

Further work on cost of capital input methodologies: Invitation for submissions on further evidence

Date: 19 September 2014

Purpose of this paper

1. This paper invites submissions on further evidence on three topics relating to our current review of the weighted average cost of capital (WACC) percentile to be applied to electricity lines and gas pipeline services.¹ Specifically, we are inviting submissions on the following further evidence.
 - 1.1 A report prepared by Professor Ian Dobbs commenting on the August 2014 Frontier Economics submission (on behalf of Transpower).² The Frontier Economics report contains analysis of the optimal WACC percentile, based on an amended version of a model published by Professor Dobbs in 2011.
 - 1.2 Further information that may be relevant to our RAB multiples analysis, being:
 - 1.2.1 further information regarding the sale of two electricity distribution businesses, which was not referred to in our draft decision, which could be used to estimate additional regulatory asset base (RAB) multiples; and
 - 1.2.2 further information presented by Ireland, Wallace & Associates (IWA) (on behalf of MEUG) on implied RAB multiples for Horizon Energy.
 - 1.3 Information, which could be considered to be new material, raised in the Major Electricity Users' Group's (MEUG) cross-submissions, being:
 - 1.3.1 two reports from NZIER, on behalf of MEUG, which contain analysis regarding the link between investment and network reliability, and the value to consumers of supply interruptions and reliability investment; and
 - 1.3.2 the Franks & Ogilvie advice that was attached to MEUG's 12 September 2014 cross-submission.

¹ Our draft decision on the proposed amendment to the WACC percentile was released on 22 July 2014. Commerce Commission "Proposed amendment to the WACC percentile for electricity lines services and gas pipeline services" (22 July 2014).

² Ian M Dobbs "Proposed amendment to the WACC percentile for the allowed rate of return: Comments on the application of the Dobbs [2011] model" (17 September 2014).

2. We are inviting submissions on the further evidence referred to in this paper only. Any material submitted on other topics, which are not specifically referred to in this paper, will not be considered in our final decision on the WACC percentile for electricity lines and gas pipeline businesses.
3. Submissions on the further evidence referred to in this paper are due by **5pm on Tuesday 30 September 2014**. We do not intend to provide an opportunity for cross-submissions. In deciding on the timeframe for submissions on this further material, we have taken into account the amount of material and the overall timeframe for our decision on the WACC percentile.

Professor Dobbs' review of the Frontier Economics submission

4. In response to our draft decision, Frontier Economics provided a submission (on behalf of Transpower) which investigated the optimal WACC percentile for regulated electricity networks.³ The analysis contained in Frontier Economics' submission was based on an amended version of a model published by Professor Dobbs in 2011.⁴
5. Frontier Economics has now developed a user-friendly version of its model, utilising a Microsoft Excel user interface.⁵ The user-friendly version of the Frontier Economics model is available at: <http://comcom.govt.nz/publicassets/Frontier-Economics-Loss-Model-110914.zip>.
6. We sought Professor Dobbs' views on the Frontier Economics submission given that it builds on the analytical framework he originally developed. Specifically, we asked Professor Dobbs to review the Frontier Economics submission (including the associated model) and provide views on:
 - 6.1 whether Frontier Economics has correctly interpreted and applied the framework used in the 2011 Dobbs paper;
 - 6.2 the reasonableness of the assumptions Frontier Economics used when recalibrating the 2011 Dobbs model to reflect New Zealand electricity lines services; and
 - 6.3 the validity of Frontier Economics' conclusions, in light of what the 2011 Dobbs model was intended to address.

³ Frontier Economics "Application of a loss function simulation model to New Zealand: A report prepared for Transpower" (August 2014).

⁴ Dobbs I.M., 2011, Modelling welfare loss asymmetries that arise from uncertainty in the regulatory cost of finance, *Journal of Regulatory Economics*, 39(1) 1-29.

⁵ The model engine is written in the 'R' statistical programming language. Further details regarding Frontier's model implementation are contained in Appendix B (pages 27-28) of its August 2014 submission.

7. We also asked Professor Dobbs to consider two earlier papers which commented on his original 2011 model in the context of our current review of the WACC percentile:
- 7.1 the June 2014 advice from Dr Martin Lally regarding the appropriate WACC percentile;⁶ and
 - 7.2 the May 2014 submission from NZIER (on behalf of the MEUG).⁷
8. While Professor Dobbs notes that the model can explain why significant uplift to the WACC might be justified, he cautions against using the model as a quantitative guide to the best choice of percentile to set for the allowed WACC. Professor Dobbs also highlighted some key inputs where further sensitivity testing of the Frontier Economics model would be beneficial, including:
- 8.1 the value for maximum willingness to pay (or ‘choke price’);⁸
 - 8.2 the likely shape of the demand curve, including assuming linear demand instead of constant elasticity of demand;⁹
 - 8.3 using different demand elasticity values for existing and new investment (in particular, assuming demand for new investment is more elastic than for existing investment);¹⁰ and
 - 8.4 the proportion of fixed and variable costs.¹¹
9. Interested parties are invited to provide submissions responding to the issues raised in Professor Dobbs’ report, including in relation to any sensitivity testing we should consider when reviewing the Frontier model. Professor Dobbs’ report is now available on our website.¹²

⁶ Martin Lally “The appropriate percentile for the WACC estimate” (19 June 2014).

⁷ NZIER “Review of evidence in support of an appropriate WACC percentile: Response to Commission invitation of 31 March 2014” (May 2014), section 3.1, pages 11-21.

⁸ Ian M Dobbs “Proposed amendment to the WACC percentile for the allowed rate of return: Comments on the application of the Dobbs [2011] model” (17 September 2014), paragraphs 55 and 75.

⁹ Ian M Dobbs “Proposed amendment to the WACC percentile for the allowed rate of return: Comments on the application of the Dobbs [2011] model” (17 September 2014), paragraph 75.

¹⁰ Ian M Dobbs “Proposed amendment to the WACC percentile for the allowed rate of return: Comments on the application of the Dobbs [2011] model” (17 September 2014), paragraph 47.

¹¹ Ian M Dobbs “Proposed amendment to the WACC percentile for the allowed rate of return: Comments on the application of the Dobbs [2011] model” (17 September 2014), paragraph 43.

¹² <http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/further-work-on-wacc/>.

Further information that may be relevant to our RAB multiples analysis

Further information regarding the sale of OtagoNet and The Lines Company

10. Following our draft decision, we are now aware of two additional transactions relating to electricity distribution businesses which could provide additional data points when analysing RAB multiples. These two transactions relate to the sale of:
 - 10.1 Marlborough Lines' controlling stake in OtagoNet to Electricity Invercargill and The Power Company, which was announced on 2 September 2014;¹³ and
 - 10.2 King Country Electric Power Trust's (KCEPT's) shares in The Lines Company to Waitomo Energy Services Consumer Trust (WESCT) in December 2013.
11. Regarding the OtagoNet transaction, Electricity Invercargill and The Power Company paid \$152.82 million for Marlborough Lines' 51% share in OtagoNet's distribution network and related contracting business.¹⁴ Prior to this transaction, Electricity Invercargill and The Power Company each owned a 24.5% share of OtagoNet (with Marlborough Lines owning the remaining 51%).¹⁵
12. The December 2013 sale of KCEPT's shares in The Lines Company was mentioned by PwC in its recent submission on behalf of Vector. PwC noted that:¹⁶
 - 12.1 it acted as an advisor to the vendor for this transaction;
 - 12.2 the amount of the transaction is confidential; and
 - 12.3 using the approach adopted by the Commission when assessing the RAB multiples for Powerco and Vector, the assets "...were transacted at a substantial discount to RAB".
13. Some information is publicly available on The Lines Company transaction. Specifically, The Lines Company's 2014 annual report notes that KCEPT sold its 10% share to WESCT for \$13.5 million.¹⁷ Details regarding The Lines Company's debt is also available in its annual report.
14. These transactions appear to be relevant to the RAB multiples analysis we have conducted to date.

¹³ The cross-submission from Ireland, Wallace & Associates (IWA), on behalf of MEUG, estimates the RAB multiples implied by the OtagoNet transaction. IWA "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 for Cross Submission" (12 September 2014), pages 6-8.

¹⁴ Energy News "Marlborough Lines sells out of OtagoNet JV" (2 September 2014).

¹⁵ See the following website for further details regarding the OtagoNet joint venture:
<http://www.otagonet.co.nz/index.php?pageLoad=2>

¹⁶ PwC "Rationale for transaction premiums to RAB value" (26 August 2014), page 2.

¹⁷ The Lines Company "2014 annual report", page 57.

IWA report to MEUG on implied RAB multiples for Horizon Energy

15. MEUG's 12 September cross-submission attached an IWA report containing further evidence about implied RAB multiples for Horizon Energy.¹⁸
16. This further evidence appears to be relevant to the RAB multiples analysis we have conducted to date.

We invite submissions on the further RAB multiples analysis

17. We therefore invite submissions containing any further contextual evidence regarding the RAB multiples evidence described above, which will assist us in determining what weight to place on this further evidence.

NZIER cross-submissions on behalf of MEUG

18. NZIER made two cross-submissions on behalf of MEUG, one dated 9 September 2014¹⁹ and one dated 12 September 2014.²⁰ There was considerable overlap between the two reports. Both reports are available on our website.²¹
19. NZIER's cross-submissions on behalf of MEUG included some information that, while responding to the issues of the impact of investment on reliability and the value of reliability which were raised in submissions, may be considered to be new material. This potentially new material includes NZIER's approach to:
 - 19.1 examining how investment might improve network reliability; and
 - 19.2 estimating the value to consumers of supply interruptions and reliability investment.
20. We have also received requests from other interested parties for the opportunity to submit on the NZIER reports.
21. Consequently, in the interests of providing an open consultation process, we have decided to allow interested parties to submit on:
 - 21.1 NZIER's 9 September 2014 report to MEUG;²² and
 - 21.2 the material contained in sections 2.3 and 2.5 of NZIER's 12 September 2014 report to MEUG.²³

¹⁸ IWA "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 for Cross Submission" (12 September 2014).

¹⁹ NZIER "Valuing investments in network reliability: An approach to estimating the value of reliability in electricity networks subject to WACC IM" (9 September 2014).

²⁰ NZIER "The WACC uplift question: A brief review of the balance between intuition and evidence supporting the WACC uplift" (12 September 2014).

²¹ <http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/further-work-on-wacc/>.

²² NZIER "Valuing investments in network reliability: An approach to estimating the value of reliability in electricity networks subject to WACC IM" (9 September 2014).

Franks & Ogilvie advice to MEUG

22. MEUG's 12 September 2014 cross-submission also attached legal advice from Franks & Ogilvie.²⁴ Again, parties have requested the opportunity to submit on the material raised in the Franks & Ogilvie advice.
23. We have decided to allow interested parties to submit on the Franks & Ogilvie advice.

²³ NZIER "The WACC uplift question: A brief review of the balance between intuition and evidence supporting the WACC uplift" (12 September 2014).

²⁴ Franks & Ogilvie "Commerce Commission review of WACC percentile – Specific legal issues arising from submissions" (12 September 2014).