IN THE SUPREME COURT OF NEW ZEALAND

SC 4/2010
[2011] NZSC 138

BETWEEN	VODAFONE NEW ZEALAND LIMITED Appellant
AND	TELECOM NEW ZEALAND LIMITED Respondent

SC 44/2010

BETWEEN	COMMERCE COMMISSION Appellant
AND	VODAFONE NEW ZEALAND LIMITED AND TELECOM NEW ZEALAND LIMITED Respondents

SC 45/2010

BETWEEN	TELECOM NEW ZEALAND LIMITED Appellant
AND	VODAFONE NEW ZEALAND LIMITED AND COMMERCE COMMISSION Respondents

SC 46/2010

BETWEEN	TELECOM NEW ZEALAND LIMITED Appellant
AND	VODAFONE NEW ZEALAND LIMITED AND COMMERCE COMMISSION Respondents

Hearing: 21-24 February 2011

Court: Elias CJ, Blanchard, Tipping, McGrath and Gault JJ

Counsel: B D Gray QC, A E Ferguson and F C Monteiro for Vodafone New Zealand Limited
J E Hodder SC, B A Davies and L C James for Telecom New Zealand Limited
M T Scholtens QC and J B Hamlin for Commerce Commission

Judgment: 17 November 2011

JUDGMENT OF THE COURT

A All the appeals are dismissed.

B No order for costs is made.

REASONS

ELIAS CJ

[1] The Telecommunications Act 2001 has as its "main purpose" regulation of the supply of telecommunication services.[1] The present appeal is concerned however with a small aspect of such regulation: the delivery of residential telephone connection to commercially non-viable customers. Under a telecommunications service obligation entered into under Part 3 of the Act, Telecom provides such services and obtains recompense from other telecommunications service providers who connect to its network. It is the responsibility of the Commerce Commission to determine on an annual basis the amount Telecom may recover for providing the service through calculating the "net cost" of meeting the telecommunications service

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1 Telecommunications Act 2001, s 3(1).

obligation.[2] The formula for this recovery is based on the net cost to "an efficient service provider", rather than Telecom's actual costs. That is made clear by s 5 of the Act which defines "net cost" as:

> [T]he unavoidable net incremental costs to an efficient service provider of providing the service required by the TSO instrument to commercially non-viable customers.

[2] Under s 84(1) of the Act, the calculation of net cost must take into account two considerations:

> (a) the range of direct and indirect revenues and associated benefits derived from providing telecommunications services to commercially non-viable customers, less the costs of providing those telecommunications services to those customers:
>
> (b) the provision of a reasonable return on the incremental capital employed in providing the services to those customers.

[3] The appeal concerns challenges to the Commerce Commission's determinations of the net cost of providing services to commercially non-viable customers in the years 2004/2005 and 2005/2006. The challenges were brought by Vodafone New Zealand Ltd, a telecommunications service provider liable to make contribution to Telecom in respect of the net cost of providing the service. Vodafone maintained that the Commerce Commission had overstated the net cost of providing the service in misapplication of the provisions of Part 3 of the Act by valuing the capital cost to an efficient service provider of providing the service using Telecom's existing network rather than by valuing the distribution system that would be used by an efficient service provider, using new mobile technology where appropriate.

[4] Vodafone was successful in its challenge. Winkelmann J in the High Court determined that the net cost calculations undertaken by the Commerce Commission had been made in error of law.[3] The determinations were set aside and referred back to the Commerce Commission for reconsideration. The Commerce Commission and Telecom appealed with leave to this Court. Direct leave to appeal from the High

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2 Section 92.

3 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* HC Wellington CIV-2008-485-2194, 1 April 2010.

Court, by-passing the Court of Appeal, was granted[4] because a related appeal was also granted leave in respect of the net cost determination of the Commission for the 2003/2004 year.[5] In that appeal, also brought by Vodafone, the challenge to the Commerce Commission determination was dismissed in the High Court[6] and, by majority, on appeal to the Court of Appeal.[7]

[5] In both sets of appeals it was argued that the Commission had overvalued the "net incremental costs to an efficient service provider" of providing the service through modelling the capital cost of providing it on the basis of Telecom's fixed line core network. The arguments on the appeals therefore overlapped. The case before Winkelmann J was concerned with determinations in which the Commission had rejected any further adaptation of its model to take account of developing technology, whereas in the case determined by the Court of Appeal in relation to the 2003/2004 year, the Commission had made limited allowance for optimised technology at and beyond the historical "nodes" (switches and points of interconnection for local access delivery) of the core Telecom fixed line network. Despite the differences, the approach taken by the majority in the Court of Appeal is not readily reconcilable with Winkelmann J's reasons, as the Judge acknowledged.[8] The 2003/2004 determination of the Commission had represented something of a compromise. In the subsequent determinations the Commission was not willing to make further adjustments for new technology.

[6] In addition to Vodafone's "new technologies" challenge to the determinations of net cost in the years 2004/2005 and 2005/2006, Telecom had also challenged the determinations in the same years on the basis that the Commission had reduced the post-tax weighted average cost of capital, a significant component of the net cost calculation, by reducing the asset beta[9] from that used in previous

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4 *Commerce Commission v Vodafone New Zealand Ltd* [2010] NZSC 51.

5 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2010] NZSC 28.

6 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* HC Wellington CIV-2007-485-826, 18 December 2007 per McGechan J.

7 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2009] NZCA 565, [2010] NZCCLR 18.

8 At [66].

9 An asset beta measures the sensitivity of a firm's returns relative to market returns when the firm has no debt, and is integral in capital asset pricing methodology (CAPM) to the assessment of cost of equity (which in turn feeds into the calculation of the weighted average cost of capital for the firm).

years.[10] This calculation bore on the "reasonable return" component of net cost, referred to in s 84(1)(b). As the contention was linked with the way in which new technologies and the risk of "stranding" of the Telecom network was treated in setting the net incremental cost of providing the service, leapfrog appeal was granted so that all four appeals could be heard together in this Court.[11]

[7] In the event, as a result of developments since the appeals were heard, we are asked to determine only the Commerce Commission appeal from Winkelmann J's judgment on new technologies. The other appeals have been settled by the parties and their resolution by this Court has become moot. Changes to the legislation mean that the precedential effect of any decision of this Court will be slight. Since, however, the Commerce Commission has been ordered by the High Court to reconsider its treatment of new technologies in determining the net cost of an efficient service provider in the two years under review and a number of liable telecommunications providers are potentially affected, resolution of the appeal is necessary.

[8] Consideration of the issues ventilated at the hearing has been shortened by the desirability of speedy determination of the narrower issue still live, so that the Commission can proceed with its reconsideration. It should be emphasised however that the Court is asked to consider only one aspect of law affecting net cost. The issue for determination is whether the Commission erred in law in modelling net cost on the basis of Telecom's existing core PSTN (public switched telephone network), rather than on the basis of a network using mobile technology where it is most efficient. It is not necessary for us to go further by expressing a view on whether the Commission properly applied the statute in its determination on the inter-related treatment of a reasonable return on the capital employed.

[9] For the reasons that follow, I am of the view that the decision of the Commission not to use mobile technology in its modelling of the net cost of an efficient provider was an error of law. It was inconsistent with its obligation to assess net cost on the basis of "the unavoidable net incremental costs to an efficient

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10 *Telecom New Zealand Ltd v Commerce Commission* HC Wellington, CIV-2008-485-2205, 1 April 2010 per Winkelmann J.

11 *Commerce Commission v Vodafone New Zealand Ltd* [2010] NZSC 51.

service provider of providing the service required by the TSO instrument to commercially non-viable customers". As Winkelmann J pointed out, the "unavoidable net incremental costs to the efficient service provider" act as an "upper limit or cap on the costs recoverable" by Telecom from liable persons.[12] The Commission erred in law by failing to adjust its model to take account of mobile technology, where an efficient service provider would use it. It did not therefore eliminate "unavoidable" incremental costs.

[10] The capital valuation of the assets used to provide the TSO services is the largest element in the calculation of net cost. A reasonable return on investment (including allowance for systematic risk) is properly assessed as part of the incremental cost. That is not however in issue on the live appeal. In the present case, the Commission's approach to the calculation of the incremental cost of providing the service was skewed by its adherence to the historic network maintained by Telecom, with only limited optimisation beyond the core network. What was required was an assessment of the network that would have been used by an efficient service provider. Any cost incurred which was not one that would have been incurred was "avoidable" and, on the definition of net cost, should have been eliminated from the assessment.

[11] I therefore agree with the reasons given by William Young P, dissenting in the Court of Appeal decision on the 2003/2004 appeal, that the determination of the Commission for that year disclosed error of law in preferring adherence to its existing model (based on Telecom's existing core network modified for new technology only in relation to nodes and local access) rather than applying the statutory requirement to assess net cost on the basis of "the unavoidable net incremental costs to an efficient service provider" of delivering the service. As he said:

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12 At [65].

> [56] ... [I]t treated consistency (or otherwise) with its scorched node model[13] as the controlling consideration instead of going back to, and applying, the key statutory provisions.

[12] The error of law in respect of the 2003/2004 determination was compounded by the Commission's determinations for the 2004/2005 and 2005/2006 years, when it decided not to factor in the delivery of services to commercially non-viable customers using new mobile technology beyond that already contained in its existing model (which had optimised for wireless delivery between the Telecom core network and customers where such delivery was efficient). The Commission took the view that taking such technology into account would deprive Telecom of a reasonable rate of return on capital investment which had been efficient when made, a result it considered to be contrary to a principle of "dynamic efficiency".[14] I agree with Winkelmann J that this was contrary to the statute. As she concluded:

> [69] In ceasing to optimise with new technology the Commission has ceased calculating "net cost". It has abandoned consideration of whether Telecom's costs are efficiently incurred and whether services could be more efficiently provided through the application of new technology.

[13] In defining net cost to exclude avoidable incremental cost to an efficient provider, the statute is not concerned with the return on legacy assets unless they are efficient. The calculation of a reasonable return, as is required in arriving at net cost, may well factor in a risk of future stranding of the capital assets of an efficient provider (as through the asset beta calculation which is no longer the subject of appeal). But if a new technology becomes more efficient than that used in the existing network or part of it, the net cost for that part of the network is that of the new technology. Otherwise, avoidable cost will be valued, and the statutory purpose of promoting efficiency undermined. As Winkelmann J pointed out:

> [74] ... Telecom is not held to a meaningful standard of efficiency at all if it can be confident that it is to continue to receive prices calculated on the

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13 The "scorched node" model of the Commerce Commission took core elements of Telecom's existing infrastructure – its "nodes", such as network switches and points of interconnection – as given, and then proceeded to "scorch" and optimise, using new technologies, the costs of the nodes and the downstream access network which connected customers to Telecom. By way of comparison, a "scorched earth" model would ignore the features of Telecom's existing network.

14 See the "new technologies" judgment of Winkelmann J at [50]–[51], reproducing excerpts of reasoning from the final 2004/2005 determination of the Commerce Commission.

> existing model, and need take no steps to explore more cost effective means of service delivery.

[14] By deciding that it would not model new technology into its calculation of capital, the Commission departed from the requirement of the statute that it calculate the unavoidable net incremental costs to an efficient service provider. Its model allowed net cost to be set above that incurred by an efficient service provider.

[15] I prefer not to express views on the matters touched on by Blanchard J at [70] to [73] of his judgment. I have some doubts, too, about the extent to which valuation methodology used in price regulation here or in other jurisdictions is helpful in the context of the limited exercise of applying prescribed criteria to apportion the cost of uneconomic customers among liable providers. As long as the Commission asks itself the right question (what are the unavoidable net incremental costs to an efficient service provider of providing the service under the TSO), as I think it has not in the 2004/2005 and 2005/2006 determinations in relation to the capital component, the valuation methodology it adopts is left by the Act for it to choose. In such choice there may be little scope for error of law. I would decide the case on the narrow point which is dispositive.

[16] In the Court of Appeal Glazebrook and Arnold JJ found no misconstruction of the statute in respect of the 2003/2004 year. They dealt with that appeal on the basis that the decision as to net cost was one the Commission was entitled to come to, although both indicated that adherence to the methodology used might require reconsideration in the future.[15] It is on this ground that Blanchard J, taking the contrary view, would dismiss the appeal from Winkelmann J's judgment in respect of the 2004/2005 and 2005/2006 years. Because of the view I take that the Commission misconstrued the function it was required to fulfil and erred in law, it is unnecessary for me to consider whether the conclusion reached was reasonably open on the facts. As the President noted in his dissenting judgment in the Court of Appeal in the appeal relating to 2003/2004, there are "considerable complexities involved in the exercise required of the Commission".[16] Since the error in law I find in misconstruction of the statute inevitably affects how the exercise is carried out,

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15 At [114] per Arnold J and [148] per Glazebrook J.

16 At [57].

there is artificiality and risk of failing to appreciate the complexities in embarking on what, on my view, would be a hypothetical review. I would rather not attempt a restatement of how error of law is identified, as is undertaken by Blanchard J in [50]–[58]. Indeed, I am attracted to the simpler view that error of law is reached whenever a body entrusted with a determination of fact has reached a conclusion that is clearly wrong or is unreasonable.

[17] There are terms in legislation which properly provide scope for judgment in application.[17] It was argued for Telecom that "net cost" was a term of this sort. No doubt there are a number of ways in which the Commission may value net cost, properly understood. The case turns however on an approach by the Commission that is inconsistent with the statutory definition that net cost is the "unavoidable net incremental costs to an efficient service provider". The network of an efficient service provider may or may not include components of Telecom's existing network. But by putting out of consideration mobile technology even where such delivery is efficient, the Commission values cost that may be avoidable to an efficient service provider in error of law.

[18] I would dismiss the appeal and confirm the High Court's remission of the task back to the Commission to perform in accordance with the statute. The other appeals should be dismissed as moot.

BLANCHARD, McGRATH AND GAULT JJ

(Given by Blanchard J)

Introduction

[19] Four appeals were heard together. They involved interpretation and application of Part 3 of the Telecommunications Act 2001,[18] which makes provision for telecommunications service obligation (TSO) instruments. In particular, the

[17] They are illustrated by *R v Monopolies and Mergers Commission, ex parte South Yorkshire Transport Ltd* [1993] 1 WLR 23 (HL) and *Moyna v Secretary of State for Work and Pensions* [2003] UKHL 44, [2003] 1 WLR 1929, cited by counsel for Telecom. See also the discussion of Cooke J in *Bulk Gas Users Group v Attorney-General* [1983] NZLR 129 (CA) at 136.

[18] The Act was substantially amended in 2006 but references in this judgment are to the Act as it applied at the time of the relevant determinations.

appeals related to determinations made by the Commerce Commission under s 90 for the years 2003/2004, 2004/2005 and 2005/2006 of the annual net cost to Telecom as telecommunications service provider (TSP) under a TSO instrument providing for local residential line services to commercially non-viable customers (CNVCs). Once the net cost has been determined by the Commission for a particular year, Telecom, as TSP, is entitled to recover a proportion of it from other telecommunications companies. Vodafone is by far the largest of these. There is no dispute about the apportionment of the cost in each year but Vodafone and Telecom each challenged aspects of the net cost determinations. For 2003/2004 the issue was the methodology used by the Commission to model the possible use by the TSP of cellular telephony as a means of providing services to the CNVCs. For the two subsequent years, Vodafone objected to a decision by the Commission to take no account of cellular technology at all, and Telecom objected to an alteration to the equity beta figure (called by the parties the asset beta) assigned by the Commission in calculating the weighted average cost of capital (WACC) used in arriving at net cost.

[20] An appeal against a determination by the Commission can be made by the TSP to whom the assessment applies and by "every liable person".[19] A liable person is a person whose network is interconnected with a fixed public switched telephone network (PSTN) operated by Telecom and who provides a telecommunication service in New Zealand to end-users by means of some component of a PSTN that is operated by the person.[20] Vodafone is a liable person. An appeal is permitted on a question of law only.[21]

The Act

[21] First, some background. Telecom was converted from a state-owned enterprise to a company listed on the stock exchange in 1989. The Government retained only a so-called Kiwi Share, by which means it could enforce certain obligations to provide residential line services. These Kiwi Share obligations (KSO)

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19 Section 100(1)(a).
20 Section 5 definition of "liable person".
21 Section 100(2).

were contained in Telecom's articles of association and later in its constitution. Dissatisfaction with the way in which telecommunications companies were regulated led the Government to establish a Ministerial Inquiry which reported in September 2000.[22] That in turn led to the enactment of the 2001 Act, although it departed in some respects from the recommendations of the report.

[22] In his reasons in the appeal concerning the 2003/2004 year[23] Arnold J explained what gave rise to Part 3:

> [68] To the extent that the KSO prevented Telecom from recovering from its residential customers the cost of providing "ordinary residential telephone service", it was obliged to subsidise that service from revenues from other services, for example services to business customers or toll services. Telecom considered that such cross-subsidies had the potential to distort the competitive process. This was because they would impose what was effectively a regulatory cost on Telecom in respect of its cross-subsidising services, which typically were services for which there was competition. As a consequence, Telecom would have to carry a cost which its competitors did not share in relation to these competitive services, in circumstances where those competitors benefited from the ubiquity of reach resulting from the subsidised service. Telecom considered that the KSO did give rise to such cross-subsidies, and sought some contribution to the cost of the KSO from its competitors in its interconnection charges. This was one of the factors that gave rise to the many disputes within the industry, as evidenced by the Clear/Telecom litigation, for example *Telecom Corporation of New Zealand Ltd v Clear Communications Ltd* [1995] 1 NZLR 385 (PC).
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> [69] Part 3 was introduced following the Fletcher report and was intended in part to address this issue. In introducing the Bill the Minister of Communications, Hon Paul Swain (9 May 2001) 592 NZPD 9116, said:
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>> The problem in the past has been the way in which other telecommunications providers have been required to meet the costs of Telecom's Kiwi share obligations. The practice has been for Telecom to include a premium on the price for interconnection with its network, which was not transparent or competitively neutral. Part 3 implements a transparent and neutral mechanism to deal with contributions to the cost of telecommunications service obligations, including the Kiwi share obligations.

[23] As soon as the legislation came into force on 20 December 2001, the KSO obligation was replaced by a TSO Deed signed by the Crown and Telecom.[24] As will be seen, the Act provided for this instrument (called in the Act the "new KSO") to be

22 Referred in the Courts below as the "Fletcher Report".
23 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2009] NZCA 565, [2010] NZCCLR 18.
24 It was in fact signed by both Telecom Corporation of New Zealand Ltd and Telecom New Zealand Ltd but for present purposes no distinction need be made between them.

deemed to be a TSO instrument under Part 3. The new KSO contained principles relating to the supply of local residential telephone services. The continuing requirement for Telecom to provide what may be called a universal service to all residential customers necessarily involves a service to CNVCs. Telecom is permitted by the Deed to use any method or any technology in supplying the services it is obliged by the Deed to provide, "provided that doing so does not place Telecom in breach of this Deed".

[24] With that background, we can proceed to describe Part 3. Section 70 provides for the declaration of TSO instruments by Order in Council. Its purpose is stated in subs (1):

> **70 Declaration of TSO instruments**
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> (1) The purpose of this section is to facilitate the supply of certain telecommunications services to groups of end-users within New Zealand to whom those telecommunications services may not otherwise be supplied on a commercial basis or at a price that is considered by the Minister to be affordable to those groups of end-users.

[25] The process leading to the declaration of a TSO instrument requires agreement between the Minister and a service provider and consultation with liable persons and others. It is unnecessary to refer in detail to the requirements of s 70 because the new KSO had a different genesis, under s 71:

> **71 Deemed TSO instrument**
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> (1) Despite anything to the contrary in section 70, any other enactment, or rule of law, an instrument of the kind referred to in subsection (2) is deemed to be a TSO instrument (**deemed TSO instrument**) for the purposes of this Part (as if that instrument had been declared to be a TSO instrument under section 70).
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> (2) Subsection (1) applies to—
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> (a) the original KSO:
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> (b) any other instrument (**new KSO**) that—
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> (i) includes or records provisions that are stated in that instrument as operating in place of, and in addition to, the KSO; and
>
> (ii) is agreed, or consented to, before the commencement of this Act (even if the new KSO has effect after that date).[25]

[25] Section 72 says that, to avoid doubt, the new KSO does not alter or revoke the constitution of Telecom.

[26] Sections 73–77 and 79 are of no present moment. Section 78 disapplies Part 2 of the Commerce Act 1986 (concerning restrictive trade practices) to a TSO instrument and matters to which it relates or which are necessary for giving it effect.

[27] Then follow sections establishing an annual procedure for determining amounts payable by liable persons. The Commission is required by s 80 to assess compliance by the TSP with the TSO instrument in each year. Liable persons and the TSP are obliged by s 81 to produce certain information to the Commission to enable it to prepare a determination of net cost. Failure to do so is an offence under s 82. The matter central to these appeals, the calculation of the net cost of complying with a TSO instrument, is addressed in ss 83 and 84:

> **83 Calculations of net cost and auditor's report must be given to Commission**
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> Not later than 60 working days after the end of each financial year of a TSP under a TSO instrument that does not contain a specified amount, the TSP must provide to the Commission—
>
> (a) calculations of the net cost of complying with the TSO instrument during the financial year; and
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> (b) a report prepared by a qualified auditor (the **auditor's report**) that includes a statement of whether or not the calculations comply with—
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> (i) any prescribed requirements relating to those calculations; or
>
> (ii) if there are no prescribed requirements, any requirements of the Commission.
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> **84 Considerations for determining net cost**
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> (1) Subject to subsections (2) and (3), in calculating the net cost under section 83, preparing a draft determination of the net cost under section 88, and determining the net cost under section 92, all of the following matters must be taken into account:
>
> (a) the range of direct and indirect revenues and associated benefits derived from providing telecommunications services to commercially non-viable customers, less the costs of providing those telecommunications services to those customers:
>
> (b) the provision of a reasonable return on the incremental capital employed in providing the services to those customers.

(2) In preparing a draft determination of the net cost under section 88 and determining the net cost under section 92, the Commission—

(a) may choose to not include profits from any new telecommunications services that involve significant capital investment and that offer capabilities not available from established telecommunications services; and

(b) must not include any losses from telecommunications services other than services that the TSO instrument requires the TSP to provide; and

(c) must consider the purpose set out in section 18.

(3) In calculating the net cost under section 83, the TSP must comply with any requirements of the Commission relating to the application of subsection (2)(a) to (c).

(4) In this section,—

established telecommunications services means telecommunications services that are not new telecommunications services

new telecommunications services means telecommunications services that were first provided in New Zealand within 5 years before the commencement of the financial year to which the calculation of the net cost relates.

[28] Understanding these sections requires reference to the definition of "net cost" in s 5:

net cost means the unavoidable net incremental costs to an efficient service provider of providing the service required by the TSO instrument to commercially non-viable customers

and to the purpose set out in s 18:

18 Purpose

(1) The purpose of this Part and Schedules 1 to 3 is to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.

(2) In determining whether or not, or the extent to which, any act or omission will result, or will be likely to result, in competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand, the

efficiencies that will result, or will be likely to result, from that act or omission must be considered.

(3) Except as otherwise expressly provided, nothing in this Act limits the application of this section.

(4) Subsection (3) is for the avoidance of doubt.

Section 18 appears in Part 2. Nothing elsewhere in that Part or in the Schedules pertains to the subject-matter of Part 3.

[29] Returning to Part 3, s 85 is about determination of an appropriate revenue basis for use by the Commission in preparing its determination. As this case is about costs and not revenues, there is no need to further describe that section.

[30] The Commission is directed at several points in Part 3 to make "reasonable efforts" to adhere to a specific timetable. In practice, the complexity of its task has made that quite impossible, although the times stipulated (120 working days after the end of each financial year of a TSP for a draft determination, and 40 working days after the closing date for submissions thereon for a final determination[26]) do suggest that the legislature did not contemplate, and would be uncomfortable with, the degree of argumentation by participants which has eventuated in practice.

[31] The matters to be included in the draft determination are found in s 88:

88 Matters to be included in draft determination

The draft determination must include,—

(a) if the TSO instrument does not contain a specified amount,—

(i) the net cost to the TSP of complying with the TSO instrument during the TSP's financial year and all material information that—

(A) relates to the calculation of the net cost; and

(B) would not, in the opinion of the Commission, be likely to unreasonably prejudice the commercial position of the TSP; and

26 Sections 86 and 90.

(ii) the amount of revenue that the TSP receives during the financial year from providing telecommunications services either by means of its PSTN or by means that rely primarily on the existence of the TSP's PSTN; and

(b) in all cases,—

(i) the amount of revenue that each liable person in relation to the TSO instrument receives during the TSO's financial year from providing telecommunications services either by means of its PSTN or by means that rely primarily on the existence of the TSP's PSTN; and

(ii) the amount (if any) by which the total amount that the TSP would receive from all liable persons in relation to the TSO instrument must be reduced because the TSP has not complied with the TSO instrument; and

(c) a statement that identifies which revenue basis has been used under section 85(1) in respect of each amount of revenue to which the draft determination applies; and

(d) if a weighted revenue basis has been used for any amount of revenue, the particulars of the weighting attached to that amount of revenue; and

(e) the revenue amounts that will be used for the purposes of calculating, under section 93, the amount payable by each liable person in relation to the TSO instrument; and

(f) the methodology applied by the Commission in making the determination; and

(g) the reasons for the determination.

[32] Section 89 authorises the Commission to hold conferences in relation to a draft determination, which it has done on each occasion. Section 90 obliges the Commission to prepare a final determination, publicly notify it and give a copy to all liable persons. Section 92 contains the matters to be included in a final determination. They parallel those in s 88 save that (f) and (g) are replaced by:

(f) an amount payable by each liable person in relation to the TSO instrument to the TSP in respect of the financial year calculated in accordance with section 93; and

(g) an amount payable by each liable person in relation to the TSO instrument to the TSP for the loss of use of the amount referred to in paragraph (f) calculated at the 90-day bank bill rate (as at the date of the final determination) for the period

> commencing from the end of the TSP's financial year and ending with the date of the final determination.

[33] There are then provisions for calculation of the amount payable by each liable person in terms of the determination and for the making of that payment.

The determinations

[34] It will be necessary to come back later to some of the detail of the draft and final determinations. At this point we describe the course taken by the final determinations from their inception only to the extent necessary to identify the issues in the appeals. The determinations for 2001/2002[27] and 2002/2003 were not under challenge, although Vodafone's appeal on the 2004/2005 and 2005/2006 determinations was supported by argument that from the outset the Commission's approach to modelling was erroneous in law.

[35] The Commission's task was to determine the net cost to the TSP in each year – that is, the "unavoidable net incremental costs" to a hypothetical "efficient service provider" (ESP) of providing the service required by the TSO instrument (the new KSO) to CNVCs. As William Young P remarked,[28] at a very broad level there are two possible general approaches. The first is a "top-down" approach, under which the Commission would start with the actual costs incurred by Telecom in providing the services to CNVCs through its network and would then adjust those costs for any perceived inefficiencies. In contrast, on a "bottom-up" approach the Commission would engineer a hypothetical model to estimate an efficient cost benchmark for the provision of the services. The latter involves a "scorched earth" or "scorched network" approach as it scorches, that is ignores, the entire infrastructure which actually exists.

[36] The Commission's approach was, as the President said, a compromise. Telecom's PSTN copper-paired network throughout New Zealand has 783 exchange service areas (ESAs). In each of them there is a point where there is an exchange to

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27 Covering the period from the commencement of the Act on 20 December 2001 to 30 June 2002 and issued on 17 December 2003. Subsequent determinations are from 1 July to 30 June in each year.

28 At [12].

and from which voice calls are transmitted to customers. There are switches and interconnection devices at these points, which are called nodes. The Commission's model divided the network into constituent parts. It treated the network upstream of the nodes, that is Telecom's real-life core PSTN network, as a given (though there was some optimisation by notional replacement with newer and cheaper technology) but it ignored or scorched the local access networks, that is the connections from the nodes to the CNVCs (the clusters of them which had been identified). The bottom-up modelling of these access networks served to cap the costs of the access networks at the cost of providing those connections using annually optimised technology. This mixed approach is known as a "scorched node" model, which is, broadly speaking, bottom-up for the access networks and top-down for the core network.

[37] In 2001/2002 and 2002/2003 the Commission compared the cost of providing the TSO service in the access networks through copper-paired wire technology and through the use of two forms of wireless technology, multi-access radio (MAR) and wireless local loop (WLL).[29] It arrived at the net cost of the notional ESP by positing the cheapest of these technologies for each of the local access networks.

The "network modelling" issue

[38] In the 2003/2004 year determination the Commission for the first time was prepared to recognise that mobile telephony was capable of supplying service to CNVCs to the standard required by the new KSO. But cellphone networks are not integrated into the PSTN through the latter's nodes. Instead, they are an overlaid network with a different architecture. A single mobile tower (the mobile node) may be able to service a much wider area than an ESA, depending upon the topography. Efficient mobile network planning is unlikely to have the mobile nodes in the same position as the PSTN nodes. Rather, mobile access networks have a broad geographic range with neighbouring transmitters providing backup to one another. In this way, quality of service is maintained without the need to over-design and over-build for each cluster of customers. The Commission's model ignored this difference and notionally constructed a mobile network around each (scorched) node

[29] WLL was recognised only in the second year but nothing turns on that.

on the PSTN from which service was provided to CNVCs where that would be viable.

[39] Vodafone said in its written submissions that, by treating each cluster of CNVCs as requiring service by a discrete access network, and by ignoring either existing or potentially new neighbouring transmitters in an integrated network, the Commission has failed to capture efficiencies inherent in mobile technology; in every case the Commission's model produced a cost for the use of mobile technology which exceeded the cost of using copper-pair wires and wireless. Thus in no case was mobile technology actually used in the model to "cap" the net cost of providing service to CNVCs at a more cost-efficient level. By not doing so, Vodafone argued, the Commission has failed to comply with the statutory requirement that it shall determine the unavoidable net incremental cost of an ESP in providing the service to the CNVCs. Vodafone argued that this was an error of law. Either it is a misinterpretation of "net cost" by the Commission or an insupportable finding of fact (a misdirection of itself as to a fact) amounting to an error of law. Vodafone appeals against the 2003/2004 determination on this basis. Both the High Court[30] and the Court of Appeal,[31] by majority, dismissed its appeal.

[40] The High Court considered that the appeal did not raise an issue of law. The Court of Appeal took the contrary view. The majority concluded, however, that the Commission had correctly understood "net cost" as defined in s 5, and in the choices it made the Commission had given proper effect to the definition. It had reached a decision that was rationally available to it.

The "new technologies" issue

[41] For the 2004/2005 and 2005/2006 determinations[32] the Commission reconsidered its position on mobile telephony. It pondered whether the introduction of this new technology into its model would have the effect of economically

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30 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* HC Wellington CIV-2007-485-826, 18 December 2007 per McGechan J.

31 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* [2009] NZCA 565, [2010] NZCCLR 18 per Glazebrook and Arnold JJ, William Young P dissenting.

32 Issued on 10 September 2008 and 17 September 2008 respectively.

"stranding" (rendering redundant and so unproductive of revenues) the old copper-paired technology and whether such an impact could adequately be taken into account by changing the rate or level of depreciation of the incremental capital attributed in the model to the ESP in its notional incremental capital investment made in order to serve CNVCs. The Commission was concerned not to alter its model in a way which deprived the ESP of an expectation of at least deriving a reasonable rate of return on and recovering an incremental capital investment which had been efficient when made; that is, that an ESP should have an expectation of achieving a net present value equal to zero (NPV=0) on its efficiently invested capital. This approach, which the Commission treated as a principle, is not found in the statute, but the Commission considered it fundamentally important to the purpose of efficiency which is required to be considered under s 18. It considered that the most important form of efficiency in this context was dynamic efficiency.[33] If this expectation were not preserved, a TSP would not be prepared to undertake investment as it might well not receive a reasonable return both *on* and *of* its investment.

[42] The Commission concluded that, to this end, there were three available options for change to its model:

(a) continuing to optimise its model by introducing new technology as it had done for wireless technology, but with no change to the original depreciation levels; or

(b) compensating ex-post for the new technologies; or

(c) providing enhanced tilted depreciation levels for new technologies.

It decided against all of them. The first would not fully provide the ESP with a reasonable return on its incremental capital. The third was impractical to implement. The result for the ESP which could be achieved under the second was equivalent in its impact on net cost to the ESP to no longer introducing new technologies. The

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33 The Commission defined dynamic efficiency in its final determination for 2004/2005 in the following terms (at [52]):

> ***Dynamic efficiency*** – is associated with ensuring that incentives are maintained for the infrastructure provider to undertake ongoing investment and innovation in the essential infrastructure over time. Dynamic efficiency has been defined as ensuring that the service provider still has incentives to undertake the investment at a socially optimal time, or where the net present value to society from the investment is maximised.

Commission therefore chose not to introduce any further new technologies (at that stage, relevantly, mobile technology) into its model. This it called discontinuing "exogenous optimisation". However, it continued to model the existing wireless technologies (endogenous optimisation) in determining net cost in the two years in question.

[43] Vodafone appealed against this decision, again saying that the Commission had misinterpreted or irrationally applied "net cost". The High Court allowed Vodafone's appeal. Winkelmann J took the view in the "new technologies" judgment[34] that the Commission had erred in law because, by ceasing to model new technology into the modelled network, it had ceased to calculate the unavoidable net incremental costs to an ESP. It had in the years in question "designed a model that could allow net cost to be set at a price higher than Telecom's actual costs".[35]

The "asset beta" issue

[44] At the same time as it refused to introduce mobile technology into its model, the Commission made a downwards adjustment (from 0.4 to 0.2) to the asset beta it used in calculating a WACC for the ESP. An equity beta factor measures the sensitivity of a firm's returns relative to market returns when the firm has no debt. An expected rate of return on capital which exactly matches the expected rate of return for the market as a whole is 1.0. The beta is the estimated multiplier of the expected return for the whole market that measures the particular firm's sensitivity to unexpected changes in the market. In this context "risk" relates to the possibility that expected returns may not materialise. The Commission assessed the cost of equity using a capital asset pricing methodology (CAPM) of which the chosen asset beta was a key component.

[45] In its final determination for 2001/2002 the Commission had made the following statement:

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34 *Vodafone New Zealand Ltd v Telecom New Zealand Ltd* HC Wellington CIV 2008-485-2194, 1 April 2010 per Winkelmann J.

35 At [75]. The Judge rejected another argument for Vodafone that the Commission had failed to consider the purpose set out in s 18 in its determination of net cost: at [78].

> [179] ... The total risk of an asset or business is made up of both diversifiable risk and undiversifiable risk:
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> - Diversifiable (or unsystematic) risk is unique to the asset or firm and can be eliminated by diversification. The risks associated with technology obsolescence, increasing competition, patent approval, antitrust legislation, labour contracts, management styles, and geographic location are all examples of unique risks.
>
> - Undiversifiable (or systematic) risk is market risk, which is not unique to the firm. Such risk cannot be eliminated by diversification. It is related to, and dependent on, the state of the economy as a whole. The more systematic risk that is inherent in the operations of a firm, the higher is its cost of capital.
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> [180] Under the framework of the CAPM, only the undiversifiable risk is relevant in determining the cost of equity. Investors are not compensated through the CAPM for diversifiable risk. The CAPM assumes that investors hold a diversified portfolio that eliminates unsystematic risk.

[46] The Commission made its decision on a downwards adjustment of the equity beta for the 2004/2005 and 2005/2006 years because it now considered that some systematic risk had been previously present for the ESP in connection with the introduction of new technology, and that this had been largely eliminated because future optimisation would occur only in relation to endogenous wireless technology.

[47] Telecom appealed against this decision, which it said was inconsistent with the Commission's previous stance, when setting the 0.4 beta, that new technology risk was non-systematic and thus to be accounted for in the setting of tilted depreciation rates rather than in the beta factor. Telecom argued that the Commission therefore could not rationally lower the asset beta as it had done.

[48] However, in her second judgment (the "asset beta" judgment)[36] Winkelmann J dismissed this appeal. After reviewing the various draft and final determinations made by the Commission under Part 3, she rejected Telecom's arguments that prior to the 2004/2005 and 2005/2006 determinations the Commission had consistently stated that technology risk is an unsystematic risk and that the Commission's original beta calculation of 0.4 had not included a risk factor for technological optimisation (so that no adjustment was needed when exogenous optimisation was excluded from the model).

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36 *Telecom New Zealand Ltd v Commerce Commission* HC Wellington, CIV 2008-485-2205, 1 April 2010 per Winkelmann J.

[49] This Court granted Telecom and the Commission leave for a direct appeal from the High Court's "new technologies" judgment and granted Telecom leave for a direct appeal from the High Court's "asset beta" judgment. It did so because the issues involved in these proceedings to an extent overlapped with the issues in the appeal from the Court of Appeal's "network modelling" judgment.

Appeals on questions of law

[50] These are appeals on questions of law. They are not general appeals.[37] We were not asked to say whether the Commission's decision is the best outcome. It may not be. The questions asked of us, instead, were the much more limited ones of whether the Commission has, in the first place, misinterpreted what is required of it by the Telecommunications Act and, secondly, if not, whether what it has done is nevertheless so misconceived that it is an unlawful decision.

[51] In *Bryson v Three Foot Six Ltd* this Court discussed what amounted to a question of law for the purposes of an appeal.[38] Approaching the matter in the same way in the different context of this case, it can be said that if the Commission has misinterpreted what it is required to do under s 92 because it has misunderstood the meaning of "net cost", and has thereby misdirected itself, it will have committed an error of law which can be corrected on appeal. But if, on the other hand, the Commission has correctly understood what net cost is for the purposes of s 92 and has then proceeded to apply that understanding to the facts before it, its conclusion is a matter for the Commission weighing up the relevant facts. Provided that it has not overlooked any relevant matter or taken account of some matter which is irrelevant to the proper application of s 92, the Commission's conclusion cannot be disturbed on appeal unless it is insupportable even on a correct understanding of "net cost".

[52] As the Court said in *Bryson*, however, an ultimate conclusion of a fact-finding body can sometimes be so insupportable – so clearly untenable – as to

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37 Compare appeals from decisions of the Australian Competition and Consumer Commission (the ACCC) to the Australian Competition Tribunal under the Trade Practices Act 1974 (Cth), where the Tribunal has a general power of review and "stands in the shoes of the ACCC": *Application by Telstra Corporation Ltd* [2010] ACompT 1 at [17].

38 *Bryson v Three Foot Six Ltd* [2005] NZSC 34, [2005] 3 NZLR 721 at [24]–[27].

amount to an error of law, because proper application of the law requires a different answer. But that will be the position only in the rare case described by Lord Radcliffe in *Edwards v Bairstow*.[39] Lord Radcliffe gave three alternative descriptions: a state of affairs "in which there is no evidence to support the determination", or "one in which the evidence is inconsistent with and contradictory of the determination", or "one in which the true and only reasonable conclusion contradicts the determination". Lord Radcliffe preferred the last of them. It will be an error of law if the Commission has correctly interpreted the requirements of s 92 in relation to "net cost" but has nevertheless made a determination of net cost where the true and only reasonable conclusion available on the facts before it actually contradicts that determination. That will be the case if the Commission has in applying s 92 made an error which is of fundamental significance to its decision-making.

[53] Some caution is, however, required of the appeal court in assessing whether the decision-maker has reached an untenable conclusion on the facts. In *Bryson* this Court took notice of the observation by Lord Donaldson MR in *Piggott Brothers and Co Ltd v Jackson* that:[40]

> It does not matter whether, with whatever degree of certainty, the appellate court considers it would have reached a different conclusion. What matters is whether the decision under appeal was a permissible option.

[54] 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.*[41] 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

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39 *Edwards v Bairstow* [1956] AC 14 (HL) at 36.
40 *Piggott Brothers and Co Ltd v Jackson* [1992] ICR 85 (CA) at 92.
41 *R v Monopolies and Mergers Commission, ex parte South Yorkshire Transport Ltd* [1993] 1 WLR 23 (HL).

imprecise word and "by redefining it thrusting on it a spurious degree of precision".[42] Accordingly, he concluded that the area referred to as "a substantial part" must only be "of such dimensions as to make it worthy of consideration for the purposes of the Act".[43] Applying that test (the criterion) to the facts involved asking, first, whether the Monopolies Commission had misdirected itself and, second, whether its decision could be overturned on the facts.

[55] His Lordship said that it was quite clear that the Commission had reached an appreciation of "substantial"[44] which was "broadly correct". Speaking generally about how a question of the nature of the second question should be approached, his Lordship said:[45]

> Once the criterion for a judgment has been properly understood, the fact that it was formerly part of a range of possible criteria from which it was difficult to choose and on which opinions might legitimately differ becomes a matter of history. The judgment now proceeds unequivocally on the basis of the criterion as ascertained. So far, no room for controversy. But this clear-cut approach cannot be applied to every case, for the criterion so established may itself be so imprecise that different decision-makers, each acting rationally, might reach differing conclusions when applying it to the facts of a given case. In such a case the court is entitled to substitute its own opinion for that of the person to whom the decision has been entrusted only if the decision is so aberrant that it cannot be classed as rational: *Edwards v Bairstow* [1956] AC 14.

Lord Mustill said that *South Yorkshire* was such a case:[46]

> Even after eliminating inappropriate senses of "substantial" one is still left with a meaning broad enough to call for the exercise of judgment rather than an exact quantitative measurement. Approaching the matter in this light I am quite satisfied that there is no ground for interference by the court, since the conclusion at which the commission arrived was well within the permissible field of judgment.

[56] The issue about "net cost" involves an imprecise criterion where "different decision-makers, each acting rationally, might reach differing conclusions when applying it to the facts of a given case".

42 At 29.
43 At 32.
44 The report says "substantive" but this is plainly a misprint.
45 At 32.
46 At 32–33.

[57] Some guidance is also to be obtained from this Court's decision in *Unison Networks Ltd v Commerce Commission*.[47] That case was about a statutory regime for controlling electricity line companies. The Commission's task was to set thresholds for declarations of control. It differs from the present case because it involved the use of a broadly expressed power designed to achieve economic objectives, rather than, as here, the calculation of an amount of net cost. But it was alleged in *Unison* that the Commission had misconstrued the requirements of Part 4A of the Commerce Act 1986 and applied the wrong legal test when exercising its power. As to that, this Court said that the statute contemplated that the Commission, as a specialist body, would exercise judgment in constructing the thresholds. That requirement, the Court said, could have been lawfully tackled in one of two ways. Both approaches were within the terms of the provisions in the relevant subpart of Part 4A. The Commission chose one of them and that was lawful.[48] Importantly, it can be added that if the Commission had chosen the other, it too would have been lawful.

[58] So there are two stages. First, whether the Commission has misinterpreted the language of the statute. This in part turns on its appreciation of the function of the word "unavoidable". And, secondly, whether, if its interpretation was correct, it has nonetheless exercised its judgment about what was "net cost" in a way that contradicts the true and only reasonable conclusion available on the facts and has thereby committed an error of law in terms of *Edwards v Bairstow.*

Developments since the hearing

[59] The Court received during April, and was considering, further submissions and a good deal of supplementary material directed to a concern raised at the hearing that the Commission may have erred even in its original modelling decision made for the purpose of its 2001/2002 determination, and that a flaw in the model has been perpetuated in the years to which these proceedings relate. The concern was generated by Vodafone's argument, made in its most fully developed form quite late

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47 *Unison Networks Ltd v Commerce Commission* [2007] NZSC 74, [2008] 1 NZLR 42.
48 At [77].

in the hearing, that the Commission had overvalued Telecom's existing assets by attributing to them an optimised replacement value.

[60] The preparation of our reasons had reached this present point in a draft version when a significant development occurred. On 2 August 2011 the Court received a joint memorandum from counsel for Telecom and Vodafone. It informed the Court as follows:

> [2] First, the Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011 (**Amendment Act**) was enacted on 30 June 2011. The Amendment Act replaces the current TSO regime with a new regime to apply from 1 July 2011 onwards. The key relevance of this development for present purposes is twofold: the TSO regime is now an historic matter; and the passage of the Act into law has caused Telecom and Vodafone to reconsider settlement of the TSO matters at issue between them.
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> [3] Second, as a result of this reconsideration, Telecom and Vodafone wish to advise the Court that they have now entered into a commercial settlement regarding the financial consequences of all TSO matters at issue between them in these appeals, and those which await Commerce Commission determination. This means that from the perspective of Telecom and Vodafone, [all their appeals] no longer present live commercial issues.

Counsel advised that their clients now did not seek any judgment from the Court. They added, however, that the Commission was not a party to the commercial settlement and that its appeal against the High Court's "new technologies" judgment was not directly affected by any of these matters.

[61] The Court then sought the views of the Commission, which on 2 September advised that it considered that it was in the public interest for it to continue with its appeal. It said that the decision of the High Court on the "new technologies" issue had significant ongoing implications for any reconsideration of the 2004/2005 and 2005/2006 years as ordered by the High Court and for the further determinations it remains legally obliged to make in respect of the 2008/2009 and 2009/2010 years.[49] Determinations for the 2006/2007 and 2007/2008 years have already been made. The Court understands that, as a result of the Telecom/Vodafone settlement, they are no longer under challenge from any party. No order for their redetermination exists.

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[49] The old Part 3 regime described above remains in force for the financial year ended 30 June 2010 and all prior financial years: s 28 of the Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011.

The same applies for the 2003/2004 determination, which was the subject only of Vodafone's network modelling appeal and thus is no longer subject to an extant appeal.

[62] The Court was informed by the Commission that the TSO costs were borne, although to a proportionately small extent, by certain firms which are not parties to any of the proceedings, or, as we understand it, the settlement, but are or will be affected by the determinations. It was pointed out that the TSO costs for 2004/2005, for example, were apportioned on the following basis: Telecom (68.9 per cent), Vodafone (24.5 per cent), TelstraClear (6.1 per cent), WorldxChange (0.24 per cent), CallPlus (0.07 per cent), Teamtalk (0.02 per cent) and Compass (0.02 per cent). For 2005/2006, 5.75 per cent of the costs were apportioned to TelstraClear and 0.53 per cent amongst six other firms. It can be assumed that a similar position exists for the 2008/2009 and 2009/2010 years. These other "liable persons" are affected by the sole outstanding legal issue: whether the Commission has made correct determinations in respect of the "new technologies" question in the relevant years.

[63] The Court then sought further information from the parties about the present position and received on 27 September a joint memorandum of the parties, following which it advised them in a Minute that it would, as the Commission still sought, proceed to give judgment on the Commission's appeal and would dismiss the other appeals.

Discussion

[64] The resolution of the Commerce Commission's appeal apparently will have no value as a precedent because of the unique nature of the Part 3 regime and the substantive changes effected by the 2011 amendment. For that reason, we now express in short form our conclusions on that appeal.

[65] In our view, the Commission made no error of interpretation of the provisions of Part 3 but did make successive serious errors in applying those provisions in the determinations to which its appeal relates. As a result, its ultimate conclusions were

clearly untenable. Proper application of Part 3 required a different result. The Commission therefore erred in law in the *Edwards v Bairstow* sense.

[66] As to the Commission's interpretation: like the majority in the Court of Appeal in the network modelling appeal, we are not persuaded that the word "unavoidable" in the expression "unavoidable net incremental costs" in the definition of "net cost" in s 5 added anything other than emphasis to the rest of the definition. The Commission was right to think that a service provider which is efficient must be one which avoids costs which are in practical terms capable of being avoided – that is, are capable of being efficiently avoided. But, examining the matter in a practical way, the service provider will not take a short-term view of what costs can be avoided if such avoidance will prejudice it in the longer term. It will, in other words, favour dynamic efficiency. The Commission cannot be wrong in having chosen to prefer forward-looking dynamic efficiency calculated to produce innovation through investment in new technology and thus productive of lower costs over time. Neither that choice, nor its adherence to NPV=0, involved per se any misinterpretation of Part 3.

[67] In order to determine net cost the Commission first modelled the hypothetical ESP's network (an optimised version of Telecom's network, as described at [38] above) and calculated the optimised asset value. It then calculated the appropriate WACC. Finally it determined the time path (depreciation) over which the ESP was to recover the capital hypothetically employed. This was done by use of a tilted annuity – the tilt is the forecast of falling replacement costs intended to reflect the impact of new technologies.

[68] The Commission initially considered a number of asset valuation methodologies: opportunity cost, historical cost, optimised replacement cost (ORC), optimised depreciated replacement cost (ODRC),[50] and optimised deprival value. The Commission decided against the use of historical cost and opted for ORC. It said that in circumstances where there are long-lived assets, and in particular where there is technological change and falling costs, historical costs might be problematic and overstate the cost of replicating the service potential of the assets required to

50 ODRC is ORC written down for past depreciation.

provide the TSO services, were they to be expressed in real terms. (We pause to comment that this criticism does not seem apt in relation to old assets, often called "legacy assets", for which there is no new and enhanced technology.)

[69] ORC is the present-day cost of acquiring an asset to provide efficiently the required quantity and quality of service. Replacement cost is based on current market values, taking account of the availability of current technology.

[70] The Commission's use of ORC failed to address, however, the distortion caused by artificially revaluing old assets (already wholly or partly depreciated) which were in reality not likely to be replaced and optimised. It is sensible to revalue on an optimised basis, say, a switch by attributing to it the lower value (price) of a new switch which performs the same or better function but is able to be acquired at a lesser price. It is quite another thing to attribute a modern equivalent value to an old asset which is not actually being replaced and for which no replacement would sensibly be introduced. All that does is to artificially inflate the value of the old asset and provide a windfall for the firm in terms of an enhanced return on and of capital employed. This emerges starkly in relation to the very significant value attributed to installed copper wire in the PSTN, the attributed replacement value of which is in large measure the current cost of putting it in the ground. It cannot be right, where the ESP is supposed to be a proxy for a firm which will continue to employ old assets, to attribute a new (2001) value to them, including the cost of work notionally needing to be done if the assets were being newly installed (in the ground). That cost which was not actually incurred included notional current fuel and labour costs.

[71] In *Application by Telstra Corporation Ltd*[51] the Australian Competition Tribunal has rejected modelling on such a basis. In that case the Tribunal was not satisfied that the use of a "hypothetical new entrant" valuation model was capable of generating appropriate estimates of the TSP's real costs, noting that such modelling "does not reflect costs actually faced by [the TSP], which has trenches, ducts, etc already in place".[52] Nor would such a price reflect the TSP's legitimate business

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51 *Application by Telstra Corporation Ltd* [2010] ACompT 1.
52 At [242].

interests, which were "to receive a commercial return on its prudent (past) investment in the infrastructure used ... not a hypothetical new investment".[53]

[72] At the time that the Commission was engaged in its modelling process and choosing to use ORC valuations, the same approach was in use in Australia by regulators and had already been subjected to penetrating criticism by Professor David Johnstone of the University of Wollongong.[54] He observed that such an asset revaluation when agreed to by a regulator (the Commission was acting in an equivalent capacity) amounts to a net present value windfall to the asset owner equal to the amount of the upward revaluation, which he described as a "free lunch".[55] His criticisms were made in relation to ODRC and would apply even more to ORC. Revaluation of legacy assets had also been disapproved in the United States.[56]

[73] The Commission's use of the tilted annuity to try to minimise the resulting asset value distortion proved to be entirely inadequate, as the Commission must have appreciated once it tried, and failed, to address the impact of new technologies. At that time, at least, its choice of ORC was called in question. It should have recognised that it had failed to produce a model of an ESP for the purposes of Part 3 appropriate to the particular circumstances.

[74] So the Commission's original error in valuation methodology was compounded when it found itself unable to accommodate new technologies beyond those which it introduced into its model in 2002/2003. At that point, the Commission, by now informed of Vodafone's complaint, should have reappraised the situation and concluded that it must not continue to use a model which even Telecom's counsel, in his submissions to us, described as a flawed model (albeit he ascribed to it a different flaw). It was incumbent upon the Commission to produce a new model using valuations which did not artificially inflate the value of the notional assets of the kind which the ESP would be taken to be employing.

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53 At [244].

54 David Johnstone "Replacement Cost Asset Valuation and the Regulation of Energy Infrastructure Tariffs – Theory and Practice in Australia" (University of Bath School of Management CRI International Series 8, 2003).

55 At 6.

56 Federal Communications Commission "Report and Order in the Matter of Federal-State Joint Board on Universal Service" (FCC 97-157, Washington DC, 1997) at [224]–[230].

[75] 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.[57] 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.

[76] Hence we reach the view that Winkelmann J's decision to order the Commission to re-consider its determinations for the 2004/2005 and 2005/2006 years was correct. The Commission's model was not capable of producing in those years a "net cost" to the ESP as Part 3 required unless it incorporated the mobile technology.

[77] The Commission has suggested that even if this were to be the Court's conclusion it should nevertheless, contrary to the merits of its appeal, have the appeal allowed, with the consequence that its erroneous determinations should be reinstated, because the time, trouble and expense to the Commission and to Telecom in undertaking a re-modelling exercise would be disproportionate to any benefit now that Telecom and Vodafone have settled. But that would be to disregard entirely the position of TelstraClear and the other liable persons who might stand to gain from an adjustment of their liabilities on a re-determination of net costs for the years in question. Moreover, the remodelling work will plainly be necessary in order that the Commission can properly make the 2008/2009 and 2009/2010 determinations. As the Commission itself has noted in the most recent memorandum to the Court, the

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[57] The unchallenged earlier determinations could not have been disturbed. Telecom would have retained all benefits given to it under them.

collection of data and the application of the methodology to that data in a particular year are comparatively routine.

[78] We would therefore dismiss the Commission's appeal. The other appeals should be dismissed as a consequence of becoming moot but we would add that the dismissal of the asset beta appeal should not be taken to inhibit the Commission's choice of the most appropriate asset beta when it reconsiders its model.

[79] There should be no order for costs.

TIPPING J

[80] I agree with Blanchard J that the Commission's appeal should be dismissed, as should the other appeals as a consequence of their having become moot. I consider the Commission erred in law in its interpretation of the statutorily defined expression "net cost".[58] I prefer that view of the matter to the view that the Commission correctly interpreted the meaning of net cost but fundamentally misapplied that concept to the facts, thereby committing an error of law of the *Edwards v Bairstow* kind.[59] But, if am wrong in concluding that the Commission misinterpreted the expression net cost, I agree with Blanchard J, for the reasons he has given, that the Commission misapplied that expression in this case. In the circumstances I too will express my views in a compressed way.

[81] On the point of interpretation I consider the Commission must have misinterpreted the statutory definition of net cost when it allowed Telecom the benefit of valuing its existing assets on an "as-new" or "cost of replacement" basis. By doing this the Commission failed to reflect the reality that the assets were not new and that they did not require replacement. Furthermore, the assets must have already been substantially or fully depreciated. The effect of the Commission's interpretation of net cost was to give Telecom the benefit of the "cost" of depreciating the assets again, when that was not a real cost. This allowed Telecom to

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58 That definition being "the unavoidable net incremental costs to an efficient service provider of providing the service required by the TSO instrument to commercially non-viable customers": Telecommunications Act 2001, s 5.

59 See *Edwards v Bairstow* [1956] AC 14 (HL).

pass on costs it had not incurred to those who were required to contribute to its net cost of servicing the commercially non-viable customers.

[82] There are two reasons why the Commission's approach can be seen as resulting from a misinterpretation of the statutory definition of net cost. First, the purpose of the net cost formula, in its statutory context, is to allow Telecom to pass on to Vodafone and the others an appropriate amount of the cost to it of efficiently servicing its commercially non-viable customers. The definition's reference to "an efficient service provider", although apparently hypothetical, must, when it is applied to Telecom for the legislative purpose, be construed as meaning "... cost to Telecom acting efficiently". Secondly, the word "unavoidable" is linked with the concept of efficiency but is not, in context, surplusage. What the composite definition envisages is that Telecom must act efficiently in providing the non-commercial service. The definition requires that any cost it incurs must be eliminated if that cost is avoidable; that is, unless it is essential to providing the non-commercial service in an efficient manner. I do not consider the concept of efficiency can, in the present context, justify the approach the Commission took.

[83] The costs which Telecom was allowed by the Commission notionally to incur through depreciating its assets a second time, and on the premise of as-new or replacement cost, were, in the relevant sense, avoidable. In the present context it is artificial and must be contrary to the legislative purpose to allow Telecom to claim costs on the basis accepted by the Commission. The Commission's approach also seems to me to be contrary to the purpose set out in s 18, which are incorporated into the relevant exercise by s 84(2)(c).

Solicitors:
Wilson Harle, Auckland for Vodafone New Zealand Ltd
Chapman Tripp, Wellington for Telecom New Zealand Ltd
Commerce Commission, Wellington