GPBs Reasons Paper at [H11.22], 3/7/001544; Airports Reasons Paper at [E11.21], 2/6/000930.

[1454] Nevertheless, through most of the IM consultation process the Commission was at pains not to commit itself. In the Revised Draft Guidelines it said merely that it "accepts the general proposition that the social costs of setting allowed rates of return too low probably outweigh the costs of setting allowed rates too high" and that "[t]he extent to which the Commission departs from the mid-point is a matter of judgment and must be assessed on a case-by-case basis".[835] This repeated what the Commission had said in 2005.[836] It was in commenting on the Revised Draft Cost of Capital Guidelines that the Commission's Experts expressed views – with some variation in emphasis – that the Commission should adopt a point above the mid-point.

[1455] The Commission was firmer in its June 2009 IMs Discussion Paper where it specifically rejected using "a mechanistic approach to setting a specific point within the range (e.g. the 75th percentile)."[837] The December 2009 Emerging Views Papers were silent on the cost of capital range. In the IMs consultation process, choice of the 75th percentile was first proposed in the May-June 2010 Draft Reasons Papers, but the cost of capital range had been discussed at some length in the Cost of Capital Workshop, as mentioned above. The Commission did not refer to this Workshop in its submissions to us.

[1456] On that basis we consider MEUG's appeal.

[1457] We have examined the instances cited by MEUG of alleged "generosities" in elements of the WACC estimation process. (We note that some of those references are effectively duplicates, one appearing in the body of the Principal Reasons Papers and another in an appendix in substantially the same words.) Contrary to the Commission's claim, it is hard to escape the sense that the Commission, in two of its individual parameter choices – debt issuance costs and asset beta, was – as MEUG asserted – inclined to err in favour of suppliers: [838]

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835 Commerce Commission *Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital* (13 June 2009) at [239] and [240], 5/13/002025.

836 Commerce Commission *Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital* (1 October 2005) at [128], 17/85/007333.

837 June 2009 IMs Discussion Paper at [8.170], 6/14/002333.

838 EDBs-GPBs Reasons Paper at [6.3.40] and [6.5.22], 3/7/001127 and 3/7/001141.

> This implies the 0.35% per annum allowance for debt issuance costs in the IM is appropriate, if not generous in favour of suppliers.
>
> ...
>
> This confirms the Commission's original estimate of 0.34 included in the Draft Reasons Papers for EDBs, GPBs, and Transpower is a reasonable estimate of the asset beta. Indeed it indicates, based on the broader range of time periods that were analysed, that an allowance of 0.34 is generous in favour of suppliers, and that the asset beta estimate could be reduced to around 0.30. This would be in line with the Commission's estimates in previous decisions.

[1458] We consider, however, that we may determine the issue of the choice of the 75th percentile on the basis of an assumption that the mid-point of the WACC range is – as the Commission asserted – correctly estimated as a mid-point, ie that no other "generosities" exist in the IM. Were we to conclude that the so-called "generosities" had resulted in an inappropriately high mid-point estimate, that in our view should properly be addressed by adjusting the mid-point estimate itself. But we have not reached that conclusion. Rather, by our assessment, the comments MEUG has identified as evidencing generosities reflect the element of judgement that the Commission acknowledged was present in its estimation procedures. We take a similar approach to suppliers' views that individual decisions by the Commission led to the WACC being underestimated. Those views which give rise to appeals are considered in their own right, and in Part 6.16 of this judgment we dismiss an appeal based on the claim that the SB-L CAPM tends to underestimate the WACC of low-beta firms, a possibility to which the Commission specifically drew attention.

[1459] Our assumption and those appeals do not impact on whether the Commission's 75th percentile approach was appropriate, since that approach is, in a logically correct manner, stated by the Commission to be based on the rest of the WACC calculations being "right", ie free from bias. The question, then, is the adequacy of the basis for the Commission's approach, which MEUG challenges.

[1460] The Commission's approach of using the 75th percentile in the manner set out in the cost of capital IMs involves the likelihood that suppliers will earn excess returns. (This is true even having regard to the fact that the calculation of the 75th percentile involves some generally acknowledged imprecision, and false precision.) If this feature of those IMs continues into future IMs, following review by the

Commission in accordance with the statutory framework, the likelihood of excess returns will be permanent. There is no suggestion in the Commission's reasoning that its choice of the 75th percentile is a decision made out of caution, and to be reviewed in the light of further evidence regarding the WACC. Rather, all the Commission's reasoning points to the choice following from, in its view, unavoidable uncertainties and asymmetric costs being permanent features of the regulatory framework.

[1461] This is clearly at odds with the s 52A(1)(d) purpose of limiting the ability of regulated suppliers to extract excessive profits. The Commission says as much in the Principal Reasons Papers. The question is whether this result – a likelihood – is justified by fear of failure to achieve the s 52A(1)(a) outcome of providing regulated suppliers with incentives to invest and innovate. The question is to be decided within the context of what best promotes the long-term benefit of consumers, the overriding purpose of Part 4.

[1462] No supporting analysis was provided by the Commission. Indeed, the propositions advanced for choosing a point higher than the mid-point seemed to be considered almost axiomatic. This extended to a strongly expressed, but unsupported, view of the benefits of dynamic efficiencies deriving from investment, without apparent regard to the nature of the investment. Such a sentiment is evident in the passage quoted in [1396] above, especially the nexus assumed between dynamic efficiency and incentives to invest. Nor was there any reference to how the outcomes produced by workably competitive markets might be relevant.

[1463] We found a similar sentiment and lack of reference to any research literature in the various citations provided by suppliers to submissions made on their behalf. The same must be said of expressions in support of the proposition in the Cost of Capital Workshop, where the absence of any voice questioning what would be beneficial to consumers was notable.

[1464] The rationale for the Commission's approach comes closest to having a clear basis, so far as the materials before us are concerned, in terms of the loss function that was discussed at the Cost of Capital Workshop. However, the Commission did

not refer to the loss function in the EDBs-GPBs Reasons Paper nor in its submissions to us, except as noted in [1439] above.

[1465] The notable feature of the Cost of Capital Workshop discussion, and of related submissions, is the absence of supporting material. There was widespread agreement that the loss function approach was appropriate, but no flesh was put on the idea. For example, Professor van Zijl noted that among the loss functions that one could postulate was a simple linear one where "the cost of being too low is three times the cost of being too high, which is equivalent to the 75th percentile. If it was 90% the ratio would be six".[839] But no reasons for any such ratio were given.

[1466] Mr Balchin spoke of a "welcome acknowledgement of the Commission that there is an asymmetric consequence of getting things wrong" but noted that "actually trying to measure the degree of asymmetry in this loss function is very difficult" and "I've never seen a study that's actually tried to do it and I can't actually think of an easy way to do it …"[840] That statement would seem to support the Commission's rejection of the approach in the Revised Draft Guidelines – see [1438] above.

[1467] Professor Bowman made the point that the loss function would vary considerably from industry to industry, as the social cost of shortcomings of investment would vary, but again, nothing beyond the general point was made. Dr Lally stated that consideration of the loss function approach led him to his view that the "75th percentile is probably the lower bound" but did not explain why.

[1468] In the light of the absence of supporting material for the 75th percentile approach – and more fundamentally, beliefs about the asymmetric social costs – the *Telstra* case cited by MEUG is of some interest. In that decision, the Australian Competition Tribunal refused an adjustment to recognise asymmetric error costs. The relevant passage is as follows:[841]

> We accept that it is possible that there may be asymmetric consequences associated with setting a WACC too high or too low. However, it is not clear to us that the asymmetry would always imply that overestimation of the

839 Cost of Capital Workshop *Transcript* (13 November 2009) at 211, 27/181/013414.
840 Cost of Capital Workshop *Transcript* (13 November 2009) at 214, 27/181/013417.
841 *Telstra Corporation Ltd (No 3)* [2007] ACompT 3 at [449].

> WACC led to a lesser social cost than underestimation of the WACC. The nature of the asymmetric consequences of incorrectly setting a WACC is likely to depend on the circumstances of a given matter that may be before the Tribunal. Telstra and Professor Bowman submitted that the long-term social costs of underestimating the WACC would be greater than the long-term social costs of overestimating it in this particular instance, largely because in circumstances where the WACC was set too low, there was a risk that this would lead to the cessation of services, or a failure to develop services at a socially desirable rate. In order to convince us of this submission, however, it was incumbent upon Telstra to provide evidence that these circumstances actually existed or would exist in relation to the ULLS. Professor Bowman assumed that they did, but he did not provide any evidence or support for the proposition that this was, or would be, the case.

[1469] Suppliers pointed out that the case related to a telecommunications company in a different regulatory regime. Nevertheless, we consider that, even approaching it with caution, two things can be taken from the case:

(a) the Australian Competition Tribunal was far from accepting that there was any general view prevailing in Australia at the time that overestimation of the WACC leads to a lesser social cost than underestimation of the WACC in regulated businesses; and

(b) the Tribunal would only have been convinced by evidence, as opposed to assertion.

[1470] In the light of the above discussion, we have some sympathy with MEUG's submission that the Commission's approach to the asymmetric costs of over and underestimating the WACC lacks a solid basis. Nevertheless, it must be said that there was strong support for it, including from the Commission's Experts.

[1471] In the absence of empirical evidence before us, some tentative in-principle arguments counter to the Commission's reasoning may be ventured.

[1472] In the first place, the expectation of earning (only) a normal return on new investment ought to be an attractive proposition for a regulated supplier. In the price control regulatory framework, the return is almost guaranteed. Each supplier is a monopoly. The normal regulatory imperative in such circumstances is to prevent suppliers from over-investing. Why then, should higher likely returns be provided?

[1473] Secondly, it is far from obvious that higher than normal expected returns would stimulate greater efficiency of any kind. On the contrary, they would render excess profits likely, even if less effort were made by suppliers to generate efficiencies than in a workably competitive market. In monopoly enterprises, the concern is always to prevent inefficiency creeping in. Providing a revenue cushion is not the way to create the right incentives.

[1474] If dynamic efficiencies are, as the Commission believes, most important, how exactly are higher expected returns supposed to stimulate them? Dynamic efficiency implies finding better ways to meet customer needs and adapting to changes in market circumstances. But necessity, not plenty, is the mother of invention. Utility industries – and certainly electricity transmission and distribution companies - are unlikely to be leaders in dynamic efficiency, precisely because they do not need to be.

[1475] Thirdly, the outputs of regulated suppliers are inputs to numerous – probably all – other sectors of the economy, as well as being used by final consumers. If the prices paid by user industries are higher than the resource cost of producing the outputs (viz, electricity and gas transmission and distribution), then inefficiency is promulgated throughout the economy. That is what is implied by higher than normal expected returns.

[1476] At the least, the inter-sectoral effects ought to be considered, and if possible estimated. This has not been done in the present regulatory processes. If evidence from studies in other times and places exists, it was not placed before us, and seems to have played no part in the Commission's thinking. That could be understandable if the inter-sectoral economic mechanisms and effects were notorious: so well-known and accepted as not to require citing. To our knowledge, such is not the case.

[1477] Nor is overseas practice suggestive that such an approach has found more than narrow favour, since the only examples from the numerous regulatory decisions made every year were two relating to United Kingdom airports.

[1478] Other arguments for the 75th percentile approach might be put. For example, choice of the 75th percentile could conceivably have been expected – or hoped – to reduce disputation over the cost of capital IMs. In that case, use of a single "uplift" factor in the cause of making less than normal returns unlikely might be justified. But the present circumstances are very far from that happy state, with every WACC parameter that could be contested subject to appeal.

[1479] In our view, applying the 75th percentile estimate to the initial RAB is unlikely to be necessary to promote incentives to invest and innovate. Future investment choices by suppliers must rationally be influenced by expected earnings on those future investments, not by earnings on past investments. (The experience with past investments may of course be relevant to future investments, but that is another story.)

[1480] The idea that greater revenues produced by higher allowed earnings on past investments (ie on the initial RAB) provide the wherewithal for more future investment is contrary to rational investment choice. Those existing higher earnings, once earned, are a given. The source of funds for future investments does not influence the riskiness of future investments; nor, therefore, does it influence their attractiveness. If anything, an abundance of capital is likely to lead to wasteful investment.

[1481] Any concern about effects on investment by yet-to-be-regulated industries would seem to be misplaced. No evidence of such an effect was presented, nor evidence that regulators anywhere in the world have held such concerns. Those observations are to be distinguished from our acknowledgement, in Part 5 of this judgment, that setting initial RAB values may affect incentives to invest in yet-to-be-regulated industries.

[1482] These in-principle objections to deliberately erring on the side of overestimating the WACC, however, suffer from the same lack of empirical support, at least in the materials before us, as the Commission's approach. The regulatory history should also be taken into account. In the face of the Parliamentary recognition of the importance of incentives to invest, it is understandable that in

establishing the new regulatory regime the Commission should not wish to run the risk of deterring investment by providing too low a rate of return.

[1483] The onus is on MEUG to persuade us that applying a mid-point WACC estimate would lead to a materially better IM. While MEUG's in-principle arguments cast significant doubt on the Commission's position, it did not present any positive evidence of the type we refer to above, for example an inter-sectorial analysis, in support of its proposal. We are therefore unable to be satisfied that the IM amended as MEUG proposes would be materially better in meeting the purpose of Part 4 and/or the purpose in s 52R.

[1484] The same difficulty applies to MEUG's two-tier proposal. In principle, that proposal is stronger, because by providing the likelihood of higher than normal returns on new investment it overcomes any disincentives that may be claimed to exist (compared to the use of the mid-point); although we are not convinced as to the reality of those disincentives.

[1485] But we were not presented with a clear means of implementing the two-tier proposal, and the Commission's concerns about it were not addressed. Therefore, for the reasons explained in Part 2 of this judgment, we would be unable to provide relief of the type sought because we were provided with insufficient information to ground directions to the Commission with the necessary degree of precision.

[1486] In reaching this decision not to amend the IM in respect of the use of the 75th percentile for DPP/CPP regulation, we are mindful that the IMs will be reviewed. At that time, we would expect that our scepticism about using a WACC substantially higher than the mid-point, as expressed above, will be considered by the Commission. We would expect that consideration to include analysis – if practicable – of the type proposed by MEUG. We would also expect the Commission to consider MEUG's two-tier proposal in light of our observations. We acknowledge that further analysis and experience may support the Commission's original position. But they may not. The following passage from the Telstra case is pertinent: [842]

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[842] *Telstra Corporation Ltd (No 3)* [2007] ACompT 3 at [457].

> … there exists as a matter of theory the potential for asymmetrical consequences should the WACC be set too low or too high. Which of these consequences will carry with it the greatest social damage is not a matter solely for theory, however, but for robust empirical examination, well-guided by theory, of the actual facts of any particular case.

[1487] In reaching this decision as it applies to Transpower, we have not needed to consider MEUG's additional submissions to the effect that Transpower's investment was already committed before the IM determination was made.

The Airports' appeals

[1488] The Airports' essential argument is that a combination of the Airports' cost of capital IM setting a WACC range of between the 25th and 75th percentile, and the Commission's comments in the Airports Reasons Paper referring to the 50th percentile as an appropriate starting point (for the purposes of assessing profitability) are, in effect, inconsistent with the Commission's approach to the use of the 75th percentile for DPP purposes. The Airports argue they should, therefore, report by reference to the 75th percentile, and a higher upper band. Such a range would be appropriate to deal with the uncertainties with the WACC model.

[1489] We are not persuaded that approach would be materially better.

[1490] ID regulation is for disclosure only, not for the control of the Airports' prices or revenues. It remains for the Airports to determine those matters as they individually think fit. Providing for them to disclose ROI by reference to the 25th and 75th percentile, in the context of the Commission pointing to the starting point of the 50th percentile, in our view will promote the purpose of ID regulation, namely ensuring that sufficient information is readily available - we emphasise readily available - to interested persons to assess whether the purposes of Part 4 are being met.

[1491] The estimation of WACC is, all accept, a complex task involving significant exercising of judgement and is open not only to the possibility of error, but also to there being a range of views. We think the Commission's approach under ID regulation reflects that reality, and will provide an appropriate level and range of information to interested persons consistent with the s 53A purpose.

[1492] Furthermore, there is nothing to prevent the Airports themselves reporting additionally, by reference to an alternative percentile, and disclosing their reasons for doing so.

6.12 ASSET BETAS – EDBS AND TRANSPOWER

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The Commission's decision

[1493] To recap, an equity beta when applied to the TAMRP (ie TAMRP x equity beta) determines the premium over the risk-free rate to be paid by a firm for its equity capital. To determine its sector-wide equity beta estimates, the Commission first had to determine sector-wide asset beta estimates, and then relever those estimates.

[1494] The Commission determined a sector asset beta estimate of 0.34% for the EDBs and Transpower. Combining that estimate with leverage of 44% generates an equity beta estimate for the EDBs and Transpower of 0.61.[843]

[1495] The Commission's asset beta estimate of 0.34 was, at the time of the May-June 2010 Draft Reasons Papers, based on a sample of 54 United States, United Kingdom, Australian and New Zealand companies (predominantly electricity firms).

[843] Asset beta ÷ (1 – leverage) = equity beta.

For each comparator firm, the Commission obtained unadjusted equity beta estimates from Bloomberg, based on monthly observations over one five-year period ending August 2009. From that data it estimated an unadjusted asset beta of 0.34.[844]

[1496] In response to submissions on that approach, the Commission undertook further empirical analysis of relevant equity beta estimates from Bloomberg. In its submissions, the Commission explained that additional analysis as including:

(a) A larger sample of 79 United States, United Kingdom, Australian and New Zealand electricity and gas companies – small companies were excluded to ensure any thin trading in their shares could not affect the estimates of the beta.

(b) A range of five-year sampling periods covering 1990 to 2010. This was to ensure the estimate of 0.34 was not due to a sampling period that was unrepresentative of the true beta.

(c) Weekly and monthly frequency data – to ensure the estimate of the beta was not biased by the choice of sampling frequency.

[1497] That additional analysis, when converted into an analysis of asset betas by delevering and relevering, and when summarised as the average of each of the eight sampling periods, produced an average asset beta of 0.28 using monthly data and 0.32 using weekly data. In the EDBs-GPBs Reasons Paper the Commission set out the results of that further analysis in Figure H9.[845] Based on those results the Commission set out the following table in its submissions:

[844] Using the process set out at [37], but with no Step 5 adjustment.
[845] EDBs-GPBs Reasons Paper at Fig H9, 3/7/001470.

	Asset beta estimated using monthly observations	Asset beta estimated using weekly observations
Draft reasons		
5 years to Aug 2009	0.34	n/a
Final reasons		
5 years to May 1995	0.27	0.26
5 years to May 2000	0.13	0.13
5 years to May 2005	0.18	0.26
5 years to May 2006	0.29	0.29
5 years to May 2007	0.33	0.37
5 years to May 2008	0.40	0.44
5 years to May 2009	0.32	0.39
5 years to May 2010	0.33	0.39
Average	**0.28**	**0.32**
20 years to 2010	0.22	0.28

[1498] The Commission concluded that its further analysis was consistent with its original estimate of 0.34 as a reasonable estimate of the asset beta.

[1499] The Commission also assessed the reasonableness of its asset beta estimate by comparing it with a range of estimates from other sources, including other regulators and estimates made in submissions from suppliers. The Commission concluded that the results of that comparative exercise showed that, despite the differing approaches to estimating beta and the different periods analysed, most estimates for electricity distribution and transmission companies fell within a reasonably tight range of between 0.30 and 0.40 – and the Commission's estimate of 0.34 was near the middle of that range.

[1500] The Commission also noted:

(a) that a recent review undertaken for the Commission for Energy Regulation (Ireland)[846] noted that the range of asset betas in previous Irish and United Kingdom regulatory decisions on energy utilities was between 0.20 and 0.41; and

[846] Europe Economics *Cost of Cost of Capital for Transmission Asset Owners, Transmission System Owner, Distribution System Operator* (for the Commission for Energy Regulation) (16 June 2010), 32/220/016078.

(b) previous advice from Dr Lally to the effect that, based on his analysis of asset betas for United States gas and electricity utilities, an asset beta of 0.30 should be applied as a starting point for previous gas and electricity decisions in New Zealand.[847]

[1501] In reaching its overall conclusion that 0.34 was a reasonable asset beta, the Commission observed:[848]

> Indeed it could be argued, based on the broader range of time periods that were analysed, that an allowance of 0.34 is generous in favour of suppliers, and could be reduced to around 0.30 (the average of the weekly and monthly estimates), and is in line with the Commission's estimates in previous decisions. However, given the variability in the estimates, and that beta cannot be estimated with precision, the Commission considered the more prudent approach was to leave the estimate of the asset beta at 0.34 as proposed in the Draft Reasons paper.

The appeals

[1502] Vector argues for an asset beta of 0.44 for the EDBs, Powerco for 0.46. Transpower supports Vector's appeal. MEUG argues that the asset beta for the EDBs and Transpower should be 0.33. Allowing Vector and Powerco's appeals would increase regulatory WACC. Allowing MEUG's would have the opposite effect. MEUG estimated the effect of allowing Powerco's appeal as a 0.85% uplift to the WACC. No other estimate of the separate effect of allowing the asset beta appeals was provided to us.

Vector's appeal

[1503] Vector bases its appeal on what it says are three flaws in the Commission's reasoning:

(a) the Commission's averaging process illogically gives 2005 data five times the weight of more recent 2010 data, producing a skewed average of rolling averages;

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847 EDBs-GPBs Reasons Paper at [H8.68], 3/7/001508; citing Lally *The weighted average cost of capital for gas pipeline businesses* (November 2004) at table 3; Lally *The weighted average cost of capital for electricity lines businesses* (8 September 2005) at table 3, 16/84/007216; Lally *The weighted average cost of capital for gas pipeline businesses* (28 October 2008) at table 3, 22/123/010159.

848 EDBs-GPBs Reasons Paper at [H8.71], 3/7/001508.

(b) the Commission, by introducing data from as far back as the 1990s, departs from usual or best regulatory practice;

(c) the Commission did not check, let alone adjust for, sensitivity to its choice of sampling periods.

[1504] Vector argues that if, avoiding those flaws, the Commission had used the most recent five-year average (ie the five years to May 2010), and within that the daily observations, it would and should have estimated an EDBs asset beta of 0.40. This would, moreover, be consistent with advice and analysis from Vector's expert, Dr Hird of CEG,[849] and the Commission's own weekly estimates for the five years ending May 2007, 2008 and 2009 (0.37, 0.44, 0.39 and 0.39). Vector says the earlier five-year periods should be excluded. That data is too old to be of use for calculating forward-looking utility betas. It is also affected by the "tech boom and bust" (ending approximately December 2001)

[1505] Vector further argues that its base asset beta of 0.40 should be adjusted upwards, to take account of changes in market leverage over time and the effects of the GFC, to produce an asset beta estimate of 0.44. Vector also criticises the Commission's asset beta cross-checks.

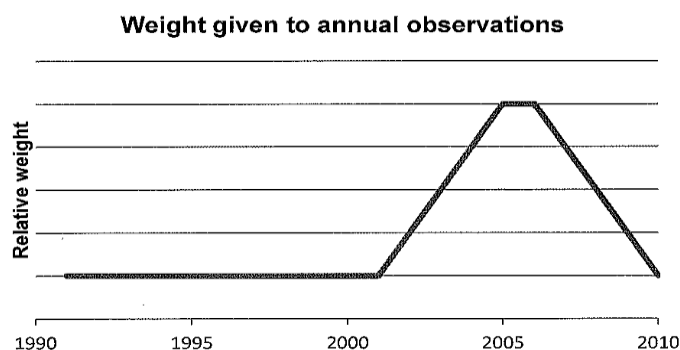
Analysis – the three flaws

A skewed average?

[1506] Vector's first flaw is based on an accepted feature of the process used by the Commission to produce the five-year averages estimates. That is, the Commission's average asset beta figures are calculated by the Commission averaging the rolling average beta estimates for each of its eight, five-year, sampling periods. Because some of those sampling periods overlap while others do not, observations that fall within more than one period are in effect given more weight than observations that fall within only one period. Vector points out, by way of example, that the data for the period June 2004 to May 2005 falls within five of the periods but the data for the

[849] CEG August Report at [29], 36/274/017928 and CEG November Report at [181]-[183], 40/310/019614-15.

year ended May 2010 falls within only one of the periods – which means that the 2005 data is given five times the weight of the 2010 data. That results in what Vector calls a "skewed average of rolling averages". Vector provided the following graph to illustrate its point:



[1507] The Commission acknowledges that Vector's analysis of the sampling is accurate. However, we consider that Vector's "skewed average" criticism does not lead to a different result.

[1508] The most straightforward way of removing the double-counting or over-weighting is simply to ignore the five-year periods to May 2006, 2007, 2008 and 2009. That leaves four contiguous non-overlapping five-year periods to May 1995, 2000, 2005 and 2010. None of the original data has been eliminated.

[1509] When we look at the remaining eight estimates, only one is greater than 0.34. That is the estimate using weekly data for the five years to May 2010. Of course, the (simple) averages over the whole period 1990 to 2010 are less than 0.34.

[1510] That leaves Vector needing to show that only the most recent period should be taken into account *and* that the monthly data should be ignored, although it still would not get as far 0.40. (Of course, if the estimates for the five-year periods to May 2007, 2008, 2009 and 2010 were averaged, higher figures would be produced. But that would involve the arbitrary over-weighting of some data that Vector rightly criticises.)

Sensitivity to choice of sampling periods

[1511] Vector's real complaint is in fact directed at the Commission basing beta estimates on observations at monthly, rather than weekly or daily intervals. The Commission's weekly sampling information:

(a) for the five years to May 2010, derives an asset beta estimate of 0.39; and

(b) averaged across the 2007, 2008, 2009 and 2010 periods, one of 0.40.

Hence Vector's support for a 0.40 base asset beta estimate for the EDBs.

[1512] Vector argues that Bloomberg itself warned against using the monthly observations the Commission relied on. Monthly observations are, Vector argues, on that basis simply unreliable. Beta estimates based on monthly observations are biased downwards. In support of that proposition, Mr Myers produced images of two Bloomberg screen shots of equity beta estimates for a United States firm, Western Gas, on the basis of both monthly and weekly observations. The monthly screen carried text reading "Number of points may be insufficient for an accurate beta": the weekly screen did not. Vector argues that beta estimates based on monthly samples are, therefore, unreliable. But Vector does not point to any evidential explanation of the reason for, or significance of, those words. In particular, the significance of the use of the word "may" was not explained. Mr Myers acknowledged, however, that the significance of those words, whatever it might be, is a big part of Vector's argument that estimates based on weekly and daily sampling intervals are reliable, as opposed to estimates based on monthly sampling intervals which are unreliable; and those based on daily sampling intervals are to be preferred.

[1513] Vector's failure to provide any evidential explanation of the significance of that text on the monthly screen is a major weakness in its argument.

[1514] Vector also relies on CEG analysis of average Bloomberg estimates by reference to the sampling periods – from five days (weekly) to 20 days (monthly). The average across all sampling periods was 0.40, with the range being from 0.30

(20 day intervals) to 0.47 (eight day intervals). That table demonstrated the sensitivity of beta estimates to sampling periods. But here, with weekly sampling periods supporting asset beta estimates of 0.39 and daily sampling periods supporting an estimate of 0.40; Vector would be happy with either. The substantive point, Vector argues, is that for daily betas each day is its own sampling period and there is, therefore, no question of sensitivity to the choice of period.

[1515] The Commission acknowledged the fact that, as its own table showed, the asset beta estimates based on monthly sampling periods were generally lower than those based on weekly sampling periods. In fact, they were lower in five of the eight five-year periods. In two they were the same and in one higher. That hardly shows a systematic unreliability of the type Vector suggests.

[1516] Showing as simply wrong Vector's complaint the Commission had not checked for sampling sensitivity, the Commission recorded in the EDBs-GPBs Reasons Paper that it had included in its further analysis:[850]

> ... daily, weekly, and monthly frequency data. This was to ensure the estimate of the asset beta was not biased by the choice of sampling frequency.

[1517] The Commission observed in a footnote[851] that the advantage of shorter (eg daily) periods was that they provided more observations and potentially increased the statistical robustness of estimating beta. The disadvantage of shorter periods included that beta could be distorted if stocks traded infrequently. Shorter periods were also further removed from the concept that was being estimated (ie how stocks perform relative to significant market movements) and might therefore be misleading if share prices did not follow a purely random walk. Moreover, the additional beta estimates using daily data were very similar to those using weekly data.

[1518] By our assessment, Vector has not provided an objective basis to its challenge to the reliability of the asset beta estimates based on monthly sampling intervals.

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850 EDBs-GPBs Reasons Paper at [6.5.21], 3/7/001141 (footnote omitted).
851 EDBs-GPBs Reasons Paper at fn 327, 3/7/001141.

[1519] As both Vector and the Commission agree, Bloomberg is a respected independent expert provider of financial and economic information used by many analysts and regulators. When monthly or weekly observations are selected by the user, Bloomberg applies its own proprietary approach to the day of the month or week that will be used. We agree with the Commission's submission that, given Bloomberg's credentials, there is no reason to believe that Bloomberg's data, based on a monthly sampling interval, is subject to systematic bias. CEG, Vector's chosen expert, did not report daily betas, but only reported observation intervals between five and 20 trading days. Vector's submission that the Commission should rely on weekly and daily data, and disregard monthly data, is in conflict with WIAL/CIAL submissions that the Commission should only rely on monthly data, and a similar submission by MEUG. On this point, Synergies, also an expert adviser to Vector, submitted during consultation that the use of monthly data was preferable to weekly data.[852] Moreover, in the case of the Airports, estimates of beta using monthly data were generally higher than estimates using weekly and daily data, implying there is no systematic downward bias associated with Bloomberg estimates based on monthly data.

[1520] We are, therefore, not persuaded by Vector as to the existence of this "flaw" either.

Data too old

[1521] In terms of the three flaws Vector identified, that leaves the proposition that some of the data used by the Commission was, put simply, too old to be relevant.

[1522] The underlying basis of Vector's proposition is not clear to us. One might have thought that the longer the period the better. In any event, as we pointed out earlier, choosing the most recent five-year period and weekly sampling produces an estimate of 0.39. Higher estimates are found only in less recent data (which incidentally was more affected by the GFC). And we have rejected the argument against using the monthly data. Indeed, as we shall see later, MEUG argues for

[852] Synergies Economic Consulting *Initial WACC Review* (for Vector) (13 August 2009) at [Box 1], 26/164/012423; Synergies Economic Consulting *WACC Review: Final* (for Vector) (31 August 2009) at [Box 1], 26/169/012601.

reducing the estimate of 0.34, which had its origins less recently in the May-June 2010 Draft Reasons Papers.

[1523] Moreover, we think it is fair to say that at any one point in time it would be unwise to place too much weight on the most recent estimates. As the Commission pointed out, data in the period to 2000 indicated estimates of asset beta of less than 0.20. If those estimates had been relied upon in or around 2001, as being the most recent estimates, the resulting asset betas would have been too low. This is very much a question of judgement, and we are not persuaded that a materially better asset beta estimate would be arrived at by limiting the analysis in the manner suggested by Vector.

Upward adjustment for leverage and the impact of the GFC

[1524] As best as we understand these elements of Vector's appeal, the complexity of which all acknowledge, Vector seeks an upward adjustment to the EDBs asset beta of 0.04, giving an asset beta of 0.44 to take account of changes in leverage over time and the impact of the GFC. Vector does not disaggregate the contribution of each of those considerations to the uplift proposed.

[1525] The first proposition is that betas calculated when equity market leverage is high (ie the equity market is "riskier" than average) must be adjusted upwards if they are to be applied to a long-run average MRP. Vector argues, based on CEG's November report,[853] that if that adjustment is not made, the cost of equity will be under-estimated because the beta calculated relative to a "riskier" market would be applied to an "only-averagely risky" market premium. We did not follow that proposition at all during the hearing, and still do not. Why betas in risky markets, which one would assume would be comparatively high, should be adjusted upwards further, was not explained to us. Having said that, the Commission accepts in principle that changes in market leverage could be relevant to beta, but argues that CEG's approach errs in a number of technical respects and does not take proper account of the data the Commission had used.

[853] CEG *Review of updated input methodologies* (for Vector) (30 November 2010) at [175], 40/310/019613.

[1526] The second reason for the adjustment is that, during the GFC, utilities stocks demonstrated higher betas than before or after. Therefore, it is appropriate to give more weight to beta observations during the GFC period: that is, the correct approach, rather than to calculate normal long-term averages, is to calculate a weighted average beta, when betas during high risk periods were given the highest weight. As Vector observes in reliance on a similar statement by CEG,[854] "[i]t is the betas that are observed when risk is high that are important to investors rather than the betas that are observed when risk is low."

[1527] The Commission responds by saying it considered beta estimates over a wide range of periods, some of which included the GFC and/or the "technology boom and bust" period, and some of which did not. Whilst there was some evidence that asset betas showed modest increases during the GFC, asset betas were generally stable across the period. Therefore an adjustment for the effect of the GFC could not be justified. The Commission also notes inconsistencies between approaches taken by various experts to the significance of both the GFC and the technology boom and bust period.

[1528] In this very technical area it is not surprising perhaps that experts differ in their views. Certainly, no argument was put before us to persuade us of the somewhat startling proposition that betas should be estimated when risks are high. Beyond that, and having assessed Vector and the Commission's positions, we agree with the Commission's essential assessment of the impact of the GFC on asset betas and hence we are simply not persuaded that to provide for these matters by a 0.04 adjustment as proposed by Vector would produce materially better EDBs and GPBs cost of capital IMs.

The Commission's asset beta cross-checks

[1529] Vector criticises the Commission's asset beta cross-checks which, like its WACC cross-checks, the Commission reproduced in a table. Vector's criticisms of these cross-checks are very similar to its criticisms of the WACC cross-checks. That

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854 CEG *Cost of Capital Input Methodologies – A Report for Vector* (15 August 2010) at [55], 36/274/017938.

is, Vector argues that the PwC cost of capital reports for Vector and Horizon should be omitted and a number of additional comparators added.[855]

[1530] The Commission's equity and asset beta estimates are a product of the Commission's comparator sample choice, as is the notional sector leverage. Vector does not challenge the Commission's leverage decision, nor its choice of comparator firm sample. Given that the cross-check challenge is essentially to the validity of one sample as compared to others, it is difficult to see how Vector can challenge the cross-check analysis while being content with the comparator sample in the same context.

[1531] We acknowledge that cross-checking the result of the application of a given methodology is a well-accepted step in the process. It is less clear to us that the outcomes of individual parts of the methodology can usefully be cross-checked themselves.

Transpower's appeal

[1532] Transpower accepts the Commission's approach of determining its asset beta on the same basis as that of the EDBs. In doing so it supports Vector's appeal, but offers no additional reasoning of its own. That aspect of Transpower's appeal against its cost of capital IM is therefore dismissed on the same basis as we have discussed for Vector's appeal.

Powerco's appeal

[1533] In contrast to Vector, which argues for greater weight to be given to beta results during the GFC, Powerco argues – based on PwC's advice[856] – that beta samples should exclude those from both the technology boom and bust years (1999-2001) and the GFC. Powerco says, however, that it and Vector (and their respective advisers) are simply addressing the same problem in different ways.

[855] Including the average asset beta for the market portfolio in New Zealand (0.7); the Commission's weekly asset beta estimated using the most recent five years of data (0.39); Ofwat's 2009 asset beta estimate for UK water businesses (0.40); Ofcom's 2009 asset beta for Openreach (0.49); the implied asset beta consistent with United States regulators allowing an average 8.1% equity risk premium since 2009 (0.55); and the United Kingdom Civil Aviation Authority (CAA) 2009 asset beta estimate for Stansted Airport (0.56).

Powerco argues that the Commission failed to place proper weight on beta estimates that support an asset beta of not less than 0.46 for the EDBs. It therefore argues that a materially better cost of capital IM for EDBs would prescribe an asset beta of 0.46.

Analysis

The tech boom and the GFC

[1534] As can be seen from the table at [1497], beta samples from the tech boom and bust period only appeared in the five years to May 2000 and the five years to May 2005 estimates. Excluding those estimates, and the overlapping 2006 to 2009 estimates, produces five-year averages of 0.30 (monthly) and 0.32 (weekly). Those results do not, from Powerco's perspective, challenge the Commission's 0.34 estimate.

[1535] As for the impact of the GFC, the Commission's June 2010 EDBs and GPBs Draft Reasons Papers estimate of 0.34 did not include the GFC, and nor did its five years to May 2007 estimates of 0.33-0.37 which are not inconsistent with its 0.34.

[1536] Moreover, none of those results support Powerco's proposed 0.46 estimate. Powerco's arguments on this point are unpersuasive.

Beta estimates supporting 0.46

[1537] Powerco points to a PwC August 2010 report[857] prepared in response to the May-June 2010 Draft Reasons Papers. In that report PwC undertook its own analysis, using monthly and daily sampling intervals, and two estimation approaches (ordinary least squares and Dimson (Dimson to compensate for light trading)), for the periods September 2004 to August 2010, and January 2002 to July 2007. The table below shows PwC's results for its asset beta estimates:

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[856] PwC *Electricity Networks Association: Submission on the Cost of Capital Parameter Estimates in the Commerce Commission's (Draft) Electricity Distribution Services Input Methodologies Determination 2010* (for ENA) (13 August 2010), 35/258/017536.

[857] PwC *Submission on the Cost of Capital Parameter Estimates in the Commerce Commission's (Draft) Electricity Distribution Services Input Methodologies Determination 2010* (for ENA) (13 August 2010), 35/258/017536.

		Mean		Median	
		OLS	**Dimson**	**OLS**	**Dimson**
Sep-04 to Aug-10:	Daily	0.39	0.39	0.38	0.39
	Monthly (re-sampled)	0.37	0.36	0.37	0.36
Jan-02 to Jul-07:	Daily	0.37	0.42	0.38	0.41
	Monthly (re-sampled)	0.54	0.54	0.42	0.45

[1538] PwC opine that most weight should be placed on the post-tech-boom pre-GFC period, ie the January 2002 to July 2007, samples. On that basis it notes that the mean of these means (0.46 and 0.54) provides a single point estimate of 0.50, while the mean of the medians provides an estimate of 0.45, supporting an overall estimate of 0.46. It is this estimate that Powerco is arguing for.

[1539] An immediate comment is called for. Underlining the complexity of these issues, and the ability for different commentators to take different approaches, PwC prefer monthly results, to avoid the effect of thin trading on daily data. This contrasts with the position advocated by Vector.

[1540] Be that as it may, the Commission generally responds to the PwC analysis by pointing to the fact that the Commission's analysis covers a wider period of time, and includes a greater sample of results. It also notes that Powerco's advice, on whether or not the GFC should be excluded, has not been consistent. The Commission points again to its analysis of the most recent five-year period which includes the GFC (2005-2010), and the five-year period immediately before the commencement of the GFC (2002-2007) as generating similar beta estimates and supporting the Commission's 0.34 estimate. It notes, finally, that PwC happens to have chosen the highest estimates, relative to the other estimates produced by the Commission and suppliers, and to the Commission's reasonableness checks.

[1541] We find no flaw in the Commission's approach or conclusion.

MEUG's appeal

[1542] MEUG originally argued that a materially better EDBs cost of capital IM would stipulate an asset beta estimate of 0.28 rather than 0.34. MEUG made that argument on the basis that the sample the Commission used to set leverage for the

EDBs at 44% had an average asset beta of 0.28. Thus, for consistency's sake if nothing else, 0.28 should be the asset beta for the IMs.

[1543] As the Commission pointed out, however, 44% was the average leverage of the 79 firm comparator sample for the period 2005-2010.[858] The 0.28 asset beta estimate was the average of the averages, and not the asset beta for those 79 firms in that five-year period. The average, and therefore consistent, as MEUG argued for, asset beta estimates for that period were 0.39 weekly and 0.33 monthly. In response, MEUG now argues for an EDBs asset beta of 0.33. In doing so it submits that the choice of 0.34 by the Commission, as opposed to 0.33, would cost consumers approximately $14 million a year during the period for which the IM applies.[859]

[1544] Alternatively if, rather than applying that mechanistic approach, a judgement was called for, the asset beta for the EDBs should be at the most 0.30, the mid-point of the Commission's estimates of 0.28 (monthly) and 0.32 (weekly).

[1545] We agree with MEUG that $14 million is a material level of cost saving for consumers. However, we are not persuaded that the SB-L CAPM, nor the cost of capital IMs themselves, are sufficiently exact so as to support the conclusion that an estimate of 0.33 as opposed to 0.34 will produce a cost of capital IM that is materially better.

[1546] MEUG here, as elsewhere, criticised the "generosity" the Commission recognised in its approach, and the use of the 75th percentile WACC estimate. We deal with those aspects of MEUG's appeal when we discuss leverage issues in Part 6.14 of this judgment.

Outcome

[1547] For these reasons, we dismiss the EDBs' and Transpower's s 52Z and s 91(1B) appeals against the Commission's relevant asset beta determinations.

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858 EDBs-GPBs Reasons Paper at [H3.43] and [Table H2], 3/7/000960 and 3/7/001408.

859 To recap: A regulatory period is five years long. An IM may be reviewed at any time, and must be reviewed at least every seven years. Where an IM is reviewed by the Commission during a regulatory period, the changes do not apply until the beginning of the next regulatory period.

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6.13 ASSET BETAS – THE AIRPORTS

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The Commission's decision

[1548] The Commission determined a sector asset beta estimate of 0.60 for the Airports. Combining that estimate with leverage of 17% generates an equity beta estimate for the Airports of 0.73.[860]

[1549] In the May 2010 Airports Draft Reasons Paper the Commission specified an asset beta estimate of 0.65. That estimate was based on an analysis of monthly data from September 2004 to September 2009 for 10 airports: AIAL plus nine overseas airports. The average asset beta of those airports based on that analysis was 0.74. Noting that was an average asset beta for all the lines of businesses owned by each airport, many of which were higher risk businesses than specified airport services regulated under Part 4, the Commission concluded that 0.65 was an appropriate asset beta for those regulated services.

[1550] Following the publication of the May 2010 Airports Draft Reasons Paper, the Commission undertook further analysis, involving a larger sample (24 airports: AIAL plus 23 overseas airports) and a very similar sampling approach as had been adopted for the EDBs. The following table from the Commission's submissions summarises the results of that further analysis:

	Asset beta estimated using monthly observations	Asset beta estimated using weekly observations
Draft reasons (5yrs to Sept 2009)		

[860] Asset beta ÷ (1 – leverage) = equity beta.

Before adjustment for multiple divisions	0.71-0.74	n/a
After adjustment	**0.65**	n/a
Final reasons		
Before adjustment for multiple divisions		
5 years to May 2005	0.67	0.56
5 years to May 2006	0.68	0.59
5 years to May 2007	0.67	0.57
5 years to May 2008	0.63	0.60
5 years to May 2009	0.73	0.64
5 years to May 2010	0.73	0.64
Average	**0.69**	**0.60**
After adjustment	**0.60**	

[1551] After considering a range of other information,[861] the Commission concluded in the Airports Reasons Paper that it was appropriate to accept an unadjusted asset beta monthly estimate of 0.69 (weekly of 0.60).[862] The Commission then, as it had in the May 2010 Airports Draft Reasons Paper, adjusted that estimate downwards to take account of the multi-divisional nature of the businesses upon which those estimates had been derived. Referring, it would appear, to the estimate in the May 2010 Airports Draft Reasons Paper, it concluded that there should be a downward adjustment of the "multi-divisional asset beta of 0.65" to 0.60. It noted that unregulated services, such as retail shopping services, were generally considered more risky than regulated services such as the provision of airfields.[863] Hence the need for the downward adjustment for the average asset beta for the regulated services. In its submissions to us, the Commission notes that that approach was consistent with a view AIAL had expressed in an issues brief concerning its 2006/2007 pricing consultation:[864]

> ... over 50 per cent of AIAL's revenue is sourced from its non-aeronautical (market contestable) business activities where earnings are potentially higher than aeronautical activities because of the higher WACC hurdle rate associated with the higher risk, commercial side of the airport business. Aeronautical activities, on the other hand, demand a much higher proportion of an airport's fixed assets and operating expenses, but are capped at a lower aeronautical WACC return.

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861 The Commission considered its previous decisions on Airports' asset betas, the asset betas estimated by the United Kingdom Competition Commission for Heathrow and Gatwick in 2007 and for Stansted in 2008, and the asset beta estimated for airports by the Commission for Airport Regulation in 2009 for Dublin: Airports Reasons Paper at [E8.64]-[E8.68], 2/6/000911-2.

862 Airports Reasons Paper at [E8.71], 2/6/000912

863 Airports Reasons Paper at [E8.83], 2/6/000914.

864 AIAL *Airport regulation and pricing* (issue brief) (1 November 2006) at [5], 18/100/008184.

AIAL's appeal

[1552] AIAL argues that the Commission:

(a) took an overly conservative approach when estimating the asset beta based on the comparator sample; or, in the alternative

(b) should either:

(i) not have made an adjustment to the asset beta to reflect the split between regulated and unregulated services; or

(ii) have made a corresponding adjustment to the notional leverage to reflect that it was in relation to regulated services only, to ensure a consistent approach.

Analysis

Overly conservative approach

[1553] AIAL supports the Commission's 0.65 estimate in the May 2010 Airports Draft Reasons Paper, and argues that would be a materially better approach. AIAL criticises the Commission's further analysis because it used weekly (consistently lower) beta estimates and because it involved earlier, lower, sample results. We refer to our earlier analysis of weekly and monthly sampling approaches, and of overall sampling periods. Again, we note AIAL's criticism of weekly results relative to Vector's endorsement of them. But, be that as it may, we cannot see how the Commission approach here can be said to be "overly conservative". Rather it would appear to have responded to criticism – albeit in the EDBs context – that its initial analysis was too narrow.

Multi-division adjustment

[1554] The second focus of AIAL's concern is the multi-division adjustment. AIAL says the Commission read too much into its earlier, but to us very clear, statement of

the relative riskiness of its regulated and unregulated business, and that a report by Uniservices questioned the need for such an adjustment.[865]

[1555] AIAL's previous acceptance of the 0.65 asset beta, also following a multi-division downwards adjustment, counts fatally against this aspect of its appeal. Clearly what AIAL is responding to is the lower result produced based on the broader analysis, not the multi division adjustment itself. Neither Uniservices nor PwC had, as the Commission noted, commented unfavourably on that adjustment in their responses to the May-June 2010 Draft Reasons Papers.[866]

Upward adjustment for leverage

[1556] AIAL's argument here is that if there were to be a multi-divisional downward adjustment to the asset beta, then there should also be an adjustment to account for the consideration that regulated airport services would likely attract higher leverage than unregulated airport activities.

[1557] There is no evidence on the record that regulated airport services would likely attract higher leverage than unregulated airport activities.

[1558] For all these reasons, we are not persuaded that the changes AIAL proposes to the asset beta would result in a materially better Airports cost of capital IM.

WIAL and CIAL's challenges

[1559] In their written submissions WIAL and CIAL also argue – in fairly succinct terms – for the May 2010 Airports Draft Reasons Paper asset beta of 0.65 because they say weekly data is systematically and materially lower than monthly data and because there is no evidential foundation for the multi-divisional adjustment.

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865 Uniservices *Comments on the Commerce Commission's Approach to estimate the Cost of Capital* (2 December 2009) at [3.2.6], 28/193/013948.

866 Uniservices *Comments on the Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (12 July 2010) at [34]-[36], 33/233/016356-016358; Professor R R Officer and Dr S Bishop *Independent Review of Commerce Commission's WACC Proposals for Transpower* (5 August 2010) at [2]-[3], 34/254/017331-017332.

[1560] For similar reasons to those set out above for AIAL, we reject those propositions and that aspect of WIAL and CIAL's appeal.

[1561] In oral argument, Mr Hodder criticised the Commission's airport comparator sample. He did so on the basis of a PwC report, prepared in August 2010 for the NZAA.[867] That report did not, itself, assess the Commission's comparator sample, as that comparator sample had not, at that time, been identified. Rather, that report criticised other reports prepared, principally for Air NZ, by Strategic Finance Group (SFG),[868] NZIER[869] and Europe Economics.[870]

[1562] Those firms had all criticised the Commission's approach, and produced advice which argued for lower asset betas than identified by the Commission in its May 2010 Airports Draft Reasons Paper.

[1563] One of the grounds for PwC's criticism of SFG's findings in particular was the use by that firm of a broader sample than the Commission had used for the purposes of the May 2010 Airports Draft Reasons Paper. Mr Hodder's submission was that PwC's criticism of that broader sample was a proxy for criticising the Commission's broader sample as used to finally determine its estimate of the airport sector asset beta and leverage.

[1564] We note immediately that because the PwC advice was not directed at the final sample used by the Commission, it is more than a little difficult to relate its criticisms to the Commission's decision. We acknowledge Mr Hodder's submission that the Commission did not, in the Airports Reasons Paper, respond to the PwC analysis: that in this context is not of itself persuasive.

[1565] Turning to the substance of the PwC criticisms of the other firms' approaches, by reference to its criticism of the SFG sample PwC would exclude nine of the

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[867] PwC *Analysis of airport betas* (for NZAA) (3 August 2010), 34/253/017296.

[868] Strategic Finance Group *Airport Beta Estimates (for Air New Zealand)* (11 July 2010).

[869] NZIER *Asset Beta for New Zealand's International Airports – Comments on the Commerce Commission's Airport Draft Reasons Paper* (11 July 2010), 33/227/016346.

[870] Europe Economics *Critique of Commerce Commission's asset beta analysis* (Report for Air NZ) (9 July 2010), 33/224/016286.

airports in the Commission's sample including, particularly, all Mexican and Chinese airports on the basis that those are "developing countries" because:[871]

> ... the different institutional and market environment in those countries compared to New Zealand means that there can be less confidence that the relationship between the economic returns to an airport in a developing country and the market as a whole is a good proxy for the relationship that would exist in New Zealand.

[1566] Having said that, PwC acknowledged that there was a greater case for excluding the Chinese firms than those from Mexico.

[1567] Thus, Mr Hodder argued, PwC's criticisms of the samples used by SFG to produce lower beta estimates than the Commission's draft estimate, was a criticism that applied also to the lower estimate the Commission had produced based on its broader sample. At the end of the day, Mr Hodder's submission was that we were entitled to give weight to that (PwC) evidence. Doing so would support the proposition of WIAL/CIAL that the Commission's estimate, 0.65, was adequate but conservative.

[1568] Having considered that evidence, we are not persuaded that WIAL/CIAL's proposed asset beta would produce a materially better Airports cost of capital IM. We find PwC's "developing country" argument unpersuasive. Mexico has, after all, been a member of the OECD for almost 20 years and to classify China's economy as "developing" may be true, but says little beyond stating the obvious. Moreover, the range of sample information commented on by PwC itself in its report (for example Europe Economics' sample compared to that of the Commission) shows, in our view, that the Commission's sample took something of a middle ground in terms of those that were advocated before it.

[1569] For all those reasons, we are not persuaded that the changes WIAL/CIAL propose to the asset beta would result in a materially better Airports cost of capital IM.

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[871] PwC *Analysis of Airport Asset Betas* (for NZAA) (3 August 2010) at 12, 34/253/017307.

6.14 LEVERAGE

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The Commission's decisions

[1570] The Commission set leverage at 44% in each of the EDBs, GPBs and Transpower cost of capital IMs.[872] MEUG challenges those decisions. It says leverage should be set at zero in each case, but also has an alternative proposal. Transpower also challenges its leverage. Transpower advances three alternatives, each of which is to a greater or lesser extent based on its actual leverage. Neither Vector nor Powerco appeals the Commission's leverage decisions.

[872] Decision [2012] NZCC 26 at cl 2.4.2(1), 67/716/033651; Decision [2012] NZCC 27 at cl 2.4.2(1), 67/715/033460; Decision [2012] NZCC 28 at cl 2.4.2(1), 67/717/033851; Decision [2012] NZCC 17 at cl 2.4.2(1), 42/351/021049.

[1571] The decisions on leverage are linked to the decisions on asset beta, which are discussed in Part 6.13 of this judgment, because the samples of comparator firms used in determining the beta estimates are common to both sets of issues.

[1572] The Commission set leverage at 17% in the Airports cost of capital IMs, taking a similar approach as it had for the EDBs and GPBs. That decision is challenged by the Airports. However, the issues raised by the Airports are different from those raised by MEUG's and Transpower's appeals, and are dealt with separately.

Background

Leverage in the WACC

[1573] Leverage is the proportion that debt capital represents of the total capital of an enterprise. A leverage parameter appears or is implied in several places in the WACC formula. In particular, a leverage parameter is used:

(a) to weight the estimate of the cost of debt and the estimate of the cost of equity in adding them to estimate a firm's WACC;

(b) in the estimate of the cost of equity, to de-lever the estimated equity betas of comparator companies to estimate their asset betas for use in the SB-L CAPM; and

(c) to re-lever the estimated asset beta to derive an estimate of equity beta for use in the SB-L CAPM.

[1574] The leverage used in the first and third steps is the same and is the regulatory leverage value. It is common ground that the leverage used in the second step is the actual observed leverage of the individual comparator companies. The issue is therefore what the value of the regulatory leverage parameter should be.

[1575] The regulatory leverage estimate of 44% set for the EDBs, GPBs and Transpower is a notional leverage, being the average leverage of the group of

comparator companies used by the Commission to estimate the asset beta for those firms.

[1576] That was not always the approach the Commission indicated it would take. Initially, in the Revised Draft Guidelines, promulgated by the Commission in June 2009 as part of its long-running cost of capital work stream, the Commission stated that:[873]

> The choice of leverage ratio, for the purposes of setting allowed rates of return, will depend on the nature of the industry. In some industries (e.g. electricity transmission) only one firm exists. In such industries, it would be natural to use the firm's actual leverage ratio, provided the capital structure is consistent with a reasonable investment grade long term credit rating. ...
>
> On the other hand, some industries may comprise several firms, and the capital structures of these businesses can vary considerably for business specific reasons that are difficult to identify precisely. For such industries, a pragmatic approach would be to apply a "notional" leverage to all firms involved. One way to determine the appropriate notional capital structure would be to take an average of the gearing ratios in the industry, checking that this average is consistent with that of an investment grade corporate. If the average industry leverage appeared too high by rating standards, it would be adjusted down to a more appropriate level for the purposes of setting allowed rates of return.

[1577] Consistent with that discussion, the contemporaneous June 2009 IMs Discussion Paper addressed leverage in the following terms:[874]

> The Commission's primary concern is to adopt a level of leverage that is consistent with the retention of a reasonable investment grade credit rating in order to ensure that regulated companies are operating within a robust financial structure (likely to be around A-/A3 or BBB+/Baa1). In a single firm industry (such as electricity transmission), it could therefore be considered relatively straightforward to adopt the actual leverage of the firm in question, provided it is satisfying the reasonable credit rating assumption. Similarly, for sectors with multiple firms, an average industry leverage assumption could be adopted for each regulated industry.

[1578] Subsequently, the Commission became aware of what came to be called "the leverage anomaly", which is explained shortly. This caused it to decide to apply a notional leverage that varied neither across industries nor over time. In the May-June 2010 Draft Reasons Papers the Commission adopted a notional leverage of 40% for all regulated services.

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873 Revised Draft Guidelines at [197]-[198], 5/13/002016 (footnotes omitted).
874 June 2009 IMs Discussion Paper at [8.36], 6/14/002303 (footnote omitted).

[1579] During consultation on the May-June 2010 Draft Reasons Papers, the Commission received from PwC (for ENA and Telecom) a submission to the effect that, if debt betas were to be excluded from the WACC analysis (which PwC agreed with), then to be consistent the notional leverage used in the WACC estimation should be close to the average leverage of the comparator companies used to derive the (average) beta estimate.[875] Debt betas are discussed in what follows.

[1580] The Commission accepted that PwC's suggested approach to determining notional leverage was more technically correct than the May-June 2010 Draft Reasons Papers' approach of applying a single fixed leverage assumption to all regulated firms. The Commission decided to set a notional leverage for each service based on the average leverage of the comparator firm sample used to derive the asset beta estimate.

[1581] Accordingly, the cost of capital IMs for EDBs, GPBs and Transpower specify a notional leverage of 44%, based on the average leverage of the sample of comparator firms used to estimate leverage and the asset beta for EDBs and GPBs. For airport services, with a different set of comparator firms, the leverage was set at 17%. As a result of Transpower's partially successful judicial review proceeding, the Commission was required to consult again on Transpower's leverage. Following that further consultation, the Commission confirmed its initial decision to set a notional leverage of 44% for Transpower – setting out its reasons for doing so in the Transpower Supplementary Reasons Paper.[876]

The leverage anomaly

[1582] In the SB-L CAPM (set out earlier), it turns out (by substituting between equations) that:

$$WACC = k_u + p(1 - T_c)L$$

where:

- k_u is the unlevered cost of capital, ie WACC when leverage is zero;

[875] EDBs-GPBs Reasons Paper at [H3.35], 3/7/001407.
[876] At 42/352/021073.

- p is the debt premium;
- T_c is the corporate tax rate; and
- L is leverage.[877]

[1583] In these substitutions, the relationship between the equity beta, leverage and asset beta is used. It can therefore be seen that, applying the SB-L CAPM, WACC increases with leverage across the full range of values of L, from zero to 100%. In the calculation used by the Commission in its IM decision for EDBs and GPBs (and thus Transpower), the WACC is 5.75% at zero leverage, rising linearly to 6.75% at 60% leverage.

[1584] This is a problem. The implication is that, if the SB-L CAPM were correct, firms would opt for zero leverage to minimise their cost of capital. Clearly, in the real world they do not. Typically, firms do borrow. The cost of debt is generally understood to be less than the cost of equity, debt being less risky than equity.[878] In its Principal Reasons Papers, the Commission referred to this feature of the SB-L CAPM as "a potentially serious anomaly".[879] It was especially concerned that regulated suppliers would, if their actual leverage were used in estimating their WACCs, have an incentive to increase their leverage, possibly beyond prudent levels.

[1585] Based on advice from Dr Lally, the Commission identified three options to respond to the leverage anomaly:

(a) setting leverage equal to zero; or

(b) setting leverage for regulated firms at a notional level for each service based on the average leverage for the sample of comparator firms used to

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877 Lally *WACC and Leverage* (17 November 2009), 7/18/002666.

878 Tax deductibility aside, debt is – obviously subject to limits – less risky than equity as it has a fixed and, relative to equity, preferential payment entitlement often supported by protective covenants.

879 EDBs-GPBs Reasons Paper at [6.6.5], 3/7/001145; Airports Reasons Paper at [6.6.5], 2/6/000733.

derive the asset beta estimate for that service as proposed by PwC: 44% for energy firms and 17% for airports; or

(c) using a non-zero debt beta. Heretofore the debt beta had been assumed to be zero in applying the SB-L CAPM.

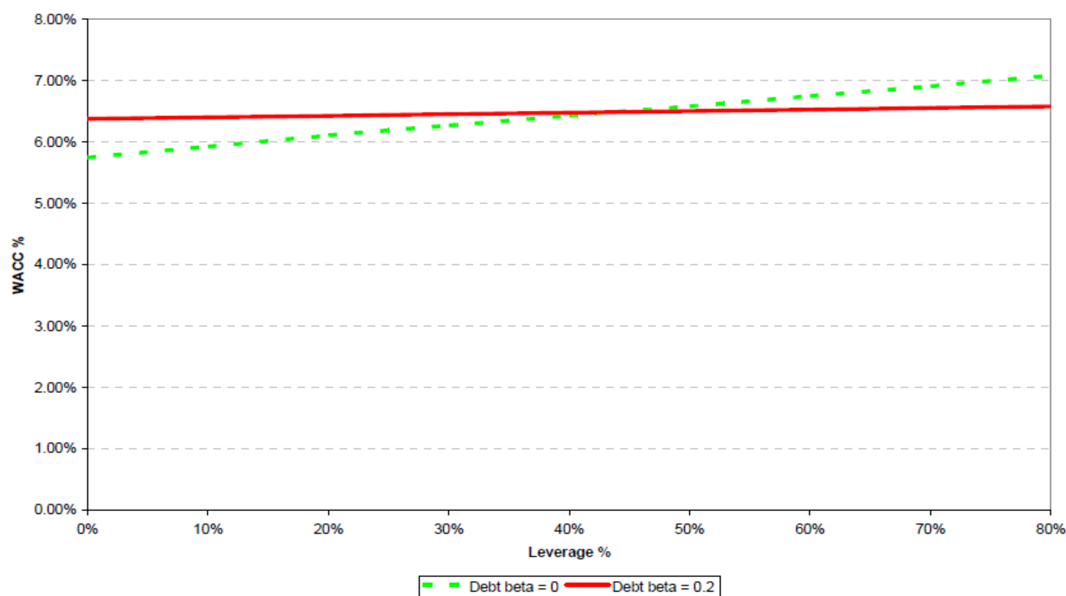
(The Commission also considered, but rejected, setting a single notional leverage for all regulated firms, as had been its approach in its May-June 2010 Draft Reasons Papers. There is no need for us to consider that option further).

[1586] The Commission took the view that setting leverage equal to zero would understate the true cost of capital, was inconsistent with overseas regulatory precedent and observed behaviour of firms, and would have implications for other parameters such as the equity beta.

[1587] The Commission showed that, under certain conditions, discussed below, using a notional leverage for the EDBs, GPBs and Transpower equal to the average leverage of its comparator sample of firms (44%) produced the same WACC estimate as using a non-zero debt beta. This is shown in the following figure, reproduced from the EDBs-GPBs Reasons Paper:[880]

[880] EDBs-GPBs Reasons Paper at fig H2, 3/7/001415.

Figure H2 Leverage and the post-tax WACC estimated for EDBs and Transpower, using the simplified Brennan-Lally CAPM and different values for the debt beta.



In Figure H2, the line corresponding to a debt beta of zero has a value of 5.75% when leverage is zero, and 6.49% when leverage is 44%. The value of 5.75% is k_u in the equation in [1582] above. The line corresponding to a debt beta of 0.2 has a much smaller slope. The lines cross where leverage is 44%.

[1588] The Commission also noted that the same WACC estimate was produced using debt beta values of 0.2 and 0.1 at the notional leverage of 44%. That is, if the line corresponding to a debt beta of 0.1 were plotted on Figure H2, it would intersect the two existing lines where they intersect each other, at 44% leverage. The new line would lie between the two existing lines.

[1589] The Commission decided not to use a non-zero debt beta (it assumed the debt beta was zero), but to apply the SB-L CAPM using the notional leverage for each service given by the average leverage for the relevant comparator sample of firms. It is important to note that this leverage was used to derive the equity beta estimate for that service, in the re-leveraging process.

[1590] The Commission noted that most submissions to it supported the use of zero debt betas, most regulators do not use debt betas, and the Commission had not previously used non-zero debt betas.[881]

MEUG and Transpower's appeals

[1591] In MEUG's appeals against the cost of capital IMs for the EDBs, GPBs and Transpower, which were heard in that order, MEUG proposes that the Court choose between two options:

(a) zero leverage; or

(b) notional leverage (44%) but with a non-zero debt beta and no non-systematic components of the debt premium. This option is explained further below.

[1592] Vector and Powerco have not appealed the use of a notional leverage of 44% and submit that the Commission's decision on leverage was correct.

[1593] Transpower seeks either:

(a) Transpower's actual forward-looking leverage (65.6%) with a zero debt beta ; or

(b) Transpower's actual forward-looking leverage, with a non-zero debt beta; or

(c) the weighted average of the average of the comparator firms' leverages and Transpower's actual forward-looking leverage (54.8%, which is the average of 44% and 65.6%), with a zero debt beta,

with the Court to select one option.

[881] EDBs-GPBs Reasons Paper at [6.6.12], 3/7/001148.

Analysis

Uncertainty Inherent

[1594] Estimation of the WACC involves use of modelling, and in particular the CAPM. The arguments made by the parties involve a good deal of algebra and calculation. It is necessary to come to grips with the complexities so as to evaluate the various submissions and proposals. However, it is worth noting at this point that this is another instance where we consider that a search for spurious precision is involved in the estimation procedures.

[1595] This should not be interpreted as criticism of modelling per se. Rather, it reflects a judgement that the uncertainties inherent in the exercise require a constant recourse to first principles and that the use of cross-checks is vital in evaluating model outcomes. Somewhat paradoxically in the face of spurious accuracy, some calculations were difficult to replicate, apparently because of the introduction of rounding errors.

[1596] We will now deal in turn with the approaches to leverage of the Commission, Transpower and MEUG, before setting out our conclusions. This ordering is convenient because of the way the arguments developed during the hearing.

Evaluation of the Commission's approach to leverage

WACC and leverage

[1597] The starting point is that the Commission chose to use the SB-L CAPM to estimate the WACC. That gives rise to what the Commission acknowledged is an anomaly. As observed, the SB-L CAPM takes account of the New Zealand tax system under which interest payments on debt are a tax deduction from corporate tax, but tax imputation (under the assumption that imputation credits are fully used) and the absence of capital gains tax have the effect that debt is not given the preferential treatment over equity that would otherwise result from its tax deductibility. Dividends are taxable in the hands of shareholders (through personal income tax), but imputation provides a credit for corporate tax paid by the firm.

[1598] The Commission stated in the EDBs-GPBs Reasons Paper that:[882]

> In a tax neutral world leverage is generally understood not to affect a firm's WACC, since the cost of capital reflects the riskiness of the cash flows, rather than how these are divided up between equity and debt investors. When corporate tax is considered, the WACC is generally understood to decline with increases in leverage. This is because interest costs are tax deductible to the firm but dividends are not.

[1599] The Commission went on to observe that "[w]hen personal tax is considered some of the tax advantages of debt are reduced" because of tax imputation.[883] It is not clear why the Commissions uses the qualifier "some". We note that for so long as some of the tax advantage of debt remains, one might expect firms to be fully debt-financed (the complete opposite of the anomaly of the SB-L CAPM that implies that firms should not borrow at all).

[1600] It could be that the Commission had in mind that overseas investors do not get the benefit of tax imputation. That issue is discussed quite extensively in the EDBs-GPBs Reasons Paper, but need not occupy us. The SB-L CAPM used by the Commission assumes that all investors are resident shareholders.

[1601] We were not taken to any materials supporting the proposition that WACC is generally understood not to be affected by leverage. We understand the proposition to reflect a preceding finance theory that does not rely on any version of the CAPM, but does assume a version of perfect capital markets.[884] A great deal of finance theory lies behind the Commission's approach, including its use of a CAPM, as it does for most other regulators around the world. This proposition is but one example.

[1602] Finance theory is, we believe, generally accepted by practitioners including regulators and regulated suppliers, although there may be areas of finance theory that remain unresolved. Certainly, and as discussed earlier, the Commission's general approach and, in particular the SB-L CAPM, has been generally accepted for regulatory purposes in New Zealand, is also used in estimating the cost of capital by

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882 EDBs-GPBs Reasons at [6.6.2], 3/7/001145.
883 EDBs-GPBs Reasons Paper at [6.6.3], 3/7/001145.
884 The Modigliani-Miller theorem.

firms, advisors and analysts in financial markets, and was not itself directly challenged. But as always in economics, underlying assumptions must be kept in mind.

[1603] All appellants accept that there is an anomaly since the model has WACC increasing with leverage. This implies that a firm's WACC would be minimised with zero leverage, meaning no borrowing, whereas firms do in fact generally borrow. The appellants' acceptance is with varying degrees of enthusiasm.[885] Transpower, moreover, disputes whether Dr Lally himself considered that WACC is invariant to leverage, claiming that he actually considered that WACC increases with leverage. There was some confusion over this point. We will discuss the issue, but we conclude that the Commission and Dr Lally were in close agreement. This is of some, albeit minor, importance because of Transpower's view that the Commission had not properly interpreted Dr Lally's advice to it.

[1604] Because the view that WACC is generally invariant to leverage was at times put strongly, or assumed, and colours the whole discussion, we express our view immediately.

WACC invariant to leverage – our view

[1605] Our understanding of the proposition that WACC is invariant to leverage is that it originates in a simpler proposition (in the sense that it does not employ the concept of a WACC); namely that the market value of a firm is independent of its capital structure. This proposition can be proved, given its assumptions, by the fact that investors can borrow and lend at the same rate as firms. The basic idea is that the firm cannot do anything that the shareholders could not do for themselves in terms of choosing a degree of leverage. The value of the firm is determined by what the firm does with its assets, not by how the ownership of those assets is sliced up between shareholders and lenders. Of course, this depends on the choice of capital structure having no effect on investment and operating decisions.

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[885] Transpower's position was a little confusing: at times it accepted the anomaly, at others it appeared to argue that WACC did generally (ie outside the SB-L CAPM) increase with leverage.

[1606] It is worth pointing out that, if the value of the firm is invariant to leverage, then the expected return on the firm's assets is invariant to leverage, and the expected return on its equity must increase with leverage (though in proportion to the debt-equity ratio rather than in proportion to leverage, which is the ratio of debt to total assets, ie the ratio of debt to debt plus equity). The riskiness of the equity increases exactly so as to offset the increase in the expected return on equity. This is not necessarily intuitively obvious, but easily derived by algebra. It is another way of explaining what makes shareholders indifferent to leverage under the assumptions related to perfect capital markets.

[1607] But in the real world, firms generally borrow, and they borrow in varying degrees (with leverage varying from firm to firm), in some cases with similar practices across an industry sector and differing practices between sectors. That suggests very strongly that firms are not indifferent to leverage, but that they choose it. In the absence of any other explanation, we conclude that they would choose their borrowing level to minimise their cost of capital. That suggests that for any given firm its cost of capital must decrease with increasing leverage up to a certain point, and then start increasing. The point where the cost of capital stops declining and starts increasing must vary from firm to firm (or all would employ the same leverage), but the curve may well be more or less flat over some range of leverages so that a firm is more or less indifferent as to its leverage within that range, or considers factors other than its cost of capital in choosing its leverage.

[1608] Accordingly, we are of the opinion that in the real world, a higher level of leverage does not invariably lead to a higher cost of capital. That is, we do not consider WACC generally increases with leverage, and we accept that there is an anomaly in the SB-L CAPM. Moreover, and unlike the Commission, we do not consider that in the real world WACC is invariant to leverage. Rather, we consider that – at least initially – WACC can be understood to decline with leverage. We note that in reaching our conclusion we have made no assumptions about what causes the WACC to behave in that way as leverage increases. It may be a combination of tax effects and costs of financial distress (assuming the costs of financial distress can be considered part of the WACC).

[1609] That conclusion is based on the assumption that leverage is chosen by firms to minimise their cost of capital. Factors other than those related to the cost of capital may influence a firm's decision about its leverage. In particular, Dr Lally suggested that a firm may find borrowing (up to a point) confers other benefits such as signalling its strength, disciplining its managers and providing added flexibility. He described such benefits as "qualitative advantages ... that cannot be incorporated into WACC".[886]

[1610] Nevertheless, we consider that the typical firm will have a view that below a certain point its leverage is too low and, above a certain point, too high. Within that range it seems highly likely that the firm's cost of capital is at a minimum (or close enough to it to satisfy the firm).

[1611] Notwithstanding the Commission's statements, it seems likely that it did not intend to firmly assert that WACC is indifferent to leverage, but rather to put forward the standard view from finance theory (with its simplifying assumptions) and contrast it with the anomaly of the model producing estimates of WACC that increase with leverage.

The leverage anomaly and debt betas

[1612] Dr Lally explained that, as can be seen from the formula at [1582], the cause of the anomaly in the model – that WACC increases with leverage – is the existence of the debt premium. The debt premium arises for three reasons, or has three components:

(a) systematic risk – variability in returns explained by variability in overall market returns, just as equity displays systematic risk (this variability is captured by the debt beta);

(b) a liquidity premium required by debt holders because corporate debt is less liquid than government bonds (the return on which is the risk-free rate); and

[886] Lally *WACC and Leverage* (17 November 2009) at 7, 71/18/002670.

(c) expected default costs, which are the difference between the promised and expected return (where "expected" is used in a probabilistic sense).

[1613] The expected return is the sum of the risk-free rate and the first two components. The promised return is the sum of the risk-free rate and all three components. In the SB-L CAPM, and in CAPM models more generally, the cost of debt is measured as the promised return, ie in terms of quoted bond rates. It should be measured as the expected return. (It was unclear whether bankruptcy costs are separate from and should be added to expected default costs, but nothing was said by the parties to suggest that anything important depends on this.)

[1614] By making some modifications to the SB-L CAPM, Dr Lally showed that if the debt premium was due only to systematic risk, then the model, incorporating a debt beta, would result in the WACC being invariant to leverage. Indeed, the WACC is equal to the unlevered cost of capital, but calculated using an asset beta de-leveraged from the equity beta using a different formula that includes the debt beta. The effect is that the WACC no longer depends on the debt premium. The Commission's estimate of that invariant WACC was 6.49% for the EDBs and GPBs.

[1615] But, as Dr Lally himself accepted, the assumption that the debt premium is due only to systematic risk is unrealistic, since in the real world liquidity premiums and expected default costs are non-zero. In this modified SB-L CAPM, where the debt premium, MRP, tax rate and risk-free rate are all inputs to the model (determined outside the model by other means of estimation) the debt beta is determined by those parameters if the whole debt premium is assumed to be systematic. It has a value slightly greater than 0.2. It cannot, consistent with the modified SB-L CAPM, be independently estimated.

[1616] Dr Lally spoke of using the SB-L CAPM unmodified, or using zero leverage in it, as respectively overstating or understating the WACC. "The third option would be to more properly estimate WACC, which would involve estimation of debt betas and defining the cost of debt as the expected yield plus an allowance for bankruptcy

costs”,[887] instead of as the promised return (which is the norm, for example, in a quoted bond yield).

[1617] It is important to understand that Dr Lally’s explanation of options was in the context of taking the SB-L CAPM as the given starting point. Thus, he went on to note that even making the adjustments involved in his third option (an option he considered impracticable because of measurement difficulties) would not completely resolve the anomaly. That is, WACC would still rise with leverage in the modified model, implying that the optimum leverage was zero, contrary to observed company practice of borrowing.

[1618] Professor Guthrie, advising Transpower, made explicit adjustments to the SB-L CAPM to deal with the debt premium. Dr Lally disputed Professor Guthrie’s results, and we will return to that dispute later. However, some conclusions can be drawn from Professor Guthrie’s analysis, because it is largely a working through of, and making algebraically explicit, Dr Lally’s own approach. Moreover, even where the specific values of certain parameters, such as the debt beta, are disputed, the broad nature of the differences between the modified model and the unmodified model are clear.

[1619] Making adjustments to deal properly with the debt premium would produce a model where the WACC at zero leverage was higher than in the unmodified SB-L CAPM, that is higher than 5.75% – see [1587] above. It would therefore cross the line in Figure H2 produced by the unmodified model. As mentioned above, the Commission produced calculations in its EDBs-GPBs Reasons Paper showing that when the leverage is equal to the average leverage of the comparator sample (44%), the WACC is the same (6.49%) for debt betas of 0.2 and 0.1. As Dr Lally’s advice showed, the same WACC is obtained when the whole debt premium is assumed to be systematic, corresponding to a debt beta slightly higher than 0.2.

[1620] These are special cases of the more general fact that, in the SB-L CAPM modified to allow for non-zero debt betas, when the leverage is that of the average of the comparator sample, the WACC is invariant to the value of the debt beta. That

[887] Lally *WACC and Leverage* (17 November 2009) at 6, 7/18/002669.

conclusion is implicit in the Commission's reasoning. We are also satisfied that it can be established algebraically. The significance of that value of leverage is that it is the value used for re-leveraging the estimated asset beta to estimate the equity beta for the regulated suppliers.

[1621] The upshot is that, in the modified SB-L CAPM, the WACC still increases with leverage. The slope of the line decreases with increasing debt beta. The slope of the line becomes zero (the line becomes horizontal) for the value where the debt beta reaches its maximum, ie where the whole debt premium is systematic. For all values of debt beta, the line passes through the point where leverage is equal to that of the average of the comparator firms. Necessarily, given the properties just set out, the intercept of the line, ie the value of WACC for zero leverage, is (excluding negative values of the debt beta) at a minimum 5.75% where none of the debt premium is systematic (ie the debt beta is zero), and at a maximum 6.49% where all of the debt premium is systematic (and the line is horizontal). Given the values of the other parameters, the whole debt premium being systematic corresponds to a debt beta slightly greater than 0.2. The line cannot have a negative slope because that would imply that the systematic part of the debt premium was greater than the whole. (As a curiosity, it may be noted that if the debt beta were negative, the line would have steeper slope, producing an estimate of WACC lower than 5.75% for zero leverage, but of course still the same estimate, 6.49%, at leverage of 44%.)

[1622] Having noted that even in the modified model WACC would increase with leverage – the anomaly would remain in a reduced degree – Dr Lally went on to propose some reasons why firms generally prefer some positive level of debt, despite the model suggesting that they would choose not to borrow so as to minimise their cost of capital. Those reasons involve:

(a) incomplete provision or use of imputation credits so that the tax advantage of debt is understated in the model; and

(b) what Dr Lally described as qualitative advantages, mentioned above.

[1623] While some of these factors might explain why a firm would wish to borrow for reasons other than minimising its cost of capital, others suggest that the cost of capital would – at least initially – decrease with increasing leverage, which is the view we take.

The implications of the leverage anomaly – our assessment

[1624] Where does this leave us? All versions of the SB-L CAPM (apart from the unrealistic case of the whole debt premium being systematic) have the WACC increasing with leverage. Allowing for part of the debt premium to be non-systematic results in higher WACC estimates for leverage up to 44%, and lower WACC estimates for leverage above 44%, than in the SB-L CAPM used by the Commission. Taking account of factors not incorporated even in the modified SB-L CAPM would reduce the WACC estimate as leverage increases, at least up to a point. There is no material before us suggesting how to take those factors into account or the likely quantitative impact.

[1625] It appears to us, then, that the WACC estimate (6.49%) given by the Brennan-Lally model for leverage of 44%, remembering that this estimate is the same in the original simplified model and in the modified model, is likely to be on the high side because of factors not taken into account even in the modified model. It is also apparent that the estimate (5.75%) given by the SB-L CAPM where the debt beta is assumed to be zero and leverage is zero is likely to be on the low side, because that model fails to deal with the debt premium properly and the effect is larger, the lower the level of leverage.

[1626] The Commission sought to address the leverage anomaly by specifying a notional leverage (44%). Specifying the leverage in the SB-L CAPM determines the estimate of the WACC, given that all the other parameters have been estimated or specified, but at a level that is higher than the model's minimum value. The minimum value of the WACC is given by zero leverage, as we saw at the beginning, and is the essence of the anomaly. Choosing a notional leverage cannot resolve the leverage anomaly. It remains a feature of the model.

[1627] Nevertheless, setting a notional leverage does address the Commission's concern that using suppliers' actual leverage would provide an incentive for them to increase their leverage beyond prudent levels. We consider that concern to be valid. The question is whether that level of leverage provides an appropriate WACC estimate or, more accurately, whether any of the proposals for different values of the leverage provides a better estimate. We consider that question in our evaluation of Transpower's and MEUG's proposals.

[1628] The Commission's reasons for choosing a notional leverage of 44% for Transpower (the same as for the other energy suppliers), equal to the average leverage of the firms used to estimate the beta, were because it will:[888]

- ensure estimates of the regulatory cost of capital do not vary with leverage, as we do not consider that the actual cost of capital does in fact increase with leverage (so long as leverage is at prudent levels);
- ensure consistency with how we have set other parameters in the Cost of Capital IM, especially asset beta;
- ensure consumers do not face changes in prices resulting from changes in a regulated supplier's capital structure, as consumers of goods and services traded in workably competitive markets also do not face changed prices from such changes by an individual supplier; and
- ensure the IM does not create an incentive for regulated supplier to increase its leverage.

[1629] The Commission argued, among other things, that in workably competitive markets prices paid by consumers do not depend on the capital structures of firms. It also noted that most of the comparator firms were in the United States where, because of the absence of dividend imputation, higher leverage may be favoured. Consequently, the figure of 44% may be higher than optimal for otherwise comparable New Zealand companies.

Evaluation of Transpower's appeal

[1630] Transpower's leverage was expected to increase from 51% to 71% during the first regulatory period. The essence of Transpower's appeal is that the Commission

[888] Transpower Supplementary Reasons Paper at [1.1.18], 42/352/021076.

should not have used the notional leverage, but Transpower's actual leverage, or an average of its actual leverage and the notional leverage. Given the range of regulatory controls Transpower was subject to, there was nothing to suggest that its actual leverage was inappropriate. Rather, that level of leverage reflected the significant – as noted earlier transformational was the word used by Mr Shavin – programme of capital works Transpower was committed to, with the approval of its regulators. Its actual leverage reflected the capital requirements of that programme, and the fact that Transpower – being wholly owned by the State – did not have access to public equity capital markets.

[1631] In terms of the "leverage anomaly" debate, Transpower's submission was based on advice from Professor Guthrie, who took issue with the Commission's expert, Dr Lally. Professor Guthrie took the non-leverage decisions of the Commission as given and, applying the SB-L CAPM (assuming a zero debt beta), derived results showing that, where the Commission uses betas derived from a comparator firm:

- using zero leverage underestimates Transpower's WACC on average;
- using the comparison firm's average leverage also underestimates Transpower's WACC on average; and
- using Transpower's actual leverage overestimates its WACC on average.[889]

("On average" refers to the results that would be obtained over a series of estimations, and thus to whether the estimates are statistically biased. Professor Guthrie's analysis refers to a comparison firm, but that can be understood as being the average of the Commission's comparator set of firms.)

[1632] Professor Guthrie proposed a new option – averaging Transpower's actual leverage with the comparator firms' average leverage. This, he argued, would come close to generating Transpower's actual WACC. In his analysis, Professor Guthrie

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[889] Graeme Guthrie *Leverage and Transpower's WACC* (4 April 2012) at [2], 42/336/020779.

used a decomposition of the debt premium, drawing on his review of the relevant literature, into a systematic debt premium (55%), a liquidity premium (15%) and an expected default loss (30%).[890] With the MRP and the corporate tax rate assumed by the Commission, and a debt premium of 2.0% (excluding debt issuance costs), the systematic risk premium of 55% of the total is consistent with a debt beta of 0.11.

[1633] Dr Lally provided advice to the Commission on Professor Guthrie's work, recommending that the Commission not change its view.[891] In his advice, Dr Lally disagreed with Professor Guthrie's view that using comparator firms' leverage instead of Transpower's would induce a downward bias in Transpower's WACC estimate. He stated that Transpower's leverage was based on the book value of its equity. He argued that if Transpower's leverage was measured correctly, or consistently with that of the comparator firms, based on the market value of equity, most of the bias would be eliminated. He was also concerned that Transpower could raise its leverage in response to the incentive to do so.

[1634] In the Transpower Supplementary Reasons Paper, the Commission made only a very brief reference to Professor Guthrie's views.[892]

[1635] During the hearing, Ms Scholtens for the Commission accepted that what became known during the hearing as the Guthrie/Lally debate received little coverage in the Commission's supplementary reasons. She explained that as being because Professor Guthrie took the view that the WACC increases with leverage, while the Commission took the view that it does not. That being the case, there was little in Professor Guthrie's views to argue with. That may seem a little strange, but is in fact understandable when the full context is considered.

[1636] Dr Lally's view was, as explained at some length above, that the fact that WACC increases with leverage in the SB-L CAPM is an anomaly, and modifying the model to "deal properly" with the debt premium would not entirely remove it. Professor Guthrie's results, on the other hand, were derived by simply taking the

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[890] Graeme Guthrie *Leverage and Transpower's WACC* (4 April 2012) [10], 42/336/020781.
[891] M Lally *Leverage and WACC for Transpower* (7 June 2012), 42/345/020967.
[892] Transpower Supplementary Reasons Paper at [1.2.18], 42/352/021083.

SB-L CAPM and modifying it to deal with the debt premium. As a consequence, in Professor Guthrie's calculations, WACC still increased with leverage.

[1637] That being the case, the value of the debt beta is irrelevant as explained above.

[1638] As already explained, we do not consider that WACC generally increases with leverage. For these reasons, while we found Professor Guthrie's exposition of the decomposition of the debt premium helpful, we do not consider that his subsequent exposition, despite its analytical clarity, furthers Transpower's case.

[1639] The Guthrie/Lally debate extended to the question of whether an estimate of Transpower's debt beta, made by PwC, was reliable. We have not found it necessary to determine that issue because we have reached the conclusion that using a notional leverage of 44% is appropriate.

[1640] The fundamental difference in perspectives carried over into Transpower's submissions, with the added wrinkle that Transpower claims that Dr Lally in fact considered that WACC does increase with leverage. As mentioned above, we consider it clear that, in its approach to Transpower's leverage, the Commission was taking a position fully in accord with the advice it received from Dr Lally. As MEUG points out in its submissions, Transpower's claim that its true WACC would be understated is based on the SB-L CAPM, with its inherent leverage anomaly.

[1641] Transpower's submissions on leverage are, we consider, in fact based on more fundamental propositions: that in the context of IPP regulation, its regulatory leverage value should be estimated using its actual forward-looking leverage unless there is good reason to consider that its leverage is inefficient. As can be seen, this submission does not rely on or respond to the existence of the leverage anomaly or on Professor Guthrie's advice. Consequently, Dr Lally's concerns about the measurement of Transpower's leverage do not need to be examined.

[1642] The Commission did not rely on a view about the efficiency of Transpower's leverage. It did rely on a view that under IPP regulation there is no presumption that

any particular regulatory value of a parameter should take the actual value of the incumbent supplier. This view has been discussed earlier in Part 6.4 of this judgment. We agree with that view.

[1643] Using leverage higher than 44% in the SB-L CAPM would generate a higher WACC. This would occur simply because of what is acknowledged to be an anomaly. If Transpower's WACC really did increase with leverage, as Transpower submits, then in our view the appropriate regulatory approach could be to set its regulatory leverage at zero.

[1644] There is no compelling reason to prefer Transpower's actual forward-looking leverage. To do so in the SB-L CAPM, with a debt beta of zero, would produce a WACC estimate that Transpower's own expert states would be biased upward.[893] Consequently, use of a higher leverage would need to be in the context of introducing a non-zero debt beta and estimating the proportion of Transpower's debt premium that was systematic (or equivalently, the proportion that was non-systematic). This would be contrary to general regulatory practice. It would not remove the leverage anomaly. Moreover, it would provide an incentive for Transpower to increase its leverage so as to enjoy the benefits of a higher regulatory WACC, and thus higher revenue.

[1645] Consequently, we do not consider that any of Transpower's leverage proposals would lead to a materially better IM. Nor do we consider the Commission made an error of law in using notional leverage, and in not choosing one of Transpower's leverage proposals.

[1646] Given the acceptance of the leverage anomaly, the Commission may well, however, give consideration to alternatives to the SB-L CAPM in the future.

Evaluation of MEUG's appeal

[1647] MEUG's initial submission is that leverage should be set to zero in the SB-L CAPM. It draws upon advice from Ireland, Wallace, and Associates arguing that

[893] Guthrie *Leverage and Transpower's WACC* (4 April 2012) at [23], 42/336/020785.

under the assumption of tax neutrality, which is central to the SB-L CAPM, WACC should be invariant to leverage. When leverage is set at zero, the cost of equity is the WACC, and the tax neutrality assumption is satisfied. "A WACC that increases with leverage is just wrong."[894] They also state that a number of practitioners do assume leverage of zero when using the SB-L CAPM.[895]

[1648] As mentioned earlier, the Commission rejected this submission on the grounds, among others, that in fact firms do not have zero leverage. In our view, that response does not come to grips with the conceded leverage anomaly. Once the anomaly is conceded, but the decision is made to use the SB-L CAPM anyway, the question becomes: what level of leverage provides the best WACC estimate? Zero leverage cannot be ruled out a priori.

[1649] However, there is a reason to rule out zero leverage. When the SB-L CAPM is modified to better deal with the debt premium, while WACC still increases with leverage, it does so to a lesser extent. Consequently a modified SB-L CAPM will produce an estimate of WACC at zero leverage that is higher than the estimate produced by the unmodified model. That estimate better reflects the real world where debt premiums do indeed exist. Moreover, the Commission's choice of leverage in the (unmodified) SB-L CAPM produces the same result as modifying the model and using that same leverage, equal to the average of the comparator firms.

[1650] The Commission's estimate may overstate the WACC. MEUG's proposal certainly understates the WACC. There is no basis in the materials to conclude that MEUG's proposal of zero leverage would generate a materially better IM.

Summary

[1651] Given the complexity of those issues, the following summary of the analysis whereby we reach our conclusions thus far may assist:

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894 Ireland, Wallace & Associates Limited *Input Methodologies Cost of Capital, Post-workshop Submissions, Report to Major Electricity Users' Group* (2 December 2009), 28/191/013911.

895 Ireland, Wallace & Associates Limited *Input Methodologies Cost of Capital, Post-workshop Submissions, Report to Major Electricity Users' Group* (2 December 2009), 28/191/013911.

(a) Under the Modigliani-Miller, classic, CAPM WACC is invariant to leverage.

(b) In the real world firms do borrow, to a point. This implies WACC is not invariant to leverage. We infer, based on real world behaviour, that WACC at first declines as leverage increases.

(c) Under the SB-L CAPM, WACC increases with leverage. This is an anomaly. But, in terms of the appeals before us, there is no suggestion that the SB-L CAPM not be used.

(d) So the question becomes how to respond to that anomaly.

(e) Dr Lally shows:

(i) In the SB-L CAPM the fact that WACC rises with leverage is because of the multiplier effect of leverage on the debt premium. Thus, the higher the leverage, the higher the WACC.

(ii) But, to the extent that debt premium is composed of debt beta, the slope of the WACC/leverage line is flatter: that is, as the percentage of the debt premium attributable to debt beta increases, WACC is, relative to an unadjusted SB-L CAPM line, relatively higher for lower leverage percentages and relatively lower for higher leverage percentages.

(iii) All the lines reflecting possible debt betas, including zero and negative debt betas, intersect where leverage is the average of the comparator firms' leverage.

(f) Assessing Transpower and MEUG's proposals against that analysis:

(i) Transpower's suggestion that it should be given leverage equal to its actual leverage (where Transpower argues that WACC increase with leverage) is not an acceptable regulatory option. If Transpower is correct, it should rationally be given a regulatory leverage of zero.

(ii) Our concern with MEUG's zero leverage proposal is that under the SB-L CAPM it would materially under-estimate the regulatory WACC, with that under-estimation being greater than the over-estimation involved in the comparator firms' leverage approach to addressing the SB-L CAPM anomaly.

MEUG's alternative proposal

[1652] We turn now to MEUG's alternative proposal using a non-zero debt beta. MEUG draws upon Professor Guthrie's decomposition of the debt premium in developing that alternative proposal. While not abandoning its initial proposal, MEUG seeks to address concerns that adopting zero leverage would understate the WACC.

[1653] MEUG proposes the alternative of modifying the model to take into account only the systematic component of the debt premium. It accepts Professor Guthrie's estimate of this component, namely 55% of the debt premium of 2.0% excluding debt issuance costs. This generates a WACC estimate of 6.10%, or 6.15% including debt issuance costs. (It will be recalled that MEUG argues for debt issuance costs to be taken into account in cash flows rather than included in the cost of debt and hence the WACC.)

[1654] Part of the intended attraction of MEUG's submission is undoubtedly that the WACC estimate it produces is about half-way between the figures of 5.75% and 6.49% produced by the SB-L CAPM with leverage of zero and 44%, respectively. The difficulty with the submission is that the debt premium also contains non-systematic components, namely, the illiquidity premium and expected default costs. MEUG does not dispute the existence of those components, but argues that ignoring

them is consistent with the use of the CAPM, in which non-systematic risk is ignored.

[1655] We do not accept that submission. No materials were provided to show that non-systematic components of the cost of debt ought to be ignored. Indeed, the materials on which MEUG bases its submissions, namely, the various pieces of advice by Dr Lally and Professor Guthrie, do not ignore the non-systematic components. Moreover, MEUG's approach appears to be novel: no instance of such an approach being applied elsewhere was adduced.

[1656] The basis of the CAPM – and not that model alone – is that an investor can diversify non-systematic risk away. However, that is generally in the context of considering the cost of equity. We are not prepared to assume that non-systematic risk in the cost of debt can be treated in the manner that MEUG proposes. Consequently, we are not persuaded that MEUG's second proposal would lead to a materially better IM.

Outcome – Transpower and MEUG's appeals

[1657] In summary, we find that none of the proposed alternatives to the Commission's leverage decision would lead to a materially better IM for either the Energy Appellants or Transpower.

[1658] The consideration of leverage is a further example of the fact that estimating the WACC is not a mechanical process capable of leading to an undisputed outcome. At each step it is appropriate to be as precise as possible, leading to figures accurate to two decimal places so far as their actual calculation is concerned. (That degree of accuracy requires maintaining accuracy to at least three decimal places throughout the calculations.) But the figures produced do not have the degree of confidence attaching to them that their appearance suggests. This is also discussed in Part 6.11 of this judgment in the context of the cost of capital range.

The Airports' appeals

Analysis and outcome

[1659] During oral submissions, counsel for AIAL conceded that the Commission's decision to set leverage at the average leverage of the comparator sample was correct. It became apparent that AIAL's complaint was about the comparator sample. That challenge is considered under the topic of asset beta in Part 6.13 of this judgment where challenges to the comparator sample are analysed and rejected.

[1660] WIAL/CIAL adopt the submission of AIAL (for a leverage of 40%, as in the May 2010 Airports Draft Reasons Paper) but argue in the alternative for a leverage of 26%. That alternative, not mentioned in the written submissions, relied on an alternative comparator sample produced by PwC. That alternative is rejected by us in our consideration of asset betas.

[1661] It follows from our determination of the Airports' asset beta appeals that we find that the Airports' proposed alternative values of leverage would not lead to a materially better cost of capital IM.

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6.15 TAMRP

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The Commission's decision

[1662] In the CAPM the MRP measures the additional expected return over and above the risk-free rate required to compensate investors for holding the market portfolio, rather than investing in risk-free assets. It represents the premium investors can expect to earn for bearing only systematic (market) risk. The form of the MRP that is consistent with the SB-L CAPM is the tax adjusted MRP (the TAMRP). The TAMRP is neither a supplier nor a sector specific parameter, but is a market-wide parameter.

[1663] In setting the TAMRP, the Commission considered its previous regulatory decisions (as the parameter is a long-term estimate), evidence from studies of forward and backward-looking TAMRP estimates, advice from its Expert Panel, evidence provided by submitters, MRP estimates used by overseas regulators, and the impact of the GFC.

[1664] The Commission's decision in respect of the TAMRP was that:[896]

(a) The TAMRP, relative to a five-year risk-free rate, would be 7% – the estimate the Commission has used since 2003.[897] In 2008, the Expert Panel considered that estimate was reasonable for the SB-L CAPM.[898]

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[896] EDBs-GPBs Reasons Paper at [H7.1]-[H7.3], 3/7/001460; Airports Reasons Paper at [E7.1]-[E7.3], 2/6/000866.
[897] EDBs-GPBs Reasons Paper at [6.5.14], 3/7/001139; Airports Reasons Paper at [6.5.14], 2/6/000729.
[898] EDBs-GPBs Reasons Paper at fn 1075, 3/7/001472.

(b) Due to the impact of the GFC, the TAMRP would be temporarily increased to 7.5% for the regulatory years ending 30 June 2010 and 30 June 2011. After that the TAMRP would revert to its long-term level of 7.0%.

(c) The TAMRP would be expressed as a composite rate for a five-year period:[899]

> ... For example, for the year commencing 1 July 2010, the TAMRP would be 7.1% and for the year commencing 1 July 2011, it would be 7%. Applying this approach in the context of ID for the five year period commencing in April 2010 the TAMRP would be 7.1%, and for the period commencing in April 2011 it would be 7%. In the context of the DPP, the TAMRP for the regulatory period 2010-2015 would be 7.1%. For the CPP, the TAMRP would be 7%.

[1665] In a footnote, the Commission further explained:[900]

> A five-year TAMRP is derived as a weighted average of the years that 7.5% applies and the years 7% applies. For example, the TAMRP of 7.1% from 1 July 2010 is derived as the weighted average of one year at 7.5% and four years at 7%, (calculated by (7.5 x 1 + 7.0 x (5-1)) ÷ 5).

[1666] We therefore assume the reference to "the period commencing April 2011" should be a reference to the period commencing April 2015.

The TAMRP appeals

[1667] Remembering that by definition the TAMRP is an economy-wide parameter:

(a) AIAL and WIAL/CIAL argue that the TAMRP for the Airports cost of capital IM should – for the first regulatory period at least – be 7.5%, not 7.0%.

(b) Vector agrees with the Commission that the TAMRP for the EDBs and GPBs cost of capital IMs should be 7.0%, and that the uplift for the GFC should be 0.5%, but argues that the period of the uplift should not be specified in advance. Rather it should be decided by the

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899 EDBs- GPBs Reasons Paper at [H7.3], 3/7/001460 (footnotes omitted).

900 EDBs-GPBs Reasons Paper at fn 1032, 3/7/001460; Airports Reasons Paper at fn 584, 2/6/000866.

Commission at the appropriate point in the future when it is clear that the effects of the GFC have passed.

(c) Transpower also agrees with the Commission's long-term TAMRP estimate of 7.0%, but argues that for its cost of capital IMs an uplift of 2.53% should be allowed during the whole first regulatory period to take account of the impact of the GFC.

[1668] As each of Vector, Transpower and AIAL (in part) base their challenges on the Commission's approach to the GFC, we deal with that issue first across the appeals. We then deal with the balance of the Airports' challenges, and that of WELL.

Impact of the GFC

[1669] The Commission based its approach to assessing and reflecting the significance of the GFC for the TAMRP on:

(a) Advice from its Expert Panel in April 2010 to the effect that it considered the TAMRP had likely increased as a result of the GFC but that it was uncertain as to how long that increase would persist into the future.[901] As different suggestions as to the appropriate response were provided by each member of the Expert Panel, it concluded that, overall the approach to be taken by the Commission was a matter of judgement.

(b) Its own assessment of a range of empirical information which in its view indicated that the effect of the GFC on the TAMRP would abate during 2011, including:

(i) New Zealand and global share market levels stabilising at levels above GFC-induced lows;

[901] EDBs-GPBs Reasons Paper at fn 1098, 3/7/001481.

(ii) the VIX[902] returning to long-term trend levels; and

(iii) other regulators' responses, surveys of MRP levels used by companies and analysts and evidence from New Zealand market participants.

[1670] Vector's argument is, in essence, a simple one. The Commission was not justified in concluding, in December 2010, that the effect of the GFC, as relevant to the estimation of the TAMRP, would abate during 2011. Vector points to the advice the Commission received from the Expert Panel, noted above, that the TAMRP had likely increased as a result of the GFC. Vector then acknowledges that stock markets had recovered by December 2010. It seeks to put that acknowledgement in context, noting Mr McKenzie's statement that the effects of the GFC were not over, Mr McKenzie referring particularly to ongoing impacts on debt markets.[903]

[1671] But, as the Commission reasoned, it is the effect of the GFC on the equity markets only that is relevant to the TAMRP, as the TAMRP is a parameter associated with the expectation of the equity markets. Vector's acknowledgement that the equity markets had recovered as at December 2010 is consistent with the Commission's analysis of the equity markets. That the GFC was continuing to have an impact on Vector's ability to source debt finance is not evidence that the TAMRP should not be 7.0%, as the debt premium is taken into account separately in the WACC estimation.

[1672] We are satisfied that the balance of Vector's criticisms of the Commission's approach to the TAMRP, in particular Vector's criticisms of the Commission's interpretation of the range of empirical data it considered, cannot be sustained. By our assessment, the balance of that data supports the Commission's approach, particularly the Commission's own assessment of the extent of recovery of share markets and of the drop in volatility of those markets as reflected in the VIX index, which the Commission analysed over a 20 year period.

[902] VIX is the ticker symbol for the Chicago Board Options Exchange's Volatility Index. The VIX is a widely used measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices. Higher levels of the VIX indicate greater expected market volatility, while lower VIX levels indicate a more benign outline.

[903] Simon MacKenzie *Statement* (23 August 2010) at [5.44]-[5.47], 36/246/018043-4.

[1673] We note that the question is not whether markets have recovered to pre-GFC values or recovered much at all. Rather it is whether they have returned to more normal operating conditions after a period of extreme volatility. We accept that some price recovery, as noted by the Commission and Vector, may be symptomatic of a return to normal conditions.

[1674] Transpower's challenge is based on a single August 2010 Officer and Bishop report, and Australian data used in that analysis.[904] The Commission, contrary to Transpower's submission, did consider that report when assessing the views of submitters on the impact of the GFC. Moreover that was a single report whose recommended adjustment of 2.53% was quite out of line with any other reported approach to whether there should be an upward adjustment to the TAMRP to account for the impact of the GFC and, if so, the magnitude of that adjustment. We think that fact alone counts against accepting Transpower's proposition, and we do not accept it.

[1675] To the extent that AIAL challenges the Commission's assessment of the impact of the GFC in arguing for a TAMRP of 7.5% during the first regulatory period, which it does at a far greater level of generality than Vector did, then our analysis of Vector's proposition also answers AIAL's challenge.

The Airports' "too conservative" challenges

[1676] The Airports each argue more generally here, as they do across their cost of capital IM appeals, that the Commission was too conservative when it determined a long-run TAMRP of 7.0%. Rather, it should have determined a long-run TAMRP of 7.5%.

[1677] In making those arguments, the Airports rely in particular on the results of an informal survey on TAMRP estimates undertaken by the Commission during the Cost of Capital Workshop, principally amongst the advisers to regulated suppliers. AIAL's argument, that the Commission placed too great an emphasis on the practice of overseas regulators and the recommendations of the Expert Panel, and too little

[904] Officer and Bishop *Independent Review of Commerce Commission's WACC Proposals for Transpower* (5 August 2010), 34/254/017330.

emphasis on the market-based evidence provided to the Commission by parties and their advisers, contrasts with Vector's proposition that company analysts and market participants' survey data was inappropriate for use in the regulatory price control context for the setting of the TAMRP. In any event, we agree with the Commission that a survey principally of regulated suppliers' advisers, in the context of consultation on the TAMRP, is not necessarily representative of the full range of views on the prevailing TAMRP in New Zealand.

[1678] AIAL suggests the Commission discounts the evidence of those market participants based on estimates of New Zealand investment banks as recorded in Table E11 of the Airport Reasons Paper. That table reads:[905]

Investment Bank	TAMRP estimate used
Deutsche Bank/Craigs Investment Partners	6.5% (plus separate recognition for imputation credits)
Goldman Sachs	6.8%
Forsyth Barr	7%
UBS	7%
Macquarie Bank	7%
First NZ Capital	7.25% (uplifted from a normal 7% after the GFC)

[1679] AIAL suggests that it is possible, particularly in the case of the Deutsche Bank/Craigs Investment Partners estimate, that the methodology used was different to that of the Commission. Whilst that may be the case, in terms of the separate recognition of imputation credits, we do not see on what basis AIAL can then characterise the balance of the results as being "relatively low".

[1680] WIAL/CIAL argue that the standard corporate finance practice in the New Zealand markets for capital suggests a long-term TAMRP of at least 7.5%. Moreover, relying on Uniservices' advice[906] they suggest that the market reality was that investors expected TAMRP of at least 7.5%. LECG advice to this effect is also pointed to.[907]

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905 Airports Reasons Paper at Table E11, 2/6/000881.

906 Alistair Marsden (Uniservices) *Comments on the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (for NZAA) (12 July 2010) at 31-34, 33/233/016533-6; Alistair Marsden (Uniservices) *Comments on the Commerce Commission's Approach to estimate the Cost of Capital* (for NZAA) (2 December 2009) at 33-41, 28/193/013949-57.

907 Irwin, Murray, Shepherd, and Van Zijl *Comments on Commerce Commission Input*

[1681] Again, we note the acceptance by the EDBs and GPBs of the Commission's long-run TAMRP estimate of 7.0% as, in and of itself, counting against those assertions. Moreover, the Commission responded to Uniservices' advice by reference to a range of other analyses to the effect that the historical estimates of TAMRP on which that advice was based were, when used alone, poor predictors of future expected premiums and that estimates of prospective MRP based on unadjusted historical averages may be biased upwards. Therefore, and whilst the Airports certainly did have advice that a TAMRP of 7.5% was the appropriate long-run estimate, we consider the range of data presented by the Commission both in its submissions to us and, more particularly, in the Airports Reasons Paper, adequately responds to that advice to the Airports.

Outcome

[1682] For all those reasons, we are not persuaded that adopting a TAMRP estimate of 7.5% as argued for by the various appellants would, in any of those instances, produce a materially better cost of capital IM. Nor are we persuaded the Commission erred in law in this respect.

Methodologies Discussion Paper (LECG, 31 July 2009) at 26-27, 25/154/012055-012056.

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6.16 MODEL ERROR

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The Commission's decision

[1683] In deciding to use the SB-L CAPM, the Commission acknowledged that the results of a number of empirical tests imply that the CAPM may understate the returns on low-beta stocks, such as firms with low market risk like the suppliers regulated under Part 4. This would constitute model error or bias. The Commission decided not to make any adjustment to compensate for the possibility of model error because it considered that:[908]

(a) there were a number of possible explanations for the results of the empirical tests;

(b) no better model was available;

(c) there was no reliable basis for determining the size or direction of any adjustment for model error; and

(d) there was no evidence that New Zealand market participants make an allowance for model error when using the SB-L CAPM to estimate the cost of equity for New Zealand firms.

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[908] EDBs-GPBs Reasons Paper at [6.4.37], 3/7/001136.

[1684] The possibility of this type of error – a bias in estimating the returns on low-beta stocks – was a consideration in the Commission's decision to adopt the 75th percentile estimate of the WACC for price-quality regulation.[909] That aspect of the decision is considered by us in Part 6.11 of this judgment.

[1685] In relation to empirical results, the Commission's view was that it had not been established that a bias exists. In considering the form of the CAPM that the Commission should use, the three members of its Expert Panel had differing views. Professor Myers preferred the use of the classical CAPM over the SB-L CAPM, partly on the grounds that: [910]

> Empirical evidence shows that average returns for low-beta firms are higher than predicted by the classical CAPM. This bias is amplified in the simplified Brennan-Lally model.

Neither of the other experts, Dr Lally and Professor Franks, took that view.[911]

[1686] Professor Myers also stated that the Commission's approach of using a term for the risk-free rate that matches the regulatory period:[912]

> ... generates a flatter security-market line, which can compensate for the fact that average returns for low-beta firms tend to be higher than predicted by the CAPM.

[1687] In considering submissions against its decision to use the SB-L CAPM, the Commission noted criticisms of findings of bias in the academic literature.[913] This supported its view that the existence of bias was not established.

[1688] The Commission noted that there was no evidence that practitioners make allowance for bias and that it was unaware of any other regulator having done so.[914] It also considered that a feature of the SB-L CAPM, namely, assuming that all investors are domestic, was likely to produce higher estimates of the cost of equity.

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909 EDBs-GPBs Reasons Paper at [6.7.11], 3/7/001151.

910 Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [22d], 5/11/001763.

911 Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at 11, 5/11/001765.

912 Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at 14, 5/11/001768.

913 EDBs-GPBs Reasons Paper at [6.4.23], 3/7/001132.

914 EDBs-GPBs Reasons Paper at [6.4.23], 3/7/001132.

The implication seemed to be that this bias, opposite in direction to the claimed bias for low-beta stocks, was more clearly supported in the literature, and quantifiable.[915]

Vector, Powerco and Transpower's appeals

[1689] Vector, Powerco and Transpower all call for upward adjustments to the cost of equity to deal with alleged bias for low-beta stocks.

Vector

[1690] Vector submits that appropriate allowances for model bias in the cost of equity for EDBs and GPBs are 1.0% and 0.2% respectively. It submits that the proposed correction for model error was grounded in the uncontested findings of the empirical finance literature. It also claims that it was incorrect to say that other regulators do not make adjustments for model error, and refers to Blume adjustments, which are referred to in the EDBs-GPBs Reasons Paper. Vector submits that Blume adjustments effectively adjust the equity beta towards a figure of one and can thus be thought of as an adjustment for the fact that the CAPM does not allow for equity beta mean reversion.

[1691] Vector further submits that practitioners also make such adjustments in non-regulatory contexts, citing Blume and Vasicek adjustments. It accepts however that the degree of precision required in a non-regulatory context is often considerably lower than in a regulatory context.

[1692] Vector cites Dr Hird of CEG[916] who explained that it is well-established among experts in the field that the implementation of the SB-L CAPM model chosen by the Commission is likely to underestimate expected returns of low-beta stocks. Therefore the graph of expected returns as a function of beta – the security market line – will be flatter in practice than predicted by the Commission's model. Dr Hird estimated that the appropriate adjustment to the cost of equity of a stock with an

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915 EDBs-GPBs Reasons Paper at [6.4.35], 3/7/001135.

916 Dr Hird (CEG) *Cost of Capital Input Methodologies* (for Vector) (15 August 2010) at [20], 36/274/017925.

equity beta of 0.7 is an uplift of 1.0%.[917] We understand from Vector that such an adjustment is one feature of the application of Black CAPM, which we refer to later-.

Powerco

[1693] Powerco seeks an allowance for model error of at least 1.0%. It cites the passage in the EDBs-GPBs Reasons Paper where the Commission acknowledged that the results of a number of empirical tests imply that the CAPM may understate the returns on low beta stocks,[918] and interprets that to be an acceptance that model risk is real. It says that the Commission's failure to make an adjustment was inconsistent with the Commission's decisions elsewhere that recognise, to some extent, the asymmetric impacts of estimation error.

[1694] Quoting from a footnote in the Revised Draft Guidelines, Powerco says that the Commission did not appear to dispute the potential for model error:[919]

> Sometimes, even when statistically-estimated standard errors are available, in order to account for any uncertainties (e.g. model uncertainty) that cannot readily be quantified, it may be desirable to augment or attenuate these estimates using qualitative judgment.

[1695] Powerco relies on the comments of Professor Franks and Myers that the CAPM does not always produce robust, stable estimates,[920] and on Mr Balchin's (PwC) submission on its behalf during a December 2009 conference on WACC.[921] That submission, Powerco says, presented evidence that the CAPM systematically provides a lower estimate of the cost of capital than the two major alternative models.

[1696] Powerco also submits that not allowing for model error wrongly ignored:

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[917] Dr Hird (CEG) *Cost of Capital Input Methodologies* (15 August 2010) at [143], 36/274/017961.
[918] EDBs-GPBs Reasons Paper at [6.4.37], 3/7/001136.
[919] Commerce Commission *Revised Draft Guidelines – Commerce Commission's Approach to Estimating the Cost of Capital* (10 September 2009) at fn 71, 5/13/002024.
[920] Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [13], 5/11/001761.
[921] PwC *Commerce Commission WACC Conference: Submission on Behalf of Powerco* (2 December 2009) at 1-3, 28/195/014018-014024.

(a) evidence that firms in workably competitive markets use hurdle rates of return that are well in excess of the simple CAPM based estimates of WACC; and

(b) the fact that the theoretical CAPM is based on a number of simplifying assumptions and as used in practice adopts only approximate proxies for key inputs.

[1697] Professor van Zijl of LECG for ENA, cited by Powerco, advised that:[922]

> Not making any allowance for [model] error is consistent with the best estimate of its magnitude being zero. That is clearly not the case. The size of the margin [over the CAPM based estimate] is highly uncertain, but given the evidence on the margin and hurdle rates over WACC ... a minimum margin of 1.0% should be allowed...

Transpower

[1698] Transpower's submission discusses model error caused by factors that affect Transpower's actual cost of capital not being incorporated in the simple theoretical CAPM model, and assumptions used in the CAPM model not holding in Transpower's circumstances. In part this was a general attack on the CAPM citing the comments of Professors Franks and Myers and a submission by Uniservices for NZAA.[923] That submission itself referred to two articles in the finance literature regarding the (poor) explanatory power of the CAPM, and came to the conclusion that "[t]his suggests that potential model error is high".[924]

[1699] Transpower also specifically claims that the Commission wrongly adopted a model which is accepted to provide estimates of the cost of equity that are too low for low-beta stocks. Transpower cites the comments of Professor Myers and the submission by Mr Balchin relied on by Powerco.

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922 LECG *Response to Commerce Commission's Draft Cost of Capital Input Methodology* (for ENA) (13 August 2010) at [71], 35/257/017529.

923 Uniservices *Comments on the Commerce Commission's Approach to estimate Cost of Capital* (for NZAA) (2 December 2009), 28/193/013917.

924 At [2.1.3], 28/193/013932.

Analysis

[1700] We deal with Transpower's challenge first, as it is expressed explicitly within a broader submission about not taking Transpower's actual circumstances into account. That submission is discussed in Part 6.4 of this judgment. Although Transpower's submission is rejected there, some elements of that submission involve more general attacks on the CAPM, and the SB-L CAPM in particular, that should be addressed here. We note that some of Powerco's arguments, being those relied on by Transpower, also go to the general merits of the CAPM, rather than to its alleged bias against low-beta stocks.

[1701] The elements of Transpower's submission that relate to alleged bias are discussed further below.

General model error versus bias

[1702] General concerns about the SB-L CAPM were dealt with by the Commission in the Principal Reasons Papers in a section on choice of model. In that section the Commission demonstrated a careful consideration of the submissions that had been made to it and the advice of its own experts, and an appreciation of the advantages and limitations of various options. It chose to use the SB-L CAPM model. Like any model, the SB-L CAPM has shortcomings; by their nature models attempt to approximate – not replicate – real-world phenomena. Particular aspects of the SB-L CAPM have come under scrutiny in these proceedings, especially, for example, the issue of leverage.

[1703] Nevertheless, as remarked earlier in Part 6.1 of this judgment, none of the appellants challenge use of the SB-L CAPM per se. To do so would, as the Commission remarks in its response submissions on model error, have required showing that some other model would lead to a materially better IM, which by its nature would be hard to do. In respect of model error, the Commission takes the view that the fundamental question is: what is the best model for estimating the cost of equity in New Zealand? That model having been chosen, it should be implemented in the conventional manner as practised in New Zealand.

[1704] We would not go that far. There is no principle that bars well-based adjustments being made to the output of a model, although it is a task that should be approached with caution. If it were the case that the SB-L CAPM was known to produce biased estimates in certain relevant circumstances – in this case low-beta utility firms – consideration would need to be given to addressing that bias.

[1705] The question facing us at this point of the appeals is not the general merits of the CAPM, nor even whether model error exists. The question is whether the SB-L CAPM is biased in the sense that the estimates it produces for the Energy Appellants are likely to be lower than their actual cost of equity. All models generate error; it is bias – error systematically in one direction – that is the concern at this point.

[1706] Evidence that the Commission accepted the existence of model error, as opposed to bias, consequently carries no weight. Nor does evidence that the SB-L CAPM produces lower estimates than alternative models establish bias. It would have to be shown that the alternative models produce unbiased or less biased estimates for the regulated New Zealand firms. Powerco and Transpower make no such claim. That disposes of the references to the joint comments of Professors Myers and Franks, and of the submissions by Uniservices and Mr Balchin. It also disposes of submissions by Powerco regarding hurdle rates of return and simplifying assumptions that constitute general attacks on the CAPM.

Is the model biased?

[1707] The Commission considered the claims by CEG, cited by Vector and Transpower, in its Principal Reasons Papers and further in its written submissions. It also considered the Black CAPM at length in deciding to adopt the SB-L CAPM. There is no need for us to go into that discussion. A central claim is that the existence of bias of the alleged nature is uncontested. In our view, the Commission shows that claim to be clearly untrue. It also cites ample evidence that there could be no confidence that:

- empirical problems with the CAPM are sufficiently clearly understood to attribute bias in the manner claimed; and

- proposed adjustments would be well-based.

Vector makes no response to those submissions of the Commission.

[1708] In respect of the LECG submission cited by Powerco, the Commission points out that it gave no justification for proposing an adjustment of 1.0%. The LECG submission is simply silent on the question of bias and low-beta stocks. It was dealing with model error in the sense of uncertainty that might justify "erring on the upside", a matter that is taken up in the discussion of the WACC range and the 75th percentile.

Do market participants and other regulators make adjustments?

[1709] Vector refers to Blume adjustments, examples of which are indeed found in the practices of practitioners and regulators. Any suggestion that, because they effectively adjust the equity beta upwards towards one, they are equivalent to an adjustment for bias against low-beta stocks, is without merit. Reversion to the mean in estimating betas, to which these adjustments are directed, is an unrelated statistical phenomenon.

[1710] Model error, as it was a subject of these appeals, refers to an alleged tendency for the CAPM, and perhaps especially the SB-L CAPM, to underestimate the cost of equity for firms with low betas, the beta being given. It is not proposed to be corrected by adjusting the betas, but by adjusting the cost of equity directly. Blume adjustments for reversion to the mean change the beta estimates themselves and hence are not relevant to this discussion of model error/bias. As a matter of fact they relate to the possibility that where high or low estimates of betas are found, it is considered that over time those estimates should tend to be closer to the mean. The Blume adjustment is designed to achieve that. Because of how the CAPM is specified, the mean of all beta estimates is one, the beta of the overall market.

Outcome

[1711] We consider the Commission's acknowledgement that a number of empirical tests imply that the CAPM may understate the returns on low-beta stocks indicates a

degree of concern about bias. Other things being equal, this would suggest that some adjustment might be desirable. However, the Commission pointed to a likelihood that the SB-L CAPM's assumptions about the residency of investors generates a bias towards overstating the beta of regulated firms. We accept this.

[1712] We consider that there is no basis on which to seek to make an adjustment for bias in respect of low-beta stocks. There is also no approach that would provide the means for determining the magnitude of such an adjustment. The adjustments proposed by the appellants have no sound basis.

[1713] For all these reasons, we do not consider that making an upwards adjustment for equity betas for alleged model error/bias, as proposed, would give rise to materially better cost of capital IMs. Nor do we consider the Commission made an error of law in not making an adjustment to compensate for the possibility of model error.

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6.17 ASYMMETRIC RISKS

Outline

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The Commission's decision

[1714] In the Principal Reasons Papers, the Commission discussed the possibility of making adjustments to the cost of capital for asymmetric risk. It decided not to.

[1715] The term "asymmetric risk" has unfortunately been used in two different ways throughout the IMs process, giving rise to some confusion. Here, where the Airports challenge the Commission's decision not to make an adjustment for asymmetric risk in their cost of capital IM, the term is used as follows:[925]

> A firm faces asymmetric risk when its distribution of returns is truncated at one extreme without an offsetting truncation at the other. In other words, the firm's payoffs are 'asymmetric'. For example, in competitive markets with sunk costs existing firms may be exposed to the risk of new entry that would erode upside returns when the market is profitable. However, when the market is unprofitable entrants are unlikely to arrive so incumbent firms are left to entirely bear any losses. This type of cost is specific to the individual supplier and is not compensated for in the standard cost of capital estimations. Similarly, in monopolised markets regulation can cap potential profits without providing commensurate insulation from downside risk. All firms may also be exposed to stranding risk (e.g. through technical obsolescence, unfavourable demand shocks), and large catastrophic events such as natural disasters.
>
> For clarity, it is useful to distinguish two categories of asymmetric risk:
>
> - Type I risks are risks that are generally unrelated to the day-to-day operations of the firm, and arise through infrequent events that could produce large losses. Examples include natural disasters; pandemics; terrorist threats; or large, unexpected policy shifts that could force the shutdown of operating plant before the end of its economic life.

[925] Airports Reasons Paper at [E12.3]-[E12.4], 2/6/000939. An identical passage appears in the EDBs-GPBs Reasons Paper at [H12.3]-[H12.4], 3/7/001554-5.

- Type II risks are risks that derive from such events as the threat of competitive entry or expansion. That is, there tends to be a cap on any significant upside to the firm, but typically not the significant downside risk that it faces. On the downside, assets can become stranded through technical innovations that unexpectedly lower operational costs or through negative demand shocks.

[1716] The term "asymmetric risk" has also been used to describe the risk that underestimating the cost of capital has greater adverse consequences than does overestimating it. This is the issue underlying the Commission's decision to use the 75th percentile, which is discussed in Part 6.11 of this judgment. In that context, the term "asymmetric costs" better describes the topic. (It may be noted that Type I and Type II errors are terms used in statistical hypothesis testing, also unrelated to the current context but possibly giving rise to confusion.)

[1717] The Commission considered that Type I asymmetric risks are events that firms would naturally wish to insure against. Since insurance against catastrophic risks is typically unavailable in the market, they would be left to self-insure. It is often unfeasible for a firm in a workably competitive market to recover the cost of catastrophic events after the fact. Making an allowance for Type I asymmetric risks in the cost of capital would in theory provide a regulated firm with the capacity to self-insure, but it would be difficult to ensure that the additional revenue was actually used for that purpose, difficult to decide how much to allow, and would risk becoming conflated with the unrelated issue of recognising the potential asymmetry in costs arising from estimation uncertainty. (The last point is a reference to the cost of capital range and 75th percentile issue.)

[1718] The Commission's Expert Panel proposed a reserve fund in which revenue from an allowance in the cost of capital would be treated as an insurance premium.[926] The fund would pay out in the event of a Type I occurrence, and adjustments could be made if the fund proved to be inadequate or too generous. However, the Commission decided that the practical difficulties, including calculating an appropriate premium, ruled against such a scheme, or the alternative approach of requiring firms to set up their own self-insurance funds.[927]

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[926] Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [165], 5/11/001792.

[927] EDBs-GPBs Reasons Paper at [H12.10]-[H12.12], 3/7/001556; Airports Reasons Paper at

[1719] The Commission decided against making any adjustment to the cost of capital for Type I asymmetric risk but said that it may in some circumstances make an allowance for such risk in the firm's cash flows.

[1720] The Commission noted that Type II asymmetric risks are potentially large in industries with large sunk-cost investments and substantial uncertainty about future demand and costs. Theory, it said, suggests that firms in such industries will not invest until expected profits are large enough to cover both the cost of capital and the Type II asymmetric risk. This would support a mark up on the standard cost of capital estimate.[928]

[1721] Submissions to the Commission proposed taking "real options" into account. A real option is one facing the firm in its capital budgeting, for example in the size and timing of an investment, as compared to financial options. The Expert Panel showed some support for compensating for Type II risk, but did not propose that it be done by adjusting the cost of capital. Two of the experts proposed adjusting cash flows.[929]

[1722] The Commission considered that:[930]

(a) Applying an ad hoc adjustment to the service-wide cost of capital would wrongly imply that all suppliers are subject to the same level of Type II asymmetric risk, leading to over and under-compensation.

(b) No evidence of Type II asymmetric risk that merited compensation had been provided by suppliers during the consultation process.

(c) Regulated firms are unlikely to be subject to the requisite degree of uncertainty for a real options approach to apply due to the long-term nature of regulation (comparable in many ways to a long-term

[E12.10]-[E12.12], 2/6/000941.

928 EDBs-GPBs Reasons Paper at [H12.14]-[H12.15], 3/7/001556-7; Airports Reasons Paper at [E12.14]-[E12.15], 2/6/000941.

929 EDBs-GPBs Reasons Paper at [H12.16]-[H12.23], 3/7/001557-9; Airports Reasons Paper at [E12.16]-[E12.23], 2/6/000941-3.

930 EDBs-GPBs Reasons Paper at [H12.32]-[H12.35], 3/7/001560-1; Airports Reasons Paper at [E12.33]-[E12.35], 2/6/000945-6.

contract) where an asset value is fixed at the moment it enters the RAB, and suppliers are allowed to earn a return on and of that investment. In workably competitive markets with sunk costs and uncertainty, the existence of long-term contracts mitigates the need for a real options approach.

(d) Assigning a positive value to real options could reward a regulated supplier for its position of market power, which would be inconsistent with the Part 4 purpose.

(e) There is no regulatory precedent for taking into account real options in the cost of capital (or RAB) even though other regulators have previously considered such arguments.

(f) To the extent that any Type II asymmetric risk does exist, it is better dealt with through front loading of the depreciation profile or cash flows, or allowing stranded assets to remain in the RAB, as has been done by other regulators.

Airports' challenges in relation to asymmetric risk

[1723] The Airports submit that the cost of capital IM should include an increment of at least 1.0% to 2.0% to account for Types I and II asymmetric risks (and market frictions in the case of AIAL). None of the EDBs, GPBs or Transpower sought such an adjustment.

AIAL

[1724] AIAL relies on a Uniservices submission of December 2009[931] to explain how Type I asymmetric risk affects airports, for example SARs, Bird Flu and terrorist attacks. Notwithstanding that the Commission had decided otherwise, AIAL goes on to say that the Commission found that these risks would be best accounted

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[931] Uniservices *Comments on the Commerce Commission's Approach to estimate Cost of* Capital (for NZAA) (2 December 2009) at [7.2], 28/193/013981.

for through the reserve fund proposed by its Expert Panel. AIAL points to difficulties with such a proposal.

[1725] In respect of Type II asymmetric risk, AIAL complains that the Commission had not itself undertaken more consideration of the existence of such risk, "despite the urging of Uniservices, and the considerable resources at its disposal". It says that the Commission had ignored or rejected the views of the Expert Panel in not allowing for Type II asymmetric risk in the cost of capital IM. It submits that not providing for these risks in the cost of capital was inconsistent with the adoption of service-wide values for most of the other parameters in the cost of capital calculation, and its ad hoc downward adjustment to asset betas.

[1726] AIAL, drawing on a second Uniservices submission,[932] also submits that firms in workably competitive markets apply a premium to WACC to reflect market frictions such as funding constraints, managerial constraints and financial distress costs. It says that the Commission should provide for them in the WACC. Uniservices concluded that "[w]hile the size of any margin for asymmetric risks and resource constraints is uncertain and difficult to precisely quantify, we consider a margin to WACC in the range of at least 1.0% to 2.0% would be reasonable."

[1727] In oral submissions counsel for AIAL drew attention to a comment by Professor Yarrow, cited in Uniservices' July 2010 submission. Uniservices for some reason quoted only the second sentence below, but the relevant paragraph was:[933]

> ...the fact that we are dealing with regulation of information disclosure only means that it is not necessary that, for the issue to be addressed, adjustments to the cost of capital be made, or option values be incorporated into the analysis. The simplest way of proceeding is just to recognize that the fact that an airport is earning returns in excess of the cost of capital over a given period does not, by and of itself, mean that the excess return in that period is attributable to market power of a persistent and problematic variety.

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932 Uniservices *Comments on the Commerce Commission's Approach to estimate the Cost of Capital in its Input Methodologies Draft Reasons Paper* (for NZAA) (12 July 2010) at [6.4]-[6.5], 33/233/016550-2.

933 Yarrow *Review of Input Methodologies (Airport Services) Draft Reasons Paper* (25 June 2010) at 14, 11/41/004493.

WIAL/CIAL

[1728] WIAL/CIAL submit that ignoring Type 1 asymmetric risks faced by airports is inconsistent with promoting incentives to invest. They accept that, while the burden of proof on the existence and quantum of any Type I asymmetric risk should not fall solely on the supplier of regulated services, airports would need to provide information such as historical evidence and estimates of their impact. It was unprincipled to assume Type I asymmetric risk is zero on the basis that the size of any adjustment cannot be precisely quantified.

[1729] In respect of Type II asymmetric risk, WIAL/CIAL note the nature of airport investment and the downside risk that actual demand turns out to be less than expected while upside risks may be capped. They refer to a 2005 paper prepared by Dr Lally in which, they said, he noted that in the case of asset stranding and asset optimisation, some form of ex ante compensation such as a margin on WACC would be appropriate.[934] Again, they say that it was not appropriate to assume that Type II asymmetric risks are zero.

[1730] In oral submissions counsel for WIAL/CIAL mentioned a PwC submission[935] on behalf of Powerco in which PwC said that compensation for stranded asset risk needs to be provided ex ante in order to have the desired effect of promoting efficient investment. PwC went on to claim that the members of the Expert Panel had all recommended that ex ante compensation for Type II asymmetric risks should be achieved through an adjustment to the cash flows of the regulated business. PwC agreed with the Expert Panel’s views.

Analysis

[1731] It is immediately clear that:

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[934] Lally *The Weighted Average Cost of Capital for Electricity Lines Businesses* (8 September 2006) at 5, 16/84/007176.

[935] PwC *Revised Draft Guidelines: Submission to Commerce Commission* (for Powerco) (1 August 2009) at [8.1], 25/159//012282.

(a) AIAL was mistaken to claim that the Commission proposed a reserve fund to deal with Type I risk. The Principal Reasons Papers reject that option.

(b) The implication in AIAL's submission that the Commission should itself have assessed and quantified airports' Type I risk using its own resources makes no sense in the absence of the provision of information by AIAL.

(c) It is clear that the Commission never suggested, as claimed by WIAL/CIAL, that Type I and II risks are zero.

[1732] The second Uniservices submission that AIAL relies on, addressing market frictions, cited cases of firms using hurdle rates of return higher than their WACCs, but did not link this fact to the Airports or to market frictions. We did not find it helpful.

[1733] Neither the Expert Panel nor the PwC submission that referred to it provides support for adjusting the cost of capital on account of Type II asymmetric risk. In fact, members of the Expert Panel recommended against doing so.[936]

[1734] The use of service-wide values for WACC parameters provides no basis for arguing that asymmetric errors should be compensated for as part of the WACC, even if it were conceded that they should be compensated for by some means. Nor does the Commission's unrelated decision to adjust the asset beta to account for the lower risk of the airport services part of the Airports' businesses compared to their other activities such as providing retail shopping services.

[1735] AIAL provided no evidence that it suffers more from the sort of market risk frictions that they listed than any other parts of the economy. We agree with the Commission that, to the extent such frictions are general, they will be reflected in the general MRP. To the extent that they are specific, they should not be recognised in systematic or market risk.

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936 Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) at [173]-[176], 5/11/001794.

[1736] We accept the Commission's submission that Dr Lally's 2005 advice does not assist WIAL/CIAL. It was in part addressed to asset optimisation, which is not a feature of the IMs applying to the Airports, and in part addressed to asset stranding, where it was qualified to state that no ex ante compensation was required where assets are not removed from the asset base. The IMs do not require stranded assets to be removed from the RAB. In any case, Dr Lally's views on the issue at hand were provided more recently in the report of the Expert Panel.

[1737] Professor Yarrow, referred to by AIAL and Uniservices, specifically said that adjustments to the cost of capital are not necessary.

[1738] In short, the Airports' submissions are devoid of merit.

[1739] More broadly, the basic point is that regulated suppliers do not face the same risks as firms in workably competitive markets. They are protected to a high degree from the vagaries of demand and the pressures of competition. Their risk of not receiving a return on assets that get stranded is obviated by the regulatory regime. They can be compensated after the event for catastrophic events. There is no likelihood that they would be allowed to fold and cease providing services.

[1740] We consider that increasing their regulated cost of capital and allowing them to charge higher prices because of the existence of Type I asymmetric risks is not a sensible idea. In workably competitive markets no firm could raise its prices in such a way without perfect collusion.

[1741] In the case of price controlled industries, the appropriate means of dealing with such risks is the one that is uniquely available to regulated industries, namely, adjustment of cash flows after the event. However, none of the price controlled suppliers challenge the cost of capital IM in respect of the lack of an adjustment for Type I and II asymmetric risks.

[1742] As for Type II asymmetric risks, sight seems to have been lost of the fact that this is a risk to consumers: the risk that socially desirable investment will be delayed. No evidence was provided about how the ID regime could adversely affect

the timing of airport investment. We accept the Commission's reasons, set out in [1722] above, for making no allowance in the IM. (We discuss the question of long-term contracts in Part 5 of this judgment on asset valuation. The reference to long-term contracts in [1722] above is not material to the point being made there about uncertainty.)

[1743] The challenge by the Airports is in some ways curious, since what they can charge is not directly constrained by regulation. Indeed, the AAA empowers an airport to set such charges as it from time to time thinks fit.[937] Moreover, no case was made that the existence of asymmetric risks raises the Airports' actual cost of capital above the estimates made in the usual way.

[1744] We have two final comments. First, this is not the only instance where economic experts have proposed an adjustment, in this case 1.0% – 2.0%, where it is clear that there is no basis for that specific magnitude. We do not accept that this type of expertise provides a basis for making such an estimate or proposal. No-one, economic expert or otherwise, can credibly state that the WACC should be increased by some specific magnitude to account for a given factor except by reference to hard evidence. We consider the 1.0% – 2.0% proposal to be without foundation.

[1745] Secondly, this challenge has provided another example of an economic proposition being stated without justification being provided: in this case, that only ex ante compensation for Type II asymmetric risk could have the desired effect of promoting efficient investment. We do not consider that statement to be self-evident or so generally accepted as to require no argument in support of it. Where a proposition is simply asserted by economic experts, we give it little or no weight.

Outcome

[1746] For all the reasons set out above, we consider that the Airports have failed to show that making an adjustment to the cost of capital on account of Types I and II asymmetric risks would lead to a materially better cost of capital IM.

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[937] AAA, s 4A(1).

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PART 7 – POWERCO'S TAX APPEAL

Outline

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Taxation in Part 4 regulation

[1747] An allowance for tax costs associated with the supply of regulated goods and services is a feature of both the ROI and BBAR calculations used in DPP/CPP and IPP and ID regulation. As outlined in of Part 1 of this judgment:

(a) under DPP/CPP and IPP regulation, the BBAR formula provides for the addition of such an allowance to other costs to arrive at regulatory income; and

(b) under ID regulation, the ROI formula provides for the deduction of such an allowance from revenue before regulatory income is arrived at.

[1748] The allowance that provides for those tax costs is the regulatory tax allowance (RTA). The generic expression for estimating the RTA, subject to potential adjustments, can be expressed as follows:[938]

Regulatory tax allowance = Regulatory taxable income x corporate tax rate

where

Regulatory taxable income = Total regulatory income
- Regulatory tax depreciation
- Other deductions and adjustments.

[938] EDBs-GPBs Reasons Paper at [5.1.6], 3/7/001105.

[1749] The tax IMs determine various inputs to that calculation. It was agreed by all that the tax IMs are dense and highly technical regulatory instruments. That complexity reflects the inherent complexity of tax law. It also reflects:

(a) the differences between a regulated supplier's GAAP accounts, its regulatory accounts and its taxation accounts;

(b) the mixture of regulated and non-regulated services suppliers provide; and

(c) the need to establish separate RTAs for each regulated service when a firm is, in fact, taxed on its overall income.[939]

[1750] There are separate tax IMs for each of ID, DPP/CPP and IPP regulation. Within those IMs, as relevant to Powerco's appeal,[940] the Commission has adopted different approaches for GTBs on the one hand[941] and EDBs and GDBs on the other.[942]

[1751] This appeal, by Powerco alone, relates to one part only of the ID and DPP tax IMs for EDBs and GDBs namely the way what is called the initial regulatory tax asset value (RTAV) is to be established for certain assets. Those assets are assets acquired by one regulated supplier from another (Traded Regulated Assets), where those assets were acquired prior to the imposition of Part 4 regulation (Existing Traded Regulated Assets). Whilst all the tax IMs take the same approach to that issue, Powerco's appeal is against the EDBs and GDBs tax IMs only.[943]

The RTAV and regulatory depreciation

[1752] In general tax terms, as – relative to a given level of income – tax depreciation increases, the level of taxable income decreases. This is due to the greater sheltering effect of the increased depreciation allowance. The same thing can

939 June 2009 IMs Discussion Paper at [7.8] and [7.21], 6/14/002271 and 6/14/002274.
940 Powerco appeals the tax IMs for EDBs contained in Decisions 710 and Decision [2012] NZCC 26 in Powerco Appeal 180 at [8]-[10], Powerco appeals the tax IMs for GDBs contained in Decisions 711 and Decision [2012] NZCC 27 in Powerco Appeal 248 at [13]-[15].
941 The "tax payable" approach.
942 The "modified deferred tax" approach.
943 Powerco does not provide regulated GTB services.

be said in the regulatory context. That is, as – relative to a given level of total regulatory income – regulatory depreciation increases,[944] the level of regulatory taxable income decreases and in turn so does the RTA. Thus, under DPP regulation, allowed regulatory income decreases whilst, under ID regulation, the level of income to be disclosed increases as does disclosed ROI. In its written submissions Powerco expresses that relationship as follows:

> Calculation of the initial RTAV[945] is highly significant. A higher initial RTAV (for example, which includes acquisition premiums paid on existing assets) implies a higher annual tax depreciation charge assumed by the regulator for calculating the regulatory allowance for taxation, which implies a lower taxable profit, a lower regulatory allowance for taxation, and therefore lower allowable revenue for an EDB or GDB.

[1753] The Commission's explanation of the same phenomenon reveals its different perspective:

> Changes in initial regulatory tax asset values have similar effects to changes in regulatory asset values. In the case of the regulatory tax asset value, however, lower valuations are more beneficial to suppliers. This is because a lower valuation implies that deductions for tax depreciation will be lower in future, and would therefore result in a higher estimate of a supplier's tax obligations. Suppliers would need additional cash flow to meet these notional tax obligations.

[1754] Under general tax law, a firm which acquires an asset from another firm for a price greater than that asset's (depreciated) tax value in the seller's tax accounts will base its tax depreciation on the price paid, and the seller will have tax depreciation recovery issues. Where Existing Traded Regulated Assets are purchased at a premium over their value in the seller's RAB, setting the RTAV of those assets at their acquisition value (ie including that premium) passes tax benefits on to consumers. Those benefits reflect the structurally higher tax depreciation, and therefore lower RTA, that results. This appeal raises the question of the extent to which that approach – which reflects the way tax asset values, but not prices, are generally determined – is appropriate in this regulatory price-setting context.

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944 Tax depreciation is higher (accelerated) in the initial years of an asset's life compared to regulatory depreciation (so that the tax deduction against the total regulatory income is higher), and slowly reduces over time. Regulatory depreciation on the other hand tends to be on a straight line basis such that initial deductions are lower, but over time, tax depreciation will fall below regulatory depreciation.

945 The reference to "initial" is because Existing Traded Regulated Assets held by Powerco when the tax IM is first used determine their RTAV. Hence this is the "initial" RTAV of those assets.

[1755] Somewhat counter-intuitively, given that the supplier appellants generally argue for higher regulatory allowances – such as for initial RAB values and for the WACC - Powerco argues here for structurally lower initial RTAVs for Existing Traded Regulated Assets. Thus Powerco is also arguing for lower deductions for regulatory depreciation of those assets, higher RTAs and, finally, higher opening revenues and prices in its DPP.

The Commission's decision

[1756] The tax IMs provide that the initial RTAV of Existing Traded Regulated Assets is to be the equivalent tax book value of those assets, capped however at their value as part of the initial RAB. Therefore to the extent that, in the past, a regulated supplier paid a premium for Existing Traded Regulated Assets on acquisition, and that premium is still reflected in the tax book value of those assets (albeit at a level at or below their initial RAB), that premium will increase regulatory tax depreciation and lower the RTA, resulting in higher disclosable total income in ID regulation and lower allowed revenues and prices under DPP/CPP regulation.

[1757] That approach is to be contrasted with the position that will apply in the future to Traded Regulated Assets. In the future, Traded Regulated Assets will enter the acquiring supplier's regulatory accounts at the same RTAV and RAB as they had in the selling supplier's regulatory accounts, irrespective of the purchase price paid. That difference in treatment is part of Powerco's reasons for this appeal.[946]

Powerco's appeal

[1758] Powerco argues that materially better tax IMs would ignore all acquisition premiums currently reflected in the tax book values of Existing Traded Regulated Assets. Excluding such acquisition premiums is necessary, Powerco argues, to

[946] Those differing approaches are summarised by the Commission, albeit in the reverse order to [1756] and [1757], as follows in the EDBs-GPBs Reasons Paper at Table 5.1, 3/7/001107:

> The regulatory tax asset value of acquired assets should remain unchanged in the event of an acquisition of assets used to supply services that are regulated under Part 4.
>
> The initial regulatory tax asset value in 2009 (as at 31 March) should be the lesser of that recognised under tax rules for the relevant assets or share of assets used to supply electricity or gas distribution services, or the initial RAB value.

adhere to the workable competition standard and to achieve consistency within the IMs.

[1759] To understand Powerco's appeal, some background is helpful.

[1760] From the mid-1990s until the early 2000s, Powerco grew significantly through mergers and acquisitions:

(a) In 1999 Powerco purchased gas distribution assets in Taranaki from NGC.

(b) In 2000, Powerco Ltd (Old Powerco), CentralPower Ltd, Taranaki Energy Ltd and MergeCo Ltd amalgamated by way of a non-qualifying amalgamation into MergeCo Ltd. MergeCo Ltd was renamed Powerco. Powerco acquired Old Powerco's and CentralPower Ltd's network and non-network assets at market value for tax depreciation purposes.

(c) In 2001 Powerco acquired gas distribution assets in the Hutt/Mana area from AGL NZ Energy Ltd at market value.

(d) In 2002 Powerco acquired UnitedNetworks Ltd's Wellington, Hawke's Bay, Horowhenua and Manawatu gas distribution networks from Vector at market value.

[1761] Hence this appeal reflects the significance on Powerco's balance sheet of the value of those Existing Traded Regulated Assets, acquired by it in the past at a premium over the book value of those assets and also over what are now the RAB values of those assets. The background was reflected in Powerco's response during consultation to the way the Commission proposed to determine the RTAVs of Existing Traded Regulated Assets.

[1762] In the June 2009 IMs Discussion Paper the Commission, consistent with its past practice, expressed the preliminary view that the RTAV for all assets would be their actual tax asset values. That view was not controversial as regards assets

acquired in the future, otherwise than from regulated suppliers. As already discussed in the context of the asset valuation IM appeals, the initial RAB of such assets is their acquisition price. So also is their initial RTAV.

[1763] Controversy arose, however, as regards the RTAV of Traded Regulated Assets. Mr Balchin, on whom here – as for AV issues more generally – Powerco relies, commented:[947]

> In past matters before the Commission, the treatment of regulatory taxation has been a controversial matter. The main issue of controversy has been the question of who should retain the apparent tax benefits that have resulted from assets that have been purchased for more than their RAB – customers or the asset owners.

[1764] Reflecting again, Powerco's ongoing challenge to the Commission's price control decisions, Mr Balchin commented that:[948]

> ...if the Commission had permitted Powerco to retain the tax benefits associated with the premiums that it had paid for assets, then the Commission's modelling would not have found a 'net benefit to acquirers' and presumably control would not have been imposed in 2005.

[1765] Mr Balchin went on to observe:[949]

> The Commission's practice with respect to taxation in previous matters has been to use the relevant business' actual tax depreciation allowances (which in turn is driven off of its actual taxation asset value, referred to below as the 'TAB') when deriving the allowance for taxation that is included in regulated revenues. Where businesses had purchased assets for a margin over the RAB of those assets, this led to the outcome that:
>
> - the (low) RAB would be used as the asset owner's deemed investment in the asset, even though a higher value had been paid for the business; but
>
> - the (higher) TAB that was based on the acquisition value would be used to calculate the taxation allowance, and in doing so result in a lower allowance for taxation in regulated revenue than otherwise.
>
> Thus, as a practical matter, the low RAB has been used to calculate the required returns (and where a lower value results in lower regulated revenue), whereas the higher acquisition value has been used to calculate the taxation allowance (and in a situation where using the higher value results in lower regulated revenues).

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947 PwC *Commerce Commission Review of Input Methodologies; Cross Submission (Prepared for Powerco)* (October 2009) at [3.1], 54/469/027791.

948 At [3.1], 54/469/027791.

949 At [3.2.1], 54/469/027791-2.

[1766] Mr Balchin expressed various concerns with that approach:[950]

(a) it generated outcomes inconsistent with those in workably competitive markets (different prices because of different tax profiles);

(b) it was an unreasonable approach which employed the notional value of an asset where to do so was disadvantageous compared to using the acquisition price and employed the acquisition price when to do so was disadvantageous compared to using the notional value; and

(c) it reflected a discontinuity in logic – if the asset owner is deemed only to have made an investment of RAB in the relevant asset, it did not make sense that the asset owner would have a greater amount that would be written off for taxation purposes.

[1767] In the December 2009 Emerging Views Papers, the Commission accepted a Powerco/Balchin proposition as regards the RTAVs of Traded Regulated Assets acquired in the future. In the future there would be no change to RTAVs where regulated assets were traded between regulated suppliers. But the Commission did not change its approach as regards the RTAVs of Existing Traded Regulated Assets.

[1768] Following the release of the December 2009 Emerging Views Papers, Mr Balchin pressed Powerco's concerns which stemmed from Powerco's historic acquisitions and the fact that the RTAV for those Existing Traded Regulated Assets would be higher than their RAB. Mr Balchin proposed three "not incorrect" responses, listing them in order from highest to lowest resulting RTAVs:[951]

(a) cap the initial RTAV for Existing Traded Regulated Assets at their initial RAB value;

(b) set the RTAV at the RAB at the date that the relevant transaction took place and adjust the RTAV from that time using standard depreciation rates; and

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[950] At [3.2.2], 54/469/027792-3.

[951] Letter from Mr Balchin (PwC) to Commerce Commission regarding workshop on Regulatory Taxation (25 January 2010) at 4, 65/694/032795.

(c) set an initial RTAV that ignores the effects of past transactions.

[1769] In the May-June 2010 Draft Reasons Papers the Commission adopted Mr Balchin's first proposal. In doing so it explained:[952]

> The Commission considers that 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 by the IRD.
>
> However, a number of submitters argued that the way in which the initial regulatory tax asset value is established should not be inconsistent with the way in which it is rolled forward. 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). The Commission agrees that this condition should also be met when the initial values of the regulatory tax asset value and the RAB value are established.

[1770] Notwithstanding that apparent success, in its responses to the May-June 2010 Draft Reasons Papers, Powerco argued that the "not incorrect" solution of an RTAV capped at RAB no longer met its concerns. The changed circumstance which had led to that shift in position is explained in Powerco's submissions in the following way:

> Due to the passing of time since the relevant transactions, and the application of tax depreciation during the period since, Powerco's tax asset values no longer exceeds its RAB. But the issue remains of concern in Powerco's circumstances. Because Powerco's tax asset values for various assets were re-set due to transactions, and it is likely that the tax asset values have not yet reduced to their pre acquisition levels, Powerco is likely to be required to price differently to what an otherwise identical firm would do. The difference in price exists purely as a result of historical events. This is not what would be observed in a competitive market.

[1771] In submissions following those draft decisions, Powerco's emphasis therefore moved away from the significance of RTAV being set higher than RAB and towards the significance of an RTAV that included past acquisition premiums, of whatever magnitude. Powerco, supported by Mr Balchin, now argued that past acquisition transactions should in effect be unpicked, to remove all acquisition premiums from the RTAVs of Existing Traded Regulated Assets. That is, the argument was now that only the third of the "not incorrect" responses would deal properly with Powerco's situation.

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[952] June 2010 EDBs Draft Reasons Paper at [5.4.12]-[5.4.13], 9/37/003721; June 2010 GPBs Draft Reasons Paper at [5.4.12]-[5.4.13], 10/38/004127; May 2010 Airports Draft Reasons Paper at [5.4.21]-[5.4.22], 8/31/003332 (footnote omitted).

[1772] The Commission did not accept that argument. The tax IMs as determined in December 2010 reflect the approach outlined in the May-June 2010 Draft Reasons Papers.

[1773] In its written submissions to us, Powerco comments on the Commission's final decision in a way that reflects its changed position:

> ... in effect the Commission's decision on the initial RTAV means that, to the extent that past acquisition premiums exist beneath the point where the RTAV exceeds the initial RAB value, the Commission is including premiums from past acquisitions in the initial RTAV.
>
> To be clear, an asset that is part-way through its life (that had not been bought and sold) would be expected to have a RAB [value] that exceeds its RTAV by a large margin. This reflects the combined effect of:
>
> (a) the application of normally shorter lives or more front-ended depreciation methods (such as diminishing value) methods for tax purposes, and
>
> (b) assets being indexed for inflation for regulatory purposes, but maintained in historical cost terms for tax purposes.
>
> As a consequence, the past acquisition premium (being the difference between the previous tax asset value and the tax asset value after the transaction) will be much greater than the amount that is recognised by the Commission's adjustment (namely the difference between the new taxation asset value and the RAB).
>
> Moreover, a substantial acquisition premium may be embedded in a supplier's tax asset value even if the tax asset value is lower than the RAB, in which case the Commission proposes to make a nil adjustment to the tax asset value. This is the situation that is likely to exist a number of years after the transaction (i.e., due to the factors described above), and describes the current situation for Powerco.

[1774] Powerco therefore argues that materially better tax IMs for EDBs and GDBs would exclude all acquisition premiums paid by Powerco for Existing Traded Regulated Assets from the initial RTAV of those assets.

Analysis

[1775] Powerco bases its materially better argument here on the fundamental propositions that the approach it suggests is required "to adhere to the workable competition standard" and also to achieve consistency. In a workably competitive market suppliers would not price differently because they had different RTAVs.

Further, the Commission's approach produces different prices for regulated suppliers whose assets include Existing Traded Regulated Assets and those whose assets do not.

[1776] The Commission's position is a simple one: Powerco's proposition would be inconsistent with the Part 4 objectives because it would ignore the value of tax deductions that Powerco is in fact entitled to. Ignoring that value would be inconsistent with the s 52A(1) outcomes, in particular that required by paragraph (d). Ignoring, up to the RAB cap, acquisition premiums paid for Existing Traded Regulated Assets does not introduce "inconsistency". Rather, it discriminates sensibly between two different situations. The Commission's different decision as regards regulated assets subject to future transactions between suppliers was because that approach:

(a) provided desirable incentives for such transactions; and

(b) left the regulated suppliers to manage the risk of those transactions, including the benefit of not being required to immediately factor higher actual depreciation into lower regulated prices.

That incentive approach is not required in the case of Existing Traded Regulated Assets. As between firms, the difference in treatment between a firm whose assets did not include Existing Traded Regulated Assets, and Powerco whose did, resulted from recognition that a firm which had purchased regulated assets at a premium had already received higher, tax sheltering depreciation benefits.

[1777] As Mr Hodder argues Powerco's tax IMs appeals, Powerco's concerns – although informed by Mr Balchin's principles – focus more pragmatically on the outcomes of the Commission's approach. That is, Powerco faces two problems. First, it had made a series of acquisitions at prices that would not now be fully reflected in the RAB values set by the Commission. So Powerco would have to set revenues and prices off a lower basis than it would have expected at the time of making those acquisitions. Secondly, and at the same time, by basing the regulatory depreciation allowance on an RTAV including those acquisition premiums, up to the RAB cap, Powerco would receive a lower RTA than a firm which had not acquired

those assets. As Mr Hodder put it at one point, in the pre-regulatory world Powerco did not have a constraint on pricing. It now had a constraint on pricing. In the pre-regulatory world Powerco had a very large depreciation factor, which was still applied. But in the changed circumstances of regulation, that had become a disadvantage.

[1778] With respect, the disjunction in the arguments is obvious. The first is based on a perhaps not unnatural concern about a fundamental effect of first, for the GDBs, price control and then, for the EDBs and GPBs more generally, DPP regulation. The second appears to be a somewhat opportunistic comparison of a hypothetical "what might have been" for another firm, or Powerco itself, and the burden, or otherwise, of the actual tax costs faced by Powerco because of its history of acquisitions.

[1779] These arguments acquire a somewhat unreal flavour at times. After all, the position is that, in the real tax world, Powerco will receive the benefits of acquisition premiums as a shelter against its actual tax costs.

[1780] Powerco's original argument during consultation on the IMs was, consistent with its position that HNET values should determine RAB values and influence DPPs accordingly, that it would be inappropriate to have RTAVs higher than those HNET RAB values. The Commission accepted that argument. That is, RTAVs are capped at RABs, noting that Powerco's RABs are (subject to the asset valuation IM appeals) lower than the RAB values that would be set by Powerco's HNET approach. But that is no longer the argument.

[1781] The argument now made, by reference to the hypothetical other firm that has not been "the subject of a transaction", is that in a workably competitive market prices do not differ between firms because of the history of the way in which firms acquired their assets, and even less so because of the taxation treatment of those assets. Even there, it is not clear to us that the prices paid for assets and the availability of depreciation benefits would not assist a firm competing at a given price level in a workably competitive market, thus making those depreciation benefits a factor in the competitive process. But that is not the point here.

[1782] Setting the prices of a regulated supplier in a natural monopoly market does not involve comparison with any other supplier. The underlying point is that in such a market there are no competitors, so that it is not the process of competition that sets prices. In that context, it is not persuasive to refer to a hypothetical other firm with which Powerco's prices are compared. Indeed, we think that Powerco's appeal is essentially an attempt to have its own circumstances govern the IM, in a manner similar to the central tenet of Transpower's appeals against its cost of capital IMs.

[1783] Nor do we think it is appropriate to refer to Powerco with and without an asset acquisition transaction, and the comparative level of the benefit of depreciation that would have been available to it in each of those scenarios. The fact is, Powerco did acquire assets in the past, and the acquisition premiums for those assets – in some way that was not well defined – are still apparently present in its tax asset values.

[1784] What the Commission is saying is that, in the case of Existing Traded Regulated Assets, there does not appear to be a good reason for the actual benefit Powerco receives from its available level of depreciation not to be reflected in prices. We agree with that conclusion.

[1785] We also accept the logic and consistency of the Commission's distinction between the initial RTAVs of Existing Traded Regulated Assets, and Traded Regulated Assets that will be sold and purchased by regulated firms in the future.

[1786] As part of its response to Powerco's arguments, the Commission refers in its submissions to an analysis of the significance of the RTAV included by Wild J in the form of a table in his decision on Powerco and Vector's judicial review challenges to the 2004 price control decisions.[953] The purpose of the table in that context was to demonstrate that Powerco's proposal, which would set relevant RTAVs at the lower ODV value compared to the higher acquisition price Powerco had paid, would, relative to the Commission's approach of setting RTAV at that price, or at the ODV value where paid, result in the derivation of excessive returns, ie returns greater than called for by the NPV = 0 or FCM approach.

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[953] *Powerco Ltd v Commerce Commission* HC Wellington CIV-2005-485-1066, 24 December 2007.

[1787] The Commission also presents a further table, which it says shows the same excessive return effect relative to the RTAV determined pursuant to the Commission's tax IM, and Powerco's proposed "materially better" alternative. Powerco objects to that material as being outside the formal record. It responds to it, additionally, with a series of its own worked examples designed to counter the Commission's "excessive returns" proposal.

[1788] As Powerco submits, the Commission did not rely on the excess returns argument in the Principal Reasons Papers. In terms of the closed record, we therefore conclude that the Commission is not able to rely before us on that further table or on the argument based on that table. The argument is not one by reference to legal authority, but rather by reference to forensic material that, to be on the record before us, needed to have been on the record of the Commission's consultation process.

[1789] Moreover, given the different tax treatment of future acquisitions of regulated assets and of Existing Traded Regulated Assets, we are not certain that the "excess returns" argument is even relevant here.

[1790] The Commission identifies the merits of the tax treatment of future acquisitions of regulated assets as being that:[954]

- suppliers retain the net tax benefits of the transaction, but also bear any subsequent costs (i.e. should the IRD revisit the tax consequences of the transaction);
- 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 still equal to pre-sale RAB); 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.

[1791] The different tax treatment of the Existing Traded Regulated Assets reflects the different significance of incentive effects for transactions in the future, relative to their effect on transactions already undertaken. In the absence of incentive effects being as relevant for those transactions, the Commission gave greater weight to the

[954] EDBs-GPBs Reasons Paper at [G2.19], 3/7/001364.

simple proposition that, here, there was no good reason not to recognise the actual value of tax depreciation allowances for regulatory tax purposes.

[1792] Finally, in any event, Powerco is unable to provide much clarity as to the extent of the detriment, and therefore implicitly – other than in terms of general incentivising theory – of the extent to which its proposed IM would be materially better for it, let alone any of the other firms who would be affected by the change in the IMs, none of whom have raised this point. All Powerco is able to say is that it is *likely* that there was some ongoing disadvantage to it from sub-RAB premiums, although Mr Hodder acknowledged that that effect would be extinguished within approximately 15 years of the original transactions. Given the length of time that had passed by 2010 since many of those transactions, the uncertainty is clear.

[1793] That uncertainty in and of itself in our view would have prevented us reaching the materially better conclusion, even if we thought – which we do not – that there may have been more substantive merit to the point. After all, what does "likely" mean? Mr Hodder acknowledged that this whole appeal was open to criticism as being academic, hypothetical in principle and devoid of numbers. We agree.

Outcome

[1794] At the end of the day, this is an issue which is peculiar to Powerco. We are not persuaded of the merits of Powerco's claims as to, in terms of s 52A, the materially better nature of the proposed IMs when applied to Powerco itself. Moreover, we have little or no information as to how that IM would impact on other suppliers and, in particular, on regulatory costs and incentives. Powerco emphasised in submissions that the "unpicking" was not complicated in the way the Commission asserted. Given, if nothing else, the inherent complexity of tax matters, we are not persuaded by that submission.

[1795] We are therefore not persuaded that materially better tax IMs for the EDBs and GDBs would set initial RTAVs for Existing Traded Regulated Assets at the level of the RTAV of the firm from whom the relevant regulated supplier most recently acquired those assets.

PART 8 – VECTOR'S COST ALLOCATION APPEAL

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Cost allocation in Part 4 regulation

[1796] In the electricity and gas sectors, some regulated suppliers provide more than one type of regulated service. Some also provide unregulated services. Vector, in particular, supplies:

(a) three regulated services: electricity distribution, gas distribution and gas transmission; and

(b) a range of unregulated services: telecommunications, utilities training, tree cutting and wind power generation.[955]

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[955] The extent to which regulated suppliers provide unregulated services varies significantly. Some EDBs (eg Orion) focus fully or almost exclusively on providing regulated electricity distribution services, so that little or no cost sharing occurs. For a range of other EDBs, up to 20% of their total operating costs and up to 10% of their asset base are reported to be shared between regulated and unregulated services. For Powerco's EDB 1-2% of total operating costs and less than 3% of its assets are shared between regulated and unregulated services. Similarly, the extent to which GPBs' regulated services share costs with unregulated services varies. Vector shares 8% of its GPB's total operating costs between its regulated and unregulated services. For Powerco's GPB, less than 1-2% of its total operating costs and less than 3% of its assets are shared with unregulated services. See EDBs-GPBs Reasons Paper at [3.2.28]-[3.2.29], 3/7/001045 and at Table C1, 3/7/001260.

[1797] The provision of different types of services by a regulated supplier, and here by Vector in particular, gives rise to the sharing of:

(a) operating costs (eg expenses related to head office functions); and

(b) assets (eg power poles used also to carry telecommunications lines).

[1798] The total cost of supplying two or more types of service in combination is often lower than if the same services are provided independently. The resulting cost reductions represent efficiency gains associated with joint supply. To the extent that regulated suppliers benefit from these efficiency gains (eg through higher profitability over the short-to-medium term), they have an incentive to provide multiple services.

[1799] Section 52A(1)(c) stipulates as an outcome to be promoted by Part 4 regulation, consistent with outcomes produced in workably competitive markets, that suppliers of regulated goods and services:

> Share with consumers the benefits of efficiency gains in the supply of regulated goods or services, including through lower prices.

[1800] To further that purpose s 52T(1)(a)(iii) requires an IM to be developed for the "allocation of common costs, including between activities, businesses, consumer classes, and geographic areas".

[1801] At the same time s 52T(3) provides that cost allocation methodologies:

> must not unduly deter investment by a supplier of regulated goods or services in the provision of any other goods or services.

The terms "efficiency gains" and "common costs" are not defined in the Act.

[1802] The Commission has determined cost allocation IMs for ID and DPP/CPP regulation of the EDBs, GTBs and GDBs. The IMs for DPP/CPP regulation refer to and apply the IMs for ID regulation. The cost allocation IMs for ID regulation of

EDBs and GPBs are, as with other similar IMs, in identical form. We therefore refer to these IMs as a single IM and reference only one of them.[956]

[1803] Under ID regulation, the cost allocation IM provides the rules that suppliers must observe when disclosing their cost data (and other financial information that relies on cost data). The allocation of common costs will affect financial results as represented in regulatory accounts provided under the ID regime.

[1804] Under DPP/CPP regulation, the cost allocation IM provides the rules by which EDBs and GPBs must decide what proportion of common costs should be recovered from consumers of the regulated services they supply. The more common costs that are allocated to regulated services, the higher the prices for regulated services will be, given that allowable revenue is set to allow the supplier to recover its costs.

[1805] To provide incentives for efficiency, including those that may result from mergers or acquisitions, the Act provides that a DPP or CPP will not be reopened during a regulatory period.[957] This allows suppliers to retain the benefits of efficiency gains realised within a regulatory period for the remainder of that period. Thus, during a regulatory period, the cost allocation IM will only apply to DPP/CPPs indirectly via information disclosed as part of ID regulation.[958] When a DPP is reset, cost allocation at that point will be determined in the manner cost allocation has been determined for ID purposes.

[1806] Vector alone appeals against the cost allocation IM. As we understand it, the proportion of Vector's business represented now, or as it may be in the future, by the provision of unregulated services is the largest among the EDBs and GPBs. A key driver of Vector's concerns about cost allocation is its use of poles in its electricity lines business to provide fibre for broadband telecommunications, and the incentives surrounding such ventures.

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956 Decision [2012] NZCC 26, 67/716/033600.
957 Section 53L.
958 EDBs-GPBs Reasons Paper at [3.3.9] and [B8.9], 3/7/001059 and 3/7/001253.

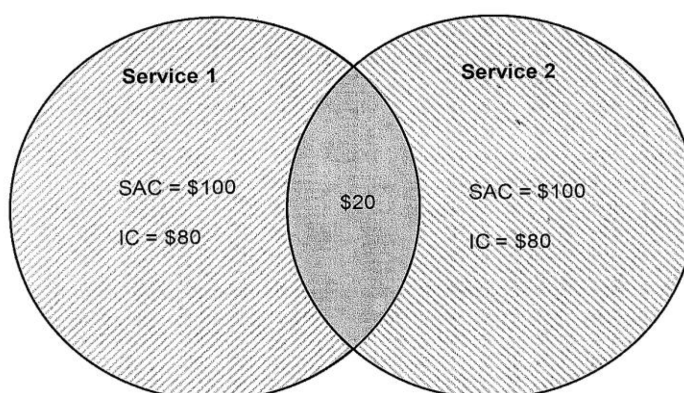
The Commission's decision

Introductory concepts

[1807] Before summarising the Commission's cost allocation IM decision, it is helpful to introduce a number of the concepts involved.

The joint provision of services and efficiency gains

[1808] To illustrate the efficiency gains arising from the joint supply of two services compared to the costs of providing the two services separately, in the EDBs-GPBs Reasons Paper the Commission used the following diagram:[959]



[1809] By reference to that diagram, the Commission explained:

(a) The stand-alone cost (SAC) of each firm for the separate provision of its service is $100. Thus, the total cost for the separate provision of the two services by separate firms is $200.

(b) The efficiency gains, or economies of scope, arising from joint provision of both services by a single firm are $20. That $20 is represented by the intersection of the two circles, reflecting the savings the single firm can make as a result of the combined provision of those services.

(c) Therefore, the SAC for a single firm providing both services is $180.

[959] EDBs-GPBs Reasons Paper at fig 3.1, 3/7/001041.

(d) The efficiency gains can be expressed as the sum of the SACs of supplying the services individually ($200), less the SAC of providing them jointly ($180).

(e) The incremental cost (IC) for a firm to provide Service 2, given that it is already providing Service 1, is $80; and in this example the IC of providing Service 1 given that Service 2 is already being supplied is also $80.

(f) The efficiency gains can also be expressed as the SAC of providing the two services jointly ($180) less the sum of the two ICs ($160).

[1810] The economic common costs are the costs that are common to the two services. They are the same as the efficiency gains from joint provision. However, economic common costs are not typically the same as the costs that would, either in a plain English sense or in accounting terms, be described as "shared costs" or "common costs". To explain the difference, the Commission provided two examples:

(a) Consider a case where the efficiency gain of $20 arose out of separate stand-alone human resource costs of $50 in total being reduced to $30. There the efficiency gain, or the economic common costs, are $20. But if, as might typically be the case, the firm did not apportion the shared, reduced, human resource costs of $30 between the two services, then the shared accounting costs in that circumstance would be $30, and would exceed the economic common costs (or efficiency gain) of $20.

(b) A more dramatic example considers two electricity distribution networks operated by two different EDBs using two transformers with a combined asset value of $200. If those EDBs merge, and it is assumed that the service could be operated using a single transformer with an asset value of $180, the economic common cost (or the

efficiency gain) is $20. The shared cost, however, would be the full $180 cost of the single transformer. [960]

[1811] The link can now be clearly seen between the s 52T requirement for an IM for the allocation of common costs and the s 52A(1)(c) purpose that suppliers of regulated services share "efficiency gains" with consumers. Section 52A(1)(c) directs attention to economic common costs, since they are identical to efficiency gains in this context. However, the question whether these efficiency gains are properly subject to s 52A(1)(c) is part of Vector's appeal.

[1812] The IM is expressed not in terms of economic common costs but in terms of shared accounting costs. The explanation in the EDBs-GPBs Reasons Paper of how the IM's sharing of accounting costs achieves a sharing of economic common costs, and hence efficiency gains, is somewhat confusing. In part this is because of different definitions used in the IM from those used to explain the IM in the EDBs-GPBs Reasons Paper, and differences between the body of that Reasons Paper and the relevant appendix.

CDA and CnDA

[1813] To identify common costs arising from a supplier supplying more than one regulated service or a regulated service and one or more unregulated services, the cost allocation IM requires:[961]

(a) first, identification of all costs of the supplier that are "wholly and solely" incurred in relation to the supply of each regulated service – costs directly attributable (CDA) – and allocation of those costs to the regulated services to which they are directly attributable; and

(b) secondly, allocation (as described below) of the remaining costs, or costs not directly attributable (CnDA).

960 EDBs-GPBs Reasons Paper at [3.2.18]-[3.2.19], 3/7/001043.

961 Decision [2012] NZCC 26 at pts 1 and 2, 67/716/033605 and 67/716/033624; and EDBs-GPBs Reasons Paper at [3.2.24], 3/7/001044.

[1814] CnDA are further divided into operating costs not directly attributable (OCnDA) and asset values not directly attributable (AVnDA).

[1815] The EDBs-GPBs Reason Paper states that:[962]

> The cost allocation IM allocates all costs associated with regulated services whether they are directly attributable or not directly attributable. By doing so, common costs – irrespective of how they are interpreted – will be allocated between different types of regulated and unregulated services, without explicitly having to define, identify and allocate common costs which, as discussed above, can be defined and measured in different ways.

[1816] This statement was a cause of confusion, as it is by no means obvious, and is inadequately explained elsewhere, how allocating common costs without regard to how they are defined can possibly achieve the statutory purposes. More helpfully, the EDBs-GPBs Reasons Paper goes on to explain that:[963]

> The IM therefore requires that operating costs and asset values that are directly attributable to a particular type of regulated service are allocated to that type of regulated service. It also sets out rules for deciding what proportion of operating costs and asset values associated with but not directly attributable to a regulated service may be recovered from that regulated service. Since the Commission is only concerned with setting rules for the allocation of costs to regulated services, the IM does not include any mandatory steps for allocating costs that are wholly and solely associated with unregulated services.

Allocation approaches: ABAA, ACAM, and OVABAA

[1817] The IM provides for three approaches for allocating CnDA to a regulated service:

(a) the default accounting-based allocation approach (ABAA), which requires a supplier to allocate CnDA based on causal factors or, where causally based allocators are not available, based on proxy factors;

(b) the avoidable cost allocation methodology (ACAM), which allows a supplier to allocate CnDA associated with a regulated service to that service where the regulated and unregulated services have a small proportion of costs in common ; and

[962] EDBs-GPBs Reasons Paper at [3.2.25], 3/7/001045.
[963] EDBs-GPBs Reasons Paper at [3.2.26], 3/7/001045 (footnotes omitted).

(c) the optional variation to the ABAA (OVABAA), which allows a supplier to allocate a greater proportion of CnDA to a regulated service than would occur under ABAA where the directors certify that the application of ABAA would unduly deter investments in unregulated services.

[1818] The Commission explained causal relationships and proxy allocators as used in the (default) ABAA in the following terms:[964]

> Practical examples of causal relationships used as cost allocators which fit the Commission's definition might include:
>
> - the number of staff hours recorded against each service during the 18 months recorded on timesheets; and
> - the average number of installation connection points ('ICPs') split between electricity distribution services and gas pipeline services over the previous 12 months.
>
> In some circumstances quantifiable causal relationships may not exist. Where this happens, EDBs and GPBs must use quantifiable proxy relationships instead and proxy cost and asset allocators based on these relationships should be applied. Where such proxy allocators are used, EDBs and GPBs must justify their use...
>
> Examples of proxy cost and asset allocators include revenue, staff numbers, and balances of CDA allocated (i.e. use of CDA as a proxy for allocations of costs which are not directly attributable.)

[1819] As the Commission describes it,[965] ACAM considers what costs would be avoided if a supplier no longer supplied services other than a regulated service, and requires an estimation of the costs of supplying other services which would be avoided if only the regulated service was supplied. Unlike SAC and IC, which are cost concepts that generally rely on the notion of efficient costs, ACAM uses actual top-down accounting cost information associated with the supply of the services. In particular, the actual costs of EDBs and GPBs may be higher than efficient levels. It is therefore possible that ACAM results in an allocation of shared costs to a regulated service greater than the efficient SAC.[966]

[1820] ACAM, the Commission submits, therefore results in cost allocations which approximate to an outcome where regulated services bear their full SAC, while

[964] EDBs-GPBs Reasons Paper at [B4.7]- [B4.10], 3/7/001242.
[965] EDBs-GPBs Reasons Paper at [3.2.33], 3/7/001046.
[966] June 2010 EDBs Draft Reasons Paper at fns 105 and 120, 9/37/003590 and 9/7/003603.

unregulated services only bear their IC. It is helpful to refer to the diagram in [1808], and think of Service 1 as a regulated service and Service 2 as an unregulated service. Thus, all the efficiency gains accrue to the benefit of the owners of the firm (in the form of higher profits) or to the acquirers of the unregulated services (in the form of lower prices) and none to the consumers of regulated services.[967]

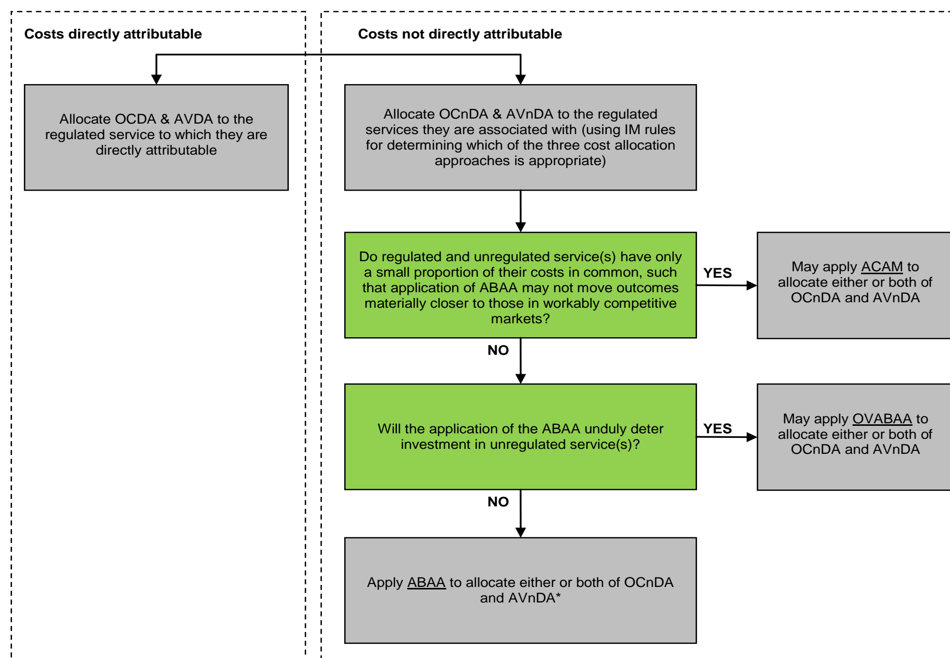
[1821] Vector did not demur from this explanation. Indeed, as will be seen, it submits that this outcome is exactly what it seeks and what the Act requires. The Commission, on the other hand, considers that in general some part of efficiency gains from the joint supply of regulated and unregulated services ought to accrue to the consumers of regulated services.

[1822] ACAM was the approach currently required of the EDBs under the Commission's 2008 EDB ID requirements. Although ACAM was not mandatory for GPBs under the 1997 Gas ID regulations, the Commission considered that it appeared that ACAM, or an approach that achieves a similar cost allocation, was also used by GPBs in instances where a cost allocation methodology was required for allocating costs between regulated and unregulated services.

The terms of the Cost Allocation IM

[1823] The Commission summarised the circumstances in which, under the cost allocation IMs, a supplier may use ACAM or OVABAA in place of ABAA:[968]

[967] EDBs-GPBs Reasons Paper at [3.2.63], 3/7/001053.
[968] EDBs-GPBs Reasons Paper at fig 3.2, 3/7/001060.



*Notes: * At any time a regulated supplier may choose to apply ABAA to allocate either or both of OCnDA and AVnDA. OCDA means operating costs directly attributable; AVDA means regulated asset values directly attributable; OCnDA means operating costs not directly attributable; AVnDA means regulated service asset values not directly attributable.*

[1824] The "small proportion" test shown, which is the threshold for allowing a supplier to use ACAM in place of ABAA, has two exceptions, or materiality thresholds:[969]

(a) first, where total unregulated revenues are not greater than 20% of total regulated revenues, a regulated supplier may allocate either or both OCnDA and AVnDA to regulated services using ACAM; and

(b) secondly, where the first threshold is not satisfied but:

(i) OCnDA (less arm's length deductions)[970] are not greater than 15% of total operating costs, a regulated supplier may allocate OCnDA to regulated services using ACAM; and/or

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969 EDBs-GPBs Reasons Paper at [B3.10]-[B3.12], 3/7/001236-7.

970 The "arm's-length deduction" and "arm's-length transaction" concepts which are defined in Decision [2012] NZCC 26, 67/716/033600 are not material to a consideration of Vector's appeal.

(ii) AVnDA (less arm's length deductions) are less than 10% of aggregated unallocated closing RAB for all types of regulated services, a regulated supplier may allocate AVnDA using ACAM.

[1825] The OVABAA may be used where the materiality thresholds are exceeded but the directors of the regulated supplier certify that an ABAA allocation of CnDA to an unregulated service would be the sole cause of that service being discontinued or not provided.[971] In that situation, the regulated firm may reduce the allocation of shared costs to the unregulated service, but only to the extent necessary to ensure that the unregulated service would not be discontinued or not provided. Costs which are thus no longer allocated to the unregulated service are then reallocated to the remaining regulated and unregulated services, using the same set of cost allocators used in reaching the “discontinued or not provided” conclusion.

[1826] The rationale for the OVABAA exception is to be found in s 52T(3), which provides that IMs “must not unduly deter investment by a supplier of regulated goods or services in the provision of other goods or services”.

[1827] As advanced by the Commission, the rules for applying OVABAA or ACAM, in lieu of the default ABAA, reflect the dynamic processes in workably competitive markets and increase the likelihood that outcomes will be consistent with such markets (compared to the low likelihood of achieving such outcomes using ACAM).[972] This was explained in the following paragraphs of the EDBs-GPBs Reasons Paper:[973]

> To promote outcomes consistent with those produced in workably competitive markets, and to achieve the objective set out in s 52A(1)(c), all types of services should bear some portion of shared costs in the longer-term.
>
> Where a supplier provides electricity distribution, gas distribution and/or gas transmission services together, the overall demand-responsiveness of the different services will be similar. A similar allocation of shared costs to each regulated services and a not too dissimilar sharing of benefits of efficiencies

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971 Part 1 (definitions) of Decision [2012] NZCC 26, 67/716/033621.

972 EDBs-GPBs Reasons Paper at [3.3.6], 3/7/001058.

973 EDBs-GPBs Reasons Paper at [3.2.59]-[3.2.65], 3/7/001053 (footnotes omitted except where specified).

with consumers of the different types of regulated services is likely to be consistent with outcomes produced in workably competitive markets.[974]

In contrast, where an EDB and/or GPB also provides unregulated services, the demand-responsiveness of each regulated service will in a number of cases be lower than that for unregulated services. In such instances, an allocation of a larger proportion of shared costs to regulated services is consistent with outcomes in workably competitive markets. In those situations only some of the benefits of efficiency gains would be expected to be shared with consumers of regulated services.

In setting this IM, the Commission has considered whether the use of ACAM as used and/or advocated by EDBs and GPBs would promote these outcomes in the longer-term. The application of ACAM would result in regulated services bearing all shared costs and unregulated services not bearing any.

Where prices are set to recover costs allocated on this basis, the application of ACAM leads to none of the efficiency gains associated with the provision of regulated services being shared between the supplier and consumers of regulated services. ACAM therefore leads to all efficiency gains being captured by the supplier in higher profits, or, to the extent that prices are lower, passed on to the consumers of unregulated services rather than consumers of regulated services. (A supplier may also set all services' prices equal to cost with shared costs allocated between services in the short-term, in which case it only earns a normal return. However, a supplier's incentives are to maximise its profits and suppliers are likely to only do this in situations where competitive constraints already apply in the short term).

As noted by Professor George Yarrow, in workably competitive markets an outcome where a service would bear all shared costs would be unlikely "since, speaking in very broad terms, it implies that the consumers of the product/service bearing all the common costs would, in effect, have no collective weight in influencing relative prices. Such an outcome appears to me to be consistent only with a complete absence of competition, since any form of competition for the business of the relevant consumers will give them some influence over the decisions of the suppliers seeking their business."

Overall, the Commission has concluded that the application of ACAM will in most instances not promote cost allocation and efficiency sharing outcomes consistent with those that occur in workably competitive markets. It is possible, however, that where shared costs are low, an approach that allocates shared costs between regulated and unregulated services will not produce outcomes that are materially different from those that would arise under ACAM. In these circumstances the use of ACAM may not result in outcomes that stray far from those that occur in workably competitive markets. ….

[974] Footnote 171 to this paragraph states: "This means that the allocation of shared costs between gas transmission and gas distribution services would be proportional to some measure of demand, e.g. revenue. A somewhat greater proportion of costs might be allocated to electricity distribution where costs are shared between electricity distribution, and gas distribution and/or gas transmission services."

[1828] We note that the second sentence in paragraph four of the above quoted passage states that the application of ACAM would result in regulated services bearing all shared costs and unregulated services not bearing any. However, this is only true of economic common costs, as paragraph five of the above quoted passage makes clear.

[1829] Building on the Commission's example at[1809], Vector illustrated the different approaches by way of the following example involving an electricity lines business using its poles to provide fibre for broadband data distribution. Mr Laurenson for the Commission adopted the example:

Electricity lines and fibre (broadband)

...

Services provided separately

Service	*Total asset base*	*Poles*	*Other assets*
Electricity lines	100	25	75
Fibre	100	25	75

Services provided together

<table>
<tr><th>Service</th><th>Total asset base</th><th>Poles</th><th>Other assets</th></tr>
<tr><td>Electricity lines</td><td rowspan="2">180</td><td rowspan="2">30</td><td>75</td></tr>
<tr><td>Fibre</td><td>75</td></tr>
</table>

By leveraging off the existing ELS [ie an EDB] infrastructure, poles for the fibre business can be provided for only an additional $5M, such that the shared (accounting) cost of the poles is only $30M.

Leveraging the existing ELS's infrastructure is therefore more efficient than building a new network. The efficiency gain (or "economic common cost") is $20M (ie. $50M - $30M), such that the total asset base required to provide the services together is only $180M (rather than $200M).

...

Applying accounting based allocation approach (ABAA)

Shared accounting costs ($30M) are allocated to each service using asset allocators (causal relationship or proxy allocator).

> For example, if poles are allocated evenly between the two services using PPE (property, plant and equipment) categories in the financial accounts:
>
> | ***Service*** | ***Total asset base*** | ***Poles*** | ***Other assets*** |
> |---|---|---|---|
> | Electricity lines | 90 | 15 | 75 |
> | Fibre | 90 | 15 | 75 |
>
> ...
>
> **Applying avoidable cost allocation methodology (ACAM)**
>
> **...**
>
> Under ACAM ... stand-alone cost is allocated to the ELS ($100M) and incremental or "avoidable" cost is allocated to fibre ($80M).
>
> ...
>
> While ACAM allocates the full economic common cost (or "efficiency gain") to the ELS, in the worked example it allocates shared (accounting costs between the two services as follows:
>
> | ***Service*** | ***Total asset base*** | ***Poles*** | ***Other assets*** |
> |---|---|---|---|
> | Electricity lines | 100 | 25 | 75 |
> | Fibre | 80 | 5 | 75 |
>
> Accordingly, it is not correct that under ACAM all "shared costs" (as defined by the Commission) are necessarily allocated to the regulated service.

[1830] Several points may be made about the example. First, the shared accounting cost of $30 million is greater than the economic common costs of $20 million. Secondly, allocating all of the shared accounting cost by ABAA as shown results in the economic common costs being allocated between the two businesses. The claim made by the Commission, referred to in [1815] above, is seen to be validated. Since the efficiency gain is the same as the economic common cost, the efficiency gain is shared between the two businesses.

[1831] But we need to change perspective. Once regulated and unregulated services are being supplied jointly, we no longer have the separate businesses as a starting point. Rather, the starting point for cost allocation is a firm supplying two services with total costs of $180 million. The CDA of the regulated service are $75 million. All the other costs need to be allocated. The unregulated fibre business will be

allocated $75 million using cost allocators, since in the example it is assumed that other assets of $75 million are attributable to the fibre business.

[1832] We do not now know the amount of the economic common costs, but we do know the accounting shared cost to be $30 million, ie the remaining costs after the two amounts of $75 million have been subtracted from the total joint costs of $180 million. Once the shared accounting costs are allocated by ABAA (in accordance with cost allocators), the economic common costs and hence the efficiency gains have of necessity been allocated and the costs of each business are $90 million. The economic common costs have been allocated in the proportion by which the shared accounting costs were allocated (equally in the example), with no regard to how they arose, ie exactly where or how efficiency gains were achieved in the business. This is a matter to which Vector draws attention, and to which we shall return.

[1833] We now consider the ACAM approach in the example. This time, as explained in the example, and consistent with the Commission's explanation mentioned in [1820] above, the regulated business bears its full SAC ($100 million) and the unregulated business bears only its IC or avoidable costs ($80 million).

[1834] From the new perspective of jointly supplied services, we note that the SAC and IC are not simply waiting to be observed, as the example, helpful as it is, tends to suggest. Rather, an estimate has to be made of the costs that the firm would avoid ($80 million) if it were to provide only the regulated electricity line services (or ELS as Vector referred to them in its example). This requires $25 million of the accounting shared costs to be allocated to the ELS (in addition to the CDA of $75 million). As a result, the economic common costs are allocated in full to the regulated business, and thus all the efficiency gains are enjoyed by the unregulated business (or its customers).

[1835] Relative to an ABAA allocation, ACAM allocates $10 million more in economic common costs, and equivalently $10 million less in efficiency gains, to the regulated business. As Vector pointed out in the example, while ACAM allocates the full economic common costs to the regulated business (or the full efficiency gain to

the fibre business), it allocates shared (accounting) costs between the two services. Vector was drawing attention to the Commission's error noted in [1828] above.

[1836] The practical result is that, under ACAM as compared to ABAA, the customers of the regulated ELS pay higher prices, as the additional $10 million has to be recovered in allowable revenue. That additional regulated revenue may be manifested in a higher firm-wide profit (ROI) or may (in whole or part) be passed on through competitive pressures to the consumers of the unregulated fibre business.

Vector's appeal

[1837] Vector's fundamental argument is that a materially better cost allocation IM would apply ACAM to all common costs, not just (as in the cost allocation IM) when the exceptions apply (ie when the materiality thresholds are not met).[975]

[1838] Vector first argues that the Commission misdirected itself in its interpretation of ss 52A(1)(c) and 52T(3), particularly when those provisions are properly understood as reflecting a particular aspect of the August 2006 GPS (set out later), namely, that improving New Zealand's productivity required that regulated businesses should be able to utilise existing assets in order to reduce the costs of investing in unregulated infrastructure and services.

[1839] More specifically, Vector's position is that s 52A(1)(c) limits the sharing outcome to efficiency gains achieved "in the supply of the regulated goods or services" – not efficiency gains resulting from the supply of both regulated and unregulated services. Further, where s 52T(3) speaks of unduly deterring investment, in Vector's view that means the Commission must adopt a cost allocation approach that does not deter incentives to invest in other services unless there is a good reason for such deterrence, for example if consumers of the regulated services would be disadvantaged by cross-subsidising consumers of unregulated services, or where it involved an approach inconsistent with s 52A(1)(d).

975 See Vector Appeal 259 at [EDS.CA(1)].

[1840] Vector argues that use of the ABAA necessarily deters investment in the unregulated business and that the materiality thresholds for the use of ACAM deters investment that may take the supplier over the threshold.

[1841] Moreover, and this is Vector's second argument, the ACAM would better promote workably competitive market outcomes and provide an appropriate and effective mechanism for addressing efficiency gains.

[1842] If we were not persuaded to substitute the ACAM approach, Vector proposes, in the alternative, that the cost allocation IM should be adjusted so that:

(a) in relation to the OVABAA:

(i) OVABAA is available where ABAA a is a "significant factor" in an investment not occurring (not the sole factor as required by the cost allocation IM);

(ii) if a directors' certification is provided, it should be accepted by the Commission unless there is good reason to consider that the information may be false or if there is no supporting information; and

(iii) ACAM should be able to be applied under the OVABAA as it is applied when the materiality thresholds are met (rather than the regulated supplier being required to develop an allocation methodology that varies ABAA only to the extent required to avoid the investment deterrence); and

(b) in relation to the materiality threshold, that a third "gross profit" materiality threshold should be introduced.

[1843] The overall flavour of Vector's argument was clearly expressed by Mr Galbraith in oral submissions:

> It's really whether the new Part 4 in s 52A should be interpreted in the context of a broad purpose of incentivising investment, innovation etc, or whether it is simply more of the same.

[1844] As Mr Galbraith put it, the cost allocation IM was another example of the Commission giving s 52A(1)(d) primacy and failing to respond to the important inclusion of the specific reference in Part 4 to incentives to invest. The inclusion of that reference was to be properly understood as some form of statutory incorporation or recognition in Part 4 of the August 2006 GPS. Mr Galbraith also reflected on the extent to which commercial activity within New Zealand's relatively small economy occurred within regulated industries and hence the importance of allowing regulated industries to "leverage off" their regulated businesses to promote innovation and investment.

[1845] That part of Vector's argument is captured in the following extracts from its written submissions:

> In line with the 2006 GPS, the current Government has indicated that its wider strategy "to increase New Zealand's global competitiveness, particularly compared to other OECD countries" will be achieved through initiatives such as the UFBI.[976]
>
> This policy was specifically noted by John Small at the IM conference (despite not being referred to in his subsequent review report):
>
> > MR SMALL: Can I just throw something in to start when you're talking about broadband and gas pipeline businesses. An observation from the Crown fibre investment company policy documents is very much that the policy on that side of the coin is really to leverage the cost models of the pipeline businesses for the advantage of promoting broadband in New Zealand. It's very clear if you look at things from that side, that the intention is that only the incremental costs should go to the broadband and that's one of the essential features of the model and the competitive nature of it that are intended to make it work. So if you're looking about perhaps whether cost allocation should be from that side, I think that policy is quite clear.
>
> Overall, ACAM is the cost allocation method that best enables EDSs and GPSs to participate in Government strategies and to promote New Zealand's economic transformation and global competitiveness. Electricity and gas consumers will be no worse off from the application of SAC / IC and New Zealand EDS / GPS companies will be incentivised to invest in other services at least cost for the benefit of the NZ economy and in the long-term interests of consumers

[976] Ultra fast broadband initiative.

Analysis

[1846] When determining the cost allocation IM, the Commission was required to reach a view on the application of the s 52A(1) purpose and outcomes, in particular s 52A(1)(c), and s 52T(3) . As noted:

- Section 52A(1)(c) stipulates the outcome that suppliers of regulated services share with consumers "the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices".

- Section 52T(3) is directed towards the effect of cost allocation IMs. It provides that such methodologies "must not unduly deter investment by a supplier of regulated goods or services in the provision of other goods or services".

[1847] The Commission argues that to adopt Vector's preferred approach would, in effect, be to read s 52A(1)(c) as if it required the sharing of efficiencies relating *only* to costs or assets that are used exclusively in the supply of regulated services. To do so would provide an incentive for a regulated supplier to invest in unregulated services greater than that required in terms of the s 52A(1) purpose of promoting outcomes produced in workably competitive markets. By the Commission's assessment, it would not *unduly* deter such investments (s 52T(3)) if the cost allocation IM provided a level of incentive equivalent to those available to a supplier in workably competitive markets. This, it argues, was generally provided by ABAA, as incorporated, with alternatives, in the cost allocation IM.

[1848] Vector's argument can therefore be considered in two parts:

(a) first, whether the Commission has correctly interpreted the requirements of Part 4, and in particular s 52A(1)(c) and s 52T(3); and

(b) secondly, in terms of Vector's argument that the approach it proposes is a materially better alternative in terms of achieving the s 52A(1) purpose and outcomes.

ACAM required by ss 52A(1)(c) and 52T(3)

[1849] Each of the s 52A(1) outcomes is here, as elsewhere, relevant to the cost allocation IM. Cost allocation, and how it is to be effected, is relevant to incentives to innovate and invest, and to improve efficiency. Subject to Vector's argument to the contrary, cost allocation affects the sharing of the extent of efficiency gains with consumers, where those gains occur because regulated and unregulated services are provided together and, to the extent that the sharing of common costs will affect both ROI and BBAR, it is relevant to the limitation of excessive profits outcome. Indeed, the allocation of asset values in order to allocate the associated capital costs can have a significant impact on allowable revenue (for DPP/CPP regulation) and ROI (for ID regulation) calculations.

[1850] Vector argues that the benefits of efficiency gains in the supply of the service do not include efficiency gains arising where regulated and unregulated services are provided together. It also argues that the s 52T(3) direction that cost allocation methodologies "must not unduly deter investment" directs the Commission to mandate ACAM sharing.

[1851] In making that argument, Vector cites, and emphasises, the following particular elements of the now repealed August 2006 GPS:

> 6. It is in the long term ins of the economy in general and consumers in particular **that regulated businesses, in common with non-regulated businesses, are able to utilise existing assets to reduce the cost of investing in new infrastructure and to take advantage of economies of scale and scope.**
>
> 7. The Government's economic policy objective is that regulated businesses have improved incentives to invest in replacement, upgraded and new infrastructure, and in related businesses for the long-term benefit of consumers. The Government considers that this objective will be achieved by:
>
> (a) regulatory stability, transparency and certainty giving businesses the confidence to make long-life investments;
>
> (b) regulated rates of return being commercially realistic and taking full account of the long-term risks to consumers of underinvestment in basic infrastructure; and

> (c) **regulated businesses being confident they will not be disadvantaged in their regulated businesses if they invest in other infrastructure and services.**
>
> 8. That Government also considers that it is important that regulatory control ensure that:
>
> (a) the consumers of regulated businesses are **not disadvantaged by the investments of regulated businesses in other infrastructure and services;**
>
> ... (Vector's emphasis)

[1852] Vector argues that the August 2006 GPS set out a clear policy position: that a regulated supplier should be able to leverage off its regulated businesses in order to benefit the wider New Zealand economy, provided consumers of regulated businesses were not disadvantaged. Moreover, the August 2006 GPS is to be seen as being reflected in, and affecting the interpretation of, s 52A(1)(c), 52T(1)(a)(iii) and s 52T(3).

[1853] Vector also argues ACAM meets the "not disadvantaged" policy of the August 2006 GPS by ensuring that a regulated supplier's unregulated business meets its ICs. Consumers of regulated services would not be worse off than if the unregulated service had not been provided. Drawing the sharing line at that point also complied with s 52T(3), so as to not unduly deter incentives to invest in unregulated businesses. An undue deterrence would be one that went beyond ensuring that the "not disadvantaged" line was observed. Thus, Vector argues that ss 52A(1)(c), 52T(1)(a)(iii), 52T(3) and the August 2006 GPS, read together, direct that regulated suppliers be encouraged to invest in unregulated services (through being able to leverage off existing assets) provided that the consumers of regulated services are not worse off, for example, as a result of cross-subsidisation.

[1854] We have already considered and rejected Vector's argument that the August 2006 GPS is, in effect, to be seen as part of the relevant text, having been "taken-up" by Parliament.

[1855] Turning then to the words of s 52A(1)(c), on a plain meaning, cross-checked with purpose – there recognising the influence the August 2006 GPS had on the drafting of Part 4, and s 52A(1) generally, an interpretation of paragraph (c) which

limits sharing, as a matter of law, in the manner proposed by Vector is not in our view the correct interpretation. Vector argues for a permanent state (at least while this IM prevails) that would mean there was no sharing of economic efficiencies between regulated and unregulated services, and that the consumers of the regulated services would bear the SAC of those services in their entirety without any sharing, notwithstanding the fact that the unregulated service used the relevant assets or services. In such a case, where efficiency gains result from the joint use of assets or sharing of operational expenditure those efficiency gains, by their very nature, are shared. In other words, the plain meaning of s 52A(1)(c) does not, when read in context and purposively, support Vector's argument.

[1856] Vector supports its argument for that approach to interpretation on the basis that what became paragraph (c) had been amended during the drafting process, in response a specific submission by Vector, so as to limit sharing to efficiency gains arising from the supply of regulated services only. As first proposed publically in the April 2007 Discussion Document, what became paragraph (c) referred to sharing "the benefits of efficiency gains with consumers, including through lower prices". As introduced to Parliament paragraph (c) referred to sharing "with consumers the benefits of efficiency gains in the supply of all or any regulated goods or services". As enacted, the paragraph to sharing such benefits of "the supply of regulated goods or services".

[1857] Vector's argument is that the addition of the reference to efficiency gains "in the supply of regulated goods or services" had been added as a result of its submission during the consultation process on the review of the Act, before the Bill was introduced, that sharing should be limited to efficiency gains "achieved within the business".

[1858] We refer to our comments in Part 2.2 of this judgment regarding what we consider to be admissible legislative history material for statutory interpretation purposes. On that basis, we do not think reliance can be placed on this material from Vector.

We note that in *Vector Ltd v Commerce Commission* in the Supreme Court Vector argued against the lawfulness of relying on this type of interpretational material, namely material arising out of exchanges during the drafting process but not before Parliament, that here it said should be relied on. Agreeing with Vector's argument in the Supreme Court, we do not think it is appropriate for courts to interpret the meaning of an enactment on the basis of changes made during the drafting process to the form of that enactment as those changes are said to be "explained" by material of the nature Vector referred us to. The possibility of prolixity and confusion in that interpretational exercise in our view counts against adopting that approach as a pragmatic consideration, to say nothing of the more principled consideration that that material was never before the decision-maker, Parliament.

[1859] The interpretation Vector argues for also overlooks the implicit recognition in s 52T(1)(a)(iii) that common costs are to be allocated between "activities, businesses, consumer classes, and geographic areas". Furthermore, in terms of the overall aim of s 52A(1), namely, that the outcomes that are to be promoted are to be ones consistent with outcomes produced in competitive markets, there is in our view no doubt that in workably competitive markets sharing between businesses would not, as a matter of fact as Vector proposes, be permanently limited to ACAM sharing.

[1860] Nor do we think that Vector's interpretation can be achieved by reliance on s 52T(3). The Commission suggests that s 52T(3) is satisfied if investment in the provision of unregulated goods or services by a regulated supplier is not deterred to any greater extent than it would be in workably competitive markets. Vector's response to that argument is that if that were the case, s 52T(3) would be redundant: s 52A(1) itself calls for workably competitive market consistent outcomes. But s 52T(3) refers to investment by a regulated supplier in the provision of other goods or services including, of course, unregulated goods and services, which s 52A(1) does not specifically deal with.

[1861] We think a reasonable approach to considering s 52T(3) is that, so long as the unregulated service receives some portion of efficiency gains (and thus bears less than its SAC), it potentially has a competitive advantage over a firm that does not have existing regulated service infrastructure to draw upon. If that condition is met,

investment in the unregulated service will not be unduly deterred. It follows that we conclude that the use of ABAA cannot of itself unduly deter investment in unregulated services.

[1862] On the other hand, it is reasonable to expect the unregulated service always to bear its IC: for otherwise ([1809] above), the regulated service would have to bear more than its SAC, with the consequence that consumers of the regulated service would be paying extra to support the unregulated service.

[1863] Even if the August 2006 GPS were, as Vector argues, in some way included in Part 4, that would not in our view support the interpretation Vector argues for. To explain that conclusion we now examine the three passages in the August 2006 GPS on which Vector specifically relies. In each case, it is helpful to refer back to the diagram in [1808].

[1864] First, in paragraph 6 of the August 2006 GPS, is the objective that "regulated businesses ... are able to utilise existing assets to reduce the cost of investing in new infrastructure and to take advantage of economies of scale and scope". The only cost allocation outcome that would prevent any such ability to take advantage of economies would be if the unregulated service had to bear its full SAC (or more), which would occur if all economic common costs were allocated to the unregulated service, and consequently all efficiency gains were reaped by the consumers of the regulated service. That outcome is nowhere proposed in the cost allocation IM. The question is always: what (non-zero) proportion of the efficiency gain should be allocated to the unregulated service?

[1865] Secondly, the paragraph 7(c) objective relates to "regulated businesses being confident they will not be disadvantaged in their regulated businesses if they invest in other infrastructure and services". That could only occur if costs were allocated to the regulated service that were not then included in allowable revenue.

[1866] Thirdly, paragraph 8(a) turns attention to the consumers of regulated services, with the concern that they "are not disadvantaged by the investments of regulated businesses in other infrastructure and services". They would be disadvantaged (by

having to pay higher prices) if the regulated businesses were made to bear more than their SAC. That would occur if more than the economic common costs were allocated to the regulated service. But such an allocation is not the concern of Vector in its appeal.

[1867] To sum up, if the relied-upon paragraphs of the August 2006 GPS were held to be mandatory requirements, they would do no more than require some sharing of economic common costs and efficiency gains between regulated and unregulated services.

[1868] We now turn to Vector's second argument, namely, that its proposal for ACAM produces outcomes more consistent with those produced in workably competitive markets.

ACAM more consistent with workably competitive market outcomes

[1869] Notwithstanding the conclusion we have reached that ACAM as proposed by Vector is not consistent with outcomes produced in workably competitive markets, it may be the case that ACAM is more consistent with those outcomes than the cost allocation IM. That could be the position if the IM were to require materially greater allocation of economic common costs to unregulated services than would be consistent with workably competitive market outcomes. In that case incentives to invest in regulated services would be higher than in workably competitive markets because expected returns would be higher, while incentives to invest in unregulated services would be lower.

[1870] We consider that the question of incentives to innovate and invest in unregulated markets is not addressed in s 52A(1). It is true that the s 52A(1)(a) outcome speaks of incentives to innovate and invest without explicitly limiting the incentives to innovation and investment in regulated services. But Part 4 is about regulated goods and services and s 52A(1) sets out the purpose of Part 4 as being 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. It is concerned with incentives to innovate and invest because innovation and investment

in regulated goods and services are necessary to the long-term benefit of consumers of those goods and services.

[1871] We consider that it is not part of the Part 4 purpose that suppliers of regulated goods and services also have incentives to innovate and invest in unregulated goods and services on similar terms as they are to have incentives in relation to regulated goods and services. Rather, the topic of unregulated goods and services is left to s 52T(3)'s protection against undue deterrence of investment. That said, the question remains whether the IM might over-incentivise investment in regulated services.

[1872] As the Commission acknowledged in its submissions, in many cases the difference in relative demand elasticity between EDB/GPB services and other unregulated services will mean that in workably competitive markets the greater portion of common costs would be allocated to the EDB/GPB service. However, experts advising the Commission and submitters were agreed that where two services were offered together in a workably competitive market, consumers of both services should expect to share in some of the benefits of this arrangement in the long run (where such benefits are to be gained). The Commission referred to the comment of a number of experts in support of that argument. It is sufficient to refer to comments from Mr Morten, of Synergies Economic Consulting assisting Vector, who, reacting to a remark by one of the Commission's Experts, observed:[977]

> Well certainly I think the starting point is to acknowledge the correctness of John Small's point, that in reality everyone would benefit from the movement towards unregulated services. Unfortunately for regulation and Regulators, and in fact regulated businesses, the key constant is actually uncertainty, and we really don't know and we really have no way of definitively establishing exactly how to fine-tune those incentives to deliver the outcomes that you want ...

[1873] Here, the ACAM and OVABAA alternatives the Commission has provided are important.

[1874] Falling below the materiality thresholds essentially reflects two possible circumstances:

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[977] Input Methodologies Conference Gas Pipeline Services *Final Transcript* (16 September 2009) at 180, 54/466/027527

(a) first, the early days of the provision of an unregulated service alongside a regulated service but where the unregulated service has the capacity to grow to become a contributor to the combined businesses above those thresholds; and

(b) second, where provision of an unregulated service continues to be an incidental aspect of the regulated supplier's business.

[1875] In both those circumstances, ACAM may be applied. That is supplemented by the OVABAA, namely, that ABAA need not be applied where, if a regulated supplier was required to apply ABAA, it would not provide the unregulated service.

[1876] Combined with the fact that, under DPP regulation, price-quality paths are not required to be reopened during a regulatory period, we think those provisions do provide for outcomes – in terms of sharing efficiency gains – that are more consistent with those produced in workably competitive markets than the general application of ACAM would provide. This is despite Vector's argument that it would be "blind chance" if ABAA, in allocating accounting shared costs, allocated economic common costs, and thus efficiency gains, in the manner that workably competitive markets would achieve. Would ABAA allocate a smaller proportion of economic common costs to regulated services than the relatively high proportion expected in workably competitive markets where one service has low demand elasticity and another has high demand elasticity? On the evidence before us it is impossible to say. But some degree of sharing of efficiency gains would occur in workably competitive markets, with implications for incentives to invest and innovate. The mandatory use of ACAM would not allow any such sharing.

[1877] We are therefore not satisfied that a materially better cost allocation IM would provide for ACAM sharing on a permanent basis as advocated by Vector. In coming to that conclusion, we note that there are already well-established unregulated services being supplied alongside regulated services. No argument has been put to explain why efficiency gains associated with such provision should be permanently exempt from sharing.

[1878] We now turn to Vector's alternative relief.

[1879] Vector submits that the Commission's requirement that an investment would be unduly deterred "solely" because of the application of ABAA is an unreasonably high threshold and not a practical test for the purposes of a directors' certification – requiring a supplier to establish ABAA as a sole cause ignores the realities of business decisions where a decision to invest will involve a multitude of factors which together may tip the balance. As Vector put it, a test:

(a) involving a threshold that imputes that the cost allocation methodology is the sole certifiable reason for not preceding with an investment is a test that, practically, could never be achieved; and

(b) requiring directors to identify the minimum reduction in allocated costs a business could bear is an unreasonably high test.

[1880] However, as the EDBs-GPBs Reason Paper explains:[978]

> The use of the term 'solely' in the definition of 'unduly deterred' is not intended to mean that the cost required to be borne as a result of an allocation is the *only* factor that results in an unregulated service being discontinued or not provided. It is intended to capture situations where, 'all other things being equal', the pivotal reason an unregulated service would be discontinued or not undertaken is its inability to bear the shared costs allocated to it as a result of applying the ABAA. In other words, after other factors have been taken into account, the amount of shared costs implicitly allocated to an unregulated service using the ABAA are the pivotal factor leading directors to discontinue or not provide the unregulated service.
>
> The Commission's definition of 'unduly deterred' (as per the IM Determination) does not introduce an unknown or unusual level of complexity for directors. Judgement is commonly exercised in commercial situations that have complexities analogous to those inherent in the definition of 'unduly deterred'. Furthermore, of the factors directors are required to take into account when approving a business plan, the shared costs borne are readily forecastable.

[1881] Having regard to the Commission's above quoted explanation of "solely" in the definition of "unduly deterred", we are not satisfied that substituting "significant factor" in lieu of the Commission's "sole factor" as advocated by Vector would

978 EDBs-GPBs Reasons Paper at [B6.11]-[B6.12], 3/7/001248-9.

produce a materially better IM. Mr Galbraith concedes that the term "significant factor" was not defined in the alternative IM advanced by Vector. The introduction of such an uncertain concept is undesirable. Moreover, we think a firm should be able to identify the “sole” factor reasonably easily: that is, the question simply becomes whether adopting the ABAA sharing approach means that the firm would decide not to enter into the provision of the relevant unregulated service.

[1882] Likewise, we are not satisfied that changing the basis of the directors' certification as set out in the cost allocation IM to give it prima facie correctness, as advocated by Vector, would be materially better. As we see it, the certification should address the information asymmetry between a regulated supplier and the Commission in a cost effective way. We do not see the certification as particularly onerous. As it was explained to us by Mr Laurenson for the Commission, the certification process would impose on an individual director an obligation akin to his or her obligation when signing a prospectus. That is, the Commission would assess the certification not on the basis of what transpired after the certificate was given, but on the basis of what the directors knew, or ought to have known, when it was given. Yes, there are penalties attaching to contravening an ID requirement (ss 86, 86B and 103(2)) but such penalties also attach to a breach of a director's duties under the Companies Act 1993. In any event, were the Commission to decline a certificate, its decision would, by our assessment of the Act, be a decision made under Part 4 that is appealable.

[1883] Nor are we satisfied that ACAM should be applied to allocate all common costs once a directors' certificate is provided, as advocated by Vector. As outlined above, where the directors of the regulated supplier certify that an ABAA allocation of common costs to an unregulated service would be the sole cause of that service to be discontinued or not provided, OVABAA may be used. As the Commission's submissions explain:

> OVABAA currently allows the common costs that have been allocated to the unregulated service under ABAA to be reduced, **by application of ACAM, to the amount at which this unregulated service would no longer be “unduly deterred**” (emphasis added).

To go beyond that and apply ACAM to all common costs once a directors' certificate is provided would not be materially better at meeting the Part 4 purpose. As the Commission's submissions put it quite succinctly:

- it would not promote the long-term benefit of consumers in regulated markets in that those consumers would not receive any of the efficiency gains from the investment in the regulated and unregulated services together; whereas

- under the Commission's approach, consumers of the regulated service will receive some of those efficiency gains over time (to the extent that the sharing does not "unduly deter" investment in the unregulated services).

[1884] We are not persuaded that the introduction of a third materiality threshold, namely a 10% of gross profit one, would produce a materially better cost allocation IM, in terms of the s 52T(3) direction. It was not explained to us how such a threshold might, in fact, be applied. Moreover, the Commission had considered the possibility of such a threshold in reaching its decisions on its cost allocation IM. It set out its reasons for not including such a threshold in the EDBs-GPBs Reasons paper in some detail.[979] Vector did not engage with that reasoning at all.

Outcome

[1885] For the reasons expressed above, we reject Vector's s 52Z and s 91(1B) cost allocation appeals in their entirety.

[979] EDBs-GPBs Reasons Paper at [B3.19]-[B3.26], 3/7/001239-40.

PART 9 – VECTOR'S REGULATORY PROCESSES AND RULES APPEAL

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Introduction

[1886] Section 52T(1)(c) provides that the IMs must include:

> (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 ...

[1887] It is accepted that the phrase "such as" means that a regulatory processes and rules IM may deal with matters additional to those explicitly referred to in s 52T(1)(c)(i) and (ii).

[1888] The Commission has determined regulatory processes and rules IMs for DPP/CPP regulation of the EDBs and GPBs which deal with:

(a) matters specified in s 52T(1)(c)(i) and (ii);

(b) the aggregation of price quality paths after an amalgamation between regulated suppliers; and

(c) how an IRIS will operate for a supplier on a CPP.[980]

[1889] Relevant to a consideration of Vector's appeal, the IMs are in the same form and are referred to by us as a single IM. For ease of reference, we cite only the regulatory processes and rules IM for EDBs.

[1890] Vector appeals against the IM to the extent it deals with identifying circumstances in which a DPP may be reconsidered and with the provision of an IRIS.[981] Vector does not appeal against the reconsideration provisions for a CPP. We deal with each aspect of Vector's regulatory processes and rules IM appeal in turn.

Reconsideration of DPPs

The Commission's decision

[1891] Relevantly, a DPP or CPP may only be reconsidered during a regulatory period:

(a) if a request is made by the Electricity Authority or equivalent body under the Gas Act;[982] or

(b) if an IM is changed following a successful appeal under s 52Z;[983] or

(c) as provided by the Commission in a regulatory processes and rules IM.

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980 Decision [2012] NZCC 26, 67/716/033593, Decision [2012] NZCC27, 67/715/033409 and Decision [2012] NZCC 28, 67/717033803. Each is a re-determination of an earlier determination as required by the High Court in *Vector Limited v Commerce Commission*, HC Wellington CIV-2011-485-536, 26 September 2011.

981 See Vector Appeal 259 at [EDS.RRP(2)]-[EDS.RRP(3)] and, for Vector's error of law appeal, Vector Appeal 258 at [3].

982 Sections 54V(5) and 55I(3).

983 Section 53ZB.

[1892] The regulatory processes and rules IM provides that a DPP and a CPP may be reconsidered if:[984]

(a) an error[985] is discovered in the determination; or

(b) the supplier has provided false or misleading information to the Commission which the Commission has relied upon in making its determination.

[1893] For a CPP, as relevant to Vector's appeal, the IM additionally provides for reconsideration if one of the following occurs:[986]

(a) a change in legislative or regulatory requirements (change event); or

(b) a catastrophic event.[987]

[1894] The Commission's reasons for providing additional reconsideration triggers for CPPs but not DPPs are set out in the following paragraph of the EDBs-GPBs Reasons Paper:[988]

> The Commission has decided, given that:
>
> - a supplier has the option to apply for a CPP to replace its DPP to address the financial and/or quality implications of significant and unforeseen events;
>
> - the DPP does not have an efficient baseline of forecast expenditure against which to assess the incremental costs of responding to a regulatory change or catastrophic event; and
>
> - the costs of reconsidering price-quality paths would be significant and potentially comparable to the costs of determining CPPs,

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984 Decision [2012] NZCC 26 at cl 4.5.2, 67/716/033679.

985 An error is defined to mean incorrect data relied on by the Commission unintentionally and determined by the Commission to be one that has a cost impact of at least 1% of the aggregated notional allowable revenue for the affected years: EDBs-GPBs Reasons Paper at [8.4.5], 3/7/001184 and Decision [2012] NZCC 26 at cls 4.5.1 and 5.6.3, 67/716/033678-79 and 033734-35.

986 Decision [2012] NZCC 26 at cl 5.6.4, 67/716/033735.

987 The terms "change event" and "catastrophic event" are also defined (cl 5.6.1 and 5.6.2, 67/716/033734-5) by reference to events having cost impacts of at least 1% of the aggregate notional allowable revenue for the affected years.

988 EDBs-GPBs Reasons Paper at [8.4.20], 3/7/001188.

> the reconsideration provisions for a DPP will not be widened beyond taking account of material errors in determining the price-quality path or reliance on false or misleading information.

[1895] The Commission also had in mind that the DPP regime allows a supplier to pass-through two categories of costs – pass through costs[989] and recoverable costs[990] during a regulatory period once the amount of those costs are known.

[1896] The two categories do not, however, embrace a catastrophic event or a change event. That is because although the catastrophe or change may be outside the supplier's control, costs associated with responding to it are not.[991]

Vector's appeal

[1897] Vector argues that the Commission has taken an overly narrow approach to the reconsideration of a DPP – an approach that is inconsistent with s 53K and the overall scheme of Part 4. Expanding on its submission Vector:

(a) lists, in an extensive footnote to its submission, examples of a range of statutory requirements for a CPP application that add risk and cost for the supplier that, it claims, Parliament deliberately introduced because DPP regulation is intended as the primary form of price control; and

(b) contends that in the case of a catastrophic event or a change event, it would be materially better for the IMs to provide for reconsideration of a DPP rather than rely on the CPP process because the risks, costs, uncertainties and timing difficulties associated with the CPP process will inevitably mean that some businesses will in effect be forced to stay on a defective DPP.

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989 For example, Commission levies under s 52ZE and levies payable under the Electricity Industry Act 2010 and the Gas Act 1992. EDBs-GPBs Reasons Paper at [8.3.30]-[8.3.31], 3/7/01180.

990 For example, costs associated with a CPP application and transmission charges payable by an EDB under the Transmission Pricing Methodology. Recoverable costs may be partially controllable by a supplier but the regulatory cost of providing an incentive for the supplier to manage them outweighs the benefit of doing so. The pass-through of some recoverable costs is subject to approval by the Commission. EDBs-GPBs Reasons Paper at [8.3.34]-[8.3.35], 3/7/001181.

991 EDBs-GPBs Reasons Paper at [8.3.38], 3/7/001182.

[1898] It is Vector's submission that a supplier, facing such an event, should not have to also face the expense and uncertainty associated with applying for a CPP. A determination that the materiality trigger (1% of revenue) had been met would provide an appropriate reference point by which the DPP could be reconsidered for a supplier. There is, in Vector's submission, no reason why suppliers' capex forecasts, as used to set their DPPs, could not be used for the reconsideration process.

[1899] Vector also submits that:

(a) a change event that has a material effect on costs is likely to affect most if not all suppliers and it would be unworkable for a large number of suppliers to apply for a CPP, particularly where the effect of the change is likely to continue over more than one regulatory period; and

(b) likewise, a catastrophic event is likely to affect a number of suppliers over more than one regulatory period.

In those circumstances, reconsideration of the DPP would be materially better than requiring a supplier to go through the CPP process.

Analysis

[1900] The Commission's first reason for providing additional reconsideration triggers for CPPs but not DPPs – that a supplier having the option to apply for a CPP to replace its DPP to address the financial and/or quality implications of significant and unforeseen events – is subject to two qualifications. First, that a supplier may make only one CPP proposal during a regulatory period. Secondly, a supplier may not make a proposal within 12 months before a DPP is due to be reset.[992]

[1901] Thus, for example, a supplier which had made an unsuccessful CPP proposal and subsequently experienced a catastrophic event early in a regulatory period would have no option but to continue under a DPP that takes no account of its peculiar

[992] Section 53Q(3).

circumstances. Likewise a supplier who experienced a catastrophic event within 12 months before its DPP is due to be reset.

[1902] Unlike another qualification on CPP proposals – the Commission not being required to consider more than four proposals in any one year[993] – the above qualifications cannot be waived by the Commission. The qualifications impugn the Commission's first reason for providing additional reconsideration triggers for CPPs but not DPPs.

[1903] On the basis that the Commission distinguishes between the circumstances in which DPPs and CPPs may be reconsidered, it is also necessary to assess the significance of the fact that the Commission is not required to consider any more than four proposals for a CPP relating to the same type of regulated services in any one year.

[1904] By reason of that distinction alone, and applying the Commission's own reasoning, a materially better IM would be one that provides for automatic reconsideration of a DPP where a material change in legislative or regulatory requirements or a catastrophic event affected more than four suppliers of the same type of regulated goods or services subject to a DPP. The Commission says the answer to that is that it is unlikely it would elect to rely on that provision where there is a material change or a catastrophic event occurred.[994] That approach does not promote certainty.

[1905] More generally, and more relevantly we think, the Commission was concerned because of the absence, in DPP regulation, of an assessment of forecast *efficient* expenditure in determining the price-quality path. The Commission observed in the EDBs-GPBs Reasons Paper as regards its decisions generally on rules and processes for IMs:[995]

> Without a 'baseline' to assess proposed changes in expenditure or claimed efficiency gains against, prices may end up being higher than is needed to be consistent with s 52A(1)(d). This may arise through suppliers being

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993 Section 53Z(1).
994 EDBs-GPBs Reasons Paper at [8.4.29], 3/7/001190.
995 EDBs-GPBs Reasons Paper at [8.1.11], 3/7/001169.

> rewarded for efficiency gains that they have not made, or for suppliers being compensated for additional costs where some or all of the costs are already sufficiently compensated under a DPP.

[1906] Reflecting that general concern in the specific context of trigger events for the reconsideration of DPPs, the Commission did not accept that, under a DPP, the IC of the legislative change or catastrophic event could simply be ring-fenced and its recovery allowed. Whilst a supplier might be able to identify costs that were associated with responding to such an event, that did not mean that all of those costs should be passed through to consumers. Likewise, costs provided for under a DPP may implicitly provide for costs of responding to legislative or regulatory changes or, to an extent, catastrophic events.

[1907] We acknowledge the Commission's in principle point, that a DPP – as a low (at least in theory) cost and to an extent one size fits all type of regulatory control – is less susceptible to being "reconsidered" by reference to an event affecting one or a small number of individual suppliers. At the same time, given the definitions of change event and catastrophic event, the trigger level is an objective one. Establishing that the trigger level has been met would provide a basis for considering the on-going applicability of a DPP to the supplier or suppliers in question. Furthermore, we would have thought that what would appear to be the Commission's principal concern, namely that an adjusted DPP might end up being higher than was appropriate because a DPP does not necessarily involve an assessment of forecasts of efficient expenditure, could – in what we take to be the reasonably unusual circumstances which constitute either of the material legislative or regulatory change or catastrophic trigger events – be addressed in the particular situation. Our essential point of difference with the Commission, and where we agree with Vector, is that given the nature of the trigger events (being quite beyond the control of the affected supplier or suppliers and objectively defined and measurable), providing for automatic reopening is materially better than invoking the CPP pathway.

[1908] Nor do we think so providing would be inconsistent with either the certainty or less cost aspects of a DPP. If, as the Commission submits, the cost of both approaches is likely to be similar, then that is not a basis for choosing between them.

Nor, again referring to the objective nature of the trigger events, does their provision detract from the certainty that a DPP once set will provide.

Outcome

[1909] We conclude that each of the regulatory process and rules IMs would be materially better in terms of the s 52A and/or s 52T purpose(s) if it were amended in terms set out in schedule 2 of Vector's Draft Orders for Relief dated 11 February 2003[996] so that a DPP could also – like a CPP – be reconsidered where either:

(a) a catastrophic event; or

(b) a change event

has occurred.

[1910] We therefore allow Vector's appeal against the rules and processes IM to the extent that it relates to the circumstances in which a DPP may be reconsidered.

The IRIS

What is an IRIS?

[1911] In DPP/CPP regulation, forward looking price paths set for a regulatory period are seen as incentivising a supplier to make efficiency gains. Pending the reset of the price path at the end of the regulatory period, a supplier effectively retains the benefit of efficiency gains not reflected in its forward-looking price path for that period, subject to the impact of the X factor.

[1912] This leads to the proposition that whilst a supplier has strong incentives at the start of a regulatory period to make such efficiency gains, those incentives weaken as the regulatory period progresses and the point at which those gains will be shared with consumers, ie at the commencement of the next regulatory period (and the price path reset), draws closer.

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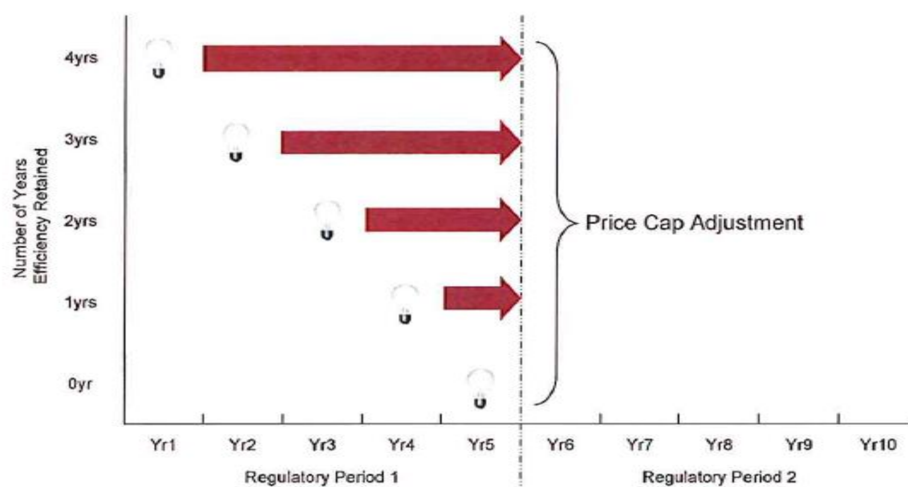
996 Vector's hand-up No 169 dated 11.02.13, recorded as handed-up on 15.2.2013.

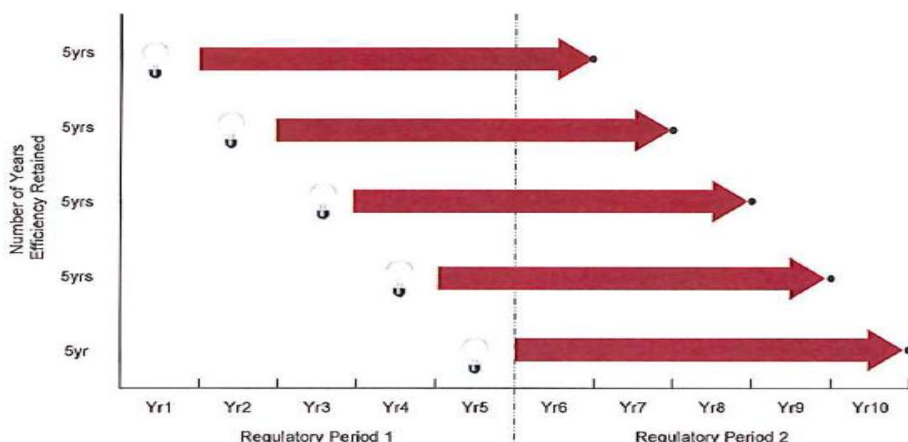
[1913] The IRIS allows a supplier to retain the benefits of any non-forecast efficiency gains for a pre-specified number of years, irrespective of when they occur during the regulatory period. This approach is seen as maintaining consistent incentives for a supplier to achieve efficiency gains throughout a regulatory period.

[1914] Two diagrams from the EDBs-GPBs Reasons Paper illustrate these concepts:[997]

Retention of Efficiency Gains under Traditional CPI-X Regulation



Rolling (5 year) incentive scheme



[1915] We make two preliminary observations:

(a) First, a regulated supplier has less incentive to make efficiency gains than a firm in a workably competitive market. In a competitive

997 EDBs-GPBs Reasons Paper at figs 8.1 and 8.2, 3/7/001192-3.

market, a firm will retain and attract customers by lowering prices to reflect efficiency gains. But, not facing competition, a regulated supplier does not have such an incentive. Moreover, where a regulated supplier does make efficiency gains, it has no particular incentive to lower its prices to reflect those gains. Rather, its natural incentive would be to retain any such gains as increased profit.

(b) Second, there is little incentive on a regulated supplier subject to price path regulation to itself forecast efficiency gains, as the benefit of those gains would be shared in advance with consumers by being incorporated in a (lower) forward looking price/revenue path.

The Commission's decision

[1916] The Commission acknowledged the use of schemes similar to its IRIS by overseas regulators to equalise incentives on suppliers to pursue efficiency gains throughout a regulatory period. But, the Commission reasoned, an IRIS was contingent on having reliable cost forecasts for the regulatory period. That was required to make it possible for the regulator to assess and reward the extent of any unforecast efficiency gains achieved by suppliers. In the EDBs-GPBs Reasons Paper the Commission states:[998]

> An appropriate IRIS was one that:
>
> (a) only rewards genuine efficiency gains;
>
> (b) takes into account both efficiency gains and losses; and
>
> (c) results in efficiencies being shared with consumers in a reasonable time-frame, while providing suppliers sufficient incentives to pursue efficiencies.

[1917] On that basis, the Commission determined an IRIS for CPP regulation of the EDBs and GPBs, but not for DPP regulation. The IRIS provides that:[999]

> The efficiency gain or loss for a particular regulatory year will be calculated as the difference between actual and forecast controllable operating

[998] EDBs-GPBs Reasons Paper at [8.5.7], 3/7/001193.

[999] EDBs-GPBs Reasons Paper at [8.5.8]-[8.5.10], 3/7/001193; Decision [2012] NZCC 26 at cl 3.3.1, 67/716/033663.

> 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 are carried forward to the subsequent five years, only positive net balances of such gains and losses in years in the next regulatory period are treated as recoverable costs.
>
> The length of the carryover period (i.e. the length of time suppliers are allowed to retain the efficiency gain before it is shared with consumers) is five years.

[1918] The IRIS is confined to opex savings because they are more likely to reflect long-term reductions in a supplier's cost base and result in long-term benefits for consumers than a one off capex saving. As explained in the EDBs-GPBs Reasons Paper:[1000]

> For capex, any difference between the supplier's actual costs in any given year and the forecast for that year is likely to be due to the supplier's performance in the year in question. While a supplier might find a lower cost way of delivering a capex project in one year, this is unlikely to have much of an effect on the costs of delivering capex projects in subsequent years. It is therefore appropriate to simply assess a supplier's capex performance in each year relative to the forecast for that year.
>
> By contrast, opex savings in any given year are more likely to reflect persistent reductions in the supplier's cost base. If a supplier reduces staff numbers in year one of the regulatory period, for example, then opex will likely be lower than forecast not just in that year but in subsequent years too. Similarly, if opex in one year goes up, costs in later years are likely to be higher as well. As a result, when assessing the extent of a gain relative to the forecast, regulators tend to focus their attention on incremental changes in actual opex from one period to another, rather than simply on opex performance in the year relative to the forecast for that year. This ensures that suppliers have an incentive to improve performance year-on-year, while ensuring that past gains or losses are not double counted.

[1919] Controllable opex is determined by: [1001]

(a) a supplier including opex forecasts for each year of the upcoming regulatory period in its CPP proposal, identifying those which are within its control and hence able to be subject to the IRIS; and

(b) the Commission then determining the opex allowance for each year of the regulatory period and the costs subject to the IRIS.

1000 EDBs-GPBs Reasons Paper at [8.5.12]-[8.5.13], 3/7/001194.
1001 EDBs-GPBs Reasons Paper at [J3.9], 3/7/001602.

[1920] Thus, to ensure that an IRIS rewards only true efficiency gains, the process leading to its formulation involves a high level of information to be provided by the supplier and auditing of that information by the Commission.

[1921] The IRIS is said to be asymmetrical because, across regulatory periods, efficiency losses are only taken into account to the extent there are available efficiency gains in a given year to offset them. A carried forward efficiency loss from a past regulatory period cannot create a negative balance in any year in the new regulatory period: it can only reduce the efficiency gains for that year to zero.

Vector's Appeal

[1922] As now relevant Vector argues, by reference to ss 52A(1)(b) and (c), that a materially better IRIS would:

(a) provide for an IRIS methodology for DPPs as well as CPPs, allowing efficiency gains to be retained for a period of at least five years irrespective of when the gain is made in the regulatory period;

(b) be available in respect of all efficiency gains, not just gains in respect of "controllable" opex as defined by the Commission (or alternatively, to the extent that the controllable/non-controllable distinction is to be maintained, the Commission should provide clarity around what categories of opex costs will be determined as controllable, to provide suppliers with more certainty and to reduce the costs of determining CPP forecasts); and

(c) allow for efficiency benefits associated with mergers and acquisitions to be retained for a 10-year period, in order to provide appropriate incentives for pro-efficient merger activity.

[1923] We consider each of those matters in turn.

Extend the IRIS to DPP regulation?

[1924] The Commission considered that it did not have sufficient reliable supplier-specific costs forecasts for a regulatory period for DPP regulation, and that accordingly an IRIS was not suitable for DPP regulation.[1002] The Commission's reasons are best explained in the EDBs-GPBs Reasons Paper:[1003]

> ... DPPs are not set from a baseline of assessed forecast efficient expenditure. Therefore, the ability to apply an explicit IRIS by which actual costs are reconciled to forecast information is limited (i.e. the ability of the Commission to identify true efficiency gains is limited due to the practical constraints of how a DPP is intended to operate). However, as previously noted in the Emerging Views Paper, the sharing of the benefits of efficiency gains (including those from mergers and acquisitions) can be taken into account through starting price adjustments at each DPP reset. In light of this – while there would be value in such a scheme if it were feasible – it is not possible to determine a suitable rolling incentive scheme that will apply to the DPP.
>
> On the other hand, as a CPP is a customised supplier-specific path determined using a building blocks analysis, a baseline allowance for expenditure suitable for an IRIS can be more readily established. As part of a CPP proposal, suppliers will be requested to identify uncontrollable and controllable costs. The Commission will undertake an assessment of these costs, including the extent to which they are controllable and should qualify for the IRIS, and will determine the quantum that is allowable for IRIS purposes for each year of the regulatory period.

[1925] We agree that the Commission's identification of the existence of forecasts of efficient expenditure, available in CPP regulation but not in DPP regulation, supports its conclusion for providing an IRIS for the former, but not the latter.

[1926] Vector's argument that the Commission's premise that DPPs are not set from a baseline of assessed forecast efficient expenditure "no longer holds", because the Commission now proposes to base DPPs on forecast expenditure, suffers from two defects.

[1927] First, in December 2010 when the Commission determined the IM that was not the position. We accept the Commission's submission that it did not set the s 52T(1)(c) IM on the basis of any firm view of the final structure of the DPP. The Commission at that point proposed an ROI band approach to setting starting prices,

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[1002] EDBs-GPBs Reasons Paper at [8.5.11], 3/7/001193.
[1003] EDBs-GPBs Reasons Paper at [8.5.22]-[8.5.23], 3/7/001196.

rather than a supplier-specific BBAR approach. By reference to the closed record, we do not think the Commission can be criticised because it based its decision in December 2010 on matters as they stood at that time.

[1928] Secondly, the distinction remains that a CPP calls for interrogated forecasts of *efficient* expenditure: in DPP regulation, a supplier simply provides its own forecast. That distinction is material. Vector's alternative, on the other hand, appears to ignore the relevance of a baseline by treating any return above a supplier's regulatory WACC as an efficiency gain, when that is not necessarily the case. For example, a return above a supplier's regulatory WACC may result from a capex deferral.

Extend the IRIS to all expenditure?

[1929] The Commission's view that the IRIS should not apply to capex accords with the views, expressed by participants at the Gas Pipelines Services day of the IM conference, that some overseas regulators experienced significant practical difficulties in applying efficiency mechanisms based on capex. In the words of Mr Balchin at that conference, they "created quite a perverse incentive for companies to defer capex from one period to the next".[1004]

[1930] Vector regards that concern as misplaced and submits that there is little incentive for capex deferral under either a CPP or DPP. Rather, in its view, capex reductions against forecast were likely to represent the achievement of the same asset base outcome for lower cost. We are not persuaded. We also think, as the Commission reasoned, that compared with capex savings in a given year, opex savings in a given year are more likely to reflect persistent reductions in the supplier's cost base.

[1931] Nor do we consider, in terms of the Commission's 2010 decision, that a materially better outcome would be achieved if the Commission were required to attempt to define in advance the categories of opex costs that are controllable. As it stands, the EDBs IM provides that a supplier's proposal for a CPP must include a description of the types of controllable opex and justification for why that opex

[1004] *Input Methodologies Conference: Gas Pipeline Services Transcript* (16 September 2009) at 170, 54/466/027517.

should be determined as controllable opex, including a description of how the EDB is able to control the amount of opex.[1005] While this approach leaves scoping controllable opex with the supplier, sensible administration suggests that is appropriate because it is the supplier, in the first instance, which is in the best position to judge what may be controllable opex, free from the constraints of a Commission-imposed definition.

Ten-year timeframe for merger and acquisitions gains

[1932] Vector seeks a 10-year period for merger and acquisition efficiency gains because of what it sees as a fundamental distinction between the incremental changes to existing business operations that are the subject of the "business as usual" IRIS mechanisms, and a transformative change such as a merger or acquisition. It submits that incremental changes to existing operations involve lower levels risk, whereas risks around mergers and acquisitions are significantly higher than "business as usual" IRIS mechanisms. There are, Vector submits, significant risks that mergers and acquisitions would fail to deliver expected synergy gains. Therefore, suppliers generally apply a discount factor to the expected efficiency gains and, if limited to a five-year period, acting rationally a supplier may pay only a small premium on the purchase price to secure the gain giving rise to a risk that pro-efficient transactions may not occur. Thus, a retention period of 10 years is appropriate.

[1933] The Commission submits that the 10-year period proposed by Vector is based on a misunderstanding of the operation of the price paths. Efficiency gains not realised within a five-year regulatory period are not shared with consumers until the end of the regulatory period in which they materialise. This is explained in the following passage in the EDBs-GPBs Reasons Paper:[1006]

> Following a merger or acquisition part-way through a regulatory period, under the IMs suppliers are not required to reallocate their costs and reflect any changes in shared cost costs in their prices (e.g. by re-opening their price path). For transparency, however, suppliers must report their actual costs as part of information disclosure. The effect of this is that suppliers may retain any benefits from efficiencies resulting from the transaction, since they may 'double count' costs and hence recover the shared costs more than once from consumers of regulated services. The ability to retain these gains provides

[1005] Decision [2012] NZCC 26 at sch D16, 67/716/033776.
[1006] EDBs-GPBs Reasons Paper at [3.3.28], 3/7/001063 (footnotes omitted).

> the incentive to achieve these efficiencies, consistent with s 52A(1)(c). At the end of the regulatory period the Commission resets the price path through starting price adjustments under a DPP or a new CPP. Through this the benefits from efficiency gains made in the previous period are shared with consumers. If efficiencies are not achieved until the next regulatory period, or additional efficiencies are made in subsequent periods these would be passed on in subsequent resets.

Analysis and outcome

[1934] We simply do not have any detail as to how Vector's proposed 10-year retention period for efficiency gains resulting from mergers or acquisitions might work. Moreover, and as the Commission points out, Vector seems to misunderstand the significance of the five-year period and DPP resets.

[1935] The essence of the Commission's decision, which we emphasise was made in December 2010 based on the information available to it at that time, is found in the following submission for the Commission:

> The Commission's submission is that while rolling incentive schemes are generally desirable, their design and implementation is not straight forward. The Commission is not satisfied that it could, at that early stage of the regime, design an IRIS of wider application that would promote the objectives in s 52A(1)(a) to (d).

[1936] We see no reason not to accept that submission. By reference to that conclusion, and to the foregoing analysis of the more specific challenges by Vector to the IRIS, we are not satisfied that an IRIS extended and amended in the way Vector proposes would produce a materially better regulatory processes and rules IM.

[1937] We were advised during the hearing that the Commission is consulting on IRIS issues with a view to the possible extension of the current IRIS. At future IM review intervals, the Commission will be expected to have considered these issues further, as it told us it would.

PART 10 – WELL'S CAPEX ASSET VALUATION APPEAL

Outline

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WELL's appeal **631**
Analysis and outcome **632**

The Commission's decision

[1938] DPP regulation is forward-looking, ie it involves setting a future price path at the start of a (five-year) regulatory period. The question arises, therefore, as to how the value of assets acquired during that period – that is capex, is to be reflected in the price path.

[1939] The Commission and WELL agree that a forecast of capex is required for that purpose.

[1940] The Commission makes that forecast as part of its s 52P price path determination, in terms of the s 53P(3)(b) assessment of profitability. In setting the DPPs in 2012 for the 2013 price-path reset, the Commission in fact used suppliers' own asset management plans prepared under the existing ID regulations. Its approach to estimating capex for future price-path resets remains to be determined.

WELL's appeal

[1941] Although not immediately obvious to us, WELL's appeal is based on the single ground that the Commission was, pursuant to the s 52T(1)(a)(ii) requirement for an IM dealing with valuation of assets, required to provide in that IM its forecast capex methodology.[1007] In other words, WELL's argument is that for DPP regulation the asset valuation IM must – as a matter of statutory interpretation – "value" capex and hence provide the basis upon which a DPP is to reflect capex during a regulatory period. That is not, WELL argues, a matter that can be dealt with by the Commission in its s 52P determination, with – as currently provided for in the DPP

[1007] See WELL Appeal 2393 at [4.2].

asset valuation IMs – the Commission's estimate of capex for a regulatory period then being reflected in the asset valuation IM.

Analysis and outcome

[1942] This appeal was complicated by a number of procedural and definitional issues.

[1943] The Commission responded to WELL's capex asset valuation IM appeal in the first instance in the same manner as it responded to Vector's SPA IM appeal. That is, it raised the same procedural and jurisdictional objections. We dealt with those issues when considering Vector's SPA IM appeal and do not repeat them here. Our reasoning in that appeal applies equally to the Commission's procedural and jurisdictional objections to WELL's capex IM appeal.

[1944] The definitional issues arose because, for most of the argument we heard, we understood – naturally we would say based on the way WELL had phrased its written and oral submissions – that WELL was not only arguing that the DPP asset valuation IM was required to deal with capex issues but also that, to the extent it did in fact do so – by incorporating the Commission's s 53P(3)(b) capex estimate, it did not do so in a way that met the requirements of s 52T(2). In his submissions in reply, Mr Oliver made it clear, however, that WELL's appeal was brought by reference to s 52T(1)(a)(ii) only, and not by reference to s 52T(2). To avoid further complicating matters, we say nothing further on that point. We therefore deal with Vector's capex appeal in the way it was finally left with us.

[1945] In our view the position is relatively clear.

[1946] Like the Commission, we do not consider that issues of forecast capex are asset valuation issues. Forecast capex may, during a regulatory period, need to be appropriately reflected in the RAB so that the DPP will provide for prices and revenue to reflect capex. But that is not to say that forecasting capex is an asset valuation exercise. On the contrary, in our view the two are to be distinguished. Forecasting capex is just that: assessing expenditure to be made in the future for the

acquisition of assets. Asset valuation responds to the assets present on a firm's balance sheet.

[1947] Also like the Commission, we think the express requirement now found in s 54S that a capex IM be determined for the IPP regulation of Transpower supports that conclusion. Section 54S did not originally appear in Part 4. It was introduced when responsibility for approving grid upgrade proposals by Transpower was transferred from the Electricity Commission to the Commission on 1 November 2010. There would have been no need for that provision if, as WELL argues, issues of capex were required to be provided for by the asset valuation IMs themselves.

[1948] Nor do we think WELL's proposed approach to capex as sought in its relief would, in any event, be materially better. WELL proposes relying on suppliers' own forecasts, as used in the ID, backward-looking, context. Taking that approach in a DPP, forward-looking context, gives rise to considerable gaming risks. Remitting the proposal to the Commission, for development of unspecified ways of addressing those risks, is in our view beyond the referral-back process provided by s 52Z(3).

[1949] For all these reasons, we dismiss WELL's capex asset valuation IM appeal.

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PART 11 – RESULTS AND COSTS

Outline

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Outcome overall

[1950] As can be seen, we dismiss all of these appeals against the Commission's IM determinations, except that we allow:

(a) that part of the Airports' asset valuation IM appeals that relate to the date for the initial MVAU valuation of the Airports' land assets; and

(b) that part of Vector's regulatory processes and rules IM appeal relating to the reconsideration of DPPs.

Orders

[1951] On that basis we invite, as we were requested to, submissions – preferably in agreed form – from the Commission, Vector and the Airports as to the appropriate form of our orders under s 52Z(3). We suggest– based on the Airports' and Vector's proposed relief – that those orders provide:

(a) for the Airports asset valuation IM (Decision 709) to be referred to the Commission pursuant to s 52Z(3)(b)(iii) with a direction that the Commission amend that IM to provide that the initial RAB value for land assets shall be the MVAU value of the land (as determined in accordance with Schedule A of that IM) as at the last day of disclosure year 2010 for each Airport; and

(b) for the amendment, pursuant to s 52Z(3)(b)(i), of Part 1 subpart 5 of the regulatory processes and rules IMs for:

(i) Electricity Distribution Services (Decision [2012] NZCC 26);

(ii) Gas Distribution Services (Decision [2012] NZCC 27); and

(iii) Gas Transmission Services (Decision [2012] NZCC 28),

in the terms set out in Schedule 2 of Vector's Draft Orders for Relief dated 11 February 2013.

Costs

[1952] The question of costs is reserved.

FOR THE COURT

"Clifford J"

GLOSSARY

Abbreviation	Definition
1994 Electricity ID Regulations	Electricity (Information Disclosure) Regulations 1994
1994 MED Electricity ODV Handbook	Ministry of Commerce *Handbook for Optimised Deprival Valuation of Electricity Line Businesses* (23 June 1994).
1997 Gas ID Regulations	Gas (Information Disclosure) Regulations 1997
2000 MED Draft Gas ODV Handbook	Ministry of Economic Development *Draft Handbook for Optimised Deprival Valuation of System Fixed Assets of Gas Pipeline Businesses* (1 January 2000), 43/357/021404.
2004 Electricity ID Requirements	Electricity (Information Disclosure) Requirements 2004
2004 Electricity ODV Handbook	Commerce Commission *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (30 August 2004), 45/378/022739.
2005 Gas Authorisation ODV Guidelines	Commerce Commission *Authorisation for the Supply of Natural Gas Distribution Services by Powerco and Vector – Valuation of the Opening Regulatory Asset Base – Methodology Reasons Paper* (3 October 2006), 47/393/023815.
2010 Confidential Survey	Commerce Commission *Confidential Debt Survey Documents - Commerce Commission Request and Supplier Responses* (1 October 2010), 62/633/031251.
2012 IMs, The	The re-determined IMs contained in Decisions [2012] NZCC 26, 27 and 28.
AAA	Airport Authorities Act 1966
ABAA	accounting-based allocation approach
ACAM	avoidable cost allocation methodology
ACCC	Australian Competition and Consumer Commission
Act, The	Commerce Act 1986
AIAL	Auckland International Airport Ltd
AIAL Appeal 820	AIAL *Notice of Appeal* CIV-2011-404-820, 17 February 2011.
Air NZ	Air New Zealand Ltd
Air NZ Appeal 802	Air NZ *Notice of Appeal* CIV-2011-404-802, 15 February 2011.

Airports, The	Auckland International Airport Ltd, Christchurch International Airport Ltd, and Wellington International Airport Ltd
Airports ID Regulations	Airport Authorities (Airport Companies Information Disclosure) Regulations 1999
Airports ID Requirements	*Commerce Act (Specified Airport Services Information Disclosure) Determination 2010* Decision 715, 22 December 2010, 40/312/019752.
Airports Inquiry	A 2002 Commerce Commission inquiry into whether AIAL, WIAL and CIAL should be controlled under the then Part V of the Commerce Act.
Airports Inquiry Report	Commerce Commission *Final Report: Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports* (1 August 2002), 44/367/021716.
Airports Reasons Paper	Commerce Commission *Input Methodologies (Airport Services) Reasons Paper* (22 December 2010), 2/6/000585.
April 2007 Discussion Document	Ministry of Economic Development *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document* (1 April 2007), 63/662/031613.
ARP	accounting rate of profit
August 2006 GPS	"Statement to the Commerce Commission of Economic Policy of the Government: Incentives of Regulated Businesses to Invest in Infrastructure" (10 August 2006) 95 *New Zealand Gazette* 2814.
August 2010 Bancorp Report	Bancorp Treasury Services *Expert Report for Vector* (August 2010), 34/245/017033.
AVnDA	asset values not directly attributable
BBAR	building blocks allowable revenue
Bill, The	Commerce Amendment Bill 2008
building blocks approach	An approach to determining a regulated firm's allowable revenue using building blocks that reflect a firm's costs.
capex	capital expenditure
CAPM	capital asset pricing model
CDA	costs directly attributable
CEG	Competition Economists Group
CIAL	Christchurch International Airport Ltd
CnDA	costs not directly attributable
Commission, The	Commerce Commission
Cost of Capital Workshop	A November 2009 Commission workshop on the development of the cost of capital IMs.

CPI	consumer price index
CPI-X	CPI minus X
CPP	customised price-quality path
December 2008 Provisions Paper, The	Commerce Commission *Regulatory Provisions of the Commerce Act 1986: Discussion Paper* (19 December 2008), 5/12/001804.
December 2009 Airports Emerging Views Paper	Commerce Commission *Input Methodologies (Airport Services) Emerging Views Paper* (23 December 2009), 7/20/002682.
December 2009 EDBs Emerging Views Paper	Commerce Commission *Input Methodologies (Electricity Distribution) Emerging Views Paper* (23 December 2009), 7/21/002773.
December 2009 Emerging Views Papers	The three emerging views papers released on 23 December 2009 for EDBs, GPBs and the Airports.
December 2009 GPBs Emerging Views Paper	Commerce Commission *Input Methodologies (Gas Pipeline Services) Emerging Views Paper* (23 December 2009), 7/22/002916.
Decision 555	*Provisional authorisation pursuant to the Commerce Act 1986 in the matter of controlled services supplied by Powerco Limited and Vector Limited* Decision 555, 24 August 2005, 46/381/023220.
Decision 656	*Authorisation pursuant to the Commerce Act 1986 in the matter of controlled services supplied by Powerco Ltd* Decision 656, 30 October 2008.
Decision 657	*Authorisation pursuant to the Commerce Act 1986 in the matter of controlled services supplied by Vector Ltd* Decision 657, 30 October 2008, 22/124/010306.
Decision 685	*Commerce Act (Electricity Distribution Default Price-quality Path) Determination 2010* Decision 685, 30 November 2009, 27/185/013495.
Decision 709	*Input methodologies determination applicable to specified airport services pursuant to Part 4 of the Commerce Act 1986* Decision 709, 22 December 2010, 1/1/000001.
Decision 710	*Commerce Act (Electricity Distribution Services Input Methodologies) Determination 2010* Decision 710, 22 December 2010, 1/2/000046.
Decision 711	*Commerce Act (Gas Distribution Services Input Methodologies) Determination 2010* Decision 711, 22 December 2009, 1/3/000215.
Decision 712	*Commerce Act (Gas Transmission Services Input Methodologies) Determination 2010* Decision 712, 22 December 2010, 1/4/000378.

Decision 713 *Commerce Act (Transpower Input Methodologies) Determination 2010* Decision 713, 22 December 2010, 1/5/000543.

Decision 714 *Commerce Act (Transpower Individual Price Quality Path) Determination 2010* Decision 714, 22 December 2010, 64/685/032434.

Decision 715 *Commerce Act (Specified Airport Services Information Disclosure) Determination 2010* Decision 715, 22 December 2010, 40/312/019752.

Decision 718 *Determination of the Cost of Capital for Services Regulated under Part 4 of the Commerce Act 1986, Pursuant to Decisions 709, 710, 711, 712 and 713* Decision 718, 3 March 2011, 41/321/020331.

Decision 723 *Determination of the Cost of Capital for Information Disclosure Year 2012 for Airport Services (March year-end) and Electricity Distribution Services Under Part 4 of the Commerce Act 1986, Pursuant to Decisions 709 and 710* Decision 723, 27 April 2011.

Decision 727 *Determination of the Cost of Capital for Information Disclosure Year 2012 for Transpower New Zealand Limited, Suppliers of Gas Pipeline Services, and Suppliers of Specified Airport Services (June year-end) Under Part 4 of the Commerce Act 1986, Pursuant to Decisions 709, 711, 712 and 713* Decision 727, 8 July 2011.

Decision 732 *Determination of the Cost of Capital for Suppliers of Electricity Distribution Services for a Customised Price-Quality Path Proposal Under Part 4 of the Commerce Act 1986* Decision 732, 30 September 2011.

Decision 745 *Determination of the cost of capital for suppliers of gas distribution and gas transmission services under Part 4 of the Commerce Act 1986* Decision 745, 22 December 2011.

Decision [2012] NZCC 1 *Maui Cost of Capital determination for the 2013 Information Disclosure Year* [2012] NZCC 1.

Decision [2012] NZCC 2 *Transpower Capital Expenditure Input Methodology Determination* [2012] NZCC 2, 79/1044/039282.

Decision [2012] NZCC 3 *Commerce Act (Transpower Individual Price-Quality Path) Determination Amendment No.2* [2012] NZCC 3.

Decision [2012] NZCC 5 *Airport Information Disclosure Determination Omnibus Amendment No 1* [2012] NZCC 5.

Decision [2012] NZCC 10	*Cost of Capital determination for Information Disclosure year 2013 for Specified Airport services (March year-end) and Electricity Distribution services* [2012] NZCC 10.
Decision [2012] NZCC 17	*Transpower Input Methodologies Determination* [2012] NZCC 17, 42/351/021030.
Decision [2012] NZCC 22	*Electricity Distribution Services Information Disclosure Determination* [2012] NZCC 22.
Decision [2012] NZCC 26	*Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, 67/716/033593.
Decision [2012] NZCC 27	*Gas Distribution Services Input Methodologies Determination 2012* [2012] NZCC 27, 67/715/033409.
Decision [2012] NZCC 28	*Gas Transmission Services Input Methodologies Determination 2012* [2012] NZCC 28, 67/717/033803.
Department, The	New Zealand Electricity Department
DHC	depreciated historic cost
DPP	default price-quality path
EDBs	electricity distribution businesses
EDBs DPP Reasons Paper	Commerce Commission *Resetting the 2010-2015 Default Price-Quality Paths for 16 Electricity Distributors* (30 November 2012), 79/1049/039761.
EDBs-GPBs Reasons Paper	Commerce Commission *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper* (22 December 2010), 3/7/000960.
Electricity Lines Business Companion Report	Commerce Commission *Regulation of Electricity Lines Businesses: A Companion Report to the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses* (31 August 2004), 45/379/022801.
ENA	Electricity Networks Association
Energy Appellants, The	The appellant EDBs and GPBs collectively (Vector, Powerco and Wellington Electricity Lines Ltd).
Existing Traded Regulated Assets	Assets acquired by one regulated supplier from another regulated supplier prior to the imposition of Part 4 regulation.
Experts, The Commission's (its)	Professor Martin Cave, Dr Michael Pollitt, Dr John Small and Professor George Yarrow.

Expert Panel, The	The expert panel comprised Professor Julian Franks, Dr Martin Lally and Professor Stewart Myers and produced two reports: Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008), 5/11/001755 and Franks, Lally and Myers *Cost of Capital Recommendation to the New Zealand Commerce Commission on whether or not it should change its previous estimate of the TAMRP as a result of the recent Global Financial Crisis* (14 April 2010), 7/27/003087.
Explanatory Note, The	Commerce Amendment Bill 2008 (201-1) (explanatory note).
EV	economic value
FCM	financial capital maintenance
Frontier Economics	Frontier Economics Pty Ltd
GAAP	generally accepted accounting practice
Gas Authorisation	*Commerce Act (Powerco Natural Gas Services) Authorisation 2008* (Dec 656) and *Commerce Act (Vector Natural Gas Services) Authorisation 2008* (Dec 657).
Gas Control Inquiry	Commerce Commission inquiry into gas pipelines services completed in 2004.
Gas Sector Review	Review of the Gas Sector instigated by the government in February 2001.
GDB	gas distribution business
GFC	global financial crisis
GPB	gas pipeline business
GTB	gas transmission business
HNE	hypothetical new entrant
HNET	hypothetical new entrant test
IC	incremental cost
ID	information disclosure
IHC	indexed historic cost
IM	input methodology
IPP	individual price-quality path
IRIS	incremental rolling incentive scheme
June 2009 IMs Discussion Paper, The	Commerce Commission *Input Methodologies Discussion Paper* (19 June 2009), 6/14/002048.
June 2010 EDBs Draft Reasons Paper	Commerce Commission *Input Methodologies (Electricity Distribution Services) Draft Reasons Paper* (18 June 2010), 9/37/003510.

June 2010 GPBs Draft Reasons Paper	Commerce Commission *Input Methodologies (Gas Pipeline Services) Draft Reasons Paper* (21 June 2010), 10/38/003932.
June 2010 Transpower Draft Reasons Paper	Commerce Commission *Input Methodologies (Transpower) Draft Reasons Paper* (25 June 2010), 11/40/004353.
LECG	Law and Economics Consulting Group Ltd
May 2010 Airports Draft Reasons Paper	Commerce Commission *Input Methodologies (Airport Services) Draft Reasons Paper* (31 May 2010), 8/31/003177.
May- June 2010 Draft Reasons Papers, The	The May 2010 Airports and June 2010 EDBs, GPBs and Transpower Draft Reasons Papers
MDL	Maui Development Ltd
MED	Ministry of Economic Development
MEUG	Major Electricity Users' Group
MEUG Appeal 268	MEUG *Notice of Appeal* CIV-2011-485-268, 17 February 2011.
MEUG Appeal 269	MEUG *Notice of Appeal* CIV-2011-485-269, 17 February 2011.
MEUG Appeal 1660	MEUG *Notice of Appeal* CIV-2012-485-1660, 3 September 2012.
MRP	market risk premium
MVAU	market value alternative use
MVEU	market value existing use
NERA	NERA Economic Consulting
NGC	Natural Gas Corporation
November 2010 Bancorp Report	Bancorp Treasury Services *Debt Issuance Cost Analysis* (for Vector) (16 November 2010), 39/304/019475.
NPV	net present value
NZIER	New Zealand Institute of Economic Research
OCnDA	operating costs not directly attributable
October 2005 EDBs RAB Decision Paper	Commerce Commission *Regulation of Electricity Lines Businesses – Valuation of the Regulatory Asset Base: Decision Paper* (13 October 2005), 46/383/023319.
October 2007 Draft Authorisation, The	Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd: Draft Decisions Paper* (4 October 2007), 48/401/024193.
ODRC	optimised depreciated replacement cost
ODV	optimised deprival value
OECD	Organisation for Economic Cooperation and Development

Opex	operating expenditure
OVABAA	optional variation to the accounting-based allocation approach
Oxera	Oxera Economics Consulting
PBA	Parsons Brinkerhoff Associates
Powerco	Powerco Ltd
Powerco Appeal 180	Powerco *Notice of Appeal* CIV-2012-485-180, 16 February 2011 (amended 16 October 2012).
Powerco Appeal 248	Powerco *Notice of Appeal* CIV-2012-485-248, 16 February 2011 (amended 16 October 2012).
Principal Reasons Papers	The Airports Reasons Paper and the EDBs-GPBs Reasons Paper
Provisional Authorisation	*Provisional Authorisation pursuant to the Commerce Act 1986 in the matter of controlled services supplied by Powerco Ltd and Vector Ltd* (Decision 555, 24 August 2005).
PwC	PriceWaterhouse Coopers
PwC 2010 ODV Handbook	PriceWaterhouse Coopers and Sinclair Knight Mertz *Report to the Electricity Networks Association: Revised ODV Handbook* (9 August 2010), 59/588/030319.
RAB	regulatory asset base
Reasons Papers	The EDBs-GPBs Reasons Paper, the Airports Reasons Paper and the Transpower Reasons Paper
Regulatory Impact Statement	Commerce Amendment Bill 2008 (201-1) (regulatory impact statement).
Revised Draft Guidelines	Commerce Commission *Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital* (19 June 2009), 5/13/001969.
ROI	return on investment
RTA	regulatory tax allowance
RTAV	regulatory tax asset value
s 52P determination	A decision made by the Commission under s 52P of the Commerce Act.
S 52T IM determination	An IM determination
SAC	stand-alone cost
SB-L CAPM	simplified Brennan-Lally capital asset pricing model.
Select Committee Report	Commerce Amendment Bill 2008 (201-1) (select committee report).
SOE	state-owned enterprise
SPA	starting price adjustment
Synergies	Synergies Economic Consulting Pty Ltd

TAMRP	tax adjusted market risk premium
TCSD	term credit spread differential
Technical Consultation	The Commission's revised draft determinations and consultation update papers October – November 2010. Commerce Commission *Input Methodologies (Airport Services) Consultation Update Paper* (1 October 2010), 12/53/005026; Commerce Commission *Airports Revised Draft Input Methodologies Determination* (1 October 2010), 12/54/005048; Commerce Commission *EDBs Consultation Update Paper* (22 October 2010), 12/55/005084; Commerce Commission *Revised Draft Commerce Act (Electricity Distribution Services Input Methodologies) Determination 2010* (22 October 2010), 12/56/005173; Commerce Commission *Revised Draft Commerce Act (Gas Distribution Services Input Methodologies) Determination 2010* (1 November 2010), 13/58/005359; Commerce Commission *Input Methodologies (Gas Pipeline Businesses) Consultation Update Paper* (1 November 2010), 13/59/005510; Commerce Commission *Revised Draft Commerce Act (Gas Transmission Services Input Methodologies)* Determination 2010 (1 November 2010), 13/60/005581; *Revised Draft Commerce Act (Transpower Input Methodologies) Determination 2010* (12 November 2010), 13/61/005745; Commerce Commission *Input Methodologies (Transpower) Consultation Update Paper* (12 November 2010), 13/62/005785 (Technical Consultation).
Traded Regulated Assets	assets acquired by one regulated supplier from another regulated supplier.
Transpower	Transpower Ltd
Transpower Appeal 1032	Transpower *Notice of Appeal* CIV-2011-485-1032, 27 May 2011.
Transpower Appeal 1656	Transpower *Notice of Appeal* CIV-2012-485-1656, 7 August 2012.
Transpower Reasons Paper	Commerce Commission *Input Methodologies (Transpower) Reasons Paper* (22 December 2010), 4/8/001630.
Transpower Supplementary Reasons Paper	Commerce Commission *Input Methodologies (Transpower) Supplementary Reasons Paper for Leverage in the Cost of Capital IM* (29 June 2012), 42/352/021073.

Uniservices	Auckland Uniservices Ltd
Vector	Vector Ltd
Vector Appeal 258	Vector *Notice of Appeal* CIV-2011-485-258, 16 February 2011.
Vector Appeal 259	Vector *Notice of Appeal* CIV-2011-485-259, 16 February 2011.
Vector Appeal 2178	Vector *Notice of Appeal* CIV-2012-485-2178, 18 October 2012.
Vector's Alternative 1	Vector's proposal for new 2010 optimised deprival value valuations.
Vector's Alternative 2	Vector's proposal to back-solve the value of the regulatory asset value using the prices that immediately preceded the imposition of a starting price adjustment.
Vector's Alternative 3	Vector's proposal to mend existing asset valuation input methodologies.
Vector (NGC)	Vector's assets purchased from NGC Holdings Ltd in 2004 and not subject to price control.
WACC	weighted average cost of capital
WELL	Wellington Electricity Lines Ltd
WELL Appeal 229	WELL *Notice of Appeal* CIV-2011-485-229, 17 February 2011.
WELL Appeal 2393	WELL *Notice of Appeal* CIV-2012-485-2393, 11 October 2012.
WIAL	Wellington International Airport Ltd
WIAL Appeal 249	WIAL *Notice of Appeal* CIV-2011-485-249, 16 February 2011.

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