Submission on Draft Determination to amend the WACC percentile

29 August 2014

CONTENTS

Executive Summary 3

Introduction... 9

Overview of the Commission draft decision 10

The review of the WACC percentile should not proceed at this time 11

Review of the Commission's analysis 12

Selective choice of evidence 26

Relevant legislative framework.. 28

Investment implications of the Commission's proposal 34

WACC range for information disclosure... 36

A materially better approach... 36

Executive Summary

1. The Commission's draft decision is that the 67th percentile of its estimated WACC distribution, rather than the 75th percentile, should be used for price-quality regulation.

2. For the reasons expressed in our previous submissions, Vector maintains the position that there is no clear case for an early review of the WACC IM, and no case at all for the Commission's current narrow and rushed consultation on the appropriate level of the WACC percentile in isolation of other IMs. In particular, Vector has strongly submitted to the Commission that the indexed versus non-indexed approach to determining regulatory revenue is in much greater need of review to avoid dis-incentivising optimal investment.

3. Notwithstanding this view, in this submission Vector addresses the Commission's draft decision to amend the cost of capital input methodology.

4. Vector agrees that it is appropriate to use a WACC significantly above the mid-point estimate for price-quality path regulation. The evidence provided in this respect has confirmed that the Commission's 2010 decision to adopt the 75th percentile remains correct.

5. In contrast, the Commission's current draft determinations of the appropriate lower and upper ranges and the choice of percentile include critical errors. Fixing these errors would lead to a more appropriate range and percentile being selected. Other factors relied on are based on assumptions rather than sound evidence or theory.

6. In our view, the Commission has ignored or mis-interpreted relevant material to arrive at its draft decision. Had the Commission not done this it would have arrived at a different result (we show that this result is the status quo – the 75th percentile) which would be materially better at meeting the Part 4 Purpose.

7. Vector considers that a materially better approach would be to set the WACC percentile for default/customised price-quality regulation at the 75th percentile. This is because:

   The Commission's analysis contains four critical errors which, if corrected would support the 75th percentile or higher

   a) The Commission's analysis relies on Oxera's suggested percentile range for determining a lower bound of the percentile range and for arriving at the 67th percentile. However, Oxera's analysis contains critical errors which, when corrected in the Commission's analysis, indicate that the 75th percentile or higher is optimal in meeting the Part 4 purpose, including minimising costs to consumers. The four most critical errors are:

i. Oxera identifies a range of NZ$1 - NZ$3 billion in costs from network outages that could occur as a result of underinvestment. However in its analysis, Oxera relies only on the low end of the range (NZ$1 bn) rather than the middle of the range (NZ$2 bn).

ii. Both Oxera and the Commission fail to recognise (or at least do not account for) the fact that the standard error of the estimate of WACC is unknown, in the same way that the actual WACC is unknown. The probabilities of loss are higher when the potential for the standard error to also be incorrect is taken account of. In fact, the loss probabilities for the 67th percentile calculated following the Oxera approach are much the same as the corrected loss probabilities for the 75th percentile. Therefore, consideration of loss probabilities does not provide a persuasive basis for reduction of the estimate of WACC to the 67th percentile.

iii. Oxera made an error in that they miscalculated the expected loss to investors of underestimating WACC by a factor of two at the 50th percentile and four at the 75th percentile. The expected loss would be in error by a factor of three at the 67th percentile. When calculated correctly, it indicates that (based on Oxera's own assessment) consumers should be willing to pay a margin of 0.84% above the mid-point estimate of WACC. This compares to the current (i.e. using the 75th percentile) increment to WACC relative to the mid-point of 0.73%. On an expected loss basis, the evidence therefore suggests increasing, rather than decreasing, the WACC percentile.

iv. The application of a consumer welfare test only – the Commission claims to have considered a balance of consumer and welfare approaches, but in fact applies only a consumer welfare approach. In particular, Oxera omits from its analysis consideration of the potential for inefficient wealth transfers from investors to consumers (which would occur if the regulatory WACC was below the true WACC).

Notwithstanding other issues with the Commission's approach discussed in this submission, given these errors in the Oxera Report, the Commission's analysis is simply wrong. Vector expects the Commission will at least correct for these errors and re-run its analysis on a principled basis (i.e. without making other adjustments to try to return to the 67th percentile outcome).

The Commission mis-interprets information or relies on unsound assumptions in other parts of its analysis

b) Professor Vogelsang's comments regarding the impact of changes on investment are not supported by economic theory, decision-making in practice or by observed outcomes. As the Commission does not know whether current investment levels are optimal, the Commission would be on more solid ground to follow the established and accepted analysis on this issue.

c) The "evidence" regarding enterprise values has been selectively chosen (with inconvenient data points arbitrarily omitted from the Commission's analysis) and mis-interpreted. Viewed objectively it does not clearly support a view that the current regulatory WACC is too high. In particular:

   i. The Commission has erroneously used an average share price value for Vector of $2.78 as at June 2013, where Vector's average share price over this 20 trading day period was $2.63. The $2.78 figure is the highest ever daily closing value for Vector's share price. Additionally, the sampling periods chosen by the Commission (June and December 2013) are amongst the highest value periods for Vector's share price since Vector was listed. These factors have led the Commission to over-estimate the RAB multiple it calculates for Vector. Using almost any other period, or an average over a longer time frame, would lead to a significantly lower RAB multiple.

   ii. Even without this error, given the substantial assumptions the Commission has had to make in identifying Vector's RAB multiple and the fact that it relies on a single source – the Deutsche Bank report, which was prepared for a different purpose – this analysis does not conclusively show that Vector is valued at a significant premium to RAB.

   iii. In relation to Transpower, inconsistencies in the Northington analysis make it unreliable as evidence.

   iv. In relation to Powerco, there are a range of explanations as to why AMP Capital may have paid as much as it did. The Commission should not dismiss these explanations as lightly as it has – the Commission is unreasonably requiring evidence to be produced which no reasonable person would expect to be in the public domain.

   v. In relation to Horizon and The Lines Company, the Commission has omitted or may be unaware of transactions that occurred at a level that imply they were traded at a discount to RAB. There is no sound reason to exclude these data points from the analysis.

d) The reliance on "other tools" to incentivise investment is inappropriate and unlikely to work:

   i. Incentives such as quality standards and IRIS mechanisms are not normally applied to make up for shortcomings elsewhere in the regulatory scheme, such as a low WACC. Such incentives are likely to be ineffective in the long term because firms will eventually need new capital and these incentives and controls cannot compel investors to put new funds into the firms.

   ii. Using such controls to require earnings to be reinvested at a below WACC return therefore amounts to taking advantage of the short-term compliance requirements facing the regulated firms. In Vector's view, the Commission's proposal falls within what Professor Yarrow has referred to as a regulatory "mugging", which is likely to undermine legitimacy and thus cause the regulatory regime to operate inefficiently in the long run.

   iii. In addition, the existence of tools to incentivise investment is not "new" evidence that justifies a change in the level of the percentile. Also the IRIS and quality incentive tools are not yet in place (and may not be – Vector opposes the quality incentive scheme as currently proposed) so their impact is necessarily unknown.

e) The Commission also places reliance on recent substantial investments and future investment plans by EDBs and Transpower and assumes these past and planned investments indicate the WACC may be too high. There are a number of reasons why less weight should be placed on these factors, including:

   i. Since 2011 a merits review has been proceeding, which indicates that regulated suppliers may well have expected some favourable changes to the IMs – thus observed investment data prior to December 2013 cannot be said to be a clear affirmation that parties will invest under the current IM settings;

   ii. A decision that the regulatory return and how it is structured over time is insufficient to warrant investment is a significant decision for any organisation to make. There is inevitably a material lag before investments can be terminated. Therefore current expenditures and forecasts are unlikely to fully reflect the effect of the merits appeal decision and certainly will not reflect the impact of the Commission's WACC percentile review on investment;

   iii. Vector has previously disclosed investment bands in its asset management plan documents, clearly flagging to the Commission

and other stakeholders that investment appetite, and therefore investment plans, would be affected if the regulatory regime deteriorated; and

iv. Vector has made representations directly to Commissioners on the issue of the indexation of RAB, the adverse impact this has on cash flows and, therefore, risk and that even at the 75th percentile decisions for continuing investment may not be justifiable.

The Commission's draft decision does not promote the Part 4 purpose compared to the status quo

f) The Commission's process and approach to this review in itself undermines the intent of the Part 4 regulation and thus the achievement of the Part 4 purpose statement is best promoted by not changing the percentile. In particular:

i. The reliance on unsound and selectively chosen evidence;

ii. The inconsistent (compared to other IM decisions) and incorrect application of the Part 4 purpose;

iii. The creation of the new concept of "not normal" circumstances as a reason for not using the existing IM as the starting point, which is contrary to the Part 4 framework and raises perceptions that similar reviews will occur in future; and

iv. The rushed and unnecessary nature of the review outside of the statutory IM review processes;

are all factors that heighten uncertainty within the regulatory regime. The uncertainty is directly contrary to the intended operation of the IMs and the Part 4 purpose. This is particularly the case where the IMs have now been determined and tested through the courts. A willingness to amend material aspects of the IM "afresh" at this stage and based on judgement rather than evidence fundamentally and adversely impacts on confidence in the regime delivering certainty over time.

The Commission's approach also creates a strong perception that it has been selective in the evidence it relies on, seemingly favouring evidence or observations that might support a lower percentile, while ignoring factors that suggest the 75th percentile or higher is the most appropriate (including from its own experts).

Therefore the 75th percentile should be retained

8. Vector urges the Commission to reconsider its willingness to so readily depart from its previous decision. While the High Court made some observations that questioned the basis for the Commission's decision, these issues have

now been tested and no clear evidence has been provided which suggests the 75th percentile is the wrong approach. To the contrary, the evidence (as opposed to assumptions) supports the 75th percentile or higher. This leads Vector to support retention of the 75th percentile for reasons of certainty and a preference for the status quo, as outlined above.

9. Vector also considers that an information disclosure WACC range from 25th to 75th percentiles is materially better at meeting the Part 4 purpose than a range of 33rd to 67th percentiles.

Introduction

10. Vector provides this submission in response to the Commerce Commission's *Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services* ("**draft decision paper**") released on 22 July 2014.[1]

11. Attached to this submission are the following expert reports:

    a) Sapere, *Setting the WACC percentile – Commerce Commission's draft decision* (Sapere Report), 29 August 2014

    b) PWC, *Rationale for transaction premiums to RAB value* (PWC Report), 26 August 2014.

12. Vector also refers to its submission and expert reports[2] filed in response to the Commission's process update and invitation to provide evidence on the WACC percentile.

13. In this submission Vector:

    a) Provides an overview of the Commission's draft decision;

    b) Re-iterates our view that there are no grounds to conduct the review of the WACC percentile now and separately from consideration of other IMs;

    c) Responds to the analysis relied on by the Commission in reaching its draft decision and identifies why that evidence is unsound**;**

    d) Identifies that the Commission has been selective in its choice of evidence to rely on;

    e) Considers the relevant regulatory framework and the implications for the approach to amending the WACC percentile; and

    f) Explains the impact of the Commission's proposed approach on investment decisions;

    g) Comments on the materially better WACC range for information disclosure; and

    h) In summary, sets out why maintaining the 75th percentile decision would be materially better at meeting the purpose statement compared with adopting a lower percentile.

14. Vector's contact person for this submission is:

---

[1] Commerce Commission, *Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services*, 22 July 2014, [Draft Decision].

[2] Vector Limited, *Further work on the cost of capital input methodologies: Submission to Commerce Commission on process update and invitation to provide evidence on the WACC percentile,* 5 May 2014; Sapere Research Group, *Setting the WACC percentile for Vector's price quality path*, 5 May 2014; and PricewaterhouseCoopers, Rationale for transaction premiums to RAB value, 28 March 2014.

Allan Carvell
Group General Manager Commercial and Regulatory Affairs
09 978 8340
allan.carvell@vector.co.nz

15. For the purpose of the record, Appendix E of the Commission's draft decision paper sets out the material the Commission considers will be 'before the Commission' for the purposes of s 52ZA(2) of the Act. In relation to the 2010 IM determination process, the Commission lists its final reasons paper only. In Vector's view, the submissions and expert reports provided in the pre December 2010 WACC IM consultation process are highly relevant to the current process and should be treated as "before the Commission" for the purposes of the current process (given this process involves an amendment to that WACC IM).[3] These submissions and experts reports would be referred to in footnotes in the Commission reasons paper (so arguably are on the record on this basis). In particular, as Vector's position is that the Commission must consider its extant position as the starting point for consideration of a change all the material considered by the Commission in making that decision must be before it when considering whether its current proposal is "materially better".

16. Vector also considers that court submissions relating to WACC filed in the High Court IM appeals should be on the record given these were before the High Court and referred to in the High Court judgment.

Overview of the Commission draft decision

17. The Commission's draft decision is that the 67th percentile of its estimated WACC distribution should be used for price-quality regulation rather than the 75th percentile.

18. The Commission's position remains that it is appropriate to use a WACC significantly above the mid-point estimate for price-quality path regulation, because the potential costs of under-investment from a WACC that is too low are likely to outweigh the harm to customers (including any over-investment) arising from a WACC that is too high. While the Commission says its rationale for an uplift to the WACC has not changed it says that "it has more evidence to determine the appropriate size of the uplift".

[3] The pre December 2010 WACC submissions and experts reports are readily identifiable from the Commission's website on the page entitled "Consultation prior to December 2010": http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/consultation-prior-to-december-2010/ and the page entitled "Cost of Capital" at: http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/cost-of-capital/.

19. The Commission first considers that this new evidence suggests that the reasonable lower and upper bounds for the WACC percentile are:

a) The 60th percentile for the lower bound, based on the Oxera report (which suggests a WACC percentile between the 60th and 70th percentile appears to provide a suitable balance) after taking into account listed off-setting factors;

b) The 75th percentile for the upper bound: while Dr Lally considers the 75th percentile is too low the Commission also takes account of other factors, such a quality standards, the Oxera view that the 80th percentile may be too high and observed investments, in support of its conclusion that the 75th percentile is the upper range.

20. The Commission then considers that: (1) the exact percentile is ultimately a matter of judgement; (2) the evidence referred to above has helped narrow the scope of the judgement required; and (3) exercising its judgement, the 67th percentile is more appropriate that the 75th percentile. It states that this is an exercise of judgement based on the following factors:

a) the Oxera report where the Commission relies on the quantitative evidence and "places weight on Oxera's view that a percentile below the 75th is appropriate";

b) Professor Vogelsang's view that, if current levels of investment are optimal, the impact of changes in investment on reliability are likely to be relatively minor (where the Commission considers strong investment has been occurring);

c) the enterprise values for Powerco and Vector (as implied by AMP Capital's acquisition of a minority stake in Powerco, and Vector's equity market valuation plus net debt); and

d) Other tools that help incentivise efficient investment from regulated suppliers (in addition to the WACC percentile) for example, required quality standards (and associated penalties). The Commission notes that it is also able to monitor the investment of regulated businesses and take action if it becomes concerned about under-investment or declining quality of service.

The review of the WACC percentile should not proceed at this time

21. For the reasons expressed in our previous submissions,[4] Vector re-iterates that there is no clear case for an early review of the WACC IM, and no case

[4] Vector Limited, *Submission to Commerce Commission on whether the Commission should review or amend the cost of capital input methodologies*, 13 March 2014. Vector Limited,

at all for the Commission's current narrow and rushed consultation on the appropriate level of the WACC percentile in isolation of other IMs. In particular, Vector has strongly submitted to the Commission that the indexed versus non-indexed approach to determining regulatory revenue is in much greater need of review to avoid dis-incentivising optimal investment.

22. We do not agree that the *obiter* remarks by the High Court create more uncertainty than is inherent in the prospect of 7-yearly IM reviews. The regular IM reviews are part of the legislated Part 4 process and investors and suppliers expect them to occur and recognise that these reviews could lead to different outcomes. In addition, the High Court recommended that the percentile issue be considered as part of the wider IM review.

23. This view has been strengthened by the recent Court ruling declining MEUG's leave to appeal the merits appeal judgment. In this ruling the Court confirmed that it did "not reach a firm conclusion" on the WACC percentile and re-emphasised its comments were "tentative" and "in principle only".[5]

24. This view is also supported by the Oxera report where it states that "[t]he choice of percentile should properly be considered alongside all elements of the WACC assessment and price-setting process in order to develop a coherent framework".[6] However, the scope of Oxera's review was limited to considering the evidence to support a choice of percentile.

25. Notwithstanding the above position, in the remainder of this submission Vector addresses the Commission's draft decision to amend the cost of capital input methodology.

Review of the Commission's analysis

26. Vector agrees that it is appropriate to use a WACC significantly above the mid-point estimate for price-quality path regulation. The evidence provided in this respect has confirmed the approach adopted by the Commission in its 2010 decision to adopt the 75th percentile.

27. However, as explained in this submission, the Commission's determinations of the appropriate lower and upper ranges and the choice of percentile include critical errors which, if fixed, would lead to a more appropriate range and

Submission to Commerce Commission on process update and invitation to provide evidence on the WACC percentile, 5 May 2014.

[5] The Major Electricity Users Group Inc v Commerce Commission [2014] NZHC 1765, 28 July 2014, at [50].

[6] *Oxera* report, page 8 section 1.2. The Oxera report also notes in numerous places that other factors were relevant to the percentile decision (such as the risk-free rate) again suggesting a wider review would be preferable (pages 6, 9, 25, 59, 61, and 74). We note that the Oxera report suggests the High Court's "recommendations" meant that only the choice of percentile was being considered (page 8). This reflects a misunderstanding of the High Court recommendation, which was to consider this issue as part of the next IM review.

percentile being selected. Other factors relied on are based on assumptions rather than sound evidence or theory.

28. In our view, the Commission has ignored or mis-interpreted relevant material to arrive at its draft decision. As we show below, had the Commission not done this it would have arrived at a different result (we show that this result is the status quo – the 75th percentile, if not higher) which would be materially better at meeting the Part 4 Purpose.

29. We address the Commission's analysis below.

Oxera report: errors in analysis relied on by the Commission to reach its draft decision

30. With Sapere, Vector has identified four key in the Oxera report's analysis. Once these errors are corrected and re-factored into the Commission's current analysis, notwithstanding the other issues referred to below, the 75th percentile (at least) would be the appropriate percentile, not the 67th:

    a) Incorrect application of the cost range: Oxera states that, for the purposes of its report, a cost in the order of NZ$1 - NZ$3 billion is the scale of the cost of the network outages that could occur as a result of underinvestment - and that this scale should be a suitable reference point for the Commission when considering the choice of percentile. However in its analysis, Oxera relies only on the low end of the range ($1 bn) rather than the middle of the range ($2 bn). Its assessment of the cost paid by consumers in relation to a particular shortfall is based on this $1bn figure.[7] This is emphasised in particular in relation to its conclusions on the 70th percentile and 80th percentile (for example, in relation to the 70th percentile, the cost of $80 million is assessed as increasing towards 10% of the NZ$1 bn estimate). Oxera's analysis would point towards a considerably higher percentile range if the $2bn figure was applied.

    b) Probability loss calculation in error: As Sapere finds,[8] both Oxera and the Commission fail to recognise (or at least do not account for) the fact that the standard error of the estimate of WACC is unknown, in the same way that the actual WACC is unknown. The consequence of this is that the probabilities reported in Table 7.3 of the Oxera report are incorrect. The probabilities of loss are higher when the potential for the standard error to also be incorrect is taken account of. In fact, the loss probabilities for the 67th percentile calculated following the Oxera approach are much the same as the corrected loss probabilities for the 75th percentile. Therefore,

[7] Oxera report, Page 72, Table 7.4.
[8] Sapere Report, pages 20-23.

consideration of loss probabilities does not provide a persuasive basis for reduction of the estimate of WACC to the 67th percentile.

c) Miscalculation of expected loss factor: Further, Oxera made an error in that they miscalculated the expected loss to investors of underestimating WACC by a factor of two at the 50th percentile and a factor of four at the 75th percentile.[9] The expected loss would be in error by a factor of three at the 67th percentile. When calculated correctly, it indicates that the expected loss at the 75th percentile would be 0.84%. This means, based on Oxera's own assessment framework, that consumers should be willing to pay a margin of 0.84% above the mid-point estimate of WACC. This compares to the current (i.e. using the 75th percentile) increment to WACC relative to the mid-point of 0.73%.[10] On an expected loss basis, the evidence therefore suggests increasing, rather than decreasing, the WACC percentile.

d) Consumer and total welfare analysis: As Sapere finds,[11] Oxera omits from its analysis consideration of the potential for inefficient wealth transfers from investors to consumers (which would occur if the regulatory WACC was below the true WACC). Such an outcome would not be consistent with workably competitive markets and needs to be added to Oxera's and the Commission's assessment of potential outcomes from over- or under-estimating the WACC. If this is not done, Oxera's loss function analysis will consistently under-state the WACC percentile range.

31. Below we reproduce Tables 3 and 4 from the Sapere Report,[12] correcting for the errors above (and for Professor Vogelsang's additional cost to consumers of $100 million for over-investment – see below). These tables demonstrate that:

a) costs to consumers are minimised at the 75th percentile where a $1 bn value of reliability loss is assumed; and

b) consumers would benefit from a move to the 80th percentile where a $2 bn value of reliability loss is assumed.

32. These tables demonstrate that a reduction in the WACC percentile to the 67th percentile would leave consumers $8m worse off using a $1 bn value of reliability loss, and $63m worse off using a $2 bn value. Table 4 suggests

[9] Sapere Report, pages 23-26. Oxera characterises the expected loss as "the amount that customers should potentially be willing to pay" to compensate investors for the expected loss from under estimates of WACC.

[10] High Court, paragraph 1432, cites MEUG estimates of the Commission's post tax WACC at 6.49% and thus at the 75th percentile is 7.22%, hence a differential of 0.73%.

[11] Sapere Report, page 29.

[12] Sapere Report, pages 27-28.

consumers would benefit by $29 million per annum if the WACC percentile was increased to the 80th percentile.

Sapere Table 3: Oxera probability adjusted quantitative estimates

	A	B	C	D	E	F	G	H
Percentile	Increase in charges ($m)	Additional investment (Vogelsang) ($m)	Probability of overestimation by 0.5% or more	Expected cost	Annualised reliability loss ($m)	Probability of underestimation by 0.5% or more	Expected reliability loss ($m)	Total cost to consumers ($m)
65th	$61	100	46.7%	$108	1000	19.7%	197	$305
67th	$69	100	48.9%	$118	1000	18.2%	182	$300
70th	$83	100	52.3%	$135	1000	16.1%	161	$296
75th	$107	100	58.2%	$165	1000	12.7%	127	$292
80th	$133	100	64.6%	$198	1000	9.6%	96	$293
Notes								
A	Oxera, Table 7.3, page 69							
B	Vogelsang, Review of Oxera, p 19							
C	Probabilities set out in Appendix 1							
D	A + (B x C)							
E	Oxera, page 50, range $1 billion to $3 billion							
F	Probabilities set out in Appendix 1							
G	F x E							
H	G + D							

Sapere Table 4: Oxera probability adjusted quantitative estimates – using mid-point of reliability loss value

	A	B	C	D	E	F	G	H
Percentile	Increase in charges ($m)	Additional investment (Vogelsang) ($m)	Probability of overestimation by 0.5% or more	Expected cost	Annualised reliability loss ($m)	Probability of underestimation by 0.5% or more	Expected reliability loss ($m)	Total cost to consumers ($m)
65th	$61	100	46.7%	108	2000	19.7%	394	502
67th	$69	100	48.9%	118	2000	18.2%	364	482
70th	$83	100	52.3%	135	2000	16.1%	321	457
75th	$107	100	58.2%	165	2000	12.7%	254	419
80th	$133	100	64.6%	198	2000	9.6%	193	388
Notes								
A	Oxera, Table 7.3, page 69							
B	Vogelsang, Review of Oxera, p 19							
C	Probabilities set out in Appendix 1							
D	A + (B x C)							
E	Oxera, page 50, range $1 billion to $3 billion							
F	Probabilities set out in Appendix 1							
G	F x E							
H	G + D							

33. Further, these tables do not account for the cost of potential inefficient wealth transfers from consumers to suppliers (as would occur if the regulatory WACC

was below the true WACC). If this cost was taken into account an even higher WACC percentile would be supported.[13]

The Commission's own approach, corrected for errors, supports the current Input Methodology

34. As Sapere shows, once the errors identified above are corrected, the Oxera quantitative estimates do not support a reduction from the 75th percentile, as it would result in *increased* total costs to consumers. In fact, Sapere finds that the optimal percentile – the one that best meets the purpose statement and delivers lowest costs in a balanced total and consumer welfare analysis – is the 75th percentile or higher.[14]

35. Notwithstanding other issues with the Commission's (and Oxera's) approach discussed in this submission, on four key points Oxera and the Commission have simply got the analysis wrong. Vector expects the Commission will at least correct for these errors and re-run its analysis on a principled basis (i.e. without making other adjustments to try to return to the 67th percentile outcome).

Other issues with the Oxera report

36. As set out in the Sapere Report,[15] Professor Vogelsang observes that the Oxera quantification does not provide for the cost to consumers of the additional investment, a point emphasised by the Commission in its Draft Decision.[16] Professor Vogelsang suggests that an additional cost of $100 million would be reasonable.[17] This estimate of costs should also be probability adjusted, as presumably the cost would not be incurred if actual WACC were below the regulated WACC. Sapere's report shows the change in the Oxera quantification from adding Professor Vogelsang's estimate, subject to Oxera's probability estimates (and these are reflected in the tables above). The profile of costs is raised, but the result remains that a reduction in the WACC percentile would increase costs to consumers, though by a smaller amount than if investment costs were excluded.

37. More broadly, Oxera (consistent with its instructions from the Commission and reflecting the Commission's fundamental error) assumes in its report that the Commission is exercising its decision afresh. Oxera does not treat the 75th percentile as the starting point, as is required under the statutory

[13] Sapere Report, page 29.
[14] Sapere Report, Table 3, Table 4 and Table 5.
[15] Sapere Report, page 27.
[16] Commerce Commission (2014), draft decision, paragraphs 5.45, 6.7.1.
[17] Ingo Vogelsang (2014) Review of Oxera's report, Input methodologies – review of the '75th percentile' Approach. 10 July 2014. Paragraph (7), page 7.

framework; nor does Oxera directly consider the impact of change in approach on incentives to invest and the effectiveness of the WACC percentile. While Oxera rightly emphasises, at a theoretical level, that consistency of approach is critical to the effectiveness of the WACC, it does not apply this to the current situation (because it treats the process as an exercise of judgement afresh).[18]

38. Oxera also does not reach a conclusion as to an exact percentile amount. Rather it makes the observation that "around the 60th to 70th percentile appears to provide a suitable balance". This is subject to the caveat that the Commission should further err on the side of caution because of risks it has not taken account of (which would suggest a higher percentile). In addition, the Oxera report does not conclude that the 75th percentile is too high. The Oxera report does not provide strong evidential support for a reduction of the 75th percentile and, in fact, when its errors are corrected it supports the 75th percentile or higher.

Consumer and total welfare analysis

39. The Commission's approach does not correctly apply the Part 4 Purpose for two reasons.

40. Firstly, the Commission has stated it "adopts both consumer welfare and total welfare approaches" without considering how this should be undertaken in light of the purpose of Part 4 (and if the Part 4 purpose was properly applied total welfare would carry greater weight).[19] The Commission has not transparently set out how it will balance consumer welfare and total welfare in its decision. This is a crucial piece of information for interested persons seeking to understand the Commission's decision and, in our view, should be transparently stated and consulted on.

41. Secondly, the Commission's experts do not apply the approach of considering both consumer and total welfare approaches. Instead Oxera (as noted above) and Professor Vogelsang apply only a consumer welfare analysis, while Professor Lally applies only a total welfare analysis. None of the experts apply a weighting of the two. As the difference in outcomes from applying the two different approaches can be huge, this calls into question the reliance that should be placed on their (unadjusted) results.

42. The Commission relies on the Oxera analysis to support its percentile range and selected percentile within that range, but makes no adjustment for the

[18] Oxera also concludes that a case-by case approach would undermine regulatory certainty (p 14) but again without considering that this is effectively the approach being taken by the Commission on this occasion.

[19] The Part 4 purpose, and the Commission's inconsistent application of the Part 4 purpose, is further discussed below.

fact the report is based on consumer welfare only. If such an adjustment was made the Commission would arrive at a decision to select a higher range and higher percentile (as discussed in the Sapere Report).[20]

43. For example, the Commission places substantial weight on the Oxera reports recommendation to set the lower bound of the range at the 60th percentile, without adjusting for the fact Oxera uses a consumer welfare analysis only. This means the bottom of the range should be higher than Oxera suggest if a weighting of total and consumer welfare tests are applied.

Whether current investment levels are optimal

44. The Commission places weight on the evidence from Professor Ingo Vogelsang that, if investment levels are optimal, the impact of changes in investment on reliability are likely to be relatively minor. As Sapere finds,[21] the view that investment levels are currently optimal is not supported by economic theory, decision-making in practice or by observed outcomes. As the Commission does not know whether current investment levels are optimal, the Commission would be on more solid ground to follow the established and accepted analysis on this issue.

45. Sapere identifies evidence that a single provider of a service will, in general, not provide a service at the optimal level of quality where there are multiple customers with varying demands for service quality. Sapere also finds that innovative investments and lumpy network augmentation investments are likely to require a higher WACC, as recognised by Professor Vogelsang.

46. In these circumstances the Commission should be concerned about investments at the margin and ensuring incentives are in place to stimulate such investments.

Enterprise values

47. The Commission relies heavily on information regarding enterprise values of Powerco, Vector and Transpower in support of exercising its judgement that a lower WACC percentile is appropriate. In our view, the Commission is placing disproportionate weight and reliance on what is limited, highly questionable and selectively chosen evidence in relation to actual WACC levels.

48. In particular, it is not correct to identify Powerco and Vector only as being representative of the distribution sector as a whole and dismiss smaller EDBs as less relevant due to their size (when the majority of the sector comprises

[20] Sapere Report, page 29.
[21] Sapere Report, pages 32-33.

smaller EDBs) – just because they are small does not necessarily mean they are inefficient.

Vector

49. As a first point, Vector notes that the Commission has erroneously used an average share price value of $2.78 as at June 2013, where Vector's average share price over this 20 trading day period was $2.63. The $2.78 figure is the highest ever daily closing value for Vector's share price. Additionally, the sampling periods chosen by the Commission (June and December 2013) are amongst the highest value periods for Vector's share price since Vector was listed. We therefore do not accept that these periods are representative of the value of Vector's equity over time. These factors have led the Commission to over-estimate the RAB multiple it calculates for Vector. Using almost any other period, or an average over a longer time frame, would lead to a significantly lower RAB multiple. Vector **recommends** the Commission uses the average share price value over the period from 2011 to 2014 as an input into its RAB multiples equation.

50. Even setting aside that error, given the substantial assumptions the Commission has had to make in identifying Vector's RAB multiple and the fact that it relies on a single source – the Deutsche Bank report, which was prepared for a different purpose and not subject to review by Vector – the analysis does not conclusively show that Vector is valued at a significant premium to RAB value. For example, the judgements made on allocation of values between Vector's business units could considerably change the outcome of the analysis. As Sapere comments,[22] it seems remarkable that the Commission in determining the appropriate WACC percentile, a matter which is of crucial importance to the regulated companies, should be content to rely on a single source such as this.

51. Vector also agrees with Professor Vogelsang that the Commission cannot be confident that Vector's RAB multiple is statistically significantly different from 1:[23]

> "…the resulting valuations are clearly subject to potential valuation errors. Because of such potential errors the comparatively low RAB multiples (compared to that of Powerco) are somewhat disturbing. It may be that from a statistical perspective they are not really larger than 1.0."

[22] Sapere Report, page 39.

[23] Professor Ingo Vogelsang, *Review of New Zealand Commerce Commission "Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services"*, July 22, 2014, p.5.

Transpower

52. In relation to Transpower, Vector does not agree that the Northington report is evidence that the 75th percentile WACC is higher than necessary. We note the Commission has not acknowledged or responded to the critiques of this report provided by PwC (on behalf of Vector) and others made in previous consultation rounds. As discussed by PwC in their updated report,[24] inconsistencies in the Northington analysis make it unreliable as evidence. Vector is disappointed the Commission continues to rely on this flawed analysis despite its shortcomings being clearly established in submissions.

Powerco

53. In relation to Powerco, the Commission dismisses possible explanations (other than the WACC) put forward in previous submissions for the price paid by AMP Capital to purchase 42% of Powerco. The Commission seems to have dismissed many of these possible explanations because there is no evidence to support them. However it is difficult to see how the Commission's assumptions regarding the price paid are any more robust. Further, in many instances there is no basis to expect evidence to be available (unless AMP Capital was to release confidential information). The absence of evidence from the public domain that no reasonable person would expect to be in the public domain is not a valid ground to dismiss the explanations being put forward. We refer the Commission to the discussion of this point in the PwC Report and PwC's credentials in this regard (as set out in their report)[25] and submit that their expertise and further discussion of the reasons for the Powerco purchase price should be taken into account.

54. For example, as discussed in the PwC Report,[26] tax structuring advice will be sought in relation to any material transaction undertaken in a different country, including looking to take advantage of value adding tax opportunities. This could include for example, the double deduction of interest costs in New Zealand and the investor's own jurisdiction and associated benefits of thin capitalisation rules. This would lead to a higher estimate of the cash flows that can be generated from the investment in the business, not a lower cost of capital. Such opportunities are not available to New Zealand-owned EDBs and GPBs.

55. As Sapere notes, there are many combinations of plausible circumstances for the AMP Capital purchase in which the correct RAB multiple would be less than that calculated by the Commission.[27]

[24] PwC Report, page 3.
[25] PwC Report, section 3.
[26] PwC Report, pages 4-5.
[27] Sapere Report, pages 38-39.

Horizon and The Lines Company

56. The Commission had no sound basis for excluding the Horizon Energy valuation from its analysis. This implies selective choice of evidence on the part of the Commission. We note that Professor Vogelsang also raised concerns regarding the exclusion of evidence regarding the Horizon market valuation.[28]

57. The Commission's analysis does not include a recent transaction involving shares in a regulated EDB – where King Country Electric Power Trust sold its shares in The Lines Company to Waitomo Energy Services Consumer Trust.[29] It appears that this transaction occurred at a discount to RAB. Putting this alongside the market value of Horizon Energy would suggest that at least some EDBs are not valued at a premium to RAB.

58. Vector has calculated the likely RAB multiples for Horizon and The Lines Company. Based on our analysis (which we can provide to the Commission on request), we estimate the RAB multiple for Horizon to be 0.98 and for The Lines Company to be 0.87. We consider that these valuations at less than RAB are relevant data points and should be taken account of by the Commission when considering the evidence as to which WACC percentile would be materially better.

Conclusion

59. In conclusion, it seems the analysis of enterprise values has four data points only – a Powerco valuation above RAB, Horizon and The Lines Company valuations at below RAB and a Vector valuation slightly above RAB, but this seems to not be statistically significant. We do not believe this is evidence that the regulated WACC is systematically over-stating the actual WACC (if it were, all valuations should be significantly above RAB value).

Other tools to incentivise investment

60. The Commission's belief that other regulatory incentives can make up for a low WACC is inappropriate and unlikely to work.

61. In our view, the Commission's reliance on short-term incentives wrongly sets up a trade-off between short and long-term investment effects in relation to the choice of percentile where both are required and fails to factor in the impact of frequent change on incentives in the short and long term. In addition, the existence of tools to incentivise investment is not "new" evidence that justifies a change in the level of the percentile.

---

[28] Ingo Vogelsang, *Review of New Zealand Commerce Commission "Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services"*, 22 July 2014, paragraph 15.
[29] The Lines Company Annual Report 2014. Also, PwC Report, pages 2-3.

62. Quality and IRIS-type incentives are necessary because when price caps are applied, the inherent incentive is for the regulated suppliers to not invest, even when all expected costs (and a commercial return) are factored into the price cap. The incentives are therefore valuable as they encourage regulated suppliers to be efficient. However, a key component of such an incentive scheme as normally implemented is that, irrespective of the marginal incentive during the regulatory period not to spend, the regulated firm will make a normal return if it does spend at the level that is forecast by the regulator.

63. Such incentives are not normally applied to make up for shortcomings elsewhere in the regulatory scheme, such as a low WACC, and this is inappropriate and likely to be ineffective. It is likely to be ineffective in the long term because firms will eventually need new capital and these incentives and controls cannot compel investors to put new funds into the firms. There is a competitive market for capital and this will eventually divert funds to more commercially viable opportunities.

64. In the short term using such controls to require earnings to be reinvested at a below WACC return amounts to taking advantage of the compliance requirements facing regulated firms. This "taking advantage" could be expected to create sovereign risk issues well beyond the regulated businesses.

65. Similarly, the Commission's view that Boards and investors will want to "ensure the lights do not go out" amounts to taking advantage of firms' reputational and social concerns to push them to make sub-normal returns over an extended period. In Vector's view, the Commission's proposal falls within what Professor Yarrow has referred to as a regulatory "mugging", which is likely to undermine legitimacy and thus cause the regulatory regime to operate inefficiently in the long run.[30]

66. Also the IRIS and quality incentive tools are not yet in place (and may not be – Vector opposes the quality incentive scheme as currently proposed) so their impact is necessarily unknown.

Observed investment behaviour by regulated suppliers

67. The Commission also places reliance on recent substantial investments and future investment plans by EDBs and Transpower and assumes these past and planned investments indicate the WACC may be too high. There are a number of reasons why less weight should be placed on these factors, including:

---

[30] Professor Yarrow, Input Methodologies conference, September 2009, transcript page 351.

a) In the DPP context, the Commission has indicated that it does not accept these capex forecasts are accurate (otherwise it would not have capped them at percentages of historical averages).

b) A significant portion of these capex forecasts will relate to customer connection and relocation projects which are difficult to forecast and may or may not be required.

c) The Commission does not know the extent to which these plans will change following the Commission's final determination of the WACC percentile.

d) The Commission's investment observations date from the 2009/10 regulatory year. This started prior to the determination of the IMs and since 2011 a merits review has been proceeding, which indicates that regulated suppliers may have expected some favourable changes to the IMs – thus observed investment data prior to December 2013 cannot be said to be a clear affirmation that parties will invest under the current IM settings.

e) Even if investment occurring does indicate that investment will continue if those parameters are maintained (if that state of affairs has been sustained through several regulatory cycles with constant IMs), it does not support a presumption that investment will continue under less favourable parameters.

f) A decision that the regulatory return and how it is structured over time is insufficient to warrant investment is a significant decision for any organisation to make. There is also inevitably a material lag before investments can be terminated. Therefore current forecasts are unlikely to fully reflect the effect of the merits appeal decision and certainly will not reflect the impact of the Commission's WACC percentile review.

g) Vector has made representations directly to Commissioners on the issue of the indexation of RAB, the adverse impact this has on cash flows and, therefore, risk and that even at the 75th percentile decisions for continuing investment may not be justifiable.

68. At most, the evidence relating to past investment and current investment plans suggests the 75th percentile is not too low (although we do not think the evidence even suggests that, due to the points made above regarding expectations that IMs may have improved following the merits appeal and the time lag in adjusting forecasts to take account of the High Court judgement and the Commission's WACC review). The evidence regarding past investment and current investment plans is certainly not evidence that a lower percentile would be materially better.

Ability to review investment and quality levels through information disclosure

69. The Commission claims to be able to monitor the investment of regulated businesses and take action if it sees evidence of under-investment.[31] The implication is that the Commission will be able to identify trends of under-investment and worsening quality of supply and re-adjust the WACC upwards if needed. With respect, Vector submits that the Commission is being overly optimistic regarding the insights provided through disclosures and we do not agree an underinvestment problem will be apparent from material received under the information disclosure regime.

70. The Commission may see investment levels drop, but will have little certainty as to whether this is due to efficiencies, reductions in demand or due to perceptions the WACC is too low. As is well recognised in economic literature and reflected in the Oxera report, the underinvestment problem manifests over time, and once apparent, is very difficult to correct. Thus the impact of under-investment on reliability tends to take time to become apparent to even interested observers. By the time it is clear what is happening, reductions in quality will already have occurred and restoration of previous quality levels will be challenging (i.e. expensive and time-consuming) to achieve. In the meantime consumers will continue to suffer lower levels of service quality.

71. In fact, this is a key factor why underinvestment is considered to be significantly worse for consumers than equivalent overinvestment.

72. The Commission could observe that in recent years quality targets have not been met by some EDBs. Vector queries whether the Commission has considered if this reflects underinvestment, even though the relevant investment environment has been with a WACC at the 75th percentile.

Reasonableness checks

73. Vector considers the Commission's reasonableness checks to be flawed. The Commission seems to follow a circular approach of adjusting market estimates of WACC to make them line up with the Commission's approach, rather than reaching the more obvious conclusion that the Commission's approach results in a WACC that is too low.

74. As noted by Sapere,[32] in making the comparisons the Commission first 'standardises' the independent estimates by adjusting for the after tax effect of the difference between the risk free rate used in the independent estimates and the Commission's own current estimate (4.21%).

[31] Draft decision, page 73.
[32] Sapere Report, pages 41-43.

75. That ignores the fact that the parameters chosen by any entity estimating WACC are a package and that often the estimate of WACC is made subject to a reasonability test. Thus, changing the value of one parameter in a set of parameter values employed by one entity to a value used by some other entity for that parameter results in what Sapere calls a "fruit salad style"[33] estimate of WACC that is not an estimate that either of the entities would own. On that basis, the Commission should at least not have made any adjustment to the WACC estimates for Vector that it obtained from the telephone survey.

76. As Sapere shows, comparison of the correct independent estimates of WACC with the Commission's estimates of WACC shows that all of the independent estimates exceed the Commission's 67th percentile estimate; and all but one exceed the Commission's 75th percentile estimate. Thus the reasonableness checks, when done correctly, support a higher WACC percentile than the 75th rather than a lower percentile.[34]

Same evidence is relied on by the Commission for both setting the range and selecting the percentile

77. Vector notes that the Commission relies on the existence of tools such as quality incentives, observed investment, and the enterprise values of Powerco, Transpower and Vector when reaching its view on the appropriate WACC percentile range and then relies on these same factors again when justifying a further percentile reduction (notwithstanding these factors have already been taken into account to arrive at the percentile range).

78. For the reasons outlined above, the Commission's reasoning is not soundly based for either of these decisions.

Selection of the mid-point of the Commission's reasonable range

79. The Commission recognises that setting the WACC too low creates risks as the harm to consumers from under-investment is greater than the harm from over-investment. To then identify a "reasonable range" and select the mid-point of that range is a risky approach. A cautious regulator would at least err to the top of the identified range, for the same reason it would set the range above the mid-point estimate of WACC in the first place.

---

[33] Sapere Report, page 42.
[34] Sapere Report, page 43.

Asymmetric risk

80. The Commission argues that "catastrophic events and other asymmetric risks are best dealt with through cash flows (e.g. by resetting price paths) rather than as an addition to WACC."[35] Vector disagrees.

81. Asymmetric risks that are not dealt with in current regulatory settings include stranding of assets due to new technologies and catastrophic events. These factors are real risks to regulated suppliers and should be catered for under the regulatory regime. The Commission argues they should not be addressed through the WACC as they "should" be dealt with through cash flows. However, they are **not** dealt with through cash flows – suppliers receive no additional compensation for these risks ex ante and, as the Orion CPP decision shows, do not receive full compensation ex post either. Thus the Commission has not dealt with these issues in its decisions to date.

82. We also note that Oxera's analysis assumes that "Other factors, such as asymmetric risk, are assumed to be captured elsewhere in the regulatory regime."[36] As Oxera's assumption is wrong – these factors are not captured elsewhere – it seems Oxera may have recommended a higher WACC percentile had it been aware asymmetric risks were not otherwise addressed.

83. The Commission also argues that asymmetric risks would have only a minimal effect on a diversified investor. Vector also disagrees.

84. In principle, it is true that an investor could diversify their portfolio by procuring shares in other businesses, e.g., other distributors, construction companies, etc. It is also true that the more an investor diversifies the less impact a single event such as an earthquake is likely to have on his or her overall share portfolio – reducing portfolio volatility. But, importantly, this diversification does not make asymmetric costs disappear. The costs of the catastrophic event (for example) to the company still need to be recovered even if the investor has "perfectly diversified".

Selective choice of evidence

85. The Commission's approach also creates a strong perception that it has been selective in the evidence it relies on, seemingly favouring evidence or observations that might support a lower percentile, while ignoring factors that suggest the 75th percentile or higher is the most appropriate (including from its own experts). The Commission's approach to amending the WACC IM also appears selective in other key respects, including in relation to:

[35] Draft decisions paper, page 42.
[36] Oxera, Input Methodologies: Review of the 75th percentile approach, 23 June 2014, page 17.

a) Certainty, where considerable emphasis is placed on certainty in terms of making a decision as soon as possible but little or no weight is placed on certainty in terms of consistency of approach in relation to the extant WACC IM (where the impact on certainty is likely to be much greater).

b) The interdependencies between the WACC percentile and other aspects of WACC IM - in this respect the Commission ignores its own experts' express concerns (as noted above, the Oxera report questions the soundness of considering the 75th percentile in isolation) yet emphasises the importance of interdependencies between the WACC percentile and the DPP framework when assessing incentives to invest.

c) The emphasis on the importance of consistency with its approach to investment for the IRIS where the context for IRIS is different and where the Commission dismisses the relevance of consistency in relation to the current WACC IM decision (again where consistency in relation to the latter is likely to have a much greater impact on incentives to invest).

d) As noted above, there is no explanation of how total surplus and consumer welfare considerations have been taken into account and balanced under the purpose statement, in circumstances where the Commission's experts (Vogelsang) advise that each approach leads to materially different outcomes. Instead, the Commission's decision is consistent with the consumer welfare approach applied by Oxera.

86. Further, in its draft decision paper, the Commission states "the choice of percentile is not significantly interdependent with other aspects of the IMs."[37] This position is in direct contrast with the Commissions previous position on interdependencies in the WACC. Specifically, in its submissions to the High Court in the input methodology appeal proceedings, the Commission's position was that:

a) the percentile choice is informed by, among other things, model uncertainty;[38] and

b) other aspects of the WACC and the percentile choice work together to achieve the correct regulatory WACC and/or it is important to consider

[37] Draft decision paper, paragraph 4.1.2.

[38] Regarding the relevance of model uncertainty, see for example para 458 of the Commerce Commission's submission on cost of capital to the High Court: "While the 75th percentile is calculated by reference to uncertainties in the parameter estimates, the decision to use the 75th rather than say the 60th percentile is informed by, among other things, the issue of potential model uncertainty."

how the choice of WACC range percentile interacts with the underlying (uncertain) parameters.[39]

87. The Commission's approach is also inconsistent with the comments made by the High Court (which recommended WACC issues be considered together at the next IM review). There appears to be no principled or economic basis for the Commission changing its view about the interdependencies between the percentile other than this position no longer supported the Commission's proposal to consider one aspect of the WACC only within short timeframes. This change in approach again creates a strong perception that the Commission is willing to adopt inconsistent approaches without good reason, in turn undermining confidence in the ability of Part 4 to deliver a more consistent and certain regime over time.

88. The Commission has also previously relied heavily on the advice of Dr Martin Lally regarding WACC issues, including in relation to the WACC percentile, but has moved away from this reliance notably quickly during this process for no clear reason.

89. Such perceptions can significantly undermine the intended operation of the reformed Part 4 regime and the intended effect of the WACC percentile. The factors set out above, and explained further in this submission, demonstrate how critical it is that any "judgement" is exercised with caution and on the basis of sound evidence.

Relevant legislative framework

90. In our view, the Commission draft decision fails to correctly apply the legislative framework in two fundamental respects, namely:

   a) while the Commission acknowledges the correct legal approach when amending an IM, it wrongly concludes that this legal framework does not

---

[39] Regarding the interdependency of the percentile choice and other parameters, see for example para 64, p 213 and para 534 page 221 of the Commerce Commission's submission on cost of capital to the High Court:

> The cost of capital IM in effect applies a TAMRP which is higher than its best estimate for TAMRP of 7.0% (plus an uplift for the GFC) in that it uses the 75th percentile of the WACC range for setting price-quality paths.
>
> ...
>
> When looking at that [asset beta] IM, it is respectfully submitted that this Court should have regard to the allowance for estimation error included in the various IMs. For example, in setting prices under DPP, CPP, or IPP, the Commission uses the 75th percentile of the cost of capital range. This range reflects, among other things, the standard error of the asset beta. Based on the parameter values in Table H22 of the EDB-GPB Reasons Paper, use of the 75th percentile estimate is equivalent to an implied asset beta of 0.40 (based on asset beta's relative contribution to the 75th percentile estimate) or of 0.44 (if all of the uplift from use of the 75th percentile estimate is attributed to the asset beta, that is, the values for TAMRP and the debt premium are assumed to equal their mean estimate.)"

apply for the purpose of this process because these are not "normal" circumstances"; and

b) as discussed above, the Commission confirms its previous approach to the Part 4 purpose, but then does not apply this in its analysis or its reliance on aspects of its expert reports.

91. Vector's primary view is the Commission has erred in law in its decision not to take account of the certainty requirements of the IM framework in the current process.

92. We note that the Commission does not appear to have clearly set out the correct legal approach in the terms of reference provided to its experts, with the result these legal errors are largely repeated in these reports. For example, the experts have erroneously adopted a greenfields approach to the IM amendment process. Professor Vogelsang's review of the Commission's draft decision states that this "greenfields" approach is incorrect, and recognises that the extant percentile choice requires the Commission to err upwards.

93. Further, as discussed by Sapere,[40] the Commission's approach of not using the status quo as the reference point for its analysis is inconsistent with standard approaches to regulatory policy analysis, including the guidance in the Treasury's Regulatory Impact Analysis Handbook. The standard analytical framework involves considering the costs and benefits of the marginal change in policy settings, compared to the costs and benefits associated with the status quo. In this case, the analytical frame should involve considering whether a change in the uplift to the WACC percentile would promote outcomes consistent with outcomes produced in workably competitive markets such that section 52A(1)(a) to (d) requirements are met'.

Approach to amendment of an IM

94. As set out in our 5 May 2014 submission, and as emphasised by a number of other submitters, alteration to the IMs without a clear evidential basis risks significantly undermining the purposes of sections 52R and 52A(1)(a) (and the very point of the introduction of IMs). This is where:

a) 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.

[40] Sapere Report, page 30.

b) The purpose of IMs is then reflected in the IM framework, where the Commission is required to determine the IMs to be applied at the commencement of the regime. These must then be published and are subject to merits review (and possibly further appeal), the IMs therefore being clearly intended to have a long-lasting and precedential effect. The Commission is required only to "review" the IMs within seven years.

c) There is a process to allow amendments to IMs, but it a process for amending the existing IM within the overarching process for determining IMs and does not envisage the Commission starting afresh (otherwise the detailed IM requirements and process would be of no purpose). As a matter of law, it is simply incorrect to say that exercising a statutory power to amend an IM allows the Commission to start "afresh". It must have probative evidence to justify a decision to change the existing percentile.

d) In relation to the Part 4 purpose, certainty is considered a pre-requisite to incentives to invest. Again, this complements the overall purpose of IMs, which is to provide certainty around the rules and processes that apply to regulation.

e) The Court of Appeal emphasised that certainty is an important objective under Part 4 and that certainty is intended to happen over time.[41] Now that the first IMs have been determined and the first merits review appeals completed, the Commission's actions will send a strong signal about the likely stability of the regime going forward. In order for certainty to happen over time, it is critical that the Commission does not now readily depart from material aspects of IMs without a sound evidential basis and / or seek to exercise judgement or discretion afresh (as if setting the IMs for the first time).

f) As a matter of regulatory best practice, it is uncontroversial that a regulator should honour commitments, and avoid unnecessary alterations and uncertainties in order to maintain investor confidence.

95. In relation to the approach to the current WACC IM consultation, Vector submits that the framework outlined above requires that:

a) the current WACC IM determination is the appropriate starting point, where the Commission is amending an IM rather than determining an IM for the first time;

[41] [CoA judgment [34(a)]]

b) material change is only made where there is a sound evidential basis that the amended IM would be materially better at meeting the purpose statement;

c) the Commission cannot simply exercise its discretion or judgement afresh: the legal power it is purporting to exercise is to amend the existing IM. It must also consider whether changing the IM is consistent with the purpose statements (taking into account the potential impact of a mid-review amendment). The Commission will otherwise send a strong signal that the IMs hold little currency and are vulnerable to frequent change: this creates considerable uncertainty in relation to the IM review and potential amendments between reviews, including prior to the next DPP reset;

d) given the above, the Commission should exercise considerable caution before exercising "judgement" (where the exercise of discretion is considered to be at the expense of regulatory stability); and

e) the impact of a change to the IM (compared to maintaining the status quo) should be a significant factor when considering an amendment to the IM and determining which approach best meets the relevant purpose statements.

96. The approach outlined above is particularly important in relation to the WACC percentile. As emphasised by Oxera, WACC works as an incentive to invest if it is applied in a consistent manner based on a whole-life approach. That is, frequent change in itself risks undermining the effectiveness of the WACC percentile because it increased the risk that the WACC will be below the actual WACC and will not allow normal returns. To exercise judgement afresh or exercise "judgment" without a solid evidential basis is closer to a case-by case approach which is not consistent with Part 4 regulatory framework (and not favoured by Oxera).

97. Critically, change without sound basis risks not only dampening incentives to invest over the long-term but also distorts incentives over the regulatory period. An increased risk that the regulatory WACC will be below the actual WACC increases incentives to maximise opex and minimise capex. This is particularly true where there is a prospect of downward change at the next regulatory period (and the Commission's approach gives a strong signal that this is a risk), as in these circumstances, efficiency gains from the previous period are effectively removed. That is, the under-investment problem is exacerbated in both the short and longer term.

98. This risk has been heightened by comments of the Commission's Deputy Chair at the WACC draft decision analyst briefing on 22 July 2014, where it was indicated that the WACC may be "walked down" over time in future

reviews of the percentile. Vector is particularly concerned that such comments imply a degree of pre-determination of future outcomes on the part of the Commission and would not adhere to any sound regulatory principles.

99. The effect of the Commission's approach is that it introduces uncertainty into the regulatory environment, which translates into uncertainty for investment. As Professor Vogelsang points out in his review of the Draft Decision, regulated firms have made investment decisions since 2010 on the expectation that the current WACC regime would be in place until at least the next planned IM review. He cites this as a reason for why the status quo might carry weight.[42]

100. Putting to one side the significant errors in the Commission's analysis identified in this submission, given the 75th percentile is still in the Commission's defined range, and given the extent of judgement required, applying the legislative framework the Commission should maintain its 2010 decision to adopt the 75th percentile. This approach is manifestly preferable particular given the adverse implications for certainty under its proposed decision.

Commission's approach to consistency in this process deficient in key respects

101. We also consider that the Commission's approach to the IM framework is fundamentally at odds with the legislative framework, giving rise to a serious error of law.

102. The Commission says that "in the normal course of events" it understands the importance of certainty in relation to IMs and that "regular changes to significant "fixed" parameters is not desirable".[43] That is, the Commission appears to accept the correct legal position. However, the Commission's position is that such an approach is not required on this occasion because "the current scenario is not "normal"".[44] The Commission says the current scenario is not normal because of the comments made by the High Court. On this basis it does not treat the 75th percentile as the appropriate starting point, but rather states that is has "approached the evidence afresh".[45]

103. In short, the Commission considers that it is not required to address the impact of change on stability and predictability when determining the WACC

---

[42] Ingo Vogelsang (2014) *Review of New Zealand Commerce Commission 'Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services'* 31 July 2012, paragraph 26.
[43] Draft Decision para 2.9.
[44] Ibid.
[45] Draft Decision para 2.6.

IM amendment on this occasion (contrary to what would normally be legally required) because of the comments made by the High Court.

104. In our view, the High Court comments cannot reasonably be said to provide a basis for not applying the overarching legislative framework, particularly where the concepts of stability and predictability are critical to the effective operation of Part 4. In particular:

    a) The High Court observations were tentative and in principle only, as has been emphasised in the High Court's recent decision on MEUG's application for leave to appeal.[46]

    b) The High Court suggested that the Commission consider whether there is a stronger evidential basis for its decision at the next review. It did not suggest that, in the absence of quantitative evidence, the Commission should exercise its discretion afresh or fail to have proper regard to the requirements of the regulatory framework and / or the impact of a change on the certainty provided by IMs.

    c) The High Court expected the Commission to consider this issue as part of the broader review, not in isolation under the amendment process.

105. The Commission's approach to whether or not it is required to have regard to stability and predictability when amending the IM in itself creates significant uncertainty about the future operation of the regime. In particular it cannot be reasonably predicted what other circumstances could arise in the future that the Commission would then judge to be "not normal".

Approach to Part 4 purpose must be consistently applied

106. The Commission's approach to the Part 4 purpose statement is set out in the 2010 IM Reasons Paper.[47] This approach was then applied to its WACC IM determination, including in relation to the choice of percentile.

107. The primary and central Part 4 purpose is to promote the long-term benefit of consumers. To achieve this, the Commission is required to promote outcomes consistent with outcomes produced in workably competitive markets such that the section 52A(1)(a) to (d) requirements are met.

108. In relation to determining the WACC IM, the Commission recognises that there is "a natural tension between providing suppliers with incentives to invest and limiting their ability to extract excessive profits".[48] When faced with this natural tension, the Commission gives greater weight to incentives to invest, because of the implications for dynamic efficiency (and thereby the

---

[46] The Major Electricity Users Group Inc v Commerce Commission [2014] NZHC 1765, 28 July 2014.
[47] *IM reasons paper,* para 2.4.2 - 2.4.6.
[48] *IM reasons paper,* para 2.4.7.

long-term benefit of consumers).[49] In the draft decision the Commission is clear that its rationale for an uplift to the WACC continues to apply.[50]

109. In the draft determination, the Commission considers consumer welfare and total welfare approaches in light of the Part 4 purpose and concludes that both should be applied.[51]

110. However, as discussed above, the Commission in error:

a) Does not transparently set out how it will balance consumer welfare and total welfare when applying the Part 4 purpose (if the Part 4 purpose was applied consistently and properly, total welfare would carry greater weight); and

b) Relies on the Oxera and Vogelsang analysis to support its percentile range and number within than range, but makes no adjustment for the fact that these expert reports are based on consumer welfare only. If such adjustments were made the Commission would arrive at a higher range and higher percentile.

111. The existence of wealth transfers from investors to consumers under a particular approach does not (on its own) mean the Part 4 Purpose is promoted by that approach. Instead, consideration and application of wealth transfers must be in accordance with the Part 4 Purpose.

Investment implications of the Commission's proposal

112. Vector is concerned that the Commission's proposed approach to the IM amendment process creates considerable uncertainty for regulated suppliers in a number of key respects. It will create reasonably held perceptions that the Commission will:

a) exercise judgement again in relation to the WACC percentile as part of the upcoming IM review, notwithstanding the previous decisions made;

b) tend towards a lower number (based on what appears to be a selective approach as discussed below);

c) potentially amend this and other IMs again at more frequent intervals than the Act requires, including before each reset; and

d) reach a view that, during an amendment process, circumstances are "not normal", where what may or may not be judged by the Commission to be "not normal" is unknowable.

---

[49] *IM reasons paper,* para H1.31.
[50] *IM reasons paper,* para 4.13.2.
[51] *Draft decision paper,* para 2.16 and 2.17.

113. In general, regulated suppliers will perceive an increased risk of increasingly lower WACC percentile decisions and accordingly an increased risk that the assumed WACC will be below the actual WACC for the long-life assets being invested in today. This impacts on incentives to invest but also impacts on the effective operation of the incentive based regime. In a workably competitive market, an increased risk of lower returns in future would be addressed by the firm seeking increased returns in the short term.

114. The Commission should acknowledge the potential impacts and incentives that result when they make judgements in this way.

115. Additionally, the uncertainty impacts on the effectiveness of the WACC percentile over the medium to long term (where consistency is critical). That is, the ability of the WACC to mitigate underinvestment in the medium term and of the incentive regime to mitigate underinvestment within a regulatory period are both considerably undermined.

116. The uncertainty outlined above is directly contrary to the intended operation of the IMs and the Part 4 purpose. Certainty was considered critical to the IMs, as set out in the Part 4 policy materials, because of its negative impact on incentives to invest. This is particularly the case where the IMs have now been determined and tested through the courts. A willingness to amend material aspects of the IM "afresh" at this stage and based on judgement rather than evidence fundamentally and adversely impacts on confidence in the regime delivering certainty over time.

117. Exercising "judgement" in circumstances where there is no clear evidence in support of a reduction in the WACC percentile, in our view, will significantly undermine the Part 4 purpose and the purpose of input methodologies. Consistency of approach and certainty are central to achieving the Part 4 purpose and the purpose of IMs. As emphasised by Oxera, consistency of approach is particularly critical in relation to the WACC percentile.[52]

118. For these reasons Vector urges the Commission to reconsider its willingness to so readily depart from its previous decision. While the High Court made some observations that questioned the basis for its decision, these issues have now been tested and no clear evidence has been provided which suggests the 75th percentile is the wrong approach. To the contrary the evidence (as opposed to assumptions), in Vector's view, supports the 75th percentile or higher. Further, this is a critical stage of the regime in terms of providing regulated suppliers with confidence that approaches will be consistently applied to the greatest extent possible.

[52] Oxera report, page 6.

119. As context, we note the relatively recent downgrading of Vector's credit rating by Standard and Poors from BBB+ to BBB. The Commission needs to be mindful that actions that can be perceived as regulatory opportunism will place further pressure on the ability of regulated firms to raise funds.

Impact on Vector's decision-making

120. As anticipated by the policy underlying Part 4, inconsistency of approach and uncertainty has very real negative implications on a supplier's decision making processes and its incentives to innovate and invest. Vector's decision making processes and the impact of inconsistent approaches and regulatory uncertainty were fully explained in evidence filed by Vector in the IM appeal proceedings and the starting price adjustment judicial review.[53] This evidence remains relevant to the issues arising here and accordingly is relied on by Vector in this process.

WACC range for information disclosure

121. The Commission has proposed a WACC range for information disclosure purposes from the 33rd to 67th percentiles.

122. Following the analysis above, Vector considers that the WACC range for information disclosure should follow the selection of the WACC percentile for default/customised price-quality regulation. In our view a WACC range for information disclosure of the 25th to 75th percentiles is materially better at meeting the Part 4 purpose than the Commission's proposed range.

A materially better approach

123. Vector considers that a materially better approach would be to set the WACC percentile for default/customised price-quality regulation at the 75th percentile. This is because, in particular:

    a) The Commission's analysis and evidence is flawed.

    b) Oxera's analysis, relied on by the Commission, contains errors which, when corrected, indicate that the 75th percentile or higher is optimal in meeting the Part 4 purpose, including minimising costs to consumers. These errors include the use of a low value in its estimate of costs from network outages, the failure to account for the potential for the standard error of the estimate of WACC to also be incorrect, Oxera's miscalculation of the expected loss to investors by a factor of 2 at the 50th percentile and

[53] In relation to the High Court SPA judicial review, Vector specifically refer to the Affidavit of Allan Charles Carvell dated 9 June 2011, the Affidavit of Simon James Mackenzie dated 8 June 2011. In relation to the IM 2010 consultation process; the Statement of Simon James Mackenzie dated 23 August 2010, the Statement of Binaifer Behdin dated 13 August 2010 and the Statement of Ryno Verster dated 23 August 2010.

4 at the 75th percentile[54] and the application of a consumer welfare test only.

c) The Commission's experts wrongly apply either a consumer welfare test or a total welfare test and the Commission wrongly relies on a consumer welfare test only. Where an appropriate balance between consumer and total welfare is applied, the evidence clearly supports a higher reasonable range and WACC percentile than the Commission's draft decision puts forward.

d) Professor Vogelsang's comments regarding the impact of changes on investment are not supported by economic theory, decision-making in practice or by observed outcomes. As the Commission does not know whether current investment levels are optimal, the Commission would be on more solid ground to follow the established and accepted analysis on this issue.

e) The "evidence" regarding enterprise values has been selectively chosen (with inconvenient data points arbitrarily omitted from the Commission's analysis) and mis-interpreted. Viewed objectively it does not clearly support a view that the current regulatory WACC is too high.

f) The Commission's process and approach to this review in itself undermines the intent of the Part 4 regulation and thus the achievement of the Part 4 purpose statement is best promoted by not changing the percentile. In particular:

    i. The reliance on unsound and selectively chosen evidence;

    ii. The inconsistent application of the Part 4 purpose (compared to other IM decisions);

    iii. The creation of the new concept of "not normal" circumstances as a reason for not using the existing IM as the starting point, which is contrary to the Part 4 framework and raises perceptions that similar reviews will occur in future; and

    iv. The rushed and unnecessary nature of the review outside of the statutory IM review processes;

Are all factors that heighten uncertainty within the regulatory regime and indicate that certainty is not increasing over time as the Supreme Court expected.

[54] When calculated correctly, the expected loss analysis indicates that (based on Oxera's own assessment) consumers should be willing to pay a margin of 0.84% above the mid-point estimate of WACC.

124. Following from the above position, Vector also considers that a WACC range for information disclosure of the 25th to 75th percentiles is materially better than a range of 33rd to 67th percentiles.