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Submission on draft pricing review determination for UBA and UCLL services

20 February 2015

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1. Introduction

1.1 This submission is provided on behalf of InternetNZ, Consumer, TUANZ, Snap and CallPlus.

1.2 We particularly note that it deals with both legal and economic issues, having had substantial input from economist, Rob Allen.

2. Executive Summary

Timing of the process

2.1 As InternetNZ, Consumer, and TUANZ point out, the expedited timing of this process is a central concern for them.

2.2 We supplement what they submit including as to:

(a) The issues around the statutory draft decisions currently timetabled for May;

(b) Concerns as to timing of the conference relative to those draft decisions

(c) How the conference and other processes might be turned to the benefit of the Commission and stakeholders,

Application of s 18

2.3 We outline our agreement with the Commission as to interpreting how s 18 is applied to the modelling. However, as the implementation of that interpretation appears to be problematic, we address the approach to s 18 in more detail. We suggest a way to get clarity, to avoid some of the issues evident in the draft decisions.

2.4 Key is that the role of the Commission is to determine the true TSLRIC, and applying s 18 including predictability distorts away from that true TSLRIC. The role of s 18 is limited, and must be carefully applied.

Required level of evidence and analysis by the Commission

2.5 By referring to judicial authority, the Commission's past practice in its telecommunications work, and the work it has done under Part 4 to remedy the same sort of problem, we submit that quantitative analysis, supported by evidence, is required and that this is not happening.

2.6 We seek to demonstrate that just one countervailing fact (that Chorus contracted years ago to deliver UFB and therefore investment incentives are not needed) shows the high level generic approach as to predictability, dynamic efficiencies, etc, is not available (and would be an error of law).

2.7 The High Court expressed concern, in the Part 4 IM Merit Appeal decision, that the Commission's decision to err on the high side for electricity and gas network service prices by setting the WACC percentile at 75th was not supported by any analysis:

> 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.[1]
>
> Where a proposition is simply asserted by economic experts, we give it little or no weight.[2]

2.8 The Commission's approach to applying s 18 efficiencies is broadly at the same level that was criticised by the court comprising a judge and two highly experienced economists. It is submitted that such a different approach is not optimal but in any event does not meet legal requirements.

2.9 It is not apparent why the Commission remedied the position under Part 4 but is continuing in this way in the telecommunications jurisdiction. The Commission accepted the High Court's criticism on this point and acknowledged:

> … the 2010 decision on the WACC percentile was not well supported by analytical and empirical evidence…"[3] and "Our previous decision to use the 75th percentile for price-quality regulation was a matter of judgment. At the time of our original decision we had limited empirical or analytical information to assist us in determining the specific WACC percentile, including on the likely response of regulated businesses (in terms of their investment behaviour) to the WACC estimates that would result from applying the cost of capital IMs.[4]

2.10 It is also not apparent why the Commission is departing from its long standing practice of doing quantitative CBAs for major telecommunications processes such as this. The Commission has stated, as to Telecommunication Act major processes:

> …that it is required to attempt so far as possible to quantify detriments and benefits … This is not to say that only those detriments and benefits that can be measured in monetary terms are to be included in the Commission's analysis[.] Those of an intangible nature, which are not readily measured in monetary terms, must also be assessed.[5]

Predictability

2.11 Against that background, we raise concerns as to the proposed treatment of predictability, and of s 18 generally.

2.12 We illustrate the problems by showing that what the Commission describes as a central estimate of true TSLRIC is in fact an uplifted estimate distorted by application of the high level predictability concept. That in turn means that a wrap up s 18 assessment would distort the price even further away from true TSLRIC.

2.13 It is apparent that the Commission has made a large number of judgments and assumptions (e.g. that re-usable assets should be valued at ORC, and a constant demand

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[1] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraph [1462].

[2] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC 3289 [11 December 2013], paragraph [1745].

[3] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, page 7.

[4] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph X5.

[5] Commerce Commission, Section 64 Review and Schedule 3 Investigation into Unbundling the Local Loop Network and the Fixed Public Data Network - FINAL REPORT, December 2003, paragraph 75.

assumption should be applied to broadband) that mean the estimate is, in fact, at the higher end of feasible TSLRIC estimates.

2.14 It is noted that the Commission's expert, Ingo Vogelsang, has said "the TSLRIC method currently proposed by the NZCC is likely to be substantially more than needed by Chorus for covering the cost of is copper access network. Thus, the copper access network is likely to remain highly profitable"[6] and "even if the Commission were to reverse its stand on the re-use of civil works would Chorus be [sic] able to generate substantial profits from its UCLL and UBA offerings".[7]

"Predictability" does not provide a sound basis for uplifts

2.15 For substantial parts of the draft decisions the Commission has effectively replaced the long-term benefit of end-users objective with a predictability of approach objective.

2.16 The Commission has decided, for example, to value re-usable assets at ORC, and to provide an uplift to TSLRIC prices on the basis that it considers this would be the most predictable approach.

2.17 The objective of predictability is given more prominence in the draft decisions than the statutory objective to promote competition for the LTBEU, and to consider the impact on efficiencies. By way of illustration, the UCLL draft decision alone makes nearly 70 references to "predictability", yet it makes less than 20 references to "promote competition" or "promoting competition", less than 30 references to "long-term benefit of end-users"; and just over 10 references to "efficiency".

Supreme Court requires historical cost for reusable assets

2.18 The draft maintains that TSO modelling is backward looking and therefore the Supreme Court TSO decision is not binding in this FPP process including as to valuing re-useable assets at historical cost instead of ORC.

2.19 However, not only are the TSO models forward looking, they are also, explicitly, TSLRIC models. In terms of predictability the correct position is to value reusable assets at historical cost.

2.20 However, our primary submission is that the Commission is bound by Supreme Court precedent; including to apply historical valuations to re-usable assets.

Ensuring relativity can be done by both increasing and decreasing prices

2.21 We acknowledge there may be legitimate grounds to exercise judgment to ensure appropriate relativities between UCLL and UBA prices, but this can be done by erring on the side of low UCLL prices and high UBA prices such that the UCLL + UBA price (and consequent end-user prices) are not increased.

The price profile should reflect the actual estimate of TSLRIC costs for each year

2.22 It is submitted that the Commission's proposal to set a constant TSLRIC-based price in nominal terms over the regulatory period should not be applied. If a constant TSLRIC price is applied we agree it should be based on WACC.

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[6] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 24.

[7] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 118.

2.23 It is submitted, that, instead the nominal prices for each of the years in the regulatory period should be used.

Backdating

2.24 Our primary submission is that there cannot be backdating of any price increases, despite the Court of Appeal backdating decision.

2.25 If we are wrong in that, we submit that backdating is available in only limited circumstances, to the extent that a quantitative analysis based on evidence shows that backdating promotes competition in the LTBEU. No such evidence or analysis has been made out thus far.

2.26 While the need for that analysis and evidence is paramount, we add a number of issues pointing away from backdating.

Chorus' cost modelling is not TSLRIC and should be rejected

2.27 The version of the Analysys Mason copper cost model Chorus has made available is not TSLRIC, and considerably overstates costs.

2.28 The result is that Analysys Mason values Chorus' copper network at $15 billion compared to Chorus' Statement of financial position for 30 June 2014 which values Chorus' copper network at $2.398 billion (and total assets at $3.680 billion).

Copper v fibre MEA for UBA

2.29 The Commission has concluded that the wording of the UBA service description requires it to use a copper MEA for the UBA uplift. Therefore, no other MEA is legally available.

2.30 It is submitted that this is an incorrect interpretation of the Act.

2.31 That interpretation would be the antithesis of TSLRIC, forcing modelling of, largely, the actual operator's network, instead of the ubiquitous focus of TSLRIC: the network of an HEO. The whole idea is not to model the incumbent's network.

2.32 Only clear statutory language would produce that contrary and unprincipled outcome. There is no such clear language (in fact the plain meaning, it is submitted, of the Act is that the MEA is not limited to copper).

2.33 If another MEA was available, very likely that would be based mainly on fibre for that is the MEA chosen for UCLL.

2.34 In order to assist the Commission going forwards, we outline our understanding of the position on this issue, as to reasons and engaging with submissions, both in terms of legal requirements and in terms of getting better outcomes going forwards for all stakeholders. We think this provides a valuable example. This is relevant not only to the choice of UBA MEA but also more broadly it is relevant on the FPP.

2.35 We think this is also a practical example of the value that can be derived by the Commission and stakeholders if the Commission is able to leverage the discipline of dealing with submissions in writing and the discipline of giving sufficient reasons, to achieve optimal outcomes. That is a practical observation, beyond the legal requirements we submit apply. We believe that, if the Commission had done that, the correct approach under the Act would likely have been identified earlier last year and would have avoided the additional work and delay entailed in starting over on the UBA uplift. (There have been several submissions since April last year, on which, if the Commission had engaged in

writing, it seems likely the problem would have been detected last year and the need to rework this now avoided: that is one of the valuable features of the discipline of dealing with submissions in writing).

2.36 We and our clients would welcome the opportunity to work with the Commission, to help find ways to make these issues work better, for better outcomes for all stakeholders.

Submissions as to additional modelling issues

2.37 Our clients do not have economists deep diving into the model, and we are therefore to submit on some of the detail, ranging from the so called aggregated model, the footprint of the model, the selection of P2P instead of GPON, shared and common cost, etc, after having reviewed the other parties' submissions, especially economists'. It is already known that there are substantial concerns in this regard to be addressed. The parties can of course submit on matters up to the due date for submissions on the formal draft determinations (currently timetabled for June).

3. We support a number of aspects of the draft decisions

3.1 Time constraints – and the need to wait to see the economists' reports as explained in the Wigley & Company submissions - have meant our focus has been on some major areas of concern with the draft decisions and not others. While we have substantive concerns about aspects of the draft decisions, we also acknowledge that we support many aspects of the draft and the Commission's modelling decisions; in particular:

- Chorus Boost proposal and/or a reduction in service quality would amount to a "change in circumstances";
- There is potential for double recovery in modelling a FTTN MEA for UBA and a FTTH MEA for UCLL;
- "the modelled UBA footprint should match Chorus' actual demand for UBA";[8]
- Use of Purchasing Power Parity (PPP) for exchange rates;
- Adoption of the BELL-Ducat approach to terrain;[9]
- the TERA model route length algorithm appears to be appropriate (and provides appropriate optimisation within the constraints of scorched node);
- The overhead/underground assumptions, including using EDB aerial data – it is not appropriate to use actual;
- RBI capital cost exclusions;[10]
- "assumptions of instant take-up with no migration";[11] and
- Inclusion of UFB demand in the demand for UCLL and UBA services.

4. Timing of the FPP process

Our clients' objectives

4.1 First, our clients are clear in their approach that getting this right trumps speed. That underpins their submissions. If the FPP decisions are delayed a number of months, but getting it right is achieved, our clients consider that this is preferable.

4.2 For them too, this is not about gaming to delay, for whatever reason. CallPlus' and Snap's position firmly shows this. As their submissions demonstrate, they will be paying large sums to Chorus, without being able to recover them from customers, based on the Commission view in December that there will be backdating. Snap has not increased its prices after December 2014, and is therefore not recovering any of the backdating. On that basis they have every incentive to

[8] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 251.

[9] Support for this approach was detailed in the submissions and cross-submissions in response to: Commerce Commission, Consultation paper our proposed view on regulatory framework and modelling approach for UBA and UCLL services, 9 July 2014.

Refer, for example, to Wigley and Company, Cross submission on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL, 20 August 2014, section 15.

We note that no concerns were raised by Chorus, and its consultants Analysys Mason and CEG, in cross-submissions on this matter.

[10] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, Attachment H.

[11] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 253.

see this handled quickly, all things equal. But our clients, including them, are concerned that the current speed is negatively impacting outcomes which outweigh those concerns.

Conclusions as to timing

4.3 In summary we submit that the position is:

(a) In order to meet the s 47 requirements for the statutory draft determinations (such as treatment of all issues including backdating and one off charges), the statutory draft determinations are being produced later (currently timetabled for May);

(b) The December draft documents therefore do not have s 47 status. They do effectively provide the material submitters requested be provided prior to the formal draft determinations, however, which the Commission had denied by markedly truncating this FPP process despite it being the largest and most significant process since the LLU investigation over a decade ago;

(c) The Commission has adjusted the timetable with the effect of reflecting the point above as to s 47, which of itself is a valuable step;

(d) The current round of submissions does not preclude later submissions, including on different points. Submissions on all points can be made up to the due dates for submissions after the s 47 draft determinations (currently mid-June). That is valuable as our clients, for example, are not in the position of being able to review in detail the Commission and Chorus modelling. But they can assess the position based on the exchanges of submissions, cross-submissions, etc by other parties.

(e) The s 47 draft determinations require sufficient reasons. As the December 2014 drafts were intended to be the statutory drafts, this enables submissions on the sufficiency of reasons relative to the Commission's current approach.

(f) It is submitted that the Commission should insert further iterative processes, including, but not limited to, redressing the absence of iterative consultation on model reference papers and similar major steps. It is expected that the current round of submissions will better illustrate the problems and issues and it is proposed to submit again on this, thereafter. However, our clients have already submitted on multiple concerns in this area, going back to early last year.

(g) One particular issue lies as to one off charges, on which the Commission currently plans to issue, as it did as to monthly charges, all the documentation at one time, contrary to the standard practice overseas. In light of the issues that are emerging as to monthly charges, it is submitted that the Commission should move to an iterative approach, including disclosure for consultation of the model reference paper as to one off charges. Further, given the submission we made on s30R on behalf of our clients that many of the issues identified there are matters for this FPP process, such issues would also benefit from an iterative process in the FPP. To avoid doubt, our s 30R submission is also a submission in this FPP process, as is self-evident from that submission.

(h) The Commission is departing generally from what the Court of Appeal in Chorus v Commerce Commission referred as *'its usual practice"* of taking an iterative approach.[12] The iterations in the current progress fall well short of what has happened in the past, on what are much simpler processes such as IPPs. The proposed approach as to conferences is a facet of that.

[12] Chorus v Commerce Commission at [51] referring to the Supreme Court's observations in Unison v Commerce Commission on the usual iterative approach by the Commission.

(i) For the reasons below, it is submitted that the conference must be held after the s47 drafts are provided, not before as currently proposed. However, an additional conference can be held as currently planned. Additionally, whatever the legal position, the conference should be held after the s 47 drafts.

(j) It is appreciated that project managing this process has its challenges. Our clients continue to question why tight time lines are set, or time lines are set at all, when changes seem inevitable. As an example – the issues are more widespread than just juggling time lines – the parties are currently expected to submit on the s 47 draft determinations within 3 weeks. The completely new documentation as to bottom up one off charges alone could not be handled within 3 weeks. The history so far in this FPP process, against the background of the history of past processes, increasingly implies that the approach would helpfully be revisited at a comprehensive and strategtic level. Our clients remain concerned that sufficiently measured steps may produce quicker and better outcomes overall. Departures, such as holding the conference prematurely, as outlined below, typically produce delay overall.

The conference - overview

4.4 The departure from a sufficiently fulsome iterative approach is seen in the December 2014 Commission decision to:

(a) hold the only conference before the s 47 draft determinations are provided not after; and

(b) forgo a conference as to the one-off charges and as to backdating (or, at least, in the case of backdating, not to have a conference on backdating after the statutory draft determination is issued).

Turning the conference to benefit the Commission and stakeholders

4.5 Before turning to the legal aspects of this we outline why in practical terms the Commission and stakeholders will benefit from holding a conference after the s 47 draft determinations are available. (For the reasons below, a conference as currently timetabled can still be held as well, and is likely to be valuable in any event: it is hard to see such complex issues for example being handled in only 2 days and sequential conferences enable an iterative approach).

4.6 Firstly, the approach of holding only one conference before the draft determination is a radical departure from invariable practice over many years. This is on the largest process with the most impact for telecommunications since the LLU investigation in 2003. The magnitude of that change in that context implies that there may be problems.

4.7 Here the context also is that undue speed is throwing up multiple substantial concerns and issues and this may be a variation on that theme.

4.8 It is also submitted that the Commission is likely to get to the final decision faster by a more measured approach to conference. The seemingly avoidable problems and likely delays, due to the choice of UBA MEA issue and the apparent need to redo the UBA modelling, appears to be one example of this. (This copper v fibre MEA issue is dealt with later in these submissions).

4.9 The lack of a conference as to one off charges (a highly material issue in terms of impact on the markets and the dollar sizes) speaks for itself (likewise as to backdating, if there is to be no conference on that, where in the order of $130 Million is at stake according to the consumer NGOs).

4.10 Monthly charges appear well short of being ready for a conference. That will be the case even with the benefit of exchanges of submissions following the December drafts. Again, an example of this is the copper v fibre UBA MEA issue. As is submitted below, the Commission has

not given its reasons as to why it concludes that the UBA service description only permits a copper UBA uplift MEA. Therefore the parties can only guess at those reasons when currently submitting. Armed with the Commission's reasons, as required for the s 47 determination, the parties will be able to engage adequately at the conference and the Commission will get the benefit of more relevant – and focussed - submissions.

4.11 That is a simple example, and one that is easily fixed such as by release of a position paper before the conference. But it is a simple example of a large number of factually and legally more complex uncertainties at present that are not ready for conference. It is submitted that this will become even more apparent from the current round of submissions.

Conference – legal issues

4.12 We note that the Act does permit the Commission to choose either a conference or consultation (see s 50). The Act does not expressly say when that conference or consultation is to take place, but it is clear from the scheme of the Act and the context of s 50 that the conference or consultation is to take place after the s 47 draft determination (on the current timetable, that would be after May 2015).

4.13 Therefore the conference currently timetabled is not a s 50 conference.

4.14 Applying of the Act:

(a) The Commission does not have to hold a conference, and it is in any event consulting after the s 47 draft determinations (thereby complying with s 50).

(b) Just as the Commission can and does have iterative consultation rounds in addition to the statutory requirements, it can hold conferences in that way too.

4.15 However, not holding a conference after the statutory draft determination, including not holding a conference of any form as to one off charges (and, possibly, backdating), is a complete departure from long standing Commission practice, on the issue that is the most complex and with the most impact for many years in telecommunications.

4.16 It is anticipated that this may raise public law issues beyond the statutory provisions identified above. Such issues are part of wider public law issues as to the nature of consultation and approach generally in this FPP process.

4.17 Should the Commission choose to continue down this path of holding only one conference before the s 47 draft determination is provided, our clients would submit further.

5. Application of s 18

Introduction

5.1 In this section we deal with how s 18 is to be applied. We are hampered by the absence of engaging in writing with multiple submissions on this, and on the related issue of the level of evidence and analysis that is required.

5.2 What appears from the draft decisions is that s 18 analysis, including as to predictability, still has a central role as to modelling choices. Mostly, however, those choices should be made without reference to s 18 including as to predictability. The objective is to determine the most accurate TSLRIC cost (and therefore price). This is what the Commission

describes as the "true TSLRIC" derived by obtaining what it calls a "central estimate" of TSLRIC.[13] Using s18 distorts that objective.

5.3 In fact, at a high level, the draft decision agrees with that conclusion: we submit that the difficulty is in the implementation in the draft and this has led to errors, including errors of law.

5.4 In this section we deal with how the Commission is to apply s 18 during the modelling. In the following section we deal with the level of evidence and analysis that is required, not only as to s 18 assessments but more widely. We show examples where it is submitted there are errors of law.

5.5 We follow that by a section dealing with the Commission's use of the predictability concept, together with other uses of s 18. In that section we give examples of where we submit the Commission is not applying its high level conclusions as to how s 18 is to be applied in the modelling process. It is submitted that these examples show error of law.

5.6 One consequence is that the Commission's "central estimate" is not a central estimate at all, but is at the higher end of the TSLRIC estimates the Commission could have produced, inflated by s 18 and predictability considerations.

Summary as to the application of s 18

5.7 We continue to rely on multiple submissions on this made by us. This summarises our submissions on some aspects for the purposes of linking them with the draft determinations.

5.8 First, we agree with the Commission's main relevant conclusion as to the relationship of the TSLRIC exercise and s18, as we summarise below.

5.9 However, the implementation is where some difficulties lie in our submission and so we will outline the position in more detail below.

5.10 Therefore we agree with this conclusion in the draft UCLL determination.[14]

> We remain of the view that we should not disregard TSLRIC objectives purely on the basis that they do not appear in section 18. Adopting a TSLRIC approach will generally not conflict with the section 18 purpose statement because setting a price based on forward-looking, efficient costs will generally promote competition. If and where there is a tension between a TSLRIC approach and the section 18 purpose statement, we consider that section 18 cannot override our need to undertake a TSLRIC exercise.

5.11 We adopt also what Spark and Vodafone say on this (as quoted below in the paragraph that follows ([199]):

> Spark indicated that it agreed [with the paragraph above] and submitted that "s18 does not override the obligation to first focus on the technical task of determining and modelling the best estimate of efficient forward-looking costs when applying a TSLRIC methodology." Vodafone has submitted that "s 18 considerations cannot displace a proper analytical approach to determining TSLRIC."

5.12 Essentially that also reflects the "internal consistency" point made by the Court of Appeal in Chorus v Commerce Commission, and that the TSLRIC FPP methodology therefore

[13] See for example [425] in the draft UCLL determination.

[14] [198] draft UCLL determination.

inherently implements s 18 in any event. This is conveniently summarised at [195]-[197] of the draft UCLL determination.

5.13 We also agree with the Commission that the approach is to estimate a "central estimate of the 'true' TSLRIC cost"[15] and then consider "whether the TSLRIC cost estimate … gives, or is likely to best give, effect to the section 18 purpose statement and the relativity requirement of the Act".[16] If at any step in the modelling process, there are choices out of which no option leads to the "true" TSLRIC, s 18 can be used to resolve the impasse.

5.14 We now expand on the analysis. In relation to most "area[s] of judgment" on the FPP, left to the Commission, in the words of Kos J,[17] s 18 has no role. Contrary to the way [166] of the draft UCLL determination reads, such "area of judgment" is not a reference to judgment under s 18.[18] Similarly as to "value judgments", as described by the Court of Appeal, which, again, are not limited to s 18 value judgments,[19] contrary to [167] of the draft UCLL determination.

5.15 In particular,[20] the Commission is required by the statute to decide: what is the true TSLRIC cost and therefore the price based on that cost? That can be framed as the central or mid-point estimate of TSLRIC. That is a question that is independent of s 18 efficiency analysis, save that it feeds into the latter analysis, not the other way around. It is a question of deciding the TSLRIC based on the cost of a hypothetical efficient network.

5.16 A problem with the approach the Commission has adopted is that it has applied s 18 judgments to its calculation of the TSLRIC estimate, resulting in an estimate above a central or mid-point estimate, and then it would apply s 18 judgment again to determine whether further uplift in the TSLRIC estimate should be applied.

5.17 A more appropriate approach would have been to follow the Commission's DPP determinations under Part 4 of the Commerce Act where it calculated a central estimate of electricity and gas network prices, and applied s 52A(1) considerations to explicitly and transparently determine the size of any uplift that should be applied (67th percentile WACC rather than mid-point WACC).

5.18 It is helpful to be clear that:

(a) There are two different types of "efficiency" involved here.

(b) Firstly there is the question of what is the hypothetical **efficient** network. That is, "efficient", in the narrow sense of least cost.

(c) Then there are the s 18 **efficiencies** in the sense of dynamic and static efficiencies (here, as varied by s 18).

(d) Although an efficient price (such as TSLRIC, assuming that to be efficient for present purposes) feeds into the efficiency analysis, the opposite does not normally happen. They are two different exercises.

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[15] [210] draft UCLL determination.

[16] [361] draft UCLL determination.

[17] Cited by the Commission at [166] of the UCLL December 2014 draft determination.

[18] We note that the draft determination's reference to "areas of judgment" as used by Kos J – at [166] of the draft UCLL determination -incorrectly concertinas two passages from his judgment: one ([139] in the judgment) dealing with s 18 (which makes no reference to "areas of judgment" despite the Commission's paragraph), and one dealing with the issues in the passage at [15] in the judgment (over 100 paragraphs away) quoted by in the Commission's paragraph. That talks about an "area of judgment" without reference to s 18.

[19] But can include s 18 value judgments at the right part of the process.

[20] At [198] of the UCLL December 2014 draft determination.

(e) TSLRIC is solely about determining the costs of the HEO. That is a question that does not have, for example, inputs based on dynamic efficiencies (even though the outcome of the exercise may produce dynamic efficiency). The most accurate TSLRIC price is the lowest cost of service option for an HEO. That is an entirely different thing.

(f) Therefore, obtaining the most accurate TSLRIC price is not solved by making choices under s18.

(g) In fact, using s 18 in the decision making deliberately takes the position away from the most accurate TSLRIC (that is the "true" TSLRIC). Obtaining the most accurate TSLRIC price is obtained by making choices that best reflect the most accurate TSLRIC price (that is the cost of the HEO). Where there are modelling/input choices to be made, the Commission needs to consider what would be the lowest (efficient) cost option that an HEO could deploy, otherwise the wrong question is being asked and answered.

5.19 Nearly always there will be one right optimal judgment to help produce the most accurate TSLRIC price. The decision may be made differently by different people but there is still one decision to get the right price.

5.20 Only if there are two or more possible decisions on a particular modelling question, none of which would necessarily produce the most accurate TSLRIC, does that impasse become resolved by a choice made using a s 18 efficiencies analysis. That is what happened on the UBA IPP, when a plausible range was reached.

5.21 Say the Commission is faced with two choices on a particular TSLRIC modelling decision, A and B. The first question the Commission asks itself is: which of A or B will lead to the most accurate TSLRIC? Usually, that question can be answered by selecting the answer that will lead to the most accurate TSLRIC.

5.22 However, if the question does not produce a preference between A or B, then, and only then, is the impasse resolved via s 18 efficiency analysis, to choose between A and B.

5.23 That example is a simple one. The IPP decision is an example of more complex decision making under s 18. It is recognised that this will not always be straightforward decision making.

5.24 We think it would greatly help the process for the Commission to clearly split its approach into those two sequential steps

5.25 That in fact is what the Commission says it is doing in the quotations above from its draft. Our conclusions above simply reflect this.

5.26 It is submitted that it is important to have clarity around how the Act is interpreted. Specific words of the Act, if clear enough, will always take effect over and above a purpose statement. A purpose statement is not applied regardless and it must not be elevated above the role available to it. The role for the Commission is unequivocally stated as to decide the TSLRIC cost and price. That is solely an issue of ascertaining efficient cost. S 18 efficiencies are irrelevant, and wrongly applied, unless there is an impasse.

5.27 We agree that the application of s 18 during the TSLRIC modelling is not limited to decisions at the end, as happened with UBA IPP. But, critically:

(a) As above, it can only be used in those occasions where there is an impasse between choices on the path to determining true TSLRIC cost;

(b) Great care is needed to avoid and adjust for the distorting magnifying effect of multiple overlapping choices at the high end (or the low end) of TSLRIC estimates.

5.28 We do not understand, or support, the Spark and Vodafone submissions, accepted in the draft UCLL determination at [204], that section 18 may not necessarily have a "discernible" or "separately observable" effect at every decision point during the modelling process". Either s 18 is overtly applied, as set out in writing, to a modelling choice, or it is not. Ideas such as not necessarily being "discernible" or "separately observable" are unusual and troubling.

6. Required level of evidence and analysis by the Commission

Introduction

6.1 It is difficult to submit on this when the Commission does not explain why it chooses not to rely upon evidence and analysis which court judgments and its past practice say are required, save on two specific points noted below, as the Commission has not engaged in writing with submissions on the point.

6.2 For example, the draft UCLL determination states, without evidence, explanation, or engaging with submissions on the point:[21]

> Where there is a trade-off between static and dynamic efficiencies, we generally give greater weight to dynamic efficiencies. This is because of the emphasis in section 18(1) of promoting competition over the long-term.

6.3 When the High Court (comprising a judge and two highly experienced economists) firmly criticised the Commission for doing exactly that: [22]

> 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.

6.4 And the same Court bench of three said this (being equally critical of such approaches by the Commission):

> Where a proposition is simply asserted by economic experts, we give it little or no weight.[23]

6.5 Then, to similar effect from the same IM judgment:

> … the Commission did remarkably little … to justify its assertions about the relative costs of over and underestimating the cost of capital …[24]

[21] At [174]. For some reason it is noted that Kos J has noted that approach. That seems immaterial but in any event an FPP has much higher evidential and analytical requirements. That is the very nature of the difference between the FPP and the IPP.

[22] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraph [1462].

[23] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC 3289 [11 December 2013], paragraph [1745].

[24] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC 3289 [11 December 2013], paragraph [1440].

> … 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.[25]

6.6 As is submitted below, s 18 efficiencies analysis requires a sufficiently comprehensive and rigorous quantitative analysis based on evidence. But, even before getting on to that detail including further judicial authorities:

(a) Applying the approach in the IM judgment, the simple "dynamic efficiency trumps static efficiency" approach is, it is submitted, an error of law;

(b) Applying such high level propositions, instead of evidence and analysis, is, it is submitted, an error of law (possibly of the *Edwards v Bairstow* kind) when a straightforward countervailing fact is omitted when coming to conclusions around dynamic efficiency, predictability etc. Here, that fact is that, to build UFB, Chorus does not need incentives to invest as it is already contractually bound to build UFB. Therefore, the high level observation as to dynamic efficiency, predictability or other high level statement is not correct given the actual facts.

6.7 Therefore, even if we were wrong in our primary submission that a fulsome quantitative analysis based on fulsome evidence is not required, it is submitted there is error of law even in relation to minimal requirements around the facts.

Quantitative analysis based on evidence required

6.8 We only summarise our more comprehensive earlier submissions in order to link them to the draft decisions.

6.9 First the Court of Appeal has recognised the importance of a quantified CBA as part of the operation of the Commission's decision making processes. Richardson J observed, in *Telecom v Commerce Commission*:[26]

> … the desirability of quantifying benefits and detriments where and to the extent that it is feasible to do so…there is in my view a responsibility on the regulatory body to attempt so far as possible to quantify detriments and benefits rather than rely on a purely intuitive judgment to justify a conclusion that detriments in fact exceed quantified benefits.

6.10 Consistent with the above, the Commission, in its telecommunications jurisdiction, has stated:

> …that it is required to attempt so far as possible to quantify detriments and benefits … This is not to say that only those detriments and benefits that can be measured in monetary terms are to be included in the Commission's analysis[.] Those of an intangible nature, which are not readily measured in monetary terms, must also be assessed.[27]

6.11 On major decisions beyond IPPs the Commission has done quantitative CBAs. This is certainly one of its major decisions. It is particularly telling that the Commission is departing from its long standing practice of undertaking quantitative CBAs.

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[25] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC 3289 [11 December 2013], paragraph [1470].

[26] Telecom Corporation of New Zealand Limited v Commerce Commission [1992] 3 NZLR 429 at [447].

[27] Commerce Commission, Section 64 Review and Schedule 3 Investigation into Unbundling the Local Loop Network and the Fixed Public Data Network - FINAL REPORT, December 2003, paragraph 75.

6.12 That is also an example of the predictability concept used by the Commission. It is not apparent why there must be predictability for one purpose but not predictability for another.

6.13 Then to the IM judgment, which clearly informs the Commission of the need to undertake quantitative analysis based on the evidence, and has of course led to the Commission re-doing the relevant analysis in relation to its decision on WACC percentile, and acknowledging the insufficiency of its initial approach.

6.14 It is submitted that it is inconsistent (and unpredictable) that the Commission would not follow its revised approach on Part 4 WACC following the IM decision.

6.15 The Commission has not applied quantified assessment for any of the judgments or decisions it has made as part of the UCLL and UBA draft determinations.

6.16 The Commission (and its expert) only directly addresses this issue on two aspects of the process. It says it does not need to do such quantitative analysis in those two respects. We outline those here and then explain why it is submitted that the conclusions are incorrect.

Quantification of the decision as to dual asset valuation (i.e. historical and ORC valuations for reusable assets)

6.17 This is the issue dealt with in Attachment D of the draft UBA determination, in relation to the question of having re-usable assets such as trenching valued at historical cost. On this, the Commission states: "We consider that we are not required to quantify the impact of our decision" in the context of re-usable assets.

6.18 The Commission continued:[28]

> We also note that [it] is also difficult to:
>
> 695.1 draw the line between reusable and non-reusable assets; and
>
> 695.2 price reusable assets. For example, we are unsure how we would price fully depreciated assets.

6.19 But that is exactly what the Commission did in its telecommunications jurisdiction when undertaking the TSLRIC analysis for TSO, as we explain when dealing with re-usable assets in this submission. It split out and priced reusable assets. This is nothing new and the Commission has experience of doing it.

6.20 It would also be contrary to the Commission's concept of predictability to now seek to reverse its long standing practice on the TSO.

Externality impacts and Professor Voselgang

6.21 Ingo Vogelsang asserts that quantifying network externality impacts would be too difficult:[29]

> WIK likes Vogelsang's overall conclusion that biasing UCLL wholesale prices upward would unlikely promote competition for the LTBEU (paragraph 42). However, in the same paragraph WIK criticises Vogelsang's (personal) claim that "positive network externality effects of a UCLL price increase for UFB subscribers exceed the negative externalities on copper-based services." While WIK sees a lack of empirical analysis here, in paragraph 48 WIK essentially admits that such an analysis cannot be done. I agree with both these assessments. The statement by

[28] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream service, 2 December 2014, paragraph 531, 532.

[29] Ingo Vogelsang, Report on several submissions in the FPP proceeding for UCLL, 6 November 2014, paragraph 3.

> Vogelsang about the net effect of externalities is not the result of an empirical estimation, which would be too complex and would lack quantitative data. This is therefore a typical situation for regulators to use their judgment.

6.22 In response, assume for the sake of argument that the net effect of externalities cannot be analysed empirically (a point that needs to be considered). The assessment is still required to be undertaken. As the Commission explains: "Those [detriments and benefits] of an intangible nature, which are not readily measured in monetary terms, must also be assessed" along with the quantitative assessment.[30]

7. The Commission's application of s 18 in practice

Introduction

7.1 We turn now to consider the Commission's treatment of the modelling in the context of the matters raised above. We do this in the following order:

(a) The "predictability" approach

(b) The modelling choices made and implemented. Have they been affected by a s 18 and/or predictability analysis, despite the Commission indicating otherwise?

(c) The s 18 and/or predictability choice at the end of the process

The "predictability" approach

7.2 The first point is apparent from our above submissions. Just as there can be no generic dynamic-efficiencies-trumps-static-efficiencies approach, so there cannot be a generic predictability approach. Section 18 efficiency analyses, including as to a component (predictability) must be sufficiently robust, sufficiently quantitative, and sufficiently grounded on evidence. That is so even if, contrary to our primary submission, the evidential and analytical requirements are lighter: for example, the fact that Chorus is contracted to deliver UFB makes predictability in that context irrelevant.

7.3 Predictability is only relevant to the extent that its relevance and impact can be analysed and demonstrated quantitively and evidentially.

7.4 At [184] and [187] of the draft UCLL determination, the Commission states:

> Giving effect to regulatory predictability is likely to give effect to the section 18 purpose statement of promoting competition….. In terms of the distinction between predictability and investor expectations, part of our approach to the application of TSLRIC is to give weight to greater predictability of approach by generally adopting an orthodox TSLRIC approach. We note that this promotes predictability without attempting to identify and give weight to reasonable investor expectations as a separate exercise.

7.5 Although the Commission elsewhere acknowledges that there are other factors in the s 18 analysis:[31]

(a) It is apparent that predictability is singled out (and/or prioritised) for separate treatment;

(b) It is applied without the evidential basis and quantitative analysis basis noted above.

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[30] Commerce Commission, Section 64 Review and Schedule 3 Investigation into Unbundling the Local Loop Network and the Fixed Public Data Network - FINAL REPORT, December 2003, paragraph 75.

[31] See [188]- [190] draft UCLL determination.

(c) For the reasons above – for example, the quotes from the IM judgment – it is submitted that such reliance on predictability is an error of law, given there is an absence of support for the concept being applied in this way.

Has the TSLRIC modelling provided a "central estimate" unaffected by s 18?

7.6 The Commission is assuming that its modelling of TSLRIC, prior to final consideration of the application of s 18, provides a "central estimate", which appears to mean an estimate, unadjusted by s 18 (that is, not impacted by s 18 considerations of the nature referred to above: in particular, unaffected by judgment calls under s 18).

7.7 For example, from [210] of the UCLL determination:

> …our model is based on estimates of the costs of the inputs required to build and operate our hypothetical network/MEA. It also contains a number of other variables, such as asset lives, which are also estimates of what the true values would be if the hypothetical network/MEA were actually built. Accordingly, our model provides us with a central estimate of the 'true' TSLRIC cost for the UCLL and SLU services.

7.8 The point is an important one because, as we outline above in the section, "The Application of s 18", it is necessary to be clear about the sequence of (a) determining the "central point" for the true TSLRIC and making decisions accordingly and (b) only using s 18 (or its variant, predictability) to resolve an impasse.

7.9 There is also a further important consideration. If the Commission looks to adjust under s 18 as a wrap up at the end of the process, there needs to be clarity around whether the cost determined thus far is already adjusted under s 18, to avoid doubling up adjustments, etc.

7.10 In the quote above from the draft UCLL determination, the purported treatment is one of a central estimate of a pure TSLRIC cost, unadjusted under s 18. We will now submit that in fact that central estimate has already been adjusted under s 18, and that leads to distortions.

7.11 For example, during the draft TSLRIC modelling process, the following decisions are dominated by predictability (s 18) considerations instead of factors pointing to a central estimate of true TSLRIC:

> Our draft decision is to use optimised replacement costs (ORC) to value all assets used in our model as: … we consider that adopting an alternative methodology would weaken the predictability of the regulatory framework. Such a move can have longer-term costs to end-users from its adverse impact on investment incentives.[32]
>
> … we have reconsidered our views on MEA adjustments. We consider that our stated approach to give weight to predictability leads us to reject capability-based adjustments. [33]
>
> We consider that a MEA adjustment on the basis of consumer preference or technological performance would be very difficult to estimate in practice and is likely to introduce a degree of unpredictability, and is therefore not supported in this draft decision. [34]
>
> … regulators in other countries have also typically adopted a scorched node or modified scorched node approach. In our view, a modified scorched node approach

[32] See [300] draft UCLL determination.

[33] See [564] draft UCLL determination.

[34] See [567] draft UCLL determination.

> therefore better aligns with our TSLRIC objective of predictability, including the fact that it is an orthodox approach. [35]
>
> ORC is consistent with our previous approach to TSLRIC and therefore our TSLRIC objective of predictability;[36]

7.12 Take the above decision to model only ORC, a decision that has a large impact on the price. The draft quoted above says "Our draft decision is to use optimised replacement costs (ORC) to value all assets used in our model as: … we consider that adopting an alternative methodology would weaken the predictability of the regulatory framework".

7.13 Unequivocally this is a decision based on s 18 not upon a central estimate of true TSLRIC and therefore the draft incorrectly describes the TSLRIC cost having been produced as the central estimate.

7.14 It is submitted that the solution is to have two clear sequential steps as outlined in our section above, "The Application of s 18".

7.15 Looking at the facts underlying that decision as to reusable assets, what the Commission has done in the past shows that, in doing this by a sequential process, it will come to a different answer.

7.16 Section 18 applies to TSO calculations. In that TSLRIC-based calculation, the Commission did not use ORC for re-usable assets.

Incorrect use of "predictability" in isolation

7.17 Despite acknowledging at [188]-[190] of the draft UCLL determination that the Commission has regard to other facets of the s 18 considerations, the above quotes show a single focus on "predictability". As we have submitted above:

(a) "Predictability" alone is an insufficient basis on which to decide;

(b) In any event, a fulsome quantitative analysis is required; and

(c) Even if we were wrong in that, application of basic facts shows that the predictability approach is incorrectly applied.

Wrap up s 18 analysis

7.18 The Commission's draft decisions have consideration at the end of the modelling of whether there should be an overall s 18 adjustment.[37]

7.19 Thus far, it has concluded such an adjustment is not necessary, based on Professor Vogelsang's advice.

7.20 But if there was to be an uplift, the approach of the Commission, by treating the net result of it's modelling as a central estimate of pure TSLRIC, when in fact it incorporates substantial s 18 uplifts, would lead to double counting and other unjustified s 18 uplifts.

7.21 This also further highlights the considerable care required when applying s 18 uplifts, to avoid magnifying effects.

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[35] See [578.2] draft UCLL determination.

[36] See [637] draft UCLL determination.

[37] See for example [426] of the draft UCLL determination

Further examples

7.22 We have outlined some further examples of what we submit are insufficient treatment of decisions in the appendix below.

8. Additional issues as to predictability

8.1 In this section we deal with predictability on the assumption that the Commission is not required to utilise the level of evidence and analysis submitted above.

8.2 We submit that the Commission has placed too much weight on the principle of "predictability" to justify its draft decisions, ahead of other s 18 efficiency factors.[38]

8.3 By way of illustration, the UCLL draft decision alone makes:

- nearly 70 references to "predictability";
- less than 20 references to "promote competition" or "promoting competition";
- less than 30 references to "long-term benefit of end-users"; and
- just over 10 references to "efficiency".

8.4 The Commission noted that "Some submitters were also concerned that our July 2014 regulatory framework and modelling approach paper suggested we were elevating reasonable investor expectations, or considerations under section 18(2A), to be of paramount consideration. As we have already noted, Vodafone also submitted that we were ranking what was, at best, a relevant consideration read in via section 18(2A) over our primary duty in section 18(1)".[39] The same criticism is also applicable to the Commission's treatment of predictability. While we support the principle of predictability, it cannot have greater importance to the Commission's decision making than the actual statutory objective.

8.5 There is an impression that predictability has the effect of simply replacing "reasonable investor expectations" as a justification for uplifts in the UCLL and UBA draft decisions. While the Commission has dropped the concept of "reasonable investor expectations" it has not changed any of the decisions that previously relied on it e.g. reusable asset valuation.

8.6 We submit that the main problem with application of "reasonable investor expectations" was the broad way the Commission applied the principle, and that the Commission's application was in conflict with the High Court's application of "reasonable investor expectations" in the Part 4 IM Merit Appeal.

8.7 The High Court saw reasonable investor expectations as simply that suppliers should expect to recover the costs of their past prudent and efficient investments i.e. a normal return on investment:[40]

> 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

[38] The exception being that no reference to predictability is made in its draft decision on backdating.

[39] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 158.

[40] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [605].

does not imply that the cost of purchase of a regulated business as a going concern should necessarily be fully protected.)

8.8 The Commission's application of "reasonable investor expectations" (and now predictability) had the effect of inflating the TSLRIC price well above actual costs and, accordingly, well above what the High Court deemed to be a reasonableinvestor expectation.

8.9 We would also caution that application of predictability, as an objective in its own right, as the Commission has done, has its limitations. Providing greater certainty or predictability can be at the expense of making end-users worse off.

8.10 By way of illustration, jumping out of an aeroplane without a parachute increases the predictability of the outcome, but the expected outcome is worse (death). This is because you are more certain to die from jumping out of a plane without a parachute than you are to survive jumping out of a plane with a parachute.

8.11 Similarly, Professor Yarrow, an expert for the Commission, has observed that "A regulator could be predictable by being entirely inert or mechanistic in its decision making, in ways that would, in reality, amount to very poor regulatory practice."[41] Professor Yarrow's comments are particularly relevant given that, while Ingo Vogelsang has noted "predictability can lead to higher or lower prices than under more flexibility", the way the Commission has applied predictability has resulted in higher prices. None of the decisions based on predictability, that we could observe would result in lower prices.

The Commission appears to place greater importance on predictability and certainty under Part 2 Telecommunications Act than Part 4 Commerce Act

8.12 It appears the Commission is now placing greater importance on predictability and certainty under Part 2 of the Telecommunications Act than under Part 4 of the Commerce Act, even though Part 4 of the Commerce Act explicitly references "certainty" as an objective of the Input Methodologies (IMs)[42] and Part 2 has no equivalent provisions or references to certainty:

(a) Like "reasonable investor expectations" in the prior consultation, the Commission has used "predictability" to justify decisions which result in uplift of UCLL and UBA prices but has not made similar application in its recent electricity DPP and Transpower IPP determinations, despite the express certainty requirement under Part 4;

(b) Regulated suppliers argued the Commission should have introduced a Starting Price Adjustment Input Methodology (SPA IM), under Part 4 of the Commerce Act, to create greater certainty and predictability. The Commission's decision not to adopt an SPA IM reflected its view, supported by the Court of Appeal, that there is a trade-off between certainty and flexibility, and certainty is something that develops over time.

(c) The Commission has previously argued that the certainty created by setting the Part 4 DPPs for a defined period provides the regulatory certainty envisaged under Part 4.[43] This is a much narrower application of certainty or predictability than the Commission has applied to the UCLL and UBA FPP draft decisions. A comparable level of certainty

[41] Yarrow, G., Cave, M., Pollitt, M., Small, J., Review of Submissions on Asset Valuation in Workably Competitive Markets - A Report to the New Zealand Commerce Commission, November 2010, p. 17.

[42] Section 52R of the Commerce Act states "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."

[43] Refer for example, to the Commission's submission to the Supreme Court, in Vector Limited v Commerce Commission [2013] NZSC 99, paras 46, 50, and 51 - 52.

would be produced by setting the FPP TSLRIC prices for UCLL and UBA services for 5 years, without any of the draft decisions' other applications of predictability.

(d) The Commission's statement "The TSLRIC objective of predictability means we would be unlikely to revisit all of the modelling choices made for the initial FPP price, but instead would focus on updating the calculation of the FPP-based price because of a change in circumstances"[44] also contrasts with its view "The prospect of change at the end of the defined period may create uncertainty for a supplier, but this represents the legislative balance between predictability and a level of regulatory flexibility".[45] We could find no discussion of balancing predictability against regulatory flexibility in the UCLL and UBA draft decisions.

The links between the draft decisions, predictability, investment incentives and promoting competition for the LTBEU are either absent or based on assumptions

8.13 The draft decisions make a number of judgments or assertions about the link between "predictability of approach" and promotion of long-term benefit of end-users, that lack adequate supporting analysis or evidence.

8.14 Take, for example, the Commission's statement in the UBA draft determination that the "draft decision is to use optimised replacement costs (ORC) to value all assets used in our model as: … we consider that adopting an alternative methodology would weaken the predictability of the regulatory framework. Such a move can have longer-term costs to end-users from its adverse impact on investment incentives".[46]

8.15 It is unclear how this argument sits with Ingo Vogelsang's view that "Rather than starting from scratch the re-use of those civil works facilities for the new set of cables is usually the most efficient way to go forward. It also reduces the probability that the regulated firm is over-collecting"[47] and "a historic cost approach is generally … more predictable than a replacement cost approach". (emphasis added)[48]

8.16 Why does the Commission consider an alternative methodology weaken predictability? This is not explained.

8.17 Why also does the Commission consider an alternative methodology has an adverse impact on investment incentives? Particularly in view of Chorus' contractual UFB roll-out obligations. This is not explained. As is made clear in the High Court Part 4 IM Merit Appeal decision, Access Providers should have incentives to invest as long as they expect to recover their costs (including a normal return on investment):

> … Future investment choices by suppliers must rationally be influenced by expected earnings on those future investments, not by earnings on past investments …
>
> 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

[44] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 103.

[45] Commerce Commission, submission to the Supreme Court, in Vector Limited v Commerce Commission [2013] NZSC 99, paragraph 46.

[46] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, Para 268

[47] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 12.

[48] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 17.

> 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.[49]

8.18 We note Ingo Vogelsang's comment "A deviation from the classical approach could jeopardize this predictability if the expectation was that the NZCC would not deviate. It could also reemphasize predictability if the expectation was that the NZCC would follow international trends".[50] Just as the use of "reasonable investor expectations" gave rise to arguments about what were reasonable expectations, application of predictability gives rise to debate about what was expected (and by whom, if not the "reasonable investor"?) and therefore what the most predictable decisions would be.

The Commission is harming predictability, not improving it

8.19 We submit that the draft decisions fail to enhance predictability in a number of specific ways, including but not limited to:

- **Predictability is a new test:** The Commission has noted one of the criticisms of "reasonable investor expectations" was that the Commission was applying "a new test as part of section 18" and by doing so was "detracting from taking a predictable approach".[51] The same objection can be applied to predictability. Predictability is a new test as part of section 18 that fails to promote predictability by detracting from predictability.

- **Inconsistencies between the approach taken under Part 4 Commerce Act and Part 2 Telecommunications Act:** For example, rejection of ORC for re-usable assets under Part 4 Commerce Act, but adoption of it for re-usable assets in the TSLRIC draft decisions.

- **Backdating means current prices are unpredictable:** The Commission's draft decision to backdate creates considerable uncertainty for access seekers (and Chorus) about the current cost of (revenue from) access services.

- **Problems with the "streamlined" process:** The Commission setting unrealistic time-frames for its FPP final determinations, and then having to substantially change these repeatedly.

- An example is the Commission not providing or consulting on the TSLRIC model specification, or the TSLRIC model etc, prior to release of a draft decision or determination.

- **Lack of transparency:** The Commission has made a number of decisions it has acknowledged will result in higher TSLRIC prices, but has not measured the impact of these decisions on prices. This contrasts with Part 4 decisions where the Commission has provided an explicit 67th WACC percentile uplift, and quantified the impact on prices.

- **Arbitrary distinctions between "orthodox"/"conventional" and "cutting edge":** The decision not to use "recent innovations in European policy" does not help "promote regulatory predictability". It is submitted that it is arbitrary and simply results in further overstatement of the TSLRIC prices.

- **Inadequate consideration of Court precedent:** not applying the precedent set for optimisation/determining efficient costs/establishing Fixed Wireless MEA provided by the

[49] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraph [1479] ad [1480].

[50] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 29.

[51] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 148.2.

Supreme Court in the TSO decision.

- The draft decisions have instead, for example, arbitrarily linking the Fixed Wireless MEA to the fixed wireless roll-out under the Government's Rural Broadband Initiative. That is an application of the actual Chorus network overriding the application of a hypothetical efficient network. Providing artificial constraints on alternative/lower cost MEAs which have no relationship to a hypothetical efficient operator (Government decisions on subsidy of telecommunications services are not a proxy for HEO).

- **Inconsistent positions on the TSO determinations:** It is submitted that there are inconsistent positions taken by the Commission, where there is the appearance of choices made to underpin the particular point sought to be made. The treatment of TSO is an example. For example, at one point there is reliance on the TSO determinations as a precedent for the TSLRIC modelling e.g. arguing that "To adopt a more predictable approach to implementing TSLRIC, our starting point has been to consider our previous approach to TSLRIC when modelling the TSO"[52]. However, the draft elsewhere maintains that the Supreme Court decision on the TSO cost determinations had limited precedent value on the basis that they were "made in a different context" and the TSO net cost determinations were "backward-looking", contrary to determinations themselves which clearly state they are "forward-looking".[53]

- It is submitted that a TSLRIC method that "is likely to be substantially more than needed by Chorus for covering the cost of is copper access network" and allows "the copper access network … to remain highly profitable"[54] would not be seen by many sophisticated observers as a predictable outcome of TSLRIC modelling.

Impact of locking in TSLRIC modelling approach after the first determinations will be higher prices

8.20 As noted above, the Commission has stated "The TSLRIC objective of predictability means we would be unlikely to revisit all of the modelling choices made for the initial FPP price, but instead would focus on updating the calculation of the FPP-based price because of a change in circumstances".[55]

8.21 This is worth contrasting with the experience with, by way of example, the Commission's gas price control and TSO net cost determinations.

8.22 The Commerce Commission reset Vector's gas distribution prices downward by 18% from 1 July 2013, after having reduced Vector's gas distribution prices in real teams by 20% between 2005 and 2008 (and holding prices constant in real terms between 2008 and 2013.

8.23 When the Commerce Commission made its 2013 reset decision it had the option of either retaining the existing prices or resetting them to reflect current and projected profitability (in accordance with s 53P(3) of the Commerce Act).

8.24 The Commerce Commission choose the latter approach.

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[52] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 132.

[53] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraphs 494 and 495.

[54] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 24.

[55] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 103.

8.25 While the 2013 changes were made under a revised Part 4 Commerce Act the Commission did not limit the extent to which modelling choices were revisited on the grounds of ensuring predictability.

8.26 The first TSO cost determination for 2001/02 was completed 18 months after the period it applied to, 21 months after consultation commenced (17 December 2003). Even with this precedent, the TSO cost determination for 2002/03 was not completed until after another 27 months after the first determination (24 June 2005). The third TSO determination then took another 21 months after that (23 March 2007).

8.27 A major reason for this was that substantial changes were required, that the above statement appears to preclude, to ensure an accurate (lower) determination of the net cost of the TSO.

8.28 Improvements the Commission made resulted in year on year reductions in the net cost determinations:

Year	Net cost of the TSO	% reduction
2001/02 Draft	$73.45m	
2001/02 Final	$65.67m	10.6%
2002/03 Draft	$62.64m	4.6%
2002/03 Final	$56.75m	9.4%
2003/04 Draft	$41.2m[56]	27.4%

8.29 One of the key differences between the consultation on the 2001/02 and the 2002/03 TSO determinations is that the 2001/02 final TSO determination effectively provided a 2002/03 de facto draft determination. This meant submitters had substantially more time to prepare for and develop submissions for subsequent resets (they didn't have to wait until the 2002/03 draft determination was released). The submissions on the 2002/03 TSO determination were consequently much more substantive (and included much more evidence) than the submissions for the 2001/02 determination. Network Strategies was able to advance evidence-based submissions on use of mobile as a MEA (which explains the 27.4% reduction from the 2002/03 final determination to the 2003/04 draft) as a natural extension of the logic the Commission had applied and developed to application of a fixed wireless cap in the previous two determinations.

8.30 If the Commission's methodology for calculating the net cost of the TSO had remained unchanged between 2001/02 Draft and 2002/03 Final the net cost of the TSO would have increased due to interest rate increases.

8.31 The limitations the Commission is proposing for resetting TSLRIC would have had the affect of curtailing these substantial improvements, and resulted in excessive cost calculations being locked in to the detriment of liable persons and end-users.

9. There are strong grounds against erring on the high side for UCLL and UBA prices

9.1 The Commission asked two fundamental questions, when considering the appropriate WACC percentile for electricity and gas networks under Part 4 of the Commerce Act:[57]

[56] The 2003/04 Final Determination increased from the draft as a consequence of the Commission misapplying treatment of mobile/wireless etc, which subsequently was successfully challenged by Vodafone through the Courts.

[57] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 2.6.

Is there any reason to depart from the mid-point ie, the best parameter based estimate we have of the cost of capital?

If so, what is the most appropriate percentile?

9.2 This is the appropriate approach to take to the TSLRIC determinations. The Commission should estimate the "true" TSLRIC, unadulterated by s 18 considerations, then ask whether there are any reasons to depart from the "central estimate" (be it through WACC percentile or other modelling generosities) and, if so, by how much?

9.3 We submit that the answer to the first question is no, and that no uplift or generosity should be provided for in the TSLRIC determinations.

9.4 The Commission's consultation details a willingness to err on the high side, based first on "reasonable investor expectations"[58] and, now on "predictability". (The latter produces the same outcome of the now replaced former approach). Also, the Commission has stated "We consider that we should give weight to erring on the side of setting a price that is too high, to avoid the negative welfare consequences of setting a price that is too low. Nonetheless, we agree with the analysis of Professor Ingo Vogelsang, that the outcome of our modelling decisions is enough to avoid these consequences of underestimating the price".[59]

9.5 It is our submission that these factors do not provide valid support for the Commission erring on the side of higher TSLRIC prices for UCLL and UBA services. We have a number of comments about the basis for making judgments on whether to err on setting high or low TSLRIC prices.

Positive network externality and migration benefit arguments don't support an uplift

9.6 The Government's now stopped plan to override the Commission's UCLL and UBA price determinations was based on the premise copper prices should be kept artificially high in order to help Chorus subsidise its UFB roll-out, and to improve the competitiveness of fibre relative to copper (in a manner akin to an import tariff and other forms of trade protection).

9.7 Similarly, the Commission noted, from the expert advice from Ingo Vogelsang, that "there may be positive network externality effects from higher UCLL (and therefore total UCLL plus UBA) prices: … Innovation benefits will come from the financial benefits for other networks and for content providers serving these networks. Additional externalities will accrue to the pre-existing subscribers of these services, who benefit from the additional or cheaper content made available to them".[60]

9.8 It is our contention these factors do not provide valid support for the Commission erring on the side of higher TSLRIC prices for UCLL and UBA services.

9.9 Even if there are positive externalities and migration efficiencies from a shift from copper services to UFB, it should not be assumed artificially high copper prices would result in greater uptake. It could stunt uptake of both copper and fibre broadband services.

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[58] The Commission, for example, previously expressed an "intention to respect reasonable investor expectations to avoid the risk of chilling investment, when combined with the associated positive externalities and migration efficiencies from the generally higher prices that may result (from our decisions on the performance adjustment, and reuse of Chorus' assets), will best give effect to the section 18 purpose – without directly raising prices further" [Commerce Commission, Consultation paper outlining our proposed view on regulatory framework and modelling approach for UBA and UCLL services, 9 July 2014, paragraphs 101 – 103].

[59] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 361.1.

[60] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 417.

9.10 The outcome could be: windfall gains for Chorus; slowdown of uptake of broadband services (which would dominate incentives for consumers to switch from copper based broadband to fibre); and Chorus slowing down migration from copper to fibre (subject to the requirements of its agreement with CFH for roll-out of fibre). While we recognise Chorus has contractual obligations for a minimum roll-out speed, it has commercial discretion about whether or not to accelerate roll-out beyond this.

9.11 It is apparent from submissions to MBIE on the Government's now stopped plan to override the Commission's UCLL and UBA determinations, and through the TSLRIC FPP consultation, to date, that it should not simply be assumed higher copper prices would result in faster roll-out and greater uptake of UFB services. The opposite could be the case.[61]

9.12 Vector articulates well the concerns regarding Chorus' incentives if "Chorus' copper access prices [are] at above cost levels (equal to the agreed price for roll-out of a fibre network), Chorus would receive windfall gain. This would heighten the value to Chorus of its copper access network. … It would also heighten the cost to Chorus of its new fibre network cannibalising its copper network's customer base. The incentive this would create would be for Chorus to rollout fibre no quicker than it is contractually-obliged to, and to retain customers on its copper network".[62]

9.13 Similarly, Ingo Vogelsang notes "the wholesale revenue effect reduces the incentives to invest in the new technology because such investment cannibalizes profits. This effect calls for low wholesale charges for the old technology in order to make the old technology less attractive than the new technology" even if he uses UFB roll-out commitments to downplay the argument.[63]

9.14 The ACCC's comments about criticism of its approach to regulated pricing are also worth noting. The ACCC noted the criticism "… ignores the role lowering prices had in driving the take-up of ULLS services, investment in DSLAMs by RSPs and innovation by access seekers (including the launch of ADSL2+ services). This helped drive competition between broadband suppliers and the benefits that flowed to consumers as demonstrated by the massive take-up of ADSL services from the late 2000s. These are developments that have been welcomed by consumers and should not be forgotten when discussing the impact of historical ULLS pricing".[64]

9.15 Similarly, if the prices for UCLL and UBA services are set below cost (or, at least, low enough to make UFB services more profitable than copper services for Chorus), Chorus' incentives would be to accelerate roll-out of fibre, and migration from copper to UFB services. Positive externality and migration efficiency arguments could mean the Commission should err on the side of low copper prices.

9.16 It is also worth observing the response of Access Seekers to the draft decisions (combined with the decision on back-dating).

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[61] In this context, we note in particular the reasoning that has been provided to the Commission as to why copper access prices should have a lower WACC percentile than electricity network services under Part 4 of the Commerce Act. As a corollary just because an uplift in overall electricity network prices may be justified, and it may be better to err on the side of higher rather than lower electricity network prices, this does not mean that any uplift should be provided for copper access prices.

[62] Vector, Submission to the Ministry of Business, Innovation & Employment on Review of the Telecommunications Act, 13 September 2013, paragraphs 107 and 108.

[63] Vogelsang, Inog, "What effect would different price point choices have on achieving the objectives mentioned in s18, the promotion of competition for the long-term benefit of end-users, the efficiencies in the sector, and incentives to innovate that exist for, and the risks faced by investors in new telecommunications services that involve significant capital investment and that offer capabilities not available from established services?", Paper prepared for the New Zealand Commerce Commission, 5 July 2013.

[64] Rod Simms, Chair, ACCC, Solving the multi-technology puzzle: The ACCC's perspective", NBN Rebooted Conference, 17 November 2014, Sydney.

9.17 What we have seen is end-user prices for broadband increasing. Notably, suppliers such as Vodafone have applied the increase in prices to both copper and fibre services. The impact, therefore, isn't (i) copper prices go up; (ii) fibre becomes more attractive to end-users; and (iii) there are resulting network externality and migration benefits.

9.18 Rather what we are seeing is: (i) copper prices go up; (ii) fibre prices also go up; (iii) broadband services become less attractive to consumers (resulting in lower uptake, or uptake of lower quality services e.g. copper rather than fibre); and (iv) negative network externality and migration effects.

9.19 This should not be surprising as the prices that ISPs set for different broadband services reflect differences in service quality (not simply differences in price). Thus if copper broadband prices increase then the profit maximising price for fibre services will increase (consumers who want fibre services will be willing to pay more than for copper services reflecting the superior service.

9.20 The Commission's attempt to promote migration, and network externalities, through artificially high copper prices becomes an exercise in futility.

9.21 Regardless, the impact of higher copper prices on uptake of fibre services would need to be tested empirically before it was safe for the Commission to rely on positive externality and migration efficiency arguments to determine it should provide Chorus' with an uplift in its copper prices.

Submissions detail why the Commission should not provide an uplift

9.22 The submissions the Commission has received to date provide a clear picture of Access Seeker and consumer consensus that it should not err on the side of high copper TSLRIC prices e.g.:

> **Upwardly biasing UCLL prices will have a significant detrimental impact on our business with flow on consequences for both competition and end-users.** If upwardly biasing UCLL prices has the effect of forcing CallPlus to prematurely migrate its unbundled services onto fibre it will have a significant impact on our business, our investment and our ability to compete. Given the criticality of our business to competition in the fixed line market this would not be in the best long-term interests of consumers.[65]
>
> … Vogelsang provides no substantive evidence of the existence of such externalities and migration efficiencies.[66]
>
> … we believe the link between UBA prices and customer migration to fibre services is tenuous at best.[67]
>
> The Act does not specifically provide adjustments to regulated services to promote uptake of fibre service.[68]

[65] CallPlus, Submission on the Commerce Commission's Consultation Paper: Proposed view on regulatory framework and modelling approach for UBA & UCLL services, 6 August 2014, paragraph 4.

[66] Network Strategies, Key issues in modelling UBA and UCLL services: Commission consultation on regulatory framework and modelling approaches for FPP process, 6 August 2014, page 19.

[67] Telecom, UCLL and UBA FPP: consultation on regulatory framework and modelling approach, 6 August 2014, paragraph 113.

[68] Telecom, UCLL and UBA FPP: consultation on regulatory framework and modelling approach, 6 August 2014, paragraph 116.

> We find … reliance on positive externalities troubling where, as the Commission recognises these are no more than potential effects.[69]
>
> As WIK observes whether positive externalities would result from forced migration to UFB is an empirical question.[70]
>
> … as WIK observes, artificially weighting an increase to UCLL and UBA prices so as to incentivise migration to UFB is not an objective of the statutory framework ..[71]
>
> Without providing any proof Vogelsang claims that positive network externality effects of a UCLL price increase for UFB subscribers exceed the negative externalities on copper-based services. For us it is basically an empirical question whether this relationship holds or not. This analysis has not been conducted …
>
> Any pricing approach which intends to deviate from TSLRIC pricing for externality reasons … has to prove empirically that the welfare losses due to price increases of such a regulatory approach are dominated by such spill-over externalities.[72]
>
> Assume that positive externalities and spill over for fibre-based networks do asset and assume further that they are at a magnitude which overrules the negative welfare effects of … increasing prices. Even then it is not obvious that economic welfare and the long-term interests of end-users are best served by upwardly biasing UBA and UCLL prices … analysis has to take … into account governmental subsidies …[73]

Part 4 IM Merit Appeal decision recognises restricting excessive returns, and lower prices improve efficiency and result in better asset utilisation

9.23 The High Court, in the Part 4 IM Merit Appeal decision, recognised the link between replicating workably competitive markets, providing for a normal rate of return/limiting excessive returns, and efficient market outcomes:[74]

> 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).
>
> …
>
> In our view, what matters is that workably competitive markets have a tendency towards generating certain outcomes. These outcomes include the earning by

[69] Vodafone, Comments on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL services, 6 August 2014, paragraph E2.2.

[70] Vodafone, Comments on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL services, 6 August 2014, paragraph E2.7.

[71] Vodafone, Comments on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL services, 6 August 2014, paragraph E2.8.

[72] Wik-Consult, Report for Telecom and Vodafone, Submission In response to the Commerce Commission's "Consultation paper outlining our proposed view on regulatory framework and modelling approach for UBA and UCLL services (9 July 2014)", 5 August 2014, paragraph 46.

[73] Wik-Consult, Report for Telecom and Vodafone, Submission In response to the Commerce Commission's "Consultation paper outlining our proposed view on regulatory framework and modelling approach for UBA and UCLL services (9 July 2014)", 5 August 2014, paragraph 47.

[74] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [14] to [22].

> firms of normal rates of return, and the existence of prices that reflect such normal rates of return, after covering the firms' efficient costs.
>
> …
>
> 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.
>
> 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.
>
> 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.

9.24 The High Court, in the Part 4 IM Merit Appeal decision, also recognised that lower prices would result in better/more efficient asset utilisation:[75]

> … 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.
>
> 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.

Part 4 IM Merit Appeal decision arguments against uplift also need to be considered

9.25 The High Court, in the Part 4 IM Merit Appeal decision, also made a number of points against erring on the high side by setting 75th percentile WACC which are generally applicable to erring on the high side of price determinations regardless of the sector or regulatory jurisdiction.

9.26 The Commission as a result determined an uplift for electricity and gas networks was justified, albeit smaller than 75th percentile WACC. These points against uplift need to be considered in the context of copper network pricing. We note the Commission did not challenge the validity of the High Court's conclusions in this regard.

[75] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [601] to [602].

9.27 The High Court pointed out, for example:

> … 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?
>
> … 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.
>
> 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.
>
> ... 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.
>
> 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.[76]
>
> 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.[77]

10. There should be no uplift in WACC percentile (or any other input into the TSLRIC price determinations)

10.1 We support the Commission's draft decision to set the WACC for provision of UCLL and UBA services at mid-point. As should be clear from the previous sections of this submission we submit that an uplift in UCLL and UBA prices should not be provided through either the WACC percentile or other uplifts in the pricing decisions. The arguments

[76] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [1472] to [1476].

[77] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraph [1480].

against setting WACC above mid-point apply equally against any other TSLRIC modelling decisions that would result in an uplift.

10.2 The matter of whether WACC should be set at mid-point, or a margin should be added, has been considered by the Commission in its previous multiple determinations of the net cost of the TSO, and in the draft determination on the TSLRIC price for PSTN services. In each of those determinations the Commission rejected the Access Provider arguments for a margin to be added.

10.3 While we are of the view different WACC percentiles may be optimal for different sectors and under different regulatory systems, we submit that there are no legitimate grounds for the Commission to deviate from mid-point for UCLL and UBA services.

10.4 If anything, there are arguments for setting the TSLRIC WACC for UCLL and UBA services below mid-point.

10.5 Previous submissions have noted the limited future need for copper investment. Ingo Vogelsang has also observed that "UCLL and UBA related investments for copper-based services are only required for keeping up the services in Chorus' UFB regions until they are replaced by UFB and in other regions for the times that copper-related services are still competitive in an inter-modal setting". Notably, also, Vogelsang's reasoning suggested that uplifts may not help because – even with an above cost TSLRIC – regional averaging could mean the TSLRIC price is not sufficient to incentivise investment in higher cost rural areas where the bulk of any future copper investment would be needed.[78]

10.6 Wigley and Company have also previously noted "Dobbs' 45th percentile for sunk costs provides the most relevant assessment of the appropriate WACC percentile for UCLL and UBA services that has been provided so far".79 Dr Lally has concluded "[t]he best available analysis on this matter is provided by Dobbs"[80, 81]

10.7 The Commission's decision to set the WACC percentile for electricity and gas networks at 67th percentile does not provide a justification for an above mid-point WACC for UCLL and UBA. There are substantive differences between the sectors which means the optimal WACC percentile for electricity and gas networks will be higher than for UBA and UCLL services.

Submissions support no higher than mid-point

10.8 Submissions made by CallPlus, Orcon, PricewaterhouseCoopers, Wigley & Company, and others have detailed why the WACC percentile set for UCLL and UBA services under Part 2 of the Telecommunications Act should be substantially less than the WACC percentile set for electricity and gas networks under Part 4 of the Commerce Act.[82]

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[78] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 112.

[79] Wigley and Company, Cross-submission to the Commerce Commission in response to the Commission's expert reports on the cost of capital for the UCLL and UBA price reviews AND Submission on the Part 4 review of WACC uplift, 4 August 2014, paragraph 22.

[80] Dr Martin Lally, The appropriate percentile for the WACC estimate, 19 June 2014, page 2.

[81] We are aware that the Commission has considered the Dobbs' model as part of the Part 4 WACC IM review, and had concerns about its suitability; at least in the context of electricity and as a justification for an uplift in WACC percentile. The Dobbs' model's fundamental premise though that the optimum WACC percentile depends on type of investment, e.g. sunk (low WACC percentile) versus new, remains valid though.

[82] See, for example, Wigley and Company, Cross-submission to the Commerce Commission in response to the Commission's expert reports on the cost of capital for the UCLL and UBA price reviews AND Submission on the Part 4 review of WACC uplift, 4 August 2014. See, for example, Orcon, Submission to Commerce Commission by Orcon Ltd in response to consultation paper, "Determining the cost of capital for the UCLL and UBA price reviews", 28 March 2014.

Chorus has not responded to submissions advocating no higher than mid-point

10.9 It is telling Chorus' response to these submissions has been strictly limited to one brief section of a CEG cross-submission in April 2014 which ignored or did not correctly deal with most submissions.[83] (Chorus has not commented on the matter of WACC percentiles since, in its TSLRIC/TSLRIC WACC submissions,[84] despite substantive submissions on the matter from other parties.)

10.10 It is submitted that the CEG cross-submission is unsuitable to be relied on in support of an uplift, or as refutation of submissions in favour of limiting WACC to mid-point:

- The Commission has rejected cashflow arguments on its WACC percentile decision for electricity and gas networks under Part 4 of the Commerce Act.

- CEG is incorrect to claim "All submissions arguing for no increment to the median WACC….fail to grapple with the existence of [asymmetry] risks".[85] If submissions had failed to recognise the impact of asymmetric risk they would have argued WACC should be set at mid-point in all jurisdictions, rather than arguing there is a stronger case for an uplift in other sectors.

- CEG only responded to a single point made by PricewaterhouseCoopers (on behalf of Telecom) and ignored all other submission points against providing an uplift above mid-point. Notably, at that point in time, the most substantive submission on WACC percentile was submitted by Orcon.[86]

- CEG are also did not fulsomely respond to PricewaterhouseCoopers. The PricewaterhouseCoopers argument was that provision of UCLL and UBA services relied on "largely sunk investments".[87] CEG responded by pointing out "Electricity and gas transport services are also delivered using what are largely sunk investments".[88] One of the things this statement fails to recognise is that prospective telecommunications investment is predominantly in fibre and, in contrast to electricity and gas, not in the existing network. As Optus has noted in the Australian context "… less weight needs to be placed on the incentive for reinvestment as there will be no further investment in the CAN [copper customer access network] assets".[89]

- While CEG ignored most submissions they commented favourably on Enable's submission, noting the "likely impact of migration to UFB on the demand for copper as an asymmetric risk factor which should be recognised in the WACC".[90] Around 75% of fibre roll-out, by UFB coverage area, is being undertaken and controlled by Chorus. To the extent migration is occurring from copper to fibre it is Chorus largely cannibalising its own market (which it was able to factor into its UFB bid). Describing this is an asymmetric risk which Chorus should be compensated for is akin to Apple arguing its iPad needs a higher return because of the risk of losing sales to the iPad Mini.

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[83] CEG, Cross-submissions on UCLL/UBA WACC, 11 April 2014.

[84] Chorus' TSLRIC WACC submissions have predominantly focussed on why it considers that the Part 4 WACC IMs produce an inadequate (too low) WACC.

[85] CEG, Cross-submissions on UCLL/UBA WACC, 11 April 2014, paragraph 18.

[86] Orcon, Submission to Commerce Commission by Orcon Ltd in response to consultation paper, "Determining the cost of capital for the UCLL and UBA price reviews", 28 March 2014.

[87] CEG, Cross-submissions on UCLL/UBA WACC, 11 April 2014, paragraph 21.

[88] CEG, Cross-submissions on UCLL/UBA WACC, 11 April 2014, paragraph 22.

[89] Optus, Submission in response to ACCC Discussion Paper Fixed Line Services Final Access Determination – Primary prices, October 2014, paragraph 1.4.

[90] CEG, Cross-submissions on UCLL/UBA WACC, 11 April 2014, paragraph 19.

Chorus' submission on Part 4 WACC IMs demonstrates a lack of understanding of economic regulation in the electricity and gas sectors

10.11 As noted above, Chorus has only made limited submission on the matter of WACC percentile for UCLL and UBA services, and has not responded to other submitters beyond one very limited cross-submission by CEG. It has nevertheless submitted to the Commission, as part of the WACC percentile consultation for the Part 4 IMs, that it should receive a higher WACC percentile than for services under Part 4 of the Commerce Act.[91]

10.12 Chorus claims "the regulatory process for UBA and UCLL will justify a higher WACC uplift than for services regulated by Part 4 of the Commerce Act" on the basis "Chorus faces:

> … greater exposure to competition from competing network operators (competitors already have market share in relation to a number of services);
>
> … greater exposure to a regulatory regime (TSLRIC) that is generally accepted to be inherently less predictable than RAB-based regulation; and
>
> … greater exposure to technological change, which compounds other regulatory risks".[92]

10.13 None of these claims are valid. The arguments Chorus relies on appear to be based on misunderstanding of how Part 4 of the Commerce Act operates, and misunderstanding of the electricity and gas sectors. Each of Chorus' claims are refuted below.

Chorus claim it faces "… greater exposure to competition from competing network operators (competitors already have market share in relation to a number of services)"

10.14 Chorus fails to recognise inter-fuel substitutability, particularly in relation to gas, the existence of embedded networks and bypass risk. Aurora Energy, for example, has detailed how it faces "genuine infrastructure competition" "In the Frankton Flats area of Queenstown … from an unregulated, grid-connected EDB".[93]

10.15 It is also notable Chorus has cited selective analyst views about loss of market share in areas where it is not the UFB provider, but has not provided its own forecasts of potential loss of future market share.[94] Our understanding is that Chorus' projections of loss of future market share are considerably less pessimistic than the analyst view it has quoted; including scenarios where it prices below the regulated UCLL and UBA prices in those areas.[95]

10.16 Likewise, while Chorus talks up the impact of alternative technology such as mobile data services, an argument Chorus has recycled on numerous occasions where it suits,[96] it has not provided any evidence to suggest the impact of this would be material.

Chorus claim it faces "… greater exposure to a regulatory regime (TSLRIC) that is generally accepted to be inherently less predictable than RAB-based regulation"

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[91] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014.

[92] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraph 6.

[93] Aurora Energy, Submission Proposed Default Price-Quality Paths for Electricity Distributors from 1 April 2015 and Low Cost Forecasting Approaches for Default Price-Quality Paths, 15 August 2014, page 29.

[94] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraphs 40 and 41.

[95] This can be readily be verified by requiring Chorus to disclose all relevant market information it has.

[96] Chorus argued extensively that new technology/infrastructure competition was a reason against LLU during the Commission's 2003 section 64 LLU review, but argued that infrastructure competition would result in inefficient duplication during the UFB tender process.

10.17 It is not clear Chorus faces greater risk under Part 2 of the Telecommunications Act than regulated suppliers face under Part 4 of the Commerce Act.

10.18 Part 4 of the Commerce Act has been somewhat unstable, particularly in relation to electricity services, with Part 4 being replaced by a new Part 4A for electricity (2001), and then Part 4 and 4A being replaced by a new Part 4 (2008). Additional uncertainty and risk has also been created by overlaps and boundary issues between the Commerce Commission, Electricity Commission (then Authority) and the GIC.[97] This regulatory instability has heightened the risk faced by regulated suppliers under Part 4.

10.19 Chorus argues "EDBs and GPBs operate with a relatively certain RAB value",[98] but this argument fails to recognise:

- the RAB values were only recently established, following introduction of RAB Input Methodologies as part of the 2008 Part 4 reforms;
- the Commission is simply at a more advanced stage of its decision making process under Part 4 (having implemented a series of IMs, and price determinations, in the last few years) than it is in relation to UCLL and UBA services under Part 2 of the Telecommunications Act. Greater certainty will come about over time from the Commission's TSLRIC price determinations.
- The Part 4 IMs, including in relation to RABs/asset valuation, are subject to statutory review in 2017. The High Court IM Merit Appeal decision in December 2013 indicated there is scope for the Commission to have determined a substantially lower set of RABs for electricity and gas networks, which could potentially impact on the Commission's IM review decisions.

10.20 In this context, the following statements by the High Court, which suggest the Commission could potentially value assets as low as scrap value, are worth noting:[99]

> 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.
>
> 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.
>
> 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.

[97] For example, the Electricity Act previously provided for Part 4 price control of Transpower and EDBs to be transferred to the Electricity Commission. This provision has now been removed. Likewise, there have been various changes to which regulator is responsible for which part of economic regulation e.g. the Electricity Commission was previously responsible for electricity transmission grid upgrade approval, but this has now been transferred to the Commerce Commission. Likewise, the responsibility for setting the electricity transmission pricing methodology has shifted between regulators and now resides with the Electricity Authority.

[98] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraph 43.

[99] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [597] – [599].

10.21 Chorus goes onto argue "… the Commission's task is to estimate the cost of operating and maintaining the actual network. This limits the potential for prices to deviate from the long run costs of an EDB/GPB operating their actual networks ... By contrast, TSLRIC regulation has no equivalent concept to a RAB and the costing of the services is less closely connected to the actual costs that Chorus incurs in providing these services … There is therefore a heightened risk that the price set will be below Chorus' long run costs".[100]

10.22 The Commission has, in fact, substantially relied on Chorus' actual cost data – more so in relation to certain cost elements, such as opex, than it has under Part 4. Chorus' disclosed calculation of the TSLRIC prices for UCLL and UBA services also demonstrate there is considerable scope to inflate the TSLRIC cost calculation well above the long-run costs of provision of copper-based services.

10.23 The risk of inflated TSLRIC cost calculations is also reflected in concerns raised in relation to the transaction charge consultation (potential add on revenues/duplicate cost recovery) and, by way of example, in concerns "It appears that the Commission intends to make a number of decisions which could result in overstatement of the TSLRIC price, such as partial optimisation, not fully assessing the cost of different potential MEAs, not taking into account third party service provision and valuing re-usable assets at ORC".[101]

10.24 Chorus goes on to claim, "By way of example" that "the Commission's most recent consultation paper proposes to model regulated unit prices for UCLL on a forecast of demand that is set above the demand that Chorus can actually achieve in delivering these services". It has hard to understand the basis for this given the Commission has adopted a constant demand growth assumption, even though New Zealand has the third highest demand growth for broadband services is in the OECD.

10.25 Chorus then goes on to assert "By way of contrast, the input methodologies that govern the regulation of EDBs and GPBs base demand on the actual number of units of the regulated service that the provider expects to sell".[102]

10.26 This simply reflects Chorus' misunderstanding of the respective Part 2 Telecommunications Act and Part 4 Commerce Act.

10.27 Regulated suppliers under Part 4 of the Commerce Act have consistently submitted the Commission's demand forecasts exceed what they expect (they are not, as Chorus' claims, set at the level regulated suppliers expect) and this could mean "other things equal, Chorus [regulated suppliers] will be unable to recover its [their] costs from customers".

10.28 In contrast, we note the Commission has assumed zero demand growth for broadband services, despite New Zealand having the third highest growth rate in the OECD.

Chorus' claim it faces "… greater exposure to technological change, which compounds other regulatory risks"

10.29 We recognise there is greater scope for technological change in telecommunications than has been seen in the energy sector. This is dealt with through the asset beta in the WACC, not through uplift in WACC percentile.

[100] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraphs 43 to 45.

[101] Wigley and Company, Submission on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL, 6 August 2014, paragraph 188.

[102] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraphs 45 and 46.

10.30 We also note Chorus is somewhat insulated from these risks by the Government subsidised roll-out of fibre. To the extent copper is displaced by fibre, customers (and revenue) will largely migrate from one part of Chorus' business to another.

10.31 Technological change also creates opportunity for new and better services and, consequently, greater revenue streams (increased ARPU). For example, Chorus has gone from receiving revenue limited essentially to phone calls from its copper network, to revenue from ADSL services and then revenue from VDSL services. Electricity and gas networks face no comparable new market/new service/revenue growth opportunities.[103] Chorus' claims about asymmetric cash flow risk cherry pick potential negative factors and omit the scope for changes which could result in asymmetric cash flow in the opposite direction.

10.32 It should also be noted that electricity and gas networks are not immune from technology and other exogenous risks.

10.33 In a recent presentation to the Business NZ Energy Council the Commission outlined the a number of 'emerging challenges' faced by energy networks including:

- future demand;
- disruptive technology;
- affordability and fuel poverty;
- death spiral;
- changing consumer expectations;
- new business models; and
- climate change (extreme weather).[104]

10.34 The impact of solar power which is improving/reducing in costs is an obvious example. The Commission's consultation on the electricity network DPP and IPP determinations also highlights risks exist in relation to energy efficiency/declining demand (without the offsetting revenue gains Chorus' receives from new services/fibre).

10.35 Economic Insights, in a report for the Commission, noted "a significant change in market conditions facing the energy supply industry occurred around 2007 with significantly reduced growth rate in demand".[105]

10.36 MBIE analysis also shows "Electricity demand in New Zealand fell 0.6% between 2012 and 2013 … This was driven by a decrease in the level of residential demand for the third year in a row, combined with flat total industrial demand … As New Zealand's population has continued to grow over the last three years, New Zealand's residential electricity use per capita has fallen. Technological energy efficiency improvements and changes in household behaviour could be behind this fall."[106]

10.37 Similarly, CarterHoltHarvey has noted a trend appears "… to becoming apparent with consumer behaviour (e.g. load reduction due to more efficient appliances and equipment, and potentially disruptive technologies such as PV, electric vehicles and enhanced methods for consumers to manage their electricity use) that future investment in augmenting transmission services may well be quite minimal or even non-existent".[107]

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[103] Consistent with this, Telstra's Chief Financial Officer noted that "…the advent of high speed internet services using DSL over copper wires allows Telstra to pay for its national copper and fibre network a second time …".

[104] Commerce Commission, Energy Sector Regulation: Predictable improvements in a changing sector and why it matters, 15 October 2014.

[105] Economic Insights, Electricity Distribution Industry Productivity Analysis: 1996-2013, 24 June 2014, pages iii and iv.

[106] Ministry of Business, Innovation and Employment, Energy In New Zealand, 2014, pages 55 and 56.

[107] CarterHoltHarvey, submission to the Electricity Authority, Transmission pricing methodology: Problem definition working paper, 28 October 2014, response to question 2.

10.38 Chorus also claims "EDBs and GPBs do not face technological or regulatory stranding. The Commission could not revalue an EDB/GPB's RAB - even with unequivocal evidence that, if built afresh using modern methods, the EDBs and GPBs assets would cost less than the RAB".[108] This ignores that the IMs are subject to statutory review in 2017. Unequivocal evidence of the kind described by Chorus could well result in reduction in RAB for subsequent price resets.

10.39 Regulated suppliers under Part 4 of the Commerce Act face risk of technology change and asset stranding. Chorus has, at best, made a valid argument that there is greater scope for technological change in telecommunications. What Chorus has not done is demonstrated this exposes Chorus to additional risks which cannot be addressed through the asset beta/market risk premium in the WACC formula.

The Part 4 WACC percentile review has implications for UBA and UCLL and they all point downwards

10.40 In our "Cross-submission to the Commerce Commission in response to the Commission's expert reports on the cost of capital for the UCLL and UBA price reviews AND Submission on the Part 4 review of WACC uplift"[109] we detailed extensively the implications of the Commission's WACC percentile review for Part 2 Telecommunications Act WACC decisions, and that the Part 4 WACC percentile consultation material suggests a lower WACC for the UBA and UCLL TSLRIC price determinations. This submission is highly relevant to the draft decision on WACC and in relation to other generosities the Commission has provided in its TSLRIC modelling.

10.41 Subsequent to this submission, the Commission released new material, and made a final decision, on the WACC percentile for electricity and gas networks. Various of this new material is relevant to the UCLL and UBA WACC percentile decisions, and reinforce the draft decision to select mid-point WACC for UBA and UCLL services:

Commerce Commission/expert statement	Wigley and Company observations
Commission Part 4 WACC Percentile Reasons (2014): "We consider that the main reason to set a WACC percentile above the mid-point is to mitigate against the risk of under-investment relating to service quality generally, and contributing to major supply outages in particular. However, compared to setting the WACC at the mid-point, a WACC uplift should also reduce the risk of under-investment in other types of investment as well."[110]	The roll-out of fibre services, plus alternative technologies such as mobile broadband, substantially mitigate this risk from a consumer perspective. What this essentially means is whether a higher WACC is justified for copper depends on the extent to which future investment in copper services is important, and on the scale of future investment in copper that will be needed. The importance of copper is highlighted vividly in Australia where the NBN initiative involved ripping out copper where fibre had been laid. As CallPlus has noted previously, "concerns about incentives to invest in copper would be akin to concerns about whether electronic good manufacturers would continue to invest

[108] Chorus, Submission on input methodologies WACC uplift draft decision, 29 August 2014, paragraph 49.

[109] Wigley and Company, Cross-submission to the Commerce Commission in response to the Commission's expert reports on the cost of capital for the UCLL and UBA price reviews AND Submission on the Part 4 review of WACC uplift, 4 August 2014, paragraph 22.

[110] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph X18.

Commerce Commission/expert statement	Wigley and Company observations
	in manufacture of VHS video recorders, tape decks and tube TVs".[111]
Commission Part 4 WACC Percentile Reasons (2014): "…to the extent that any additional positive incentives to actively promote greater investment might be justified, targeted ex post incentive mechanisms might be more effective than a WACC uplift for some types of investment."[112]	The extent to which investment in copper should be incentivised by an artificially high WACC versus stringent service quality requirements (which appear necessary, anyway, to preclude Chorus' from downgrading service quality a la its "Boost" plan).
Commission Part 4 WACC Percentile Reasons (2014): "There are other tools to help incentivise efficient investment from regulated suppliers, in addition to the WACC percentile. For example, required quality standards (and associated penalties) help reduce the risk of underinvestment. We are able to monitor the investment of regulated businesses and take action if we become concerned about under-investment or declining quality of service."[113]	See above.
Commission Part 4 WACC Percentile Reasons (2014): "The WACC percentile is an adjustment applied to the mid-point, which is the best estimate of the cost of capital. Analytically and logically it therefore makes sense to start at the mid-point, and then consider whether there is good reason to depart from it."[114]	Agreed.
Commission Part 4 WACC Percentile Reasons (2014): "In our draft decision, we explained that we considered benefits to consumers from wealth transfers due to lower prices are relevant to our analysis (meaning, as is expressed above, avoiding future wealth transfers from consumers to suppliers due to higher prices). We did not accept that the Part 4 framework suggests that wealth transfers should not be taken into account at all."[115]	Agreed.
Commission Part 4 WACC Percentile Reasons (2014): " … notwithstanding our in principle view that using the consumer welfare standard is more consistent with an overall objective of the long-term benefit to consumers, it may be appropriate in practice to give some weight to producer surplus.	Agreed.

[111] CallPlus, Submission to the Commerce Commission on technical consultation paper "Determining the cost of capital for UCLL and UBA price reviews, 28 March 2014, paragraph 52.

[112] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph X.19.

[113] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph X.22.3.

[114] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 2.11.2.

[115] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph A41.

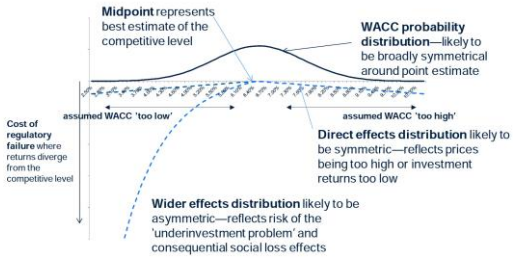
Commerce Commission/expert statement	Wigley and Company observations
However, this would only be to the extent producer surplus provides an appropriate proxy for some otherwise difficult to quantify (or unquantifiable) long-term (net) benefit to consumers, in particular as an indicator of the margin for error regarding incentives to invest. In the current context, the effect of giving some weight to producer surplus would be a higher WACC percentile than would otherwise be the case."[116]	
Commission Part 4 WACC Percentile Reasons (2014): "A number of submissions from regulated suppliers have suggested that a WACC uplift should be used to avoid the risk that, without the uplift, specific investments with a positive net benefit to consumers would not occur. In their view this is particularly the case for certain innovation investments, economic investments, and for investments made to meet new demand."[117]	This should be considered in the context of roll-out of fibre services (as well as other technologies such as mobile broadband).
Oxera (2014): "… the WACC may not be the most effective mechanism for promoting unusual forms of investment, such as true innovation, given that, in traditional network assets, any premium would also need to be applied to the significant majority of the capital base"[118]	Agreed.
Commission Part 4 WACC Percentile Reasons (2014): "We consider the main justification for applying an uplift to the mid-point WACC is to mitigate the risk of under-investment in network quality, which could potentially have significant adverse consequences for consumers (due to major supply outages)."[119]	See above.
Oxera (2014): "The submissions argue for either a higher or lower range. A lower range would be identified if: • the investment made by the companies is not directly related to the reliability and outage effects that drive asymmetric risks … • the companies are already likely to invest heavily at the 50th percentile, the 60th to 70th percentile drives material additional investment with benefits well below the costs,	Agreed. These points are highly relevant to Chorus/investment in copper services. Submissions to the Commission on Part 4 WACC percentile included a lot of evidence to suggest the risk to investment from a WACC percentile was too low was asymmetric, as reflected in the sharp increase in cost of regulatory failure where WACC is assumed to be too low. The basis of Oxera's recommendation of a WACC percentile range of 50 – 60 % be used was that the economic cost of under-investment result in network

[116] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 2.37.

[117] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 3.38.

[118] Oxera, Review of expert submissions of the input methodologies, Prepared for New Zealand Commerce Commission, 27 October 2014, page 2.

[119] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 5.3.

Commerce Commission/expert statement	Wigley and Company observations
and there is limited ability for the regulator to respond; or • the downside risks are overstated, either because they are lower in New Zealand or because GDP is not an appropriate measure."[120] Oxera's views on asymmetric risk are illustrated in the figure below.  Source: Oxera, Figure 2.1: Potential asymmetric risks of regulatory failure	outages was in the range of $1 billion to $3 billion. Chorus is yet to provide any evidence to suggest the same contention is applicable to copper services. Previous submissions by other submitters would suggest it is not. The copper investment requirements, where fibre roll-out has been brought forward and subsidised is limited, and under-investment in copper would result in further acceleration of the shift from copper to fibre.
Oxera (2014): "Overall, given the low level of expenditure on such [innovation] investments relative to the first two categories of investment in the electricity transmission and distribution sectors, and given that the additional costs of innovative investments (as well the additional return and any over-investment) would have to be netted off the benefits, Oxera determined that these were likely to be second-order effects and that the main under-investment problem for transmission and distribution companies would take the form of an 'increasing gap between actual network quality and the socially and economically optimal level of network quality'. We do not consider that the evidence provided by respondents has sufficiently disproved this judgment. "In sectors where there is greater scope for innovation, greater analysis of such investments may be warranted when setting the WACC percentile. However, we note that it is a WACC uplift applied to the entire asset base is unlikely to be the most efficient mechanism for incentivising such projects to be undertaken. The evidence indicates to us that the significant majority of capital investment (and therefore, RAB assets) are focused on delivering continuing service	Agreed. These points are particular relevant in the context that innovative investments will predominantly be in new technologies, rather than copper services.

[120] Oxera, Review of expert submissions of the input methodologies, Prepared for New Zealand Commerce Commission, 27 October 2014, page 9.

Commerce Commission/expert statement	Wigley and Company observations
across New Zealand, now and into the future."[121]	
Commission Part 4 WACC Percentile Reasons (2014): "Since market failures vary from industry to industry and from type of investment to type of investment, the allowed WACC should be differentiated on a case-by-case basis in order to correct for market failures."[122]	Agreed. This is consistent with our argument that the optimal WACC percentile is substantially higher for energy networks, than for copper services, and with the Commission's views on dual-till for airports.
Commission Part 4 WACC Percentile Reasons (2014): "The case for allowing a WACC above the mid-point estimate may be much weaker than the conventional arguments state and may be restricted to specific types of investment (such as innovations, reliability, or particularly lumpy investments)."[123]	Agreed.
Commission Part 4 WACC Percentile Reasons (2014): "… there are a range of factors which limit the need for a WACC uplift for investments to meet demand growth."[124]	Agreed.
Commission Part 4 WACC Percentile Reasons (2014): "The Court also observed that: "the tendencies in workably competitive markets are towards [normal] returns and prices [that reflect such normal rates of return, after covering the firms' efficient costs]. By themselves, these tendencies will also lead toward 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" (Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC [December 2013], paragraphs [18] and [20])."[125]	Agreed. It should also be noted infrastructure competition can also incentivise Chorus' to invest e.g. if Chorus does not adequately invest and service is degraded this will increase the risk end-users will switch suppliers/technology.
Commission Part 4 WACC Percentile Reasons (2014): "We consider that taking into account the expected level of future investments (ie RCP2) is more relevant than using historical levels of investments (ie the level of investment during RCP1) when considering an appropriate WACC. This is consistent with Incenta, who state that "the	Agreed. The expected level of investment in copper, compared to historic investment, and compared to the requirements for fibre roll-out, are highly relevant to consideration of the importance of incentives (for Chorus) to invest in copper.

[121] Oxera, Review of expert submissions of the input methodologies, Prepared for New Zealand Commerce Commission, 27 October 2014, page 31.

[122] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 5.30.3.

[123] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 5.30.5.

[124] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph 5.6.7.

[125] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, footnote 383.

Commerce Commission/expert statement	Wigley and Company observations
WACC provides an incentive for businesses to make the necessary investments that are required for the future when they are required to be made"."[126]	

Substantial new analysis and evidence would be required to justify an uplift

10.42 If any party wishes to challenge the use of mid-point WACC, the High Court Part 4 IM Merit Appeal decision made in December 2014, and the Commission's subsequent Part 4 WACC IM percentile review provides appropriate benchmark and guidance for the evidence needed to demonstrate such an uplift (higher prices) would be to the long-term benefit of end-users.

10.43 The evidence and analysis the Commission relied on in making its decision on WACC percentile for electricity and gas networks under Part 4 of the Commerce Act was detailed and substantive and included:

- Quantified loss function modelling;
- Analysis of whether historic investment had been sufficient (particularly relevant if the Commission adopts a higher price determination than previous prices or the IPP prices);
- Analysis of the gap between RAB and share market value/sale price (Chorus' listing value at separation would provide an appropriate proxy);
- Consideration of the extent to which there were alternative tools for ensuring adequate investment e.g. tougher service quality requirements and penalties;[127]
- Consideration of investment incentives broken down by investment in network quality, investment to meet demand growth, innovation investments, and "economic investments"; and
- International practice by other regulators.

11. Problems with the MEA including limited application of FWA

11.1 It is submitted that the way the Commission has set the MEA has resulted in further overstatement the TSLRIC cost.

11.2 This is illustrated, for example, by the Commission's decisions on FWA.

11.3 It is submitted that the Commission is following the mistakes it made in not adequately applying FWA as the MEA in the TSO net cost determinations, decisions that were overturned by the Supreme Court.

11.4 There are a number of decisions the Commission has made in FWA which are inconsistent with the approach a HEO would adopt. The result is understatement of the extent to which a HEO would use FWA and an overstatement of the cost of FWA e.g.:

- The Government RBI roll-out is not a proxy for the FWA a HEO would adopt.

[126] Commerce Commission, Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services, Reasons paper, 30 October 2014, paragraph E25.4.

[127] Chorus' attempt to circumvent the Commission's access determinations with a so called "Boost" product also highlight the importance of ensuring stringent service quality requirements and penalties.

- The Government RBI included requirements that would add substantial costs to the FWA that are not relevant to decisions a HEO would make e.g. the requirement that cell-sites allow co-location by four operators.
- The justification for the limited roll-out assumptions is vague, and limited, given the potential cost implications e.g. "… our view is that expanding the FWA boundary outside the RBI FWA footprint may be inconsistent with our consideration of technical factors, such as the observed network roll-out in New Zealand"[128] and "in our view it would not be deployed by a hypothetical efficient operator nationwide based on other considerations such as operator strategy" (emphasis added).[129]
- The reference to "operator strategy" appears to blur what operators are doing as a consequence of Government UFB/RBI decisions/subsidies with what a commercially focused HEO would do to minimise the cost of rolling out copper functionality equivalent services.
- Reliance on "observed network roll-out" would bias the Commission's decisions towards Chorus' actual costs rather than that of a HEO.
- A HEO would not limit itself to one FWA tower (supplying 67 customers only) per coverage area.
- A conservative limit has been set for the number of premises served per tower.
- A HEO would not obtain mobile spectrum rights for a limited copper/fibre substitution in high cost areas only. The mobile spectrum would be used for roll-out of full mobile services or the HEO would obtain wholesale arrangements with an existing mobile service provider.
- A HEO's decisions on use of mobile would not be constrained by the location of existing incumbent exchanges. This is an issue with the application of scorched node which was apparent from the Commission's TSO net cost determinations, and one of the causes of the Commission under applying FWA to the TSOR net cost determinations.

11.5 We illustrate the limitations of the approach the Commission has taken by way of stylized examples.

11.6 Assume:

- 100 customers.
- Cost of FWA (per tower cable of supply 67 customers) = $1500.
- Cost of copper services equals $2,000 for a shared pipe plus, $15 connection per household.

11.7 The cheapest way to supply the customers would be $3,000 by building two towers, compared to $3,500 from supplying copper services. This is precluded by the Commission's limit of one tower only supplying the 67 most expensive customers.

11.8 If a combination of FWA and copper was used the cost would be $3,995 (the most expensive option), consisting of one tower ($1,500), one shared pipe ($2,000) and connections ($395 = 33*$15).

11.9 We agree with Vodafone and Spark that the FWA coverage should not be arbitrarily restricted to the edge of the network or RBI roll-out. As Network Strategies has noted "The hypothetical efficient operator would make use of FWA in its network, deploying the latest release of LTE technology where it is efficient to do so. This is likely to be in the rural areas

[128] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 524.

[129] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 531.

of the network where it could represent the least cost modern technology in at least both zones 3 and 4".[130]

11.10 Wireless technology was used in the 2008 fixed access model that Analysys Mason developed for the ACCC[131] so it can hardly be described as a new or cutting edge approach to TSLRIC modelling. Network Strategies noted the Analysys Mason model encompassed access network algorithms that deployed the most cost-efficient solution by ESA, selecting copper, fibre, wireless or satellite. The modelled wireless technology was based on GSM 900MHz parameters. While this 2G technology implementation may have been cost-efficient in only 1% of sites in 2008, with a more modern choice of wireless technology the results may be quite different in 2014".[132]

11.11 The approach the Commission should take is to determine what parts of the network would be most efficiently (least cost) supplied by FWA. A "predictable" TSLRIC approach would be to adopt a MEA/combination of MEAs that would deliver the least cost roll-out of services consistent with the actions of a genuinely hypothetical efficient operator.

12. The Commission should not adopt both scorched node and ORC for re-usable assets

12.1 If the Commission was adopting a scorched earth approach it would have a stronger case for applying ORC for re-usable assets on the basis that the HEO network may have limited overlap with Chorus' actual network, in which case it would have limited scope to re-use trenches and ducts.

12.2 The Commission is instead applying a scorched node approach which enables widespread use of re-usable assets.

12.3 If the Commission is going to assume that the HEO would use the same set of re-usable assets as Chorus' then the forward-looking cost of these assets will be nil, not replacement costs, as they would not need replacement.

12.4 The combination of scorched node and ORC for re-usable assets creates the worst of both worlds for consumers. They do not get the benefit of greater efficiency adjustments, and they don't get any benefit from re-use of existing assets.

12.5 The draft decision to use ORC to value reusable assets was based on the Commission's view "that adopting an alternative methodology would weaken the predictability of the regulatory framework" and "in practice, the alternative methodologies have limitations which may impact on their potential benefits. Most notably failure to recognise the opportunity costs of fully depreciated assets that are still in use".[133]

12.6 We reiterate Ingo Vogelsang's view that "Rather than starting from scratch the re-use of those civil works facilities for the new set of cables is usually the most efficient way to go forward. It also reduces the probability that the regulated firm is over-collecting"[134] and "a

[130] Network Strategies, Final report for Spark New Zealand and Vodafone New Zealand, Cross-submission for consultation on UCLL and UBA FPP regulatory framework: A review of selected issues in submissions on the Commission's consultation paper of 9 July 2014, 20 August 2014, page ii.

[131] ACCC, Analysys cost model for Australian fixed network services, December 200, section 5.1.2.

[132] Network Strategies, Final report for Spark New Zealand and Vodafone New Zealand, Cross-submission for consultation on UCLL and UBA FPP regulatory framework: A review of selected issues in submissions on the Commission's consultation paper of 9 July 2014, 20 August 2014, page 22.

[133] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 621.

[134] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 12.

historic cost approach is generally … more predictable than a replacement cost approach". (emphasis added)[135]

12.7 The choice of replacement cost over historic cost is puzzling given precedent set in other jurisdictions.

12.8 Part of the reason given by the Commerce Commission for its decision to undertake a Part 4 investigation into Eastland Port was that Eastland had moved to a replacement cost valuation methodology, "This substantially increased their asset valuation",[136] and "that asset valuations at Eastland Port may have been increased in a manner that are likely to contribute to excessive profits".[137]

12.9 The Commission also moved away from the replacement cost, ODV, methodology for electricity, adopting a hybrid of ODV for legacy assets and actual cost for new assets.

Electricity precedent is to use nil or historic cost for re-usable assets

12.10 Consistent with Vogelsang's view, in our "Submission on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL", 6 August 2014, detailed that the Commission deviated from ORC for reusable assets (i.e. easements) under the ODV methodology applied to regulated suppliers under Part 4 Commerce Act. They were valued at historic cost or nil value.

12.11 We note the Commission has relied on consistency with its approach under Part 4 as enhancing predictability:

> We consider that this is a predictable approach as it is forward-looking, and is consistent with our approach in setting the default price-quality path (DPP) under Part 4 of the Commerce Act.[138]

12.12 The Commission's electricity ODV Handbook noted "Easements, and any other assets that do not deteriorate in service and do not have potential alternative uses, are to be valued at historic cost, without depreciation or indexation. In respect of easements, this implies a hypothetical operating environment where a new entrant has access to existing line routes on the same basis as the incumbent ELB." (emphasis added).[139]

12.13 Also notable, is the Commission's comment, made in relation to its review of valuation methodologies under the Part 4 IMs, that "All other things being equal, setting an initial RAB value that is consistent with the long-term benefit of consumers suggests setting a lower rather than a higher value …"[140]

12.14 We reiterate the reasons provided by the Commission for applying historic cost to easements/re-usable assets in electricity, which included:

> A material one-off increase in the regulatory value of a supplier's past investments on the basis of a replacement cost-based approach meets with similar objections to … of an opportunity cost valuation. An increase in pricing of the scale likely to be implied by a new replacement cost-based revaluation would be equally inconsistent with the outcomes produced in workably competitive

[135] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 17.

[136] Commerce Commission, Preliminary Assessment of Eastland Port, 20 June 2014, paragraph 27.

[137] Commerce Commission, Preliminary Assessment of Eastland Port, 20 June 2014, paragraph 26.

[138] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 75.

[139] Commerce Commission, Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses, 30 August 2004, paragraph 1.4(c).

[140] Commerce Commission, Input Methodologies (Electricity Distribution) Emerging Views Paper, 23 December 2009, paragraph 75.

markets characterised by on-going relationships between suppliers and consumers.

In a workably competitive market, a supplier's ability to implement a substantial price increase that is inconsistent with pre-existing arrangements would be limited, not least because consumers would switch to a less opportunistic supplier (irrespective of whether the increase in prices was smoothed or sudden). In such markets, this switching limits suppliers in their ability to extract excessive profits. But in a regulatory context, consumers do not have the option to switch to an alternative supplier of the same service when prices are increased. Thus, regulated suppliers would not be limited in their ability to extract excessive profits in the event of a material one-off increase in regulatory valuations. [footnote removed][141]

The Commission considers that easement rights should be assigned either: (i) a nil value, reflecting situations where compensatory payments were not made for loss of land use or consequential loss; or (ii) the historic cost value of the rights as recorded in the asset register of the lines business, irrespective of whether these rights were obtained before or after 1993 (or 1988 for Transpower). This differs from the treatment in MED's ODV Handbook (and the Revised Draft ODV Handbook) where all pre-1993 (1988) easements were required to be assigned a nil value.[142]

… dynamic efficiency will not be harmed by valuing easements at historic cost, given that easements are not replaced.[143]

Under the Commission's draft decision for the initial RAB, the value of existing easements will be the value for those easements included in each EDB's 2009 disclosures. Thus existing easements will be valued at historic cost.

…

The Commission considers that different treatment for establishing the value of easements in the initial RAB from that adopted for other network assets or land is appropriate given the very different characteristics of easement rights. Easement rights are sunk assets … Easements are distinct from other sunk assets (such as network assets) because easement rights usually do not suffer physical deterioration or obsolescence, and are usually available to the supplier in perpetuity (i.e. do not need to be replaced). In light of these characteristics, the Commission considers opportunity cost or replacement cost valuations are inappropriate for existing easements. (Emphasis added)[144]

12.15 We also note that the Commission rejected use of "opportunity cost" for valuing specialised network assets under Part 4 of the Commerce Act.[145]

[141] Commerce Commission, Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, December 2010, paragraphs 4.3.8 and 4.3.9.

[142] 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, paragraph 168.

[143] 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, paragraph 162.

[144] Commerce Commission, Draft Reasons Paper, Input Methodologies (Electricity Distribution Services), June 2010, paragraphs 4.4.128 – 4.4.130.

[145] Commerce Commission, Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, December 2010.

12.16 This position was supported by the High Court in the Part 4 IMs Merit Appeal decision:[146]

> [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.

13. Re-using assets

Introduction

13.1 Our clients have made a number of submissions on this, and they continue to submit them, including where the Commission has not engaged with them yet in writing. An example is the availability of the UFB infrastructure, owned by Chorus and the LFCs, for the HNO.

13.2 In this section, we instead deal with a specific legal point: the draft decision not to model existing assets such as trenches at historical or other reduced cost.

13.3 That conclusion is not available as it does not apply and is contrary to the judgment of the Supreme Court in *Vodafone v Telecom* [2011] NZSC 138.

Vodafone v Telecom

13.4 In *Vodafone*, the Supreme Court considered, among other issues, whether the Commission was correct to include old assets such as trenches in the TSO modelling at ORC or some other basis such as historical cost. It concluded that the Commission was wrong to use ORC as this would "artificially inflate the value of the old asset and provide a windfall for the firm…"[147]

13.5 The modelling approach, in relation to the treatment of assets such as trenches, is, it is submitted, materially the same or similar for the TSLRIC exercise as it is for the TSO modelling:

(a) The TSO modelling decides the "net cost" as then defined in s 5 of the Act 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.

(b) TSLRIC also models the cost of an "efficient service provider". For example, as the Court of Appeal said in Chorus v Commerce Commission at [30];

> The TSLRIC model provides an estimate of the costs of an efficient access provider over a sufficient period of time (long run), on a "forward-looking" basis.

[146] Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC 3289 [11 December 2013], paragraphs [377] and [378].

[147] Vodafone v Telecom at [70].

13.6 Applying the Supreme Court decision would require historic cost or similar to be used instead of ORC, for the reasons below. We deal first with the Commissions draft reasons for concluding the TSO circumstances are different.

Commission's draft views distinguishing TSO and Vodafone v Telecom

13.7 The UCLL draft determination summarises those views at [658] and [659]:

> We agree with Chorus that the Supreme Court decision was made in a different context and related to determining the TSO net costs, which is backward-looking. Although the Supreme Court decision supported a historic cost approach to asset valuation in that particular context, we consider that this would be inconsistent with our forward-looking approach in this TSLRIC context. The TSO net costs calculation represented the efficient cost of Telecom providing services to commercially nonviable customers in a given past period. ….
>
> …The context in which we are required to select an appropriate methodology for the purpose of the FPPs is different. The use of a replacement cost methodology does not afford Chorus an unjustified windfall gain in this context, but is consistent with our task to model the network of a hypothetical efficient operator on a forward looking basis.

13.8 It is submitted that the reasons outlined by the Commission for the Vodafone judgment not applying to TSLRIC are not correct.

13.9 We note immediately that the following statement above does not appear to be correct: "The use of a replacement cost methodology does not afford Chorus an unjustified windfall gain in this context…" As Professor Vogelsang, the Commission's expert confirms, that is exactly what ORC is doing.

TSO and Vodafone v Telecom are relevant and binding.

13.10 The TSO in fact involves the same TSLRIC modelling based on forward looking costs, and the Commission both acknowledged that multiple times and also implemented TSLRIC. The only significant difference here, is that the TSLRIC for the FPP is TSLRIC+ (that is, it adds fixed and common cost) whereas the TSO TSLRIC is pure TSLRIC (that is, fixed and common cost is not added). That difference is not relevant here.

13.11 The cost models the Commission adopted to calculate the net cost of the TSO were pure TSLRIC:

(a) They calculated the net cost of supplying TSO services of an "efficient service provider" (equivalent to an HEO);

(b) The costs were explicitly calculated on a long-run incremental cost (LRIC) basis;

(c) The Commission's net cost calculations were explicitly undertaken on a "forward-looking"[148], bottom-up, scorched node basis, with optimisation including adoption of fixed wireless as the MEA;

(d) The Commission has acknowledged "the previous TSLRIC model" it built was "for the TSO".[149]

13.12 In short, the TSO models are specifically designed and implemented at forward looking TSLRIC. And the Commission has said so many times. For example in the first TSO

[148] For example, the first TSO net cost determination made references to the TSO modelling being "forward-looking".

[149] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 94.

determination there are 32 references to the model being forward looking and none to it being backward looking. They are not backward looking as the UCLL draft determination quote above says. Therefore, the Supreme Court decision is binding in this FPP and ORC is not an option for the Commission.

13.13 The Commission has made a number of references to the TSO net cost determinations being TSLRIC, or consistent with TSLRIC, in the TSO net cost determinations themselves, in the Commission's development of a draft TSLRIC price for PSTN services, and in the current UCLL and UBA FPP determination process e.g.:

TSO net cost determination	**PSTN TSLRIC determination**	**UCLL and UBA TSLRIC determinations**
Given that the measurement of the net cost of the TSO is based on modelling different physical parts of a telecommunications network, this suggests that TSO assets be valued on a consistent basis with the TSLRIC modelling. If, for example, the forward-looking cost of a switch were valued in the TSLRIC exercise on the basis of its replacement cost, it would seem logical to value the switching components of the TSO cost on the same basis.[150]	The modelling work for the TSO determination required the Commission to collect input values for a range of network parameters and unit costs which are common to the TSLRIC model.[151]	In order to assist us with determining our approach to TSLRIC, we have closely considered the previous TSLRIC cost model we built (for the TSO) …[152]
… a key question is how often to 're-optimise' the (gross) asset base … Whatever the approach, it is useful to be consistent with the approach taken to modelling the TSLRIC of providing interconnection services.[153]	In reaching its determination, the Commission considered two TSLRIC models: • the model developed by Telecom ('Telecom Model'); and • the model developed for the Commission by CostQuest Associates	To adopt a more predictable approach to implementing TSLRIC, our starting point has been to consider our previous approach to TSLRIC when modelling the TSO.[155]

[150] Commerce Commission, TSO Discussion Paper and Practice Note - Implementation Issues Paper, 19 April 2002, paragraph 184 at: http://comcom.govt.nz/dmsdocument/8989.

[151] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraph 65 at: http://www.comcom.govt.nz/dmsdocument/4371.

[152] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 94.

[153] Commerce Commission, TSO Discussion Paper and Practice Note - Implementation Issues Paper, 19 April 2002, paragraph 189 at: http://comcom.govt.nz/dmsdocument/8989.

[155] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 132.

TSO net cost determination	PSTN TSLRIC determination	UCLL and UBA TSLRIC determinations
	Inc ('Commission Model'). "Both models were based on the earlier CostProNZ model which was developed for the Commission by CostQuest to calculate core network costs for the TSO determination. … "CostQuest developed the Commission Model … This model includes reports to calculate both the TSLRIC cost of interconnection services and relevant core network costs which could be used for future TSO determinations.[154]	
In estimating the net cost of the TSO, the Commission regards unavoidable incremental costs as the difference between the long-run costs an efficient service provider would incur with and without the obligations imposed by the TSO instrument … The incremental cost should be the long run incremental cost (LRIC).[156]		
CostPro calculates the LRIC cost for material and labour investments associated with the switching, signalling, and transport of landline telecommunication		

[154] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraphs 113 to 116 at: http://www.comcom.govt.nz/dmsdocument/4371.

[156] Commerce Commission, Draft Determination for TSO Instrument for Local Residential Service for period between 1 July 2003 and 30 June 2004, 23 December 2005, paragraphs 22 and 23.

TSO net cost determination	PSTN TSLRIC determination	UCLL and UBA TSLRIC determinations
network functions. In conjunction with HCPM, the output from CostPro is used to calculate the TSO net cost. CostPro was designed to use forward looking, commercially available telecommunications technologies. It also employs modelling algorithms which reflect the best practice of contemporary switch and transport engineering.[157]		
.. LRIC costs represent the avoidable costs of the provision of TSO services over the PSTN network.[158]		
In estimating the net cost of the TSO, the Commission regards unavoidable incremental costs as the difference between the long-run costs an efficient service provider would incur with and without the obligations imposed by the TSO instrument. … The incremental cost should be the long run incremental cost (LRIC).[159]		

13.14 The principle difference between the calculation of the net cost of the TSO and the TSLRIC cost for UBA and UCLL services, is the TSO cost calculations were required by the Act to be purely incremental cost, and did not include a contribution to "forward-looking common costs" i.e. the TSO net cost calculation was "pure TSLRIC". The Commission previously acknowledged this when undertaking TSLRIC for fixed PSTN interconnection services:

[157] Commerce Commission, Draft Determination for TSO Instrument for Local Residential Service for period between 1 July 2003 and 30 June 2004, 23 December 2005, paragraphs 442 and 443.
[158] Commerce Commission, Draft Determination for TSO Instrument for Local Residential Service for period between 1 July 2003 and 30 June 2004, 23 December 2005, paragraph 456.
[159] Commerce Commission, Determination for TSO Instrument for Local Residential Service for period between 1 July 2002 and 30 June 2003, 24 March 2005, paragraphs 23 – 25 at: http://comcom.govt.nz/dmsdocument/9103.

> The TSLRIC modelling differs from that of the TSO because TSLRIC includes an allocation of common costs, such as corporate overheads, whereas the TSO calculates the incremental costs of CNVCs. In practice this requires the TSLRIC model to include some additional costs not included in the TSO core network model.[160]

Applying Vodafone v Telecom to this FPP

13.15 The Supreme Court decision is binding on the Commission in concluding that ORC is not available for assets such as trenching.

13.16 In delivering the judgment of the majority,[161] Blanchard J said:

> [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.

13.17 That conclusion is also consistent with the following approaches, including as to underlying reasons:

(a) The rejection by the Australian Competition Tribunal of ACCC's similar use of ORC in relation to a "hypothetical new entrant" valuation model in respect of Telstra, in a judgment relied upon by Blanchard J.[162]

(b) The Commission's application of ORC in electricity and gas does not extend to re-usable assets such as easements.

(c) The High Court caution, in the Part 4 IM Merit Appeal decision, about the risks of applying replacement cost valuations based on hypothetical efficient operators or new entrants:[163]

> 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 foundations in the HNET as to lose its credibility as generating the prices that could be charged for services in a workably competitive market.

(d) The EU split approach to value assets such as trenches at historical cost.

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[160] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraph 67 at: http://www.comcom.govt.nz/dmsdocument/4371.
[161] Majority of 3 judges, with Tipping J also agreeing with that judgment if he is wrong on his primary point
[162] Application by Telstra [2010] ACompT 1. See [71] of the judgment of Blanchard J.
[163] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289, paragraphs [612].

Further detail

13.18 We have provided further detail as to how the TSO applies to this FPP at Appendix B below.

14. Predictability and reusable assets

14.1 The Commission states in its UBA draft determination, with particular regard to valuing assets at ORC instead of historical cost:[164]

> We have tried, where possible, to create a conventional TSLRIC model. This helps promote regulatory predictability. We have, therefore, avoided building in more recent innovations in European policy.

14.2 This conflicts with Ingo Vogelsang's view that "Rather than starting from scratch the re-use of those civil works facilities for the new set of cables is usually the most efficient way to go forward. It also reduces the probability that the regulated firm is over-collecting"[165] and "a historic cost approach is generally … more predictable than a replacement cost approach". (emphasis added)[166]

14.3 For the reasons in the last paragraph, valuing at historical cost, or some other variant short of the currently proposed ORC, is the only option available to the Commission.

14.4 But in any event, if, contrary to our primary submissions, the concept of predictability has relevance, it is relevant here to have historical cost values for assets such as trenching. It is what happens with the TSO. And it happens in our neighbour, Australia. Plus, it happens for Chorus' sister gas and electricity utilities. It would be entirely unpredictable for the TSLRIC approach to take the opposite path. Predictability requires historical cost values for assets such as trenches.

14.5 It is submitted therefore that the following statement in the UCLL draft determination at [646] is not accurate:

> We consider that ORC is the orthodox methodology based on New Zealand and international practices.

14.6 The opposite is the position. The orthodox position in Australasia and Europe, at least is not ORC as to reusable assets such as trenches.

14.7 The predictability argument in this area also does not address our earlier submission that the Act is to be interpreted, in this context, as though it is speaking now (that is, with regard to current circumstances, such as sunset networks, the surrounding developments noted above, etc).

15. Additional examples of input assumptions/modelling decisions which result in further overstatement of TSLRIC

15.1 We are concerned that a large number of the input assumptions/modelling decisions the Commission has adopted in the draft decisions result in over-statement of the TSLRIC prices.

15.2 We have discussed the impact of the Commission's application of "reasonable investor expectations" and its replacement principle of "predictability", and how these result in

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[164] At Page 11

[165] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 12.

[166] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 17.

uplifts. We have also discussed that the impact of the Commission's limited application of FWA and adoption of ORC for re-usable assets.

15.3 While we have not been able to go through the TERA modelling in detail, it is apparent that there are a large number of methodology decisions and input assumptions that result in overstatement of TSLRIC include. A selection of examples include::

- Reliance on un-audited information provided by Chorus;
- The assumption of constant demand growth; and
- Beca's determination of trenching and ducting costs.

Reliance on unaudited/uncertified Chorus' data should be eliminated or minimised

15.4 We are concerned about the Commission's reliance on Chorus' data which has not been audited or certified as accurate by Directors of Chorus (as required by regulated suppliers providing information under Part 4 of the Commerce Act) i.e.:[167]

> **Attachment A: Form of Certification**
> I/We, [*insert full name(s) of Director*], being [a Director/Director(s)]of «COMPANY» («ZZ») certify that, having made all reasonable enquiry, to the best of my/our knowledge and belief, the attached information complies with the Commerce Commission's requirements in respect of the request for information, which was issued by notice in writing to «ZZ» under section 53ZD of the Commerce Act 1986 on 13 August 2014 *[except in the following respects: [*insert description of non-compliance*]]
>
> [*Signature of Director(s)*]
>
> [*Date*]

15.5 While it is an offence to "knowingly" provide false or misleading information this is a weaker protection than requiring Directors to proactively confirm that the information is correct.

15.6 We are also concerned the Commission has requested costing information from Chorus but not from other providers that use similar or the same assets. We believe this will result in overstatement of costs.

15.7 By way of example, Chorus claims copper cables only have an asset life of 10 to 30 years,[168] whereas the Commission's previous Electricity ODV Handbook prescribed that cables have an asset life of 45 to 70 years depending on whether it was XLPE or PILC.[169]

15.8 While we acknowledge that electricity and telecommunications copper cables are not the same – for example, electricity cables are typically greater in diameter – we would consider it unlikely that these differences would justify such differences in asset lives. It may be useful for the Commission to obtain Chorus' asset register detailing the actual age of its assets.

[167] Commerce Commission, Notice to supply information to the Commerce Commission under section 53ZD of the Commerce Act 1986, 13 August 2014.

[168] Chorus, 2014 Chorus Annual Report, page 51.

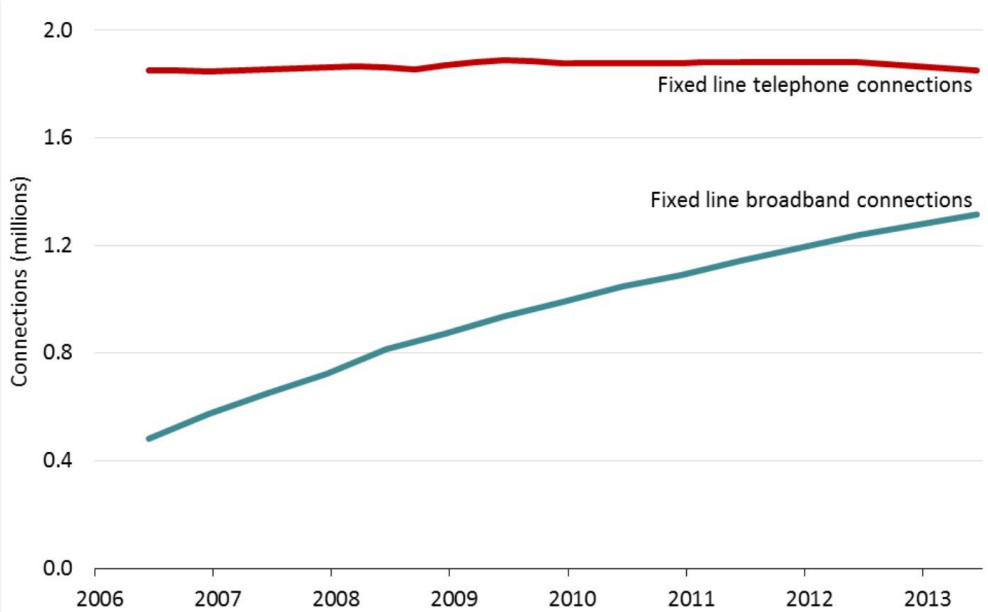
[169] Commerce Commission, Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses, 30 August 2004, Table A.1.

The Commission should not assume constant demand growth

15.9 The Commission's Annual Telecommunications Monitoring Report clearly shows that while "the number of fixed-line telephone connections has remained static … fixed-line broadband connections have continued to grow steadily …".[170]

15.10 This is depicted in the figure below.

Figure: Fixed-line telephone and broadband connections



Source: Commerce Commission, Annual Telecommunications Monitoring Report 2013, May 2014, figure 3.

15.11 The Commission also noted "New Zealand was third equal together with Ireland in its rate of growth of fixed-line broadband penetration in the OECD for the six months to 30 June 2013, with 2.9% growth compared to the OECD average of 1.4%".[171]

15.12 Consistent with this, Chorus Chief Executive Officer, Mark Ratcliffe, said that Chorus 2014 annual performance was "a solid financial result underpinned by an increase of 51,000 broadband connections and relative stability in the number of fixed lines, while fibre connections more than doubled".[172]

15.13 The Chorus Annual Report also noted 'Fixed line fibre connections have doubled during the year, VDSL connections have increased significantly and total fixed line connections have remained stable".[173]

15.14 Despite this the Commission has assumed constant demand growth which will result in understatement of revenue and overstatement of TSLRIC prices.

[170] Commerce Commission, Annual Telecommunications Monitoring Report 2013, May 2014, page 8.
[171] Commerce Commission, Annual Telecommunications Monitoring Report 2013, May 2014, page 9.
[172] Chorus, 2014 Chorus Annual Report, page 24.
[173] Chorus, 2014 Chorus Annual Report, page 25.

Trenching and ducting cost estimates need to reflect the size and bargaining power of a HEO rolling out a nation-wide network

15.15 The TSLRIC cost modelling applies estimates of trenching and ducting costs provided by Beca.

15.16 While Beca has appropriately applied the Bell-Ducat soil categorisation and field study classification, its estimates nevertheless overstate trenching and ducting costs in two ways.

15.17 The Beca cost estimates rely on historic tender data extending back to 2008.[174] We question whether such historic data is suitable for forward-looking cost estimates.

15.18 While Beca has acknowledged "Being such a large telco" has enabled Chorus "to negotiate lower prices with their subcontractors in return for the promise of regular ongoing work. In the opinion of one directional drilling contractor we spoke to the negotiated rates could be as much as 20% lower than their normal tender pricing … We wish to emphasise that this discount has not been taken into account within our pricing".[175]

15.19 We agree with TERA that "Prices used in the TSLRIC models should reflect those that an efficient operator with the bargaining power of an operator with significant market power would face".[176]

15.20 It is plausible that a HEO, rolling out a nation-wide network, would not be able to get the same (or larger) discounts Chorus is able to obtain. Beca is effectively assuming Chorus is more efficient than a HEO.

16. Ensuring relativity can be done by both increasing and decreasing prices

16.1 We acknowledge there may be legitimate grounds to exercise judgment to ensure appropriate relativities between UCLL and UBA prices, but this can be done by erring on the side of low UCLL prices and high UBA prices such that the UCLL + UBA price (and consequent end-user prices) are not increased.

16.2 The comments of Wigley and Company are worth reiterating:[177]

> The Commission incorrectly assumes that addressing relativity would result in higher prices for end-users. For example, the Commission states that "a UBA price above the median would be likely to increase the prices faced by end-users" and addressing relativity could "simply result in end-users paying more".
>
> Relativity should not be achieved by simply increasing the UBA price (and therefore the aggregate UCLL and UBA price). We recognise that higher aggregate prices could result in higher retail prices that would be a cost to end-users. That is unnecessary to ensure an appropriate relativity (wide margin between UCLL and UBA prices).
>
> The best way to ensure the margin between UCLL and UBA prices achieves appropriate relativity is to use the relativity mandatory requirement to err on the low side for the UCLL prices. This can be done such that the retail prices consumers face where aggregated UCLL and UBA is used by the access seeker are unaffected, but consumers would benefit from the lower cost delivery of service from UCLL-only access seekers. Any windfall that Chorus may have

[174] Beca, FPP corridor cost analysis of trenching and ducting rates in NZ – Final Issue Nov14, 25 November 2014, page 11.

[175] Beca, FPP corridor cost analysis of trenching and ducting rates in NZ – Final Issue Nov14, 25 November 2014, page 19.

[176] TERA, TSLRIC price review determination for the Unbundled Copper Local Loop and Unbundled Bitstream Access services, Model Reference Paper, November 2014, page 41.

[177] Wigley and Company, Submission on consultation paper outlining Commission's proposed view on regulatory framework and modelling approach for UBA and UCLL, 6 August 2014, paragraphs 244 to 246.

> obtained from higher than otherwise UBA prices would be offset in full by lower UCLL prices.

16.3 The Commission has acknowledged that it "can consider lowering the UCLL price as well as increasing the UBA price to maintain relativity" but believes "such considerations would raise wider section 18 considerations, such as the considerations that led to an uplift in the UBA IPP review and which we consider are still relevant to the UCLL price determination".[178]

16.4 We have a number of comments in response to this.

16.5 The Commission has expressed concern that "If the price is incorrectly set below forward-looking cost, this would adversely impact on returns to investment in new and innovative services and may act to discourage such investment. In turn this can impact on competition in the longer-term which can be dependent on such investment".[179]

16.6 Asymmetric cost concerns only apply where there is a risk that setting the price too low would result in the regulated supplier recovering less than its costs, including a normal rate of return.

16.7 The Commission (and Vogelsang) have been explicitly clear that the TSLRIC determinations will result in prices that are well above Chorus' actual costs so asymmetric cost concerns are not relevant. We have also detailed why asymmetric cost considerations are less relevant to the determination of the prices for copper services, than for other regulated services such as electricity and gas network services.

16.8 Addressing relativity issues through lower UCLL prices (on their own, or in conjunction with higher UBA prices) would have the advantage of avoiding adverse price impacts on consumers, and addressing the problem that the Commission's draft decisions will result in excessive returns for Chorus.

16.9 The Commission's asymmetric cost arguments also rely on the assumption that higher copper prices will accelerate migration to fibre services:[180]

> The Commission considers that accelerated migration implies a welfare cost to end-users because they could have continued to consume the cheaper copper broadband services rather than the more expensive fibre broadband services. However, as discussed above, this cost needs to be weighed against the benefits of accelerated migration in bringing forward services dependant on UFB take-up. Thus over time we would expect the value of the additional capabilities of fibre to grow and benefits to end-users to accrue, offsetting the welfare costs of accelerated migration.

16.10 As we have already noted, this assumption is not valid. Higher copper prices will result in both higher copper and higher fibre prices (we can observe that retailers are retain the relativities between copper and fibre prices, in response to the Commission's draft decisions) which will detrimentally impact on both broadband and fibre uptake.

17. The price profile should reflect the actual estimate of TSLRIC for each year

17.1 We do not support the Commission's proposal to set a constant TSLRIC-based price in nominal terms over the regulatory period. For the avoidance of doubt, if a constant TSLRIC price is applied we agree it should be based WACC.

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[178] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 475 [footnote removed].

[179] Commerce Commission, UBA Update paper, 13 August 2013, paragraph 115.

[180] Commerce Commission, UBA Update paper, 13 August 2013, paragraph 141.

17.2 We support the application of the nominal prices for each of the years in the regulatory period. This would result in an approximate increase in UCLL prices of 2.2% per annum of the 5 year regulatory period the Commission proposes.

17.3 We do not consider the Commission has adequately justified its position, or demonstrated it would be to the long-term benefit of end-users.

17.4 The Commission has simply relied on the arguments that "The price profile would be consistent with the current price profile for UBA and UCLL services" and "This price profile also smooth's prices over the regulatory period and, therefore provides stability in regulated prices during that period".[181]

17.5 The Commission has noted "The effect of this approach is that prices are higher in the earlier years of the regulatory period, and lower in the later years, relative to an approach where prices are not levelised".[182] This would be allocatively inefficient resulting in relative underconsumption of copper broadband services in the earlier years, and overconsumption of copper broadband services in latter years.[183]

17.6 The Commission has stated, supported by Chorus, "our draft decision is to set a constant nominal price for the regulatory period, because doing so provides price stability over the regulatory period".[184]

17.7 This ignores that, given the Commission is proposing an increase in prices compared to the IPP prices, the constant nominal price will result in a larger change in prices when the FPP prices take affect; for UCLL services the affect would be an increase of $4.70 per month, rather than $3.56 per month. Adopting a nominal price profile would help smooth the transition from the IPP to FPP TSLRIC prices

17.8 Likewise, adoption of a smoothed price path over the regulatory period would result in a greater disruption to prices at the end of the regulatory period when the prices need to be reset.

17.9 The impact on UBA services is not as material as the nominal averaged price is $10.17 versus the non-averaged price of $10.19 for 2015, reflecting that the Commission's calculation of nominal UBA TSLRIC prices initially declines then increases, compared to the approximate 2.2% increase for UCLL TSLRIC prices over the 5 year period. We also note that given the minor variation of UBA TSLRIC prices (ranging from $10.17 to $10.19) price stability arguments have little material impact either way. We would support the same approach being applied to UBA and UCLL services for consistency.

17.10 The Commission has incorrectly stated "… we set a constant nominal price over the regulatory period such that the stream of cash flows arising from this price has the same NPV as the stream of cash flows arising from the nominal prices (the latter being a tax-adjusted tilted annuity) over the regulatory period".[185] If the Commission applies backdating the overcharging (at the start of the regulatory period) will occur for a longer period (the backdating period), and will not be fully offset by underpricing at the end of the regulatory period.

17.11 We consider that application of the yearly nominal price profile is more consistent with the CPI-X style price regulation the Commission adopts under Part 4 of the Commerce Act. We are not aware of any concerns raised with this approach by either regulated suppliers

[181] Commerce Commission, Consultation paper outlining our proposed view on regulatory framework and modelling approach for UBA and UCLL services, 9 July 2014, paragraph 260.

[182] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 404.

[183] It could also have the same impact on fibre broadband services, as discussed in the sections of this submission "Higher UCLL and UBA prices undermine broadband and fibre uptake" and "Positive network externality and migration benefit arguments don't support an uplift".

[184] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 410.

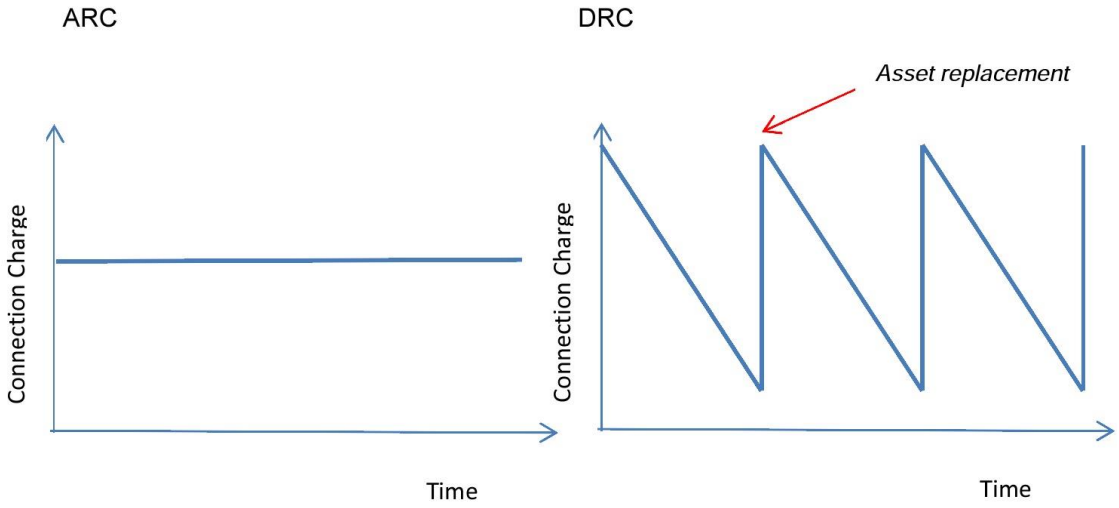
[185] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 412.2.

or retailers that would cause the Commission to consider setting X = CPI and applying a lower starting price adjustment (comparable to the TSLRIC draft decision proposals).

17.12 The Commission's position also appears to be at odds with the Electricity Authority, and may be something it would be useful for the Commission to discuss with the Authority.

17.13 This is reflected in the Electricity Authority's Working Paper "Transmission Pricing Methodology: Connection charges", 6 May 2014, where it expressed concern about the averaged depreciation profile Transpower currently adopts under the Transmission Pricing Methodology for connection assets, and argued that it would be preferable to adopt a depreciated replacement cost profile that would result in a "saw-tooth" price profile (as depicted in the diagram below).

Figure 1 ARC versus DRC charges



Source: Electricity Authority, Working Paper, Transmission Pricing Methodology: Connection charges", 6 May 2014, Figure 1.

18. Choice of UBA uplift MEA

Introduction

18.1 The Commission has concluded that the wording of the Act requires it to use a copper MEA for the UBA uplift: therefore, no other MEA is legally available.

18.2 If another MEA was available, very likely that would be based mainly on fibre for that is the MEA chosen for UCLL. In this section we outline why we submit that the Commission's conclusion is contrary to the only available interpretation of the Act, and is an error of law.

18.3 There is the same sub-theme as there is for UCLL, as to FWA: whether or not FWA can be part of the UBA MEA. We note in particular that the draft UBA determination from [229] deals with whether or not to include FWA in the copper based model. While the reasons referred to by the Commission overlap with the fibre v copper UBA MEA issue, the key point is that the focus of the reasoning is upon the FWA issue, not the fibre v copper UBA MEA issue. This means in particular that there is no reference in the draft determination to the submissions by us, Vodafone and InternetNZ as to the fibre v copper UBA MEA issue, to which we refer below.

18.4 In this section we analyse the position in the following order:

(a) We outline our understanding of the Commission's reasons for concluding that there must be a copper MEA for the UBA uplift, and we note an unexplained, inconsistent

and unpredictable departure from the Commission's approach on the IPP, which relied primarily on a fibre MEA for the UBA uplift;

(b) We address the relevant purpose and scheme of the Act, and the wider context, before turning to the specific part of the Act that leads the Commission to conclude that only a copper MEA is legally possible: the UBA service description.

(c) We then deal with the statutory UBA service description against that background;

(d) Finally, we deal with adequacy of reasons and of analysis, both in the context of legal requirements and in the context of demonstrating the value to be achieved, quite apart from legal requirements, if the Commission does address submissions and reasons. If the Commission had done this, it is unlikely to have fallen into an error which we consider means that the UBA TSLRIC exercise will need to be started again.

Our understanding of the Commission's reasoning

18.5 The key reason for concluding that the copper UBA uplift MEA can only be used appears to be, in the words of the December drafts, that "the wording of the UBA service description" requires a copper MEA (and in turn does not permit FWA in the MEA).[186] Nowhere in that draft determination or prior documents does the Commission explain (i.e. give reasons) why that "wording" has that effect.[187] Nor does the Commission deal with our submissions and cross submissions,[188] InternetNZ submissions[189] and Vodafone's submissions[190] as to why the wording does not have that effect (yet it deals with the submissions on the separate (but related issue) of whether the UBA MEA can include FWA, an issue which appears to take for granted that the MEA cannot be fibre due to the "wording").[191]

18.6 On the limitation to a copper MEA, in summary, the Commission adds in its draft determination (for the first time):[192]

(a) That the wording of the UBA service description, coupled with the *"staggered set of services",* requires a copper UBA uplift MEA.

(b) Having different MEAs for different services is not inconsistent; it simply reflects FPPs for different services may require different modelling assumptions. *"We approach the task of pricing each service separately so do not restrict ourselves to considering that the same hypothetical efficient operator is building both the UBA and UCLL services at the same time and would optimise the relationship between the two."*[193]

(c) Unbundlers' decisions to unbundle are based on the legacy copper network, thereby avoiding the UBA increment. For that reason, presupposing a copper MEA is likely to give best effect to s 18.

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[186] December 2014 draft UBA determination at [233].

[187] It is not explained (a) at [166]-[174] of the Commission's 9 July 2014 consultation paper, (b) in the UBA Issues and processes paper referred to therein, or (c) in Dr Every-Palmer's 14 March 2014 opinion.

[188] Wigley Memorandum dated 30 April 2014 at [16] and Wigley cross submissions dated 20 August 2014 at [9].

[189] InternetNZ 6 August 2014 submissions at [9]-[12].

[190] Vodafone 6 August 2014 submissions at [G1.9]-[G1.12]; the Commission only addressed the issue at [G1.8] in relation to Vodafone's submission on the UBA MEA, which is a different point. It ignored the submissions on what the "wording" required, commencing at [G1.9].

[191] December 2014 draft UBA determination at [228] to [233].

[192] December 2014 draft UBA determination at [233] to [234].

[193] December 2014 draft UBA determination at [233]; footnote omitted.

An unexplained, inconsistent, and unpredictable reversal of approach by the Commission

18.7 The UBA price formula for the IPP and the FPP are materially the same, the difference being that the IPP is (UCLL price + benchmarked additional costs) and the FPP is (UCLL price + TSLRIC of the additional costs).

18.8 The main benchmark relied on by the Commission for the IPP was Sweden.

18.9 The MEA in Sweden was fibre.

18.10 The Commission has not explained why, contrary to its position on the IPP, it now sees the relevant FPP MEAs as limited to copper. To be consistent, and in particular to apply the Act legally correctly, the benchmarks could only be copper-based. The IPP is of course a proxy for the FPP and therefore, if the UBA uplift MEA can only be copper, the benchmarks can only be copper too. Alternatively, if it is to be used – an unlikely scenario – there would need to be some sort of adjustment. The Commission is now effectively saying that its main IPP benchmark was wrongly selected/used.

18.11 That also is another facet of predictability, where the Commission has focussed on only one limited aspect of predictability. The Commission is departing from its previous approach.

UBA MEA: relevant purpose and context

18.12 In this section we address the purpose, context and scheme of the Act in relation to UBA, prior to addressing the specific wording in the UBA service description.

18.13 The Court of Appeal in Chorus v Commerce Commission, explained, repeating rudimentary statutory interpretation principles, how the Act should be interpreted (the observations as to the IPP apply equally to the FPP):[194]

> [42].....We note here that, as a matter of statutory interpretation, the various provisions relating to the determination of the UBA price in the IPP and the requirements of ss 18 and 19 should be read together to ensure that the legislation works in a realistic and practical manner.
>
> [44] It is also reasonable to assume, on the basis of the principle of statutory interpretation that the provisions of a statute are likely to be internally consistent, that the statutory definition of the UBA price reflects the requirements of s 18, including in particular subs (2A) which was enacted at the same time. In other words, the mandatory requirement for the Commission to carry out the "benchmarking" exercise for the IPP by reference to appropriate "comparable countries" is itself designed to implement the statutory purpose, not to contradict or undermine it.

18.14 The Court of Appeal in that judgment also conveniently summarised key parts of the Act relevant to UBA pricing, including (highlighting added):[195]

> [28] The FPP is defined as:
>
> > The price for Chorus's unbundled copper local loop network plus TSLRIC of additional costs incurred in providing the unbundled bitstream service.

[194] Footnotes omitted

[195] Footnotes omitted

[29] "TSLRIC" (Total Service Long Run Incremental Cost) is also defined. It:

> (a) means the **forward-looking costs** over the long run of the total quantity of the facilities and functions that are directly attributable to, or reasonably identifiable as incremental to, the service, taking into account the service provider's provision of other telecommunications services; and
>
> (b) includes a reasonable allocation of forward-looking common costs.

[30] **The TSLRIC model provides an estimate of the costs of an efficient access provider over a sufficient period of time (long run), on a "forward-looking" basis (reflecting the notional costs to an operator if it built a new network) rather than of Chorus's actual costs.**

18.15 The key point, reflecting long understood TSLRIC practice, is, in the words of the Court of Appeal, to establish *"the notional costs to an operator if it built a new network .. rather than of Chorus's actual costs".* That of course is what the MEA methodology seeks to replicate. We will use the MEA words in this submission, but this is simply another way of framing what the Court of Appeal has described.

18.16 By concluding that the Act only permits a copper MEA, the outcome is contrary to what the scheme of the Act requires and envisages, as explained by the Court of Appeal. Instead of deciding what the operator of the new network would build (by comparing possible options and then choosing the new hypothetical network (the MEA)), the legacy network can only be used.

18.17 Of course, in the end, the specific words of the statute can override the broader purpose and scheme of the Act. But, here, limiting the MEA for the UBA uplift to copper is so contrary an outcome, and so contrary to the Act overall, that clear words would be required for that outcome to occur. That is standard statutory interpretation.

18.18 That such an outcome – a copper only MEA for the UBA uplift – is contrary to the scheme of the Act becomes even clearer when other matters are considered.

18.19 First, the Act must take an integrated and internally cohesive approach so far as possible. It would be strange, therefore, for two closely related services to be modelled on different bases: one copper and one fibre (and FWA).

18.20 That reflects what the Court of Appeal said in Chorus at [44]: there should be *"internal consistency"* within the Act, and the FPP UBA price methodology. Applying (and quoting) that Court of Appeal dictum to FPP, the UBA price methodology *"is itself designed to implement the statutory purpose, not to contradict or undermine it"*

18.21 The inconsistency between copper and fibre MEAs becomes even clearer when it is seen that the UBA service (that is, the all up service) would in fact be a combination of a fibre MEA component and a copper MEA component. That is impractical and unnecessarily complicated, even before adding considerations such as double-counting etc.

18.22 Therefore the position is contrary to the Commission's justification for a copper MEA based on a *"staggered set of services".*[196] It is not apparent what the reasoning of the Commission on this *"staggered set of services"* point is. It is hard to understand how the concept can mean anything other than there should be a cohesive approach, based on the same MEAs. There should be, as the Court of Appeal said *"internal consistency".* If the Commission wishes to continue to pursue its *"staggered set of services*" point, we suggest

[196] December 2014 draft UBA determination at [233].

it should explain the reasons in more detail in its forthcoming draft determination, so that the parties can adequately submit on the point.

18.23 Finally, in relation to s18 and incentivising unbundlers, who unbundled based on avoiding the UBA increment, as we note elsewhere, s 18 adjustments require comprehensive, factual and quantitative analysis, and are subject to the specific structure in the Act. Apart from the important relativity consideration, it is not apparent how s 18 might apply here (including, as we outline below, as to interpretation of the UBA service description given it is clear).

The words of the UBA service description

18.24 As noted above, the Commission does not explain why it considers that *"the wording of the UBA service description"* means there must be a copper MEA. Further, the Commission does not give reasons as to, or address our, Vodafone and InternetNZ submissions on those words. This current submission largely is a more elaborate exposition of the same points made earlier by us, Vodafone and InternetNZ.

18.25 As a result, there is no choice but to submit on this largely in the dark.

18.26 We are guessing, perhaps wrongly, that the Commission's reference to "wording" limiting the uplift to a copper MEA, is to the price formula:

> The price for Chorus's unbundled copper local loop network plus TSLRIC of additional costs incurred in providing the unbundled bitstream access service.

18.27 Again, we have difficulty in submitting on this, in the absence of reasons, largely because the wording seems entirely suitable at first sight, without detailed analysis, to the UBA uplift being an unrestrained MEA which is not limited by an assumed copper layer 1. We see nothing in that wording that stands in the way of a simple application of the scheme, purpose and context of the Act as outlined above. The wording will be interpreted, if there is doubt or possible different interpretations, to be consistent with the overall scheme of the Act.

18.28 Given the UCLL MEA is fibre (with FWA), it seems highly likely that the true UBA uplift MEA, absent statutory restriction, would also be fibre (with FWA).

18.29 Analysing that in more detail (even though we consider that is not necessary as the meaning is plain enough):

(a) The first component in the price – "The price for Chorus's unbundled copper local loop network" – must be the price established for UCLL.[197]

(b) That first component expressly does no more than establish the price. It says nothing, expressly, for example about how that price was derived such as via the fibre MEA, etc.

(c) The next step is to add to that price the "TSLRIC of additional costs incurred in providing the unbundled bitstream access service".

(d) "additional costs" relative to what? That needs to be clearly resolved. The Commission does not address this. In the context of the Act, its scheme and purpose, that would be "additional costs" relative to the fibre/FWA copper MEA. Critically,

[197] "Chorus's unbundled copper local loop network" is the name for the UCLL service in Schedule 1 and this can only be a cross-reference to that service.

nothing in the price formula requires a different interpretation than such interpretation, which would implement the broader framework.

(e) To interpret otherwise would lead to the contrary outcomes, inconsistent with the overall framework, outlined above by us. In particular, it would do the complete opposite of how the Court of Appeal describes what is to happen. Instead of deciding what the operator of the new network would build (by comparing possible options and then choosing the new hypothetical network (the MEA)), the legacy network can only be used. That is the antithesis of TSLRIC methodology.

(f) There is only one possible correct interpretation of the Act in this regard: this is not a matter where the Commission has a choice between options.

18.30 We also wonder whether the Commission might be incorrectly conflating two steps in TSLRIC methodology when working out the price of the actual copper services. Absent detail we can only speculate. Those two steps are:

(a) Determining the MEA of the actual legacy copper service (for UBA, there is a split into two: the UCLL and the UBA uplift MEAs: we agree with the Commission there needs to be a split);

(b) Deciding the price for the actual copper service based on that MEA, by, here, using a different hypothetical network.

18.31 It is the cost of the MEA that determines the price. Taking this a step at a time for UBA:

(a) The actual UBA service is made up of the equivalent of copper UCLL, plus the copper layer on top for the Layer 2 UBA uplift.

(b) The MEA for UCLL is fibre/FWA and the MEA for the UBA uplift should be fibre/FWA. We agree with the Commission that these are split MEAs.

(c) The price of UBA all up is (i) the UCLL price, derived from the UCLL fibre/FWA MEA and (ii) the additional cost of the layer 2 service (additional to the fibre/FWA MEA) on a fibre/FWA basis.

18.32 Nothing in the UBA service description requires an approach different from this. To the contrary as the required use of the UCLL price is derived from the fibre/FWA MEA, and not from the actual UCLL copper service, the correct interpretation, in this 2 step process, is to use fibre and FWA for the UBA uplift MEA.

Absence of reasons

18.33 As noted above, our intention here is as much to try and helpfully set out ways forward as to reasons and as to engaging with submissions.

18.34 The Commission intended the December 2014 draft UBA determination to be the statutory draft, which is required by the Act to include reasons (which must mean sufficient reasons).In the event however the December determination was not the statutory draft. The approach in that document is a useful benchmark to talk to for that reason, in preparation for the actual statutory draft which is to come.

18.35 As to the choice of MEA for UBA, we consider that the December draft would not have met the Act's requirements as to reasons:

(a) It is not enough to state that the wording of the UBA service description requires a copper MEA without explaining why that is so, as that conclusion is not self-evident. The difficulty we (and no doubt others) face in trying to formulate submissions

illustrates why adequate reasons are needed: we can only guess at the Commission's reasons on the key issue of the interpretation and application of the UBA service description.

(b) The draft determination must engage with material submissions of the parties, as we have submitted earlier.

(c) Notably, the Commission engaged with some overlapping submissions (as to FWA) but did not engage with submissions on the wording of the price formula. This leads to the implication that the latter were not adequately considered or were not considered at all, in the context of no explanation of the restraint caused by the wording being given. Given our view that, if the Commission had engaged with those submissions and dealt with them in writing, it would not have fallen into error, the implication is that they have not been adequately or at all considered. This problem applies widely across the Commission's approach and, together, that implies that the necessary reasons have not been given and/or submissions have not sufficiently engaged with.

18.36 We submit that would have been an error of law and/or been judicially reviewable, if the December draft determination was what it purported to be: the statutory draft determination.[198] We consider that there will be error of law (and/or reviewable breach) if those shortfalls are not remedied in the new draft statutory UBA determinations. (That is part of our continuing submissions that inadequate reasons are being given in both the UBA and UCLL draft decisions, including as to engaging with submissions: therefore this is an example of the broader problem).

18.37 There is a key observation to make on this independently of the error of law position. It is submitted that, if the Commission had engaged with submissions in its draft determination, and had given its reasons, its draft decision on the copper MEA would have been unlikely. The rigour of engaging with submissions likely would have led to the correct position months ago. If that is so, and given there is no option but to rework the UBA approach, delays and rework might have been avoided.

18.38 This illustrates that engaging with submissions in writing is a valuable discipline.

19. Chorus' modelling confirms the Commission should not rely on its TSLRIC price calculations, and should be wary of the advocacy work undertaken by Analysys Mason

19.1 The severe time pressures the Commission's draft decisions have placed submitters under, with limited consultation on substantive matters prior to issuing the drafts,[199] has meant we have been unable to review the Chorus' modelling in the detail we would consider prudent, given it could potentially influence the Commission's modelling decisions.

19.2 From the limited review we have been able to undertake, the modelling has confirmed our fears that: (i) there is substantial scope to inflate cost modelling (including well above actual costs, let alone the costs of a HEO); and (ii) Chorus' has not learnt from past experience where it provided grossly inflated cost calculations that the Commission was unable to use.

19.3 We consider that, yet again, Chorus has provided a cost calculation that does not meet the reasonable requirements of a TSLRIC/cost of a HEO calculation, and grossly overstates the TSLRIC prices.

[198] It is also still submitted that, even though the statutory requirements to give reasons do not apply until the formal draft determination, there may have been legal error already.

[199] These concerns have been detailed extensively in previous submissions.

19.4 The pre-Telecom split Chorus provided cost modelling for the TSO cost determinations and the (uncompleted) PSTN TSLRIC determination which were grossly inflated calculations of Chorus' costs.

19.5 Chorus' calculation of the net cost of the TSO was grossly inflated compared even to its own previous calculation (under the Telecommunications Information Disclosure Regulations 1999) let alone compared to the Commission's ultimate cost determinations.

19.6 The Chorus TSO net cost modelling of between $167m (2000/2001) and $408m (2001/02) contrasts with the Commission's determinations, for example, of $65.57m (2001/02) and $56.75m (2002/03), in the first two years the Commission calculated the cost, and $69.72m (2008/09, draft) in the final year the Commission calculated the cost.

19.7 Likewise, Chorus provided a PSTN interconnection TSLRIC cost calculation of 1.86cpm, but subsequently stating that the Commission's rate of 1cpm "is within an acceptable band".[200]

19.8 TelstraClear's observations about Chorus' past disclosures of its modelling results are worth noting:

> [Chorus'] incentives to overstate TSLRIC have been borne out by by their estimate of TSLRIC which is nearly double that of the Commission's. Because of [Chorus'] incentives to inflate TSLRIC the Commission should reject [Chorus'] calculation of the TSLRIC price.[201]
>
> … during the Commission's benchmarking exercise to determine the interconnection rate under the initial pricing principle, [Chorus] argued that the Commission should maintain the interconnection rate 66 at 2.7cpm. In response to the Commission's section 45 notice of April 2004, [Chorus] calculated TSLRIC to be 1.86cpm. Yet [Chorus] subsequently stated that the Commission's rate of 1cpm "is within an acceptable band".[202]
>
> This is also borne out by the experience with [Chorus'] calculation of the net cost of the TSO. Under the Telecommunications Information Disclosure Regulations 1999, [Chorus] was required to disclose its net cost of the Kiwi Share Obligation (KSO), as the TSO was then known. For the financial year to 30 June 2000, [Chorus] estimated the net cost to be $167m. For the financial year to 30 June 2001, [Chorus] estimated the net cost to be $174m. Under the Telecommunications Act, [Chorus] subsequently estimated (on an annualised basis) that the net cost of the TSO to 30 June 2002 was $425m (which [Chorus] subsequently reduced to $408m after making minor changes to the methodology requested by the Commission). [Chorus] has moderated its estimate slightly since then, and has claimed that for the financial year to 30 June 2003 the net cost of the TSO was $344m.[203]

19.9 Chorus is not alone, amongst access providers, in inflating its TLSRIC cost determination, though it may provide one of the more extreme examples (highlighted by determining an asset value slightly less than that of Telstra). In 2009, for example, Telstra claimed that pricing of ULLS should have been set at $AU30, compared to the ACCC's TSLRIC (weighted average) price of $AU15.75.

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[200] Likewise, in relation to the TSO, disclosing a TSO cost for 2001 of $174m for 2001, and then $408m for 2002, compared to the Commission's determination of $65.67m for 2002.

[201] TelstraClear, Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 26 May 2005, paragraph 3.

[202] TelstraClear, Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 26 May 2005, paragraph 38.

[203] TelstraClear, Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 26 May 2005, footnote 6.

Analysys Mason cost modelling is not TSLRIC and inflates costs

19.10 The approach Analysys Mason has adopted to calculate the costs of Chorus' UCLL and UBA services is not TSLRIC. It is not genuinely bottom up. It is not based on MEA. It is not based on a HEO.

19.11 What Analysys Mason has done is adopted a top-down model Chorus' actual copper and fibre network and costs, applying Chorus' actual network build as the purported MEA, with minimal efficiency adjustments, and valued the assets at Replacement Cost. The main variation from Chorus' actual costs is valuation of re-useable assets at Replacement Cost. The result are prices (asset valuation) that are substantially higher than Chorus' actual costs (the value of Chorus' actual assets).

19.12 Examples of issues with Analysys Mason's cost modelling include:

-
- Analysys Mason purport to adopt a hybrid bottom-up cost model. The approach they take, however, is fundamentally top-down. The have taken Chorus' actual network, and made minor adjustments e.g. modest adjustments for aerial, sharing and optimisation.
- Analysys Mason has provided no cost modelling evidence it has selected the lowest cost/most efficient MEA. For example, Analysys Mason rule out consideration of FWA without testing whether it would be lower cost. The MEA Analysys Mason adopts is simply Chorus' copper network e.g. "Asset counts come from NetMap, a Chorus GIS"[204] and the model uses "Chorus' actual asset counts (as a proxy for the forward looking asset count)".[205]
- Analysys Mason claims "The model is intended to reflect a hypothetical new entrant" but goes on to state "The model is based on actual asset counts, where available, as Chorus' actual investment decisions are taken as a proxy for an efficient operator given the real-world constraints encountered in New Zealand".[206] Use of Chorus' actuals is a recurring theme in the Analysys Mason modelling e.g. "Unit costs asset type based on costs faced by Chorus …"[207], "Trenching costs based on costs recently incurred and planned for the UFB deployment",[208] "Opex approach – based on Chorus operating costs"[209] and "Lifetimes from Chorus fixed asset register (FAR)".[210]
- While Analysys Mason claim to adopt a scorched node approach there is limited evidence of optimisation e.g. there is no node or route length optimisation.
- Input parameters are extensively inflated. Analysys Mason, for example, has adopted an inflated post-tax nominal WACC of 8.1% compared to the WACC adopted by the Commission of 6.47%.[211] Likewise, the models include increasing and number of assets even though demand remains constant.
- There has been no independent audit or peer review of Analysys Mason's modelling.

19.13 The result is that Analysys Mason values Chorus' copper network at $15 billion compared to Chorus' Statement of financial position for 30 June 2014 which values Chorus' copper network at $2.398 billion (and total assets at $3.680 billion). The calculation also contrasts

[204] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 10.

[205] Analysys Mason, Report for Chorus to provide to the Commerce Commission Model user guide for UCLL hybrid bottom-up model, 28 November 2014, page 1.

[206] Analysys Mason, Report for Chorus to provide to the Commerce Commission Model user guide for UCLL hybrid bottom-up model, 28 November 2014, page 4.

[207] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 10.

[208] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 10.

[209] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 10.

[210] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 12.

[211] Analysys Mason, Chorus UCLL and UBA models briefing, 4 December 2014, slide 12.

against Chorus' estimate that "the total cost to build the UFB communal network by the end of 2019 is $1.7–$1.9 billion".[212]

19.14 We consider that the Analysys Mason modelling results are simply implausible.

Calculations of the profitability of Chorus' copper business provide a sanity check against Chorus' TSLRIC calculation and the need for an uplift in prices

19.15 Chorus' claim that TSRLIC prices are substantially above both pre and post-IPP prices contrasts with Vector's calculations that these prices, based on Part 4 Information Disclosure profitability modelling, would provide Chorus with an ROI between 2015 and 2020 of 20-25% [pre-December prices][213] and 19 - 23% [IPP prices].[214] The Vector calculations would suggest either that the TSLRIC prices should be lower than the IPP prices, or that TSLRIC results in prices substantially above cost/the prices that would be permissible if Chorus' copper business was price controlled under Part 4 of the Commerce Act. Notably, Network Strategies undertook an independent review of these calculations and described them as conservative.[215]

[212] Chorus, 2014 Chorus Annual Report, page 33.

[213] Vector, Submission to the Commerce Commission on the Scoping and Issues Discussion Paper for UCLL TSLRIC, 14 February 2014, paragraph 25.

[214] Vector, Submission to the Commerce Commission on the Scoping and Issues Discussion Paper for UCLL TSLRIC, 14 February 2014, paragraphs 11 and 29.

[215] Vector, Submission to the Commerce Commission on the Scoping and Issues Discussion Paper for UCLL TSLRIC, 14 February 2014, paragraphs 26 and 27.

Appendix A.

Commerce Commission/expert statement	These statements contain a number of contentious and unsubstantiated views
Commission draft UCLL determination (2014): "We consider that we should give weight to erring on the side of setting a price that is too high, to avoid the negative welfare consequences of setting a price that is too low. Nonetheless, we agree with the analysis of Professor Vogelsang, that the outcome of our modelling decisions is enough to avoid these consequences of underestimating the price".[216]	There are differing views on the welfare impact of UCLL and UBA that are too high or too low, and whether there is an asymmetry which means it is better to err on the side of copper prices that are too high;
Commission draft UCLL determination (2014): "In the UBA IPP determination, we decided it was appropriate under section 18 to choose a price point above the median to account for asymmetric costs: … Our view remains that the negative impacts on competition of under-estimating the forward-looking costs are greater than over-estimating the forward-looking costs. This implies that we should err on the higher side to avoid the negative consequences of setting a price that is too low".[217]	The Commission has not established setting UCLL and UBA prices too low (high) would harm (promote) competition;
Commission draft UCLL determination (2014): "In particular we noted that underestimating the price would adversely impact on returns to investment in new and innovative services and these costs were likely to be greater	The Commission has not established setting UCLL and UBA prices too low (high) would adversely (positively) impact the returns on new and innovative services or the impact this would have on investment;

[216] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 361.1.

[217] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 414.

Commerce Commission/expert statement	These statements contain a number of contentious and unsubstantiated views
than the likely costs of over-estimating the price".[218]	
Commission draft UCLL determination (2014): "We noted: …The Commission considers that accelerated migration implies a welfare cost to end-users because they could have continued to consume the cheaper copper broadband services rather than the more expensive fibre broadband services. However, as discussed above, this cost needs to be weighed against the benefits of accelerated migration in bringing forward services dependant on UFB take-up. Thus over time we would expect the value of the additional capabilities of fibre to grow and benefits to end-users to accrue, offsetting the welfare costs of accelerated migration. "We received expert advice from Ingo Vogelsang on the effects of the UCLL price on competition for the long-term benefit of end-users. Professor Vogelsang noted that there may be positive network externality effects from higher UCLL (and therefore total UCLL plus UBA) prices: … Innovation benefits will come from the financial benefits for other networks and for content providers serving these networks. Additional externalities will accrue to the pre-existing subscribers of these services, who benefit from the additional or cheaper content made available to them. "Our draft decision is that … a price that is too low could slow migration to fibre-based services,	The Commission has not established setting UCLL and UBA prices too low (high) would harm (accelerate) migration to UFB services; The Commission has not established there are migration benefits and positive network externalities from migration to UFB services; "the question is if migration is already incentivized enough through the investment subsidies and by not adjusting the relevant MEA for the performance difference between the copper-based and the UFB service"?;[220]

[218] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraph 415.

[220] Ingo Vogelsang, Current academic thinking about how best to implement TSLRIC in pricing telecommunications network services and the implications for pricing UCLL in New Zealand, 25 November 2014, paragraph 25.

Commerce Commission/expert statement	These statements contain a number of contentious and unsubstantiated views
with consequential impacts on the welfare benefits arising from migration to fibre networks. On balance, we continue to hold the view that, in principle, we should give weight to erring on the high side to avoid the negative consequences of setting a price that is too low". [footnotes removed.][219]	
Commission Process and Update Paper (2014): "We consider that if companies are financially disadvantaged by the timescales of the FPP process, this may harm investment which, in turn, would not promote competition for the long-term benefit of end-users. If there is a delay in implementing the final FPP prices (whether due to a change in the process or subsequent litigation which protracts any finality of the pricing), investors may be deterred from innovating and investing in a way that would grow the overall market and promote competition. Investment can promote competition for the long-term benefit of end-users, and accordingly avoiding disincentives to investment incentives can promote competition and give effect to the section 18 purpose statement".[221]	The Commission has not defined how (and which) companies could be "financially disadvantaged by the timescales of the FPP process"; The Commission has not established how this "financial disadvantage" could "harm investment" or how this would harm the promotion of competition for the long-term benefit of end-users.

[219] Commerce Commission, Draft pricing review determination for Chorus' unbundled copper local loop service, 2 December 2014, paragraphs 415 to 419.

[221] Commerce Commission, Process and issues update paper for UCLL and UBA pricing review determinations, 19 December 2014, paragraph 22.

Appendix B.

Treatment by the Commission of TSO

1. The cost models the Commission adopted to calculate the net cost of the TSO were TSLRIC:
   - They calculated the net cost of supplying TSO services of an "efficient service provider" (equivalent to an HEO);
   - The costs were calculated on an "incremental basis";
   - The Commission's net cost calculations were undertaken on a "forward-looking", bottom-up, scorched node basis, with optimisation including adoption of fixed wireless as the MEA;
   - The Commission has acknowledged "the previous TSLRIC model" it built was "for the TSO".[222]

2. The principle difference between the calculation of the net cost of the TSO and the TSLRIC cost for UBA and UCLL services, is the TSO cost calculations were required by the Act to be purely incremental cost, and did not include a contribution to "forward-looking common costs" i.e. the TSO net cost calculation was "pure TSLRIC". The Commission previously acknowledged this when undertaking TSLRIC with for fixed PSTN interconnection services:[223]

> The TSLRIC modelling differs from that of the TSO because TSLRIC includes an allocation of common costs, such as corporate overheads, whereas the TSO calculates the incremental costs of CNVCs. In practice this requires the TSLRIC model to include some additional costs not included in the TSO core network model.

3. The Commission has subsequently been inconsistent with its statements about whether the TSO net cost calculation was TSLRIC, stating it was as grounds for relying on it as precedent to calculation of the TSLRIC for UCLL and UBA services, but suggesting it was different and "backward-looking" as grounds for disregarding the Supreme Court precedent on how the net cost of the TSO should be calculated.

4. This inconsistency is depicted in the table below:

Commerce Commission statements that TSO cost model was TSLRIC	**Commerce Commission statements suggesting the TSO cost model was not TSLRIC**
Commission draft UCLL determination (2014):" In order to assist us with determining our approach to TSLRIC, we have closely considered the previous TSLRIC cost model we built (for the TSO) …"[224]	Commission draft UBA determination (2014): "Chorus submitted that the historical context of TSO compensation is different. By its nature it is a backward-looking approach to identify costs that could have been avoided. The very purpose of TSLRIC prices for access services, and the clear Parliamentary intent and

[222] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 94.

[223] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraph 67 at: http://www.comcom.govt.nz/dmsdocument/4371.

[224] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 94.

Commerce Commission statements that TSO cost model was TSLRIC	Commerce Commission statements suggesting the TSO cost model was not TSLRIC
	regulatory precedent, is to identify a forward-looking cost. "We agree with Chorus that the Supreme Court decision was made in a different context and related to determining the TSO net costs, which is backward-looking. Although the Supreme Court decision supported a historic cost approach to asset valuation in that particular context, we consider that this would be inconsistent with our forward-looking approach in this TSLRIC context. The TSO net costs calculation represented the efficient cost of Telecom providing services to commercially non-viable customers in a given past period."[225]
Commission draft UBA determination (2014): "To adopt a more predictable approach to implementing TSLRIC, our starting point has been to consider our previous approach to TSLRIC when modelling the TSO."[226]	Commission draft UBA determination (2014): "The TSO net costs calculation represented the efficient cost of Telecom providing services to commercially non-viable customers in a given past period" [emphasis added].[227]
Commission draft PSTN determination (2005): "The modelling work for the TSO determination required the Commission to collect input values for a range of network parameters and unit costs which are common to the TSLRIC model".[228]	
Commission draft PSTN determination (2005): "In reaching its determination, the Commission considered two TSLRIC models: • the model developed by Telecom ('Telecom Model'); and • the model developed for the Commission by CostQuest Associates Inc ('Commission Model'). "Both models were based on the earlier CostProNZ model which was developed for the Commission by CostQuest to calculate core network costs for the TSO determination. … "CostQuest developed the Commission Model … This model includes reports to calculate both the TSLRIC cost of interconnection services and relevant core network costs which	

[225] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraphs 494 and 495.

[226] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 132.

[227] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraphs 494 and 495.

[228] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraph 65 at: http://www.comcom.govt.nz/dmsdocument/4371.

Commerce Commission statements that TSO cost model was TSLRIC	Commerce Commission statements suggesting the TSO cost model was not TSLRIC
could be used for future TSO determinations".[229]	
Commission 2002/03 TSO determination: "In estimating the net cost of the TSO, the Commission regards unavoidable incremental costs as the difference between the long-run costs an efficient service provider would incur with and without the obligations imposed by the TSO instrument. … The incremental cost should be the long run incremental cost (LRIC)".[230]	
Commission TSO Practice Note (2002): "Given that the measurement of the net cost of the TSO is based on modelling different physical parts of a telecommunications network, this suggests that TSO assets be valued on a consistent basis with the TSLRIC modelling. If, for example, the forward-looking cost of a switch were valued in the TSLRIC exercise on the basis of its replacement cost, it would seem logical to value the switching components of the TSO cost on the same basis".[231]	
Commission TSO Practice Note: "… a key question is how often to 're-optimise' the (gross) asset base … Whatever the approach, it is useful to be consistent with the approach taken to modelling the TSLRIC of providing interconnection services".[232]	

5. As well as the apparent inconsistency in the Commission's position we would note the following:

   - A distinction should be made between calculating the cost from an earlier period (as in the case of the TSO) versus the cost determination being backward-looking. The TSO net cost determinations make clear the Commission attempted to apply a bottom-up forward-looking methodology e.g. "Costs are estimated on a forward-looking basis using an economic/engineering model. The model estimates the cost of an efficient provider providing TSO services rather than the TSP's actual cost".[233]

   - In the first TSO net cost determination there wasn't a single reference to

[229] Commerce Commission, Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 11 April 2005, paragraphs 113 to 116 at: http://www.comcom.govt.nz/dmsdocument/4371.

[230] Commerce Commission, Determination for TSO Instrument for Local Residential Service for period between 1 July 2002 and 30 June 2003, 24 March 2005, paragraphs 23 – 25 at: http://comcom.govt.nz/dmsdocument/9103.

[231] Commerce Commission, TSO Discussion Paper and Practice Note - Implementation Issues Paper, 19 April 2002, paragraph 184 at: http://comcom.govt.nz/dmsdocument/8989.

[232] Commerce Commission, TSO Discussion Paper and Practice Note - Implementation Issues Paper, 19 April 2002, paragraph 189 at: http://comcom.govt.nz/dmsdocument/8989.

[233] Commerce Commission, Determination for TSO Instrument for Local Residential Service for period between 20 December 2001 and 30 June 2002, 17 December 2003, paragraph 199 at: http://comcom.govt.nz/dmsdocument/8975.

"backward-looking" but 32 references to the TSO modelling being "forward-looking".

- On the basis of the same reasoning the Commission applies to describe the TSO net cost calculation as "backward-looking", the UCLL and UBA FPP determinations could be equally considered "backward-looking" if the Commission backdated the charges i.e. the Commission proposes to set a TSLRIC price in September 2015 for the cost of providing UCLL and UBA services between 1 December 2014 and September 2015.

- The Commission's PTSN Interconnection FPP determination would also have been backward-looking in this respect, in that the Commission had released a draft determination on 13 April 2005 to set the price at 1 cent per minute from June 2002.[234]

- The Act defined the net cost of the TSO as the costs of an efficient service provider not "the efficient cost of Telecom" [emphasis added].[235]

6. In short, the Commission has rejected the relevance of the Court judgments on the TSO on the basis "that the Supreme Court decision was made in a different context", TSO net cost determinations were "backward-looking" whereas TSLRIC is "forward-looking", and also the "The TSO net costs calculation represented the efficient cost of Telecom providing services to commercially non-viable customers in a given past period".[236] It is clear from the Commission's TSO net cost determinations, and its draft PSTN interconnection TLSRIC determination, the TSO net cost was calculated on a forward-looking "pure TSLRIC" (i.e. excluded common costs) basis, and the Commission was able to heavily utilise (including the modelling) in its draft PSTN interconnection TSLRIC determination.

Court precedent on TSO cost calculation should to be factored into TSLRIC cost modelling approach

7. The Supreme Court decision on the calculation of the net cost of the TSO is binding precedent for the Commission to follow.

8. The submissions by CallPlus and Orcon on this point are worth reiterating:

- "The Court judgments provide useful precedent in terms of what is meant by "efficient service provider", which parallels the efficiency concept inherent in forward-looking cost methodologies such as TSLRIC, and the appropriate level of network optimisation/deviation from Chorus' actual copper network";[237]

- "The Court judgments also highlight that even if a service is provided by copper it does not follow that the Commission needs to assume the services are provided by fixed line/copper network when it is establishing what the costs of an efficient service provider would be. MEA can include mobile and wireless technology";[238]

[234] http://www.comcom.govt.nz/the-commission/media-centre/media-releases/2005/telecommunicationsactcommissionrel1

[235] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraph 495.

[236] Commerce Commission, Draft pricing review determination for Chorus' unbundled bitstream access service, 2 December 2014, paragraphs 494 and 495.

[237] CallPlus and Orcon, Submissions by CallPlus and Orcon following the further consultation paper and the workshops, 11 April 2014, paragraph 7.18.

[238] CallPlus and Orcon, Submissions by CallPlus and Orcon following the further consultation paper and the workshops, 11 April 2014, paragraph 7.19.

- "The Court case made it clear the Commission was modelling the cost too closely to (pre-Chorus split) Telecom's network, and was not adequately applying the concept of an efficient service provider or lowest cost technology options such as wireless. This case is worth re-emphasising given Chorus' continued advocacy that the Commission apply a copper MEA that is closely aligned to its own network and does not apply other technologies such as wireless";[239]

- If the Commission's assertion the TSO cost determination is not TSLRIC, and it is backward-looking, were correct the Court judgments would still provide a 'low tide' mark for the level of optimisation/use of alternative technologies etc as a forward-looking cost methodology would take a more aggressive approach to these matters than a backward-looking cost methodology.

9. Given the importance of the Court judgments to the TSLRIC determination we repeat the following statements, from the Court decisions, cited by Orcon:[240]

> … the Commission's approach 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.[241]
>
> … the determination of the Commission … 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 …[242]
>
> … [I]t treated consistency (or otherwise) with its scorched node model as the key controlling consideration instead of going back to, and applying, the key statutory provisions.[243]
>
> The error of law … was compounded … when it decided not to factor in the delivery of services … using new mobile technology beyond that already contained in the existing model … [244]
>
> In ceasing to optimise with new technology the Commission 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.[245]
>
> … the statute is not concerned with the return on legacy assets unless they are efficient.[246]

[239] Orcon, Cross-submission on the further consultation on issues relating to Chorus' UCLL and UBA services, 30 April 2014, paragraph 7.4

[240] Orcon, Cross-submission on the further consultation on issues relating to Chorus' UCLL and UBA services, 30 April 2014.

[241] Vodafone v Telecom [2011] NZSC 138, paragraph [10].

[242] Vodafone v Telecom [2011] NZSC 138, paragraph [11].

[243] Vodafone New Zealand Ltd v Telecom New Zealand Ltd HC Wellington CIG 2008-485-2194, 1 April 2010, paragraph [56].

[244] Vodafone v Telecom [2011] NZSC 138, paragraph [12].

[245] Vodafone New Zealand Ltd v Telecom New Zealand Ltd HC Wellington CIG 2008-485-2194, 1 April 2010, paragraph [56].

[246] Vodafone v Telecom [2011] NZSC 138, paragraph [13].

> By deciding that it would not model new technology into its calculation of capital, the Commission … allowed net cost to be set above that incurred by an efficient service provider.[247]
>
> The network of an efficient service provider may or may not include components of Telecom's existing network.[248]
>
> The Commission … failed to address … the distortion caused by artificially revaluing old assets (already wholly or partly depreciated) which were in reality not likely to be replaced …). 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 … the attributed 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 new … 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.[249]

[247] Vodafone v Telecom [2011] NZSC 138, paragraph [14].
[248] Vodafone v Telecom [2011] NZSC 138, paragraph [17].
[249] Vodafone v Telecom [2011] NZSC 138, paragraph [70].