

Cross Submission on WACC Percentile Issues

Prepared at the request of

BARNZ

Authorship

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Executive Summary

The Commerce Commission published a proposed amendment to the WACC percentile for electricity lines services and gas pipeline services on 22 July 2014. This is a cross-submission pursuant to that proposal. It was commissioned by BARNZ but represents the independent views of the author and was prepared in a manner consistent with the High Court's Code of Conduct for Expert Witnesses. It addresses matters raised in the following four submissions.

- CEG, for NZ Airports and ENA, Economic Review of Covec Report, June 2014, which we refer to as CEG1.
- CEG, for NZ Airports, Economic Review of Draft Decision on the WACC Percentile, August 2014, referred to below as CEG2.
- Incenta, for ENA, Rationale for setting the regulatory WACC above the midpoint value – Response to Draft Decision, August 2014.
- Sapere, for Vector, Proposed amendment to the WACC percentile - Commerce Commission's draft decision, 29 August 2014.

Since these submissions refer in part to earlier work by Oxera, we include that work in our scope.¹ Collectively, the submissions raise a large number of issues. To assist the Commission we do not work through them point-by-point but instead focus on what seem to be the most important themes and arguments.

It should not be inferred that neglecting to mention or cite a specific point in any of the submissions under review indicates our agreement with that point. For example, the first CEG submission (CEG1) is very critical of an earlier Covec submission and we consider it devoid of merit. However we consider it will be most useful to the Commission to address it in the context of the main arguments which we consider are the following.

- Scope issues, including arguments that this further work on WACC is framed too narrowly;
- Welfare standards;
- Oxera's work and in particular criticisms of its approach to
 - Welfare standards;
 - Costs of investment and lost reliability;
 - Consequences of under- and over-investment; and
 - Statistical issues; and
- RAB multiples.

Scope Issues

Some submissions have raised again the treatment of asymmetric risks such as the risk of catastrophic events, arguing that this should have been included in the Commission's scope, and drawing on evidence from the recent Customised Price Path (CPP) work following Orion's exposure to the Christchurch earthquakes.

¹ Oxera, Input methodologies: Review of the '75th percentile' approach, dated 23 June 2014.

We review these arguments and consider that the Commission's approach, which involves ex-post compensation through cash flows, is superior to the alternative of adding a mark-up to the WACC in advance. There are several reasons for our preference, including the difficulties of estimating an actuarially fair insurance premium, and the fact that allowing such a premium would not eliminate the risk of opportunistic re-litigation in the event that catastrophe strikes.

Welfare Standard

The submissions on the appropriate welfare standard are interesting for their structure. They tend to argue by analogy, referring to the competitive markets reference in the Part 4 purpose statement, noting that competitive markets are efficient and concluding that efficiency must therefore be the relevant welfare standard and wealth transfers must therefore be ignored.

This seems a weak line of reasoning. In particular it ignores the fact that consumers, not producers, are the main beneficiaries of competition. Other things equal, firms would prefer to have no competitors but consumers would prefer that competition is intense.

We are also unconvinced by the argument that consumers are not just consumers, but also supply labour and own productive assets. This ignores the following facts: most labour is not supplied to regulated firms; most productive assets owned by consumers are not regulated; and there are already specific provisions under Part 4 (notably s54D) to excuse firms from regulation in situations where consumers are indeed deeply connected to regulated firms.

Oxera's Treatment of Costs

We agree that Oxera should have included the costs of reliability investment in its analysis of cost-minimising investments. However we also note, as others have, that the Oxera framework is highly stylised and relies on many assumptions. In this context, we consider that the mere addition of an extra \$100m of capital investment when the WACC is over-estimated, while one way of modelling the issue, is somewhat crude. We build on the Sapere submission, by allowing the size of extra expenditure to increase with the WACC percentile, and show that doing so restores the Oxera results.

We also consider the cost of outage estimates used by Oxera. Submissions criticised Oxera's adoption of the lower end of its range (\$1bn rather than \$3bn), which sounds reasonable until one looks at what these values refer to. They are estimates of the cost to GDP, not consumer welfare. When GDP falls as a result of an outage, a material share of that fall is borne by firms in the form of lost profits. Moreover, it is increasingly the case in New Zealand that productive assets are owned by foreigners. Since the loss of consumer welfare will be materially lower than the loss of GDP we consider it reasonable to avoid the top end of the range.

A second reason to do so is that the range is estimated from observations on actual outage events. It is unreasonable to assume that, even with a very high WACC percentile, there would be no outages at all.

Oxera's Statistical Work

The Sapere submission argues that Oxera has erred by assuming that the mark-up component is a fixed amount rather than a random variable. While technically true, it is questionable whether there is merit in considering this argument given the somewhat loose statistical grounding of the WACC distribution analysis generally.

More importantly however, the adjustment proposed by Sapere is itself based on an assumption that the estimates of WACC and the percentile mark-up are statistically independent. We outline reasons why these variables may covary negatively, which would undermine and potentially reverse Sapere's conclusions on the direction of bias.

We also consider that this point fails on the basis of materiality. The differences between the Sapere estimates of the relevant probabilities and Oxera's estimates of the probabilities are small enough to be swamped by other uncertainties in the analysis, particularly the cost estimates discussed above.

RAB Multiples

We consider that the Commission's RAB multiple analysis was treated appropriately in its proposal, so we disagree with submissions that argue it reflected "extreme" behaviour. We note that there are many potential causes of RAB multiples in excess of unity, but that whatever the causes such an observation does at least tell us that investor capital is not being expropriated.

In our view the converse does not apply. For example, even with a very generous WACC, a firm might have a RAB multiple less than one if the management makes very poor decisions.

We agree with submissions regarding the relative merits of a snapshot observation on a RAB multiple and inference drawn over a longer period of time. Generally speaking more weight should be attached to the latter.

Finally we observe that comparisons with the USA and Australia should be made in light of the fact that those jurisdictions have been regulating for much longer than New Zealand. It is doubtful that the certainty objective of input methodologies has yet been achieved, and in this context it is likely that investors are somewhat wary and conservative in their views on asset value.

1 Introduction

As part of the Commerce Commission's further work on WACC, interested parties are invited to make cross-submissions. This report was commissioned by BARNZ. It represents the independent views of the author, who has read the High Court Code of Conduct for Expert Witnesses and respected its provisions in preparing this report.

The report comments on the following submissions:

- CEG, for NZ Airports and ENA, Economic Review of Covec Report, June 2014, which we refer to as CEG1
- CEG, for NZ Airports, Economic Review of Draft Decision on the WACC Percentile, August 2014, referred to below as CEG2
- Incenta, for ENA, Rationale for setting the regulatory WACC above the midpoint value – Response to Draft Decision, August 2014
- Sapere, for Vector, Proposed amendment to the WACC percentile - Commerce Commission's draft decision, 29 August 2014

The arguments contained in the submissions under review arise from the Commerce Commission's proposal of 22 July 2014.² They also bear in part on an earlier report by Oxera, Input methodologies: Review of the '75th percentile' approach, dated 23 June 2014. We therefore also refer to this work.

To assist the Commission, this report does not work through each of the above reports systematically. Rather, it is structured around the topics of most interest and draws from the reviewed submissions to illustrate the arguments that have been advanced.

It should not be inferred that neglecting to mention or cite a specific point in any of the submissions under review indicates our agreement with that point. For example, the first CEG submission (CEG1) is very critical of an earlier Covec submission and is considered devoid of merit. We will comment here on the main arguments it presents, but will not work through it point by point and omission of any points does not indicate our agreement with them.

The balance of this report is structured in the following way.

- Section 2 discusses the scope of the issues being considered by the Commission;
- Section 3 considers the welfare standard and its implications;
- Section 4 looks at Oxera's work and the criticisms of it;
- Section 5 reviews arguments on the Commission's RAB multiples work; and
- Section 6 offers some brief concluding comments.

² Commerce Commission, Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services, 22 July 2014.

2 Scope of Inquiry

In our first submission on this matter,³ we discussed the scope of the Commission's inquiry in the context of the High Court's decision on appeals against the IM decisions. Our discussion of asymmetric risks noted that both the Court's judgement and the Commission's initial discussion of its further work on WACC separated the percentile issue from asymmetric risks such as catastrophic risks.

CEG1 claimed incorrectly that our paper "inappropriately disregards asymmetric cash flow risk". It was discussed (under the heading "asymmetric risk"); CEG simply took a different view as to its relevance. Similarly, while asymmetric cash flow risk was discussed by the Commission in the draft decision, CEG2 suggests that it was "overlooked". Again, this is not correct.

Nevertheless, the scope of the Commission's work remains of interest and therefore deserves substantive comment. This is best achieved by looking at the Incenta submission.

Incenta recognised that the Commission discussed the matter, noted the Commission's preference for making allowances through cash flows where necessary, but objected to two matters that stem from the CPP process invoked for Orion following the Christchurch earthquakes. These were

- The notion that a percentile above 50% provides a buffer for investors; and
- The implications of investor diversification.

In our view, the Commission's draft decision is strong on these points. In the context of the Christchurch earthquakes it is true that investors are better diversified than consumers, and it is also true that any percentile above 50% provides investors with something of a buffer. That indeed is the point.

Incenta correctly note that if, and to the extent that, the WACC percentile *is used* as a buffer, it does not deliver the same return as the percentile chosen. But that is not the purpose of the Commission selecting a percentile above the 50%. The aim is not to guarantee an *above* WACC return; rather it is to increase confidence that a WACC return will be achieved in the context of uncertainty over the true parameter value.

Incenta also raise the prospect that the Commission might deny ex-post compensation for catastrophic risk on the grounds that investors are diversified. While that is a theoretical possibility, a more reliable predictor of how the Commission will behave is surely provided by its decisions in respect of the Orion CPP. In that case, Orion received compensation for almost all losses, the cost of which will be paid by Orion's customers. That is a long way short of denying compensation. The totality of the Orion decision imposes most of the costs on consumers leaving a residual amount for investors to bear.

³ Covec, Estimating WACC for Airports in New Zealand, Report for BARNZ, 30 April 2014.

More generally, the “scope” question at hand is whether to allow firms higher earnings in advance, forcing them to fund catastrophic costs from their own pocket, or to make allowances in cash flow if and when a catastrophe occurs. On this point we consider that ex-post compensation is far superior than ex-ante compensation for catastrophic risk.

One reason is that it is extremely difficult to estimate the actuarially fair insurance premium to charge customers for ex-ante compensation. That increases the transaction costs of setting the mark-up, but it does not eliminate the prospect of re-litigation in the event that a catastrophe materialises.⁴ Another reason is that consumers are obliged to pay up-front for events that arise rarely if ever. A third reason, is that actual losses are able to be estimated fairly and accurately for catastrophes that do in fact occur. For these reasons we endorse the scope of the Commission’s work.

⁴ For example, if a catastrophe occurs a firm might argue that it only had, say, five years of higher earnings and that this is insufficient to cover costs.

3 Welfare Standard

Many submitters have discussed the welfare standard that applies to decisions over the WACC percentile. We raised this initially in our first submission and enlarged on those arguments in our second submission.⁵ Those arguments need not be repeated. We consider that it would be a serious error to ignore the role of regulation in delivering benefits to consumers, that welfare transfers are indeed a legitimate goal of economic regulation in markets where there is little or no competition or prospect of a substantial increase in competition, and that investor interests are relevant because and to the extent that consumers benefit from their involvement.

This view lay behind our analysis of the *price* effects of errors in WACC, which showed that there are asymmetric costs from symmetric errors and that from this perspective the optimal WACC percentile is less than 50%. CEG1 considered this point “*thoroughly unremarkable*” and went on to argue that a logical consequence was to “*set the price at zero*”. That is not correct. CEG seem to have missed the fact that the pricing and investment analysis in our report (i.e. the short run and long run analysis) are both important, and that the purpose of both is to analyse potential welfare asymmetries from symmetric errors in WACC estimation.

Fundamentally however, CEG1 objects to the use of a consumer welfare standard.⁶ The paper tries to argue that this standard is “inconsistent with workably competitive market outcomes” but it demonstrates no such inconsistency. For example, it discusses stylised hypothetical interventions that would create deadweight loss relative to a workably competitive market outcome, but fails to connect those hypothetical scenarios to any plausible scenario in New Zealand’s regulated industries. It also attempts to argue that a consumer welfare standard might deliberately impose financial losses on firms, which ignores the “long-term” qualifier although our report did discuss the relevance of this.

The Incenta report under review mounts further arguments on this point. It suggests, for example that all references to “competitive markets” imply that total welfare is the relevant standard “so wealth transfers must be ignored” (p6). That is simply not true. Imagine a spectrum of markets from monopoly to highly competitive, and think about how consumer benefits vary across this spectrum. As a general rule consumers would prefer the competitive end and producers would prefer the monopoly end. Competitive markets promote consumer interests and make life difficult for producers.

Incenta also argues that consumers are not just interested in a good deal from suppliers. It says “*no consumer is just a consumer, but may also be a provider of labour and owner of factors of production*”. This argument falls away when we note that what matters in this context is the relationship between consumers and producers of *regulated services*. If a

⁵ Covec, WACC Percentile Issues, Report for BARNZ, 28 August 2014

⁶ CEG2 repeats the same arguments as CEG1, so the following comments apply to both.

consumer works on a farm or a fishing boat, her labour supply is of no relevance to an electricity company.⁷

From the perspective of an electricity distribution business, many consumers are “just a consumer”. Some do own a proportionate share in their local EDB, and if this interest is sufficiently strong there are specific provisions in Part 4 (s54D) that allow for the firm to be exempt from regulation. Twelve EDBs are exempt under this provision.⁸

⁷ The converse applies in some cases though. Farm workers often have their electricity bills covered as part of an employment contract.

⁸ <http://www.comcom.govt.nz/regulated-industries/electricity/electricity-default-price-quality-path/treatment-of-consumer-owned-electricity-distribution-businesses/>

4 Oxera's Work

Consultants for regulated firms have criticised the work of Oxera on several grounds. It has been argued that Oxera

- Used the wrong welfare standard, and that correcting this “error” would shift the WACC percentile to well above 75%;
- Neglected investment costs and used the wrong benchmark values for the cost of lost reliability;
- Was unduly sanguine regarding the potential consequences of under-investment and the ability for timely corrections; and
- Made a serious statistical error in not recognising that the mark-up to the WACC is itself a random variable.

We consider these arguments below.

4.1 Welfare Standard

A primary criticism of Oxera made by two of the papers under review, is that consumer welfare should not have been used to represent the benefit of avoiding electricity outages. For example:

- CEG2 says that Oxera “counts every reduction in consumer surplus as a welfare loss in its empirical assessment of the costs to consumers associated with different WACC percentiles” and
- Incenta says that “Oxera’s recommended range was quite clearly based solely upon the consumer welfare standard. Oxera’s results – and its recommendations with respect to the WACC percentile – would have been materially different if it had applied an efficiency objective rather than the consumer welfare objective.”

We note that Sapere does not argue against this welfare standard, though it does argue that it has not been implemented correctly by Oxera, a matter we discuss further below.

Our views on the relevance of a consumer welfare standard have been covered in section 3 above and in our previous two submissions on this matter. We consider that CEG and Incenta’s arguments against a consumer welfare standard are weak. Certainly these arguments are inconsistent with the provisions of s52G of the Act as discussed in our second report. Since there can be only one welfare standard in Part 4, reference to the welfare standard relevant to s52G is also a reference to the overall welfare standard for Part 4 provisions.

For these reasons, we consider that CEG2 and Incenta’s criticisms of Oxera’s welfare standard are invalid.

4.2 Costs of Investment and Lost Reliability

Sapere pick up on a point made by Professor Vogelsang regarding the cost of extra reliability investments in electricity. This cost was not included in the Oxera analysis and Sapere present (Table 3) a revised analysis in which an extra \$100m is invested with increasingly high probabilities as the WACC percentile is increased.

It is apparent that both the Oxera analysis and the Sapere revision of it are based on highly stylised frameworks, and on very “round” numbers. For example, it only considers reliability investments, assumes that over or under-estimation of WACC by 0.5% is a trigger point for both new reliability investments and lost reliability caused by under-investment and assumes that there is a single cost of lost reliability that does not vary with WACC percentile (though Oxera does include a range of loss values).

While we agree with Sapere and Professor Vogelsang that the cost of extra investment should be included, it is apparent that other changes would also make the analysis more closely aligned with reality. For example, it seems implausible to assume that as the WACC percentile increases the amount of extra investment in reliability will remain constant.

To illustrate the potential impact of relaxing this assumption, the following table, which follows the same format as Table 3 in the Sapere submission, shows the result of assuming instead that the \$100m investment figure cited by Professor Vogelsang (which is another very ‘round’ number) actually increased in line with the WACC percentile.

Percentile	Increased Charges (m)	Extra Capital (\$m)	Pr WACC over-estimated by > 0.5%*	Expected Cost (m)	Annualised Reliability Loss (\$m)	Pr WACC under-estimated by > 0.5%*	Expected Reliability Loss (\$m)	Total Cost to Consumers (m)
65th	\$61	100	46.70%	\$108	1000	19.70%	197	\$305
67th	\$69	110	48.90%	\$123	1000	18.20%	182	\$305
70th	\$83	120	52.30%	\$146	1000	16.10%	161	\$307
75th	\$107	130	58.20%	\$183	1000	12.70%	127	\$310
80th	\$133	140	64.60%	\$223	1000	9.60%	96	\$319

*these percentages were estimated by Oxera. They reflect the likelihood, at different percentiles, of the WACC error (ie the difference between the final allowance and the true WACC) being in excess of 0.5%

The intuition here is that as the percentile increases two things happen: the probability of extra investment increases and the size of potential investment also increases. We have modelled this second effect by increasing the size in the “extra capital” column.

Under these assumptions total consumer costs are minimised at percentiles lower than the 75th. While we consider that a size effect is likely to occur, the assumptions embedded in the above table may well be incorrect. However much the same complaint could be made about the \$100m extra capital suggested by Professor Vogelsang, and indeed about Oxera’s annualised reliability loss estimates. Our point is that even with those two assumptions, consumers may still be better off with lower percentiles.

The size of Oxera's estimates of the annualised reliability loss have been criticised by consultants for regulated firms. In particular, Oxera's use of \$1bn rather than the \$3bn value at the top end of their range has been challenged. In considering this issue we revisited Oxera's analysis and the source of their estimates. Several points emerge from this review.

- The estimates range from \$0.7bn to \$3bn;
- They are estimates of the total annualised cost of outages in different jurisdictions (not New Zealand); and
- They are estimates of lost GDP.

Although they are not based on New Zealand data we accept Oxera's argument that its estimated range

"appears to be broadly consistent with recent evidence on the VoLL from the Electricity Authority, although this evidence also demonstrated that the cost would vary significantly for different customer groups, demonstrating that the actual cost would be heavily linked to the most likely nature of any event that could happen in New Zealand."

There remain two very important points. One is that Oxera assumes the total cost will indeed be avoided by a higher WACC percentile.⁹ That is a strong assumption bearing in mind the large number of outages that *actually occurred* to generate the data in the studies Oxera cites. A much more likely scenario is that even with a WACC allowance more than 0.5% above the true value some outages will still occur, so consumers will not avoid the full estimated cost. This effect alone is a reason to avoid using the top of the range of estimated costs.

Secondly, there is a big difference between GDP and consumer welfare. When GDP falls as a result of an outage, it affects all of the components of GDP. A significant share of the cost is borne by firms in the form of lower profits, not consumers. It is true of course that many firms are owned by New Zealand residents, but foreigners own and increasingly large share of our GDP and could not reasonably be considered consumers for the purpose at hand. It follows that consumer welfare losses may be materially lower than GDP losses, which is a second reason for erring towards a lower estimate of the cost of lost reliability.

4.3 Consequences of Under-Investment

Incenta argue (section 3.2) that "*under-investment is far less transparent than over-investment*" and use this argument to suggest that irreversible losses will occur from under-investment. The proposed reason for this difference in transparency is that over-investment results in assets being built which makes the assessment of whether that investment was needed "*far more objective*".

We disagree. In either case, the question of whether investment is needed is the same question. Answering it would need to draw on the same type of facts, such as load growth, the age or condition of particular assets etc. The key to optimal investment is a

⁹ Provided the allowed WACC is more than 0.5% above the actual WACC.

robust asset management planning process, leading to forecasts of efficient levels of investment which can then be subject to proper scrutiny before approval.

4.4 Statistical Issues

Sapere argues from a statistical standpoint that Oxera and the Commission have underestimated the variance of the distribution of the WACC estimate. The WACC is not being marked up by a fixed amount, Sapere argues, but by a random variable. This is because the standard error of the sampling distribution of the WACC estimate is unknown, therefore it is estimated, therefore it is a random variable with its own variability.

From this point, the Sapere argument is that the estimated final allowance for WACC (i.e., inclusive of the percentile-based mark-up) is the sum of two random variables. Sapere assume these two random variables are independent. In this case the variance of their sum is the sum of their variances, meaning that random variation in the estimate of the mark-up magnifies the variation of the final WACC allowance, making it larger than the variance of the initial point estimate of WACC (p.21).

The basis for Sapere's independence assumption is not clear, and appears unexplored in the Sapere submission. However it is critical to their result. In particular, if there is negative covariance between the mark-up and the point estimate of WACC, then Sapere's conclusion could be reversed leading to a lower optimal percentile, *ceteris paribus*. This follows from the standard formula for the sum of the variance of two random variables

$$\text{Var}(X + Y) = \text{Var}(X) + \text{Var}(Y) + 2 \text{Cov}(X, Y)$$

If the covariance term is negative, the variance of the sum is smaller than the sum of the variances and could easily be smaller than either of the variances individually.

In the example at hand, X represents the (random) estimate of WACC and Y represents (a function of) the estimate of the spread of the distribution of WACC. Neither of these are known, which is why the regulator is estimating them. In the context considered by Sapere, both of these things are being estimated periodically.

The difficulty of course is that they are not being estimated statistically. There is consequently no specific estimator, and therefore statistical methods cannot be used to investigate the properties of the estimator, including the variance of its sampling distribution.

Indeed, the current process of further work on the WACC percentile can be viewed as trying to select an estimator. The legal structure of the input methodologies seems to point towards this being a one-time only choice. That is, once the WACC percentile is determined it is not expected to change.

Nevertheless, we can explore Sapere's independence assumption by undertaking a thought experiment in which the WACC percentile was re-selected each time the WACC was reset. In this context, would the WACC percentile be independent of the WACC?

Suppose for example that the point estimate of WACC was surprisingly high. Would the regulator take any account of that surprise when considering the percentile mark-up? A relatively modest mark-up is at least plausible and arguably appropriate in this context. Conversely, if the regulator's point estimate of WACC was surprisingly low, it might well use a broader estimate of spread leading to a higher mark-up in order to guard against under-funding the firm. This reasoning suggests a negative correlation between the WACC and the mark-up.

This is of course somewhat speculative. However it does indicate that the approach taken by Sapere, which pivots on there being independence between the estimate of WACC and the estimate of the mark-up, may be ill-founded. Certainly there is no empirical evidence that supports the Sapere assumption. There is also an intuitive argument for a negative correlation, the result of which could reduce, rather than increase, the variance of the sampling distribution around the final WACC allowance.

5 RAB Multiples

There are several criticisms of the RAB multiples analysis in the submissions under review. We look first at the CEG2 submission and then at the Incenta submission.

Before doing so, we note that the Sapere submission includes a nice explanation of the reason for RAB multiples greater than unity (section 7). Their submission uses simple algebra and the argument boils down to a very intuitive proposition: when the WACC allowance exceeds the true WACC, the RAB multiple will exceed 1. We fully agree. That indeed is the relevance of looking at RAB multiples.

5.1 CEG Arguments

The CEG2 submission on RAB multiples begins by claiming that the Commission has placed excessive weight on its (i.e. the Commission's) own work. The evidence CEG2 presents for this claim seems very weak to us. It amounts to quoting a perfectly reasonable question that the Commission posed in response to CEG's earlier submission. CEG could have addressed the question squarely but chose instead to argue that it's mere asking demonstrated that the Commission was being "*extreme*".

CEG then quotes the AER. Our reading of the quote is that the AER also considers RAB multiples to be relevant indicators of market conditions. It is true that the AER does not make use of RAB multiples directly in the determination of WACC. However the AER has considerably more flexibility than the Commerce Commission in making its WACC determinations. It is not bound by Input Methodologies, much less being required to determine Input Methodologies.

CEG goes on to discuss the various causes of a RAB multiple in excess of 1. These points are well understood and the Commission is aware of them already. As we noted in our second submission, and as is implied also by the Sapere argument cited above, the fact that multiples exceed 1 is sufficient to conclude that the WACC allowance is not too low.

The converse does not follow in our opinion. For example, poor performance by a CEO, poor decisions by Boards, or a failure to achieve economies of scale could all result in RAB multiples below 1 even if the WACC allowance exceeds the true cost of capital.

Nevertheless, as a general matter we do consider that observations over a period of time should carry more weight than single snapshots. If CEG's assertion that the observation of Vector's RAB multiple was atypical or even unique, then we would agree that it should either receive commensurately less weight in the Commission's decision making or that the Commission should utilise a more representative share price in order to calculate the RAB multiple.

5.2 Incenta Arguments

The Incenta submission argues using an analogy with regulated firms in the USA and Australia. It shows that regulated firms in these jurisdictions tend to have RAB

multiples of around 1.2 and suggests that by these standards the RAB multiples that have arisen under the Commerce Commission's 75th percentile setting do not look generous.

In our view this argument needs to be viewed in the light of an emerging regulatory regime in New Zealand as distinct from much more established processes in the USA and Australia. Investors in New Zealand are still becoming accustomed to being regulated and are likely to be somewhat wary while our regime beds in. There is a real sense in which we are yet to achieve the certainty goals of the input methodologies, and it would be natural for investors to reflect that in their valuations.

6 Conclusion

Our review of submissions has been necessarily brief. We have tried to focus on the issues of most relevance to the Commission. This has meant that some of the claims CEG1 made about our first report have not been addressed directly. For the record, we consider that CEG1 is wholly misleading and we accept none of its criticism.

We consider that none of the arguments discussed above contain evidence that should lead the Commission to reverse the view outlined in its proposed amendment.