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29 August 2014

Brett Woods
Regulation Branch
Commerce Commission
Wellington

Dear Brett,

Amendment to the WACC percentile cross-submission

Introduction

1. Vector welcomes the opportunity to provide this cross-submission on the Commerce Commission's (Commission) *Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services* (draft decision paper). No part of this submission is confidential.

2. This submission responds to the submissions of the Board of Airline Representatives of New Zealand (BARNZ), the Major Electricity Users' Group (MEUG) and the report by the New Zealand Institute of Economic Research (NZIER) on behalf of MEUG dated 29 August 2014.

3. Additionally, the attached expert report from Sapere Research Group, *WACC percentile – cross submission,* 12 September 2014 (Sapere cross-submission report), addresses the following reports:

   a) The Ireland, Wallace and Associates (IWA) analysis of RAB multiples; and

   b) The Covec report for BARNZ.

4. This submission does not respond to the NZIER report for MEUG dated 9 September 2014. That report provided new material outside of the standard submission timeframes and we understand the Commission has not yet decided whether to accept it as a submission. If the Commission does not accept it as a submission it cannot take account of its contents. If the Commission does accept the new report as a submission, the Commission must provide time for other parties to make cross-submissions on it.

Response to BARNZ

5. BARNZ argues that use of the 67th percentile would be inconsistent with the Part 4 purpose.[1] BARNZ does not clearly set out its preferred approach, however, the arguments in its submission appear to oppose any percentile above the mid-point. BARNZ's position is based on its view that:

   a) The Commission is required to "replicate" workably competitive markets and, in workably competitive markets, businesses often earn below a normal mid-point return. A percentile above the mid-point is, therefore, "excessively generous" and not consistent with workably competitive markets.

   b) The Commission has failed to place sufficient emphasis on certainty, contrary to the Part 4 purpose.

   c) Applying a total welfare approach is outside the parameters of, or inconsistent with, the Part 4 purpose, rather a solely consumer welfare approach is required.

6. As we explain below, BARNZ's suggestion that a percentile above the mid-point is "excessive" and contrary to the Part 4 purpose is without sound basis. Critically, BARNZ does not refer to the central reason for including an uplift, which is to address asymmetric social costs (for the benefit of consumers in the long term) in circumstances where a "true" normal return is not known. BARNZ's analysis is otherwise based on an erroneous interpretation of the Part 4 purpose.

Percentile above the mid-point is consistent with Part 4 purpose

7. The BARNZ position ignores the key reason for choosing a percentile above the mid-point, which is to address the asymmetric social costs associated with under compensation (in circumstances where a "true" normal return is not known). This is where, over the long term, the costs to consumers of under-compensation significantly outweigh the costs of over-compensation. Accordingly, consistent with the long term benefit of consumers, the Commission has sought to limit the risk of suppliers being under compensated by determining a percentile significantly above the mid-point.

8. As has been explained in numerous submissions and experts reports, a key issue in relation to WACC is that the true WACC cannot be known. Because the true WACC is unknowable, there is a risk for suppliers of over or under compensation. In order to reduce the risk of under-compensation, and

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[1] BARNZ, Submission *on proposed amendment to the WACC percentile for energy businesses*, 29 August 2014 (BARNZ submission).

therefore worse outcomes for consumers in the long term, a percentile significantly above the mid-point is selected.

9. The outstanding issue is the selection of a specific percentile significantly higher than the mid-point.

10. If BARNZ's position is correct (that any percentile above the mid-point is inconsistent with the Part 4 purpose), then the Commission's entire approach of considering how the percentile is used to address asymmetric social costs is misconceived. However, as the Commission sets out in the Draft Determination, the available evidence filed in the WACC IM consultation provides substantial support for using a WACC above the mid-point (in order to address asymmetric social costs) including from all of the Commission's expert advisors.[2] BARNZ has not provided any analytical or empirical evidence to support a position that these views on asymmetric social costs are wrong.

11. BARNZ otherwise misinterprets the Part 4 purpose as follows:

a) BARNZ incorrectly argues that Part 4 requires the Commission to "replicate" competitive markets. However, the Part 4 purpose requires the Commission to promote *the long-term benefit of consumers* by promoting outcomes consistent with outcomes in workably competitive markets *such that* (a) to (d) are achieved.[3] This is in the context of regulated markets, not competitive markets, where different factors and conditions will achieve outcomes (a) to (d) over the long term.

b) By way of example, unlike a competitive market, it is the regulator that determines the extent to which a supplier earns a normal return, rather than a range of temporary market conditions. For this reason, certainty is seen as critical to achieving the Part 4 objectives even though certainty is not necessarily a competitive market condition (inconsistently, BARNZ emphasises the importance of certainty in the regulatory context).

c) Further, in relation to the Part 4 purpose objectives, it is well accepted that:

i. To promote incentives to invest, regulated suppliers must be able to expect to earn at a least a normal return over the lifetime of the assets. This is because regulated suppliers are unable to adjust their returns in the short term to reflect the risk of not being able to achieve a normal return in the long term. BARNZ's reference to

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2 See for example, the Commission's Draft Decision at X17 where the Commission refers to support from: all of its expert advisors; a large number of submitters and expert reports provided by interested parties; and overseas regulators. Commerce Commission, *Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services*, 22 July 2014.

3 This is where Parliament has designated (a) to (d) as the specific requirements or objectives that must be achieved. As noted in the Explanatory Note to the Bill, (a) to (d) "spell out the requirements" for achieving the long-term benefit of consumers (at page 4).

temporary fluctuations in competitive markets (earning above or below normal returns) has no relevance to the broader purpose statement.

ii. As referred to above, the harm to consumers from under-investment is greater than the harm from over-investment. Addressing this asymmetry is clearly more consistent with promoting the purpose statement than an approach that does not address the asymmetry.[4]

iii. Relevantly, the asymmetry of social costs underpinned the policy decision to require the Commission to seek to "limit" rather than eliminate excess profits under objective (d) of the Part 4 purpose.[5]

12. To support its case, BARNZ cites at length comments made by the High Court. As has been comprehensively discussed throughout this consultation process, the High Court expressly stated that its comments were tentative and in-principle only and suffered from a lack of empirical evidence. In addition, as Vector and other submitters have previously set out, these tentative comments were, when considered further, not soundly based.

13. In the context of BARNZ's submission, Vector emphasises that:

a) The High Court did not reach a view that addressing asymmetric social costs was contrary to the Part 4 purpose. To the contrary, the High Court recognised the Commission's view was understandable, and ultimately determined that a mid-point WACC as proposed by MEUG would not be materially better at meeting the Part 4 purpose.

b) In any event, as Vector has previously submitted, it is wrong to suggest a point above the mid-point estimate provides an expectation of excess returns. As the Commission accepts, it is the expectation of a normal return that will provide incentives to invest. Selecting a point above the mid-point provides greater confidence that the regulatory settings allow for a normal return and reduces the risk of under-compensation.[6] To suggest a higher percentile provides for excess returns mischaracterises the conceptual basis for selecting a percentile.

c) The Commission has tested the Court's tentative comments in the current consultation process and the analysis and evidence provided has only further confirmed that the Court's comments in this respect were not well founded.[7]

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4 See paragraph 8 above which refers to the weight of evidence in support of this position.

5 For example see Ministry of Economic Development, *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document*, April 2007 para 87.

6 Vector emphasises that even at the 75th percentile, there is a likelihood that the WACC IM does not provide for a normal return.

7 See paragraph 8 above.

Mid-point is not the best estimate of WACC

14. It is worth remembering that the assumption that the mid-point is the best estimate of WACC is not well founded. The mid-point can only be the best estimate if the distribution of WACC is normally distributed, which is not known to be the case. In particular, as the Commission is aware, the simplified Brennan-Lally Capital Asset Pricing Model under-states returns for low-beta stocks, thus implying that the mid-point estimate is itself too low.

15. Importantly, the best estimate of the cost of capital need not lie at the centre-point of a range; setting a WACC at a higher percentile might simply reflect the fact that a chosen WACC parameter range was not symmetrically or evenly distributed.

Certainty and incentives to invest

16. Vector agrees that certainty is central to promoting incentives to invest under Part 4. BARNZ, however, argues that the certainty created by the IMs is sufficient to provide incentives to invest under Part 4, and that "allowing for excess returns" is inappropriate. In response, Vector submits as follows:

    a) While certainty is a key factor in providing incentives to invest, expectations of earning at least a normal return are also critical. A percentile above the mid-point is not for the purpose of "allowing excess returns" rather it reduces the risk of under-compensation, and therefore, the related risk of under-investment (taking account of the asymmetric social costs). (As explained above, BARNZ's reference to excess returns mischaracterises this basis for determining a WACC percentile above the mid-point.

    b) Further, rather than achieving certainty over time, the Commission's approach in the Draft Determination creates considerable uncertainty about the future operation of the regime. This is where the Commission has, contrary to the legislative framework:

        i. approached an existing input methodology "afresh";

        ii. undertaken a substantive amendment outside the IM review process; and

        iii. again exercised judgement without reference to its previous decision and in the absence of empirical evidence.

    These issues are explained in further detail in Vector's submission of 29 August 2014.[8]

[8] Vector, *Submission on Draft Determination not amend the WACC percentile*, 29 August 2014, paras 9 to 105 and 112 to 117.

Total welfare approach and consumer welfare approach

17. BARNZ argues that the Commission should consider only the consumer welfare approach because Parliament rejected a purpose statement that focused "only on improving efficiency" and a total welfare approach is based solely on economic efficiency. However, as explained below, BARNZ's interpretation is not consistent with the words of the Part 4 purpose, nor it is supported by the policy material cited.

18. The Commission's position in the Draft Determination is that the consideration of both total welfare and consumer welfare approaches is relevant to the Part 4 purpose. Vector agrees that both concepts are relevant, although in our submission of 29 August 2014 we stated that the Commission should set also out how total welfare and consumer welfare approaches are to be balanced when the Commission assesses expected outcomes against the Part 4 purpose. Vector further explained that, if the Part 4 purpose had been applied properly and consistently with the Commission's own approach to the Part 4 purpose, some aspects of total welfare would carry greater weight in this balancing exercise because of the importance of dynamic efficiency for the long term benefit of consumers.[9]

19. Vector agrees that the economic concepts of total and consumer welfare are relevant as a guide to measuring and categorising the effects that would result from changes to the WACC IM. Consideration of total welfare in addition to consumer welfare is necessary in order to promote the Part 4 purpose for the following reasons:

    a) The Part 4 purpose is neither a total welfare nor a consumer welfare test. Rather, the Commission is required to promote the long-term benefit of consumers by promoting outcomes consistent with workably competitive markets such that outcomes (a) to (d) are achieved. Of the possible range of workably competitive market outcomes, Parliament designated (a) to (d) as the specific requirements or objectives that must be achieved. The reference to "consumers" in the phrase "the long-term benefit of consumers" does not require a solely consumer welfare approach. Rather, the long-term benefit of consumers requires the outcomes in (a) to (d) to be achieved so that consumers are better off in the long term both directly and as members of a society in which overall welfare is increasing.

    b) Critically, use of a consumer welfare approach alone would be contrary to the Part 4 purpose, as it does not recognise broader dynamic efficiency outcomes that are necessary to achieve objective (a). In particular, a consumer welfare benefit test on its own would allow for under-recovery over the life of the assets as it considers consumer benefits only and,

[9] Ibid at paras 106 to 110.

accordingly, would not promote incentives to invest (which require an expectation of earning at least normal returns), nor incentives to innovate. This is contrary to (a) and, ultimately, contrary to the long term benefit of consumers. A total welfare approach is also required and, as we have previously submitted, properly applying the purpose statement, would carry greater weight

20. BARNZ states that the use of a total welfare approach "has been rejected by Parliament" with reference to extracts from policy materials. However, the policy material referred to by BARNZ does not in any way support this proposition. The relevant material cited refers to the policy decision to include (a) to (d) rather than efficiency objectives only and, in a similar vein, to the relevance of "both efficiency and distributional objectives". As explained above, to the extent welfare approaches are under consideration as they are here, Part 4 requires consideration of both a total welfare and consumer welfare approach (with total welfare carrying more weight).

21. Finally, BARNZ argues that that Commission has failed to apply a solely consumer welfare approach, and that, if it did, the percentile would be lower than the 67th percentile set out in the draft decision. However, while the Commission stated that both total welfare and consumer welfare approaches were relevant, it has erroneously considered consumer welfare only, which for the reasons above, is contrary to the Part 4 purpose. This is explained in further detail in our submission on 29 August 2014. Thus BARNZ is incorrect.

Response to MEUG

22. MEUG's submission makes some strong statements which do not appear to be supported by the reports of MEUG's experts. In particular:

    a) MEUG states that NZIER's analysis "suggests the Oxera estimate could overstate loss by as much as 1000%".[10] We have been unable to locate this finding in either of NZIER's reports.

    b) MEUG argues that the RAB multiples analysis "strongly suggests a persistent bias of error associated with the regulatory WACC but in the wrong direction. The empirical evidence suggests that it is so generous the primary regulatory concern now should be to find ways to mitigate the extraction of excessive profits, to reinstate normal pressure for innovation and to protect the dynamic efficiency of users".[11] These are strong words. We would expect to see similarly strong evidence to back them up but have been

[10] MEUG, *Submission on proposed amendment to WACC percentile*, 29 August 2014 (MEUG submission), paragraph 17.

[11] MEUG submission, paragraph 16.

unable to find such evidence in MEUG's expert reports. While Ireland, Wallace and Associates (IWA) argue the RAB multiples are even higher than the Commission believes, the attached Sapere cross-submission report demonstrates this analysis is flawed and (as noted below) NZIER do not believe weight should be placed on this evidence. Nor do IWA demonstrate that the RAB multiples they have calculated are due to the WACC that is applied, instead they acknowledge "[t]here are many other reasons why in practice the RAB multiple may vary from 1".[12]

Response to NZIER's 29 August report

23. NZIER's report for the Major Electricity Users' Group (MEUG)[13] is a (lengthy) statement that they are not persuaded by the theory or empirical evidence they have read in this process. However, they do not appear to provide any substantive evidence of their own.

NZIER support further analysis being undertaken

24. NZIER's key recommendation appears to be that the Commission should take a different approach to its analysis (NZIER put forward some suggestions) and until this analysis is done the mid-point percentile should be used.

25. Vector would not be opposed to the Commission doing further analysis to refine its assessment of the appropriate percentile; indeed in our submission we recommended changes that should be made to the analysis conducted by Oxera. However, we are not convinced that NZIER's approach has merit.

26. In any case, it does not appear feasible to complete the additional analysis suggested by NZIER in time for a new WACC percentile to be determined prior to the price reset decisions for Transpower and EDBs. If the Commission did accept NZIER's recommendation to do additional work, we see no evidence to support a proposition that the mid-point should apply while that additional work is done. The majority of experts have supported setting the WACC at above the mid-point estimate.

27. It also appears to us that NZIER may be setting a standard for "evidence" that they would find persuasive that is simply impossible to meet and their aim is to use this uncertainty to have the Commission set the WACC at the mid-point and leave it there permanently, as the evidence they are seeking cannot be obtained.

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[12] Ireland, Wallace and Associates Limited, *Commerce Commission's Proposed Amendment to the WACC Percentile for Electricity Lines Services and Gas Pipeline Services dated 22 July 2014: Report to Major Electricity Users' Group*, 29 August 2014, paragraph 2.14.

[13] NZIER, *Changing the WACC percentile*, 29 August 2014 (NZIER August report).

NZIER critique of Oxera's analysis

28. A key criticism of the Commission's analysis made by NZIER is that it (and, in particular, the Oxera report[14] relied on by the Commission) uses data from the United States that is "not similar to" New Zealand network data. NZIER's conclusions appear to be that there is less need for major new investment in New Zealand electricity networks, and that New Zealand electricity networks are more reliable than their US counterparts. Even if these points are true we are not sure that they are relevant:

    a) Where investment needs are lower it would be expected that investment rates will be lower, irrespective of the WACC. However, some investment will continue to be needed and the WACC will need to be set at a rate that incentivises such investments. An approach of reducing the WACC at times of lower investment requirements and increasing the WACC at times of higher investment requirements (which appears to be where NZIER's argument is heading) would create considerable uncertainty and thus be diametrically opposed to the purpose of input methodologies. It would also not incentivise investment even when the WACC is higher as firms would reasonably expect the WACC to be lowered again in the medium term.

    b) Oxera seeks to estimate the cost of interruptions. Oxera notes that "the VoLL for New Zealand seems typical of that for other countries, [so] it is reasonable to use estimates from studies of international outage costs as a first-order proxy to approximate the total cost implied by a power outage in New Zealand".[15] A view that interruptions are less likely to occur in New Zealand than in the United States does not invalidate this analysis as the probability of interruptions does not directly tell us anything about the cost of an interruption when it occurs.

29. In support of their view that investment needs in New Zealand are relatively low, NZIER includes a table showing low peak demand growth in New Zealand over time.[16] However, this is a measure of coincident system peak demand and is not a useful measure of investment needs. Coincident system peak demand does not usefully describe adjustments in expenditure as it is constraints or new capacity requirements at a localised level, rather than at the network-wide level, that drive expenditure. Non-coincident system peak demand will better reflect growth in demand across networks over time. Vector has previously recommended[17] to the Commission that it amends its information disclosure determinations to require disclosure of non-coincident peak demand rather than coincident peak demand for this reason.

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[14] Oxera, *Input methodologies: Review of the '75th percentile' approach*, 23 June 2014 (Oxera report).

[15] Oxera report, page 43.

[16] NZIER August report, page 11.

[17] Letter from Ian Ferguson to John McLaren, *Improvements to the IDDs*, 11 February 2014, page 4.

30. Additionally it is worth noting that Oxera does not solely rely on United States data. For example:

a) Oxera uses data from NZIER on the elasticities of demand for commercial and industrial customers;[18]

b) Oxera uses data from Statistics New Zealand on the impact of an increase in electricity prices on input costs for different industries;[19]

c) Figure 5.2 of Oxera's report summarises studies on the cost of power outages in the United States, Canada, Europe, Australia and New Zealand; and

d) While Table 5.1 of Oxera's report does mostly utilise studies from the United States, events in Canada and Austria are also covered and Table 5.2 discusses network failures related to under-investment in Africa and India as well as North America.

Where Vector agrees with NZIER

31. Vector agrees with NZIER that total and consumer welfare approaches "both matter"[20] and that the Commission places "too much reliance" on a small number of observations of enterprise values and that the RAB multiples analysis "should not be relied upon to support a quantitative decision".[21]

Some information presented by NZIER could suggest the WACC is too low

32. NZIER express surprise that network companies have invested less than the Commission's forecasts of their expenditure. However, they do not ask the obvious question of whether this may be evidence that the current 75th percentile estimate is too low.

33. Despite their view that United States network data is not relevant, NZIER rely on United States research that systematic under-investment occurs even after the rate of return is increased.[22] While this may imply, as NZIER suggest, that there is a seeming dis-connect between return on investment and rates of investment, a simpler explanation would be that even the relatively higher rates of return in the United States are too low to stimulate investment. What NZIER do not consider is the risk that the apparent under-investment problem could have been even worse if a lower rate of return had been used.

[18] Oxera report, page 34.

[19] Oxera report, page 37.

[20] NZIER August report, page 6.

[21] NZIER August report, pages 20-21.

[22] NZIER August report, page 28.

Vector Technology has been mis-interpreted

34. Finally, NZIER questions whether firms providing natural monopoly services have incentives to innovate except where products are not regulated. Their only reference for this claim is: "An illustrative case in point is Vector Technology where [Vector] locate and manage their investments and innovations in network utility".[23] However, this reference is simply wrong. The segment called "Technology" in Vector's annual report comprises Vector's electricity and gas metering businesses and Vector's fibre/communications business as is clear from our Annual Report.[24] Investments and innovations within our network businesses – for example, our outage manager app – are within the Electricity segment or the Gas Transportation segment; they are not part of the Technology segment.[25]

Contact details

35. If you have any queries in regard to this submission please contact me in the first instance on 09 978 8340 or at allan.carvell@vector.co.nz.

Yours sincerely,

Allan Carvell
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[23] NZIER August report, page 31.

[24] Vector Limited Annual Report 2014, pages 16-17 and the Segment Information section on page 50: https://www.nzx.com/files/attachments/198986.pdf

[25] Also, for completeness, we do not operate a business called Vector Technology.