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Brett Woods
Regulation Branch
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Dear Brett,

Further WACC percentile cross-submission

Introduction

1. Vector welcomes the opportunity to provide further cross-submissions into the consultation process on amending the WACC percentile.

2. This cross-submission responds to the new material provided by NZIER on behalf of MEUG, in its reports *Valuing investments in network reliability*, dated 9 September 2014 (NZIER 9 September Report) and *The WACC uplift question*, dated 12 September 2014 (NZIER 12 September Report). There is substantial overlap between these two reports so this submission responds to them jointly.

3. We will provide a further cross-submission on the other new material by 30 September. However, given the tight timeframes for this consultation process, we thought it would be helpful to the Commission to provide this response to the NZIER reports early.

Overview of our comments

4. In our view the new NZIER reports are not robust because one or both of them:

   a) Are premised on an incorrect interpretation of the intent of the WACC percentile;

   b) Overlook the most significant costs of under-investment;

   c) Use data that is not publicly available and cannot be reconciled to data that is publicly available;

d) Misunderstand the information disclosure data which means that it has mis-interpreted that data; and

e) Generally make statements that cannot be substantiated.

5. We expand on these points below.

NZIER mis-characterises the intent of the WACC percentile

6. NZIER discusses "how additional investment could **improve** the reliability of the network" and states that the information presented in the September report "provides a starting point to consider whether additional EDB investment or other measures would be effective in **improving** network reliability."[1] [emphasis added]

7. This is clearly addressing the wrong question. The Part 4 regulatory regime, of which the WACC is a key part, does not seek to **improve** network reliability. Based on consumer studies that indicate consumers are mostly not willing to pay more for a better level of service, the current regulatory settings seek to deliver "no material deterioration" in service quality. While the Commission has proposed to introduce a revenue-linked incentive scheme for quality from 2015, the low power of that scheme and its symmetrical nature suggest the aim remains to retain reliability at current levels on average. A scheme that sought to increase reliability would increase prices and there is no sign that consumers are willing to pay for such an outcome.

8. NZIER then goes on to identify causes of Class C outages and queries whether more investment (as could be stimulated by a higher WACC) could help prevent them.[2] It is true that there are causes of interruptions that have a close relationship with expenditure and there are causes of interruptions that do not have a close relationship with expenditure. However, as discussed above, the aim of EDB investments is to maintain current levels of reliability. Under current regulatory settings EDBs would not seek to invest to avoid outages caused by events like lightning strikes any more than they currently do. But the risk with reducing the WACC percentile is that the rate of more preventable outages increases. NZIER's analysis does not address this risk and is therefore not relevant.

NZIER overlooks the most significant costs of under-investment

[1] NZIER 9 September report, page 5. NZIER 12 September report, page 8.

[2] NZIER 9 September report, page 6-7. NZIER 12 September report, pages 9-11.

9. A key aim of the new NZIER reports seems to be to calculate some form of VoLL estimate for different customer classes based on observed outages in New Zealand in a recent year or years.[3] However, as many of the expert reports have set out, the most significant cost of under-investment is likely to be a major failure of supply with a substantial cost to the economy. Such a cost of underinvestment may well not show up as a noticeable increase in outages and hence would not be captured by NZIER's analysis.

10. For example, Orion's investments to make its network more resilient in the face of earthquakes may not have materially improved their SAIDI or SAIFI, but made a significant difference to consumer outcomes when the Canterbury earthquakes occurred. NZIER's analysis would not reflect the value of such investments.

11. Therefore we do not consider that this analysis is relevant.

NZIER uses data that is not publicly available and is contradicted by publicly available data

12. Table 2 in each of the new NZIER reports relies on data that appears to be drawn from a VoLL survey they completed in 2012 for the Electricity Authority (EA), which has never been published. NZIER reference an EA report which does mention the 2012 survey, but this EA report only provides the outcomes of an earlier (2010) survey.[4] Thus there is no publicly available reference document that supports the data being presented and parties have not had the opportunity to critique this information. On that basis, we do not think weight can be placed on the data that is presented here.

13. We also note that the numbers provided in Table 2 of each of the new NZIER reports do not seem to line up with the published numbers in the 2012 EA VoLL report (which refer to the earlier 2010 VoLL survey). For example, Table 2 states the value of an outage to residential consumers is $6.08 per (one hour?) outage. However, Footnote 2 of the EA VoLL report states that the cost of an eight hour outage to Auckland residential consumers was $287.52, and the VoLLs for consumers surveyed in other regions were higher than this. Thus data that is publicly available casts some doubt on the information presented in Table 2.

14. Additionally, NZIER states that large commercial and industrial consumers "place a high value on outages and (generally but not always) have standby

[3] NZIER 9 September report, page 9. NZIER 12 September report, page 15.

[4] NZIER 9 September report, footnote 8. NZIER 12 September report, footnote 23. Electricity Authority, *Investigation into the Value of Lost Load in New Zealand, Report on methodology and key findings*, 23rd July 2013 (EA VoLL report).

generation capability to cover the outage event".[5] However, paragraph C48(e) of the EA VoLL report says:

> *despite the potential cost and reputational damage of outages, relatively few organisations were found to have invested in alternative energy supplies. Out of the 33 organisations interviewed, whilst 17 had invested in alternative supplies, only five had the ability to cover more than 50% of their respective loads*

15. This text refers to the 2010 VoLL survey rather than the 2012 VoLL survey, but it seems improbable to us that the situation would have materially changed over the two-year period. The quote above appears more credible as it is broadly in line with Vector's experience of major users on our network – some but not all large consumers on our network have some form of back-up capability to cover essential services, but only a few have sufficient back-up to operate fully during network interruptions.

NZIER misunderstands information disclosure data

16. The NZIER 9 September report identifies that EDB capex disclosed as being in the "reliability, safety and environment" category is a relatively small amount of total capex.[6] Their logic is not spelled out but seems to be that: (a) an uplift to WACC is justified to fund reliability investments; and (b) most EDB capex is not related to reliability; therefore (c) a WACC uplift that is applied to all assets is a poor way to incentivise investment.

17. There are several issues with this analysis. Firstly, it is not only investments in reliability that deliver benefits to consumers. Investments in system growth provide supply (at standard network levels of reliability) to new consumers and any consumers that may have growing demand. If these investments are not made, new consumers may not be able to access energy supplies or, in doing so, may adversely impact on the security and reliability of supply available to existing customers. System growth investments also need to achieve a commercial return before EDBs will make them and thus a sufficiently high WACC is required to incentivise expenditure for reasons other than reliability.

18. Secondly, NZIER has mis-interpreted the information disclosure data it uses. Just because there is a category called "reliability, safety and environment" does not mean EDBs disclose all capex related to reliability in that category. In fact, all expenditure in the Asset Replacement and Renewal category delivers reliability benefits to consumers.

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[5] NZIER 9 September report, page 10. NZIER 12 September report, page 16.

[6] NZIER 9 September report, pages 7 and 13.

19. NZIER's confusion has probably arisen because they are unaware of the way the capex categories are defined in the Information Disclosure Determinations. As the Commission will be aware, the subcategories of reliability, safety and environment capex are defined as expenditure where the "primary driver" is the need to improve quality of supply, meet legislative or regulatory obligations, or to otherwise improve network reliability, safety or environmental impact.[7] Thus any capex project that has reliability benefits but for which the *primary driver* does not meet these definitions would not be disclosed in this category.

20. Similarly, NZIER identify what seems to be a low value of expenditure on vegetation management being disclosed by EDBs in 2013.[8] However, 2013 was the first year in which the new information disclosure requirements applied and there was a specific transitional provision that stated that vegetation management opex did not need to be separately disclosed in that year.[9] Thus the disclosed value of vegetation management opex in 2013 will not reflect actual EDB expenditure on vegetation management.

NZIER overlook evidence supporting a higher WACC

21. NZIER also claim that there is no evidence that the outcome from WACC mis-estimation is an asymmetric loss.[10] We refer NZIER to the expert reports prepared by Oxera and Sapere[11] which provide clear evidence that the cost to consumers of under-estimating the WACC is likely to be much higher than the cost to consumers of over-estimating the WACC.

22. Finally, NZIER conclude, summarising their analysis in the NZIER August report:[12]

> *Based on our brief examination of empirical data of network investment and performance here in NZ we suggested that … despite the incentive of the 75th percentile, regulated networks appear to under-invest anyway (in the same way as they do in the US)…*

23. In our view this seems to be a strong argument that the current 75[th] percentile WACC is too low and the Commission should, if anything, consider

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[7] Electricity Information Disclosure Determination 2012, clause 1.4.

[8] NZIER 9 September report, page 7.

[9] Electricity Information Disclosure Determination 2012, clause 2.12.5(8)(b).

[10] NZIER 9 September report, page 11.

[11] Oxera, *Input methodologies: Review of the '75[th] percentile' approach*, 23 June 2014. Sapere Research Group, Setting the WACC percentile for Vector's price-quality path, 5 May 2014.

[12] NZIER 9 September report, page 14.

increasing the WACC to mitigate the under-investment problem NZIER claim to have identified.

Conclusion

24. Thus, in our view, the analysis put forward by NZIER in its new September reports is either based on a mischaracterisation of the issue at hand, or is based on unavailable or misinterpreted data. Also, as NZIER acknowledges,[13] the September reports do not provide advice on what the appropriate WACC percentile should be. As a result, the Commission should place little or no weight on these reports in its consideration of the appropriate WACC percentile.

Contact details

25. 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,

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[13] NZIER 9 September report, page 13.