



# MAJOR ELECTRICITY USERS' GROUP

13 August 2004

Mr Paolo Ryan  
Gas Pipeline Inquiry  
Commerce Commission  
PO Box 2351  
WELLINGTON

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Dear Paolo

## **Cross-submission following Gas Control Inquiry conference**

1. Two topics are covered in this cross-submission on matters covered at the Commerce Commission Gas Control Inquiry conference and in the report prepared by Professor Martin Lally on US electric utilities asset beta released by the Commission on 21 July 2004 (released by the Commission with a request for comments as part of cross-submissions). The two topics are:
  - a) Asset beta; and
  - b) Accounting for asymmetric risk and the percentile of the WACC range.

### **Asset beta**

2. The draft Gas Control Inquiry report of 21 May 2004 made various assumptions regarding values of the parameters to be used in the WACC. The MEUG submission of 2 July disputed references in the draft Inquiry report to an asset beta of 0.4 having been adopted for the NZ electricity lines businesses.
3. On 21 July, the day before the Commission conference began, the Commission circulated a paper prepared by Professor Martin Lally, "*The Estimation of the Asset Beta of US Electric Utilities*," 20 July 2004. MEUG undertook at the Commission conference to make a submission on this paper.
4. The 20 July 2004 Lally paper is consistent with the 4 August 2003 Lally paper (released with the Commerce Commission report, "*Regulation of ELB Targeted Control Regime – Draft Assessment and Inquiry Guidelines (Process and Analytical Framework)*", 7 August 2003) in suggesting an asset beta for US electric utilities of 0.3.

5. In regard to asset beta MEUG make three points:
- There is a significant difference between the data used by Lally based on Damodoran and the internationally recognised Ibbotson Associates data;
  - Recent Ibbotson Electric Services asset beta estimates are materially below Lally's 0.3; and
  - Ibbotson publish Natural Gas Distribution asset beta and those estimates are also materially below those estimated by Lally.

The following paragraphs discuss these in detail.

6. Ibbotson Associates is an internationally recognised specialist valuation company. The Ibbotson methodology and application are transparent and is available from 1996. Attached is an extract from the Ibbotson Associates "*Cost of Capital 2004 Yearbook*" providing further information on how asset beta are calculated. The Ibbotson Associates website also has similar information (refer [www.ibbotson.com](http://www.ibbotson.com)). The comprehensive nature of the Ibbotson data is illustrated in their estimation of the asset beta for 287 US utility companies (SIC code 4: "transport, communications, electric, gas and sanitary services"). The median asset beta for these companies was 0.29 and the mean 0.55. A copy of the web page summarising this analysis as extracted from the Ibbotson Associates web site is attached.
7. MEUG advised the Commission by submission on 1 October 2003 of the significant difference between the asset beta estimated by Ibbotson for US electricity utilities and that by Lally using Damodoran data. An updated table for Electric Services including 2004 data is set out below:

<b>Asset beta: SIC code 491 <i>Electric Services</i></b> [ "... generation, transmission and/or distribution of electrical energy for sale" ]				
	Median	Industry Composite	Small	Sample No.
1996	0.32	0.32	0.42	72
1997	NA	NA	NA	NA
1998	0.32	0.36	0.12	66
1999	0.17	0.16	0.13	56
2000	0.11	0.13	0.11	54
2001	0.03	0.06	0.18	51
2002	0.03	0.00	-0.01	37
2003	0.05	0.01	0.23	37
2004	0.12	0.11	0.22	41
Source: <i>Ibbotson Associates Cost of Capital Quarterly Yearbooks</i> <a href="http://www.ibbotson.com/content/cc_lv11.asp">http://www.ibbotson.com/content/cc_lv11.asp</a>				
Average of 8 observations	0.14	0.14	0.18	
Max.	0.32	0.36	0.42	
Min.	0.03	0.00	-0.01	

8. Whereas Lally estimates the asset beta for US electricity utilities as 0.3, the Ibbotson estimates from and including 1999 onwards has been consistently less than 0.2.

9. Ibbotson also publish asset beta for SIC code 4924: Natural Gas Distribution. A summary of the data since 1996 follows:

<b>Asset beta: SIC code 4924 <i>Natural Gas Distribution</i></b> [“... engaged in the distribution of natural gas”]				
	Median	Industry Composite	Small	Sample No.
1996	0.26	0.35	0.03	34
1997	NA	NA	NA	NA
1998	0.32	0.38	0.13	29
1999	0.18	0.23	0.34	27
2000	0.16	0.26	0.11	17
2001	0.07	0.11	0.07	13
2002	0.04	0.05	0.04	11
2003	0.05	0.08	-0.02	11
2004	0.06	0.12	NA	9
Source: <i>Ibbotson Associates Cost of Capital Quarterly Yearbooks</i> <a href="http://www.ibbotson.com/content/cc_lv11.asp">http://www.ibbotson.com/content/cc_lv11.asp</a>				
Average of 8 observations (except 7 for small”)	0.14	0.20	0.10	
Max.	0.32	0.38	0.34	
Min.	0.04	0.05	-0.02	

10. The Commerce Commission draft Inquiry report asset beta range of 0.4 to 0.6 for gas transmission and distribution is totally outside any of the Ibbotson asset beta for natural gas distribution by year from 1996 to 2004 or by class or by mean and median.
11. The differences between Damodoran and Ibbotson Associates are significant and should be reconciled. It is notable that no other market based evidence equivalent to that of Ibbotson has been tabled by those parties seeking a higher asset beta.

#### **Accounting for asymmetric risk and the percentile of the WACC range**

12. MEUG have submitted that the draft Inquiry report had little supporting analysis to justify anything other than the 50<sup>th</sup> percentile being used for the WACC. MEUG recommended the 50<sup>th</sup> percentile be used in conjunction with sensitivity analysis of a range of WACC and sensitivity analysis on specific costs and risks.
13. The Commission has referred to asymmetric risk of under-investment if gas line companies were controlled as the reason for proposing the 75<sup>th</sup> percentile in the draft Inquiry report. There was considerable discussion of this during the conference.
14. MEUG make the following cross-submissions on the question of asymmetric risk:
- Observed equity beta (both in NZ and overseas) presumably reflect the markets view of a range of risks including regulatory asymmetric risks of concern to the Commission. By choosing other than the 50<sup>th</sup> percentile the Commission is in effect assuming the Commission can take a more informed view of the range of relative risks affecting gas line businesses than equity markets. If that is the case then the Commission needs to justify that view with credible analysis.

- b) The Commission appears to have made the assumption that in the control scenario there is a greater risk of gas pipeline under-investment than in the non-control scenario. MEUG believe this assumption has been overstated. From experience in the electricity industry the risk from increasing regulatory control is not under-investment, it can also be over-investment, eg:
- i) In the electricity sector there is a general acceptance that in the pre Electricity Commission non-control environment there may have been relatively less investment in the grid than was desirable. One of the advantages of the Electricity Commission governed controlled environment has been to overcome some of the barriers to efficient grid investment. However in the new Part F (of the Electricity Governance Rules 2003) regime, there is widespread concern of electricity grid over-investment as cheaper transmission alternatives may not be considered because they are less certain and dispersed than grid options. The Electricity Commission may also be sufficiently risk adverse to "the lights going out" to have a propensity to approve more rather than less grid investment that would be efficient.
  - ii) Even if gas pipelines were controlled and those controls inhibited gas pipeline owners from making gas pipeline investments, it is unlikely that would be the end of the matter. In the electricity industry Unison has raised this type of argument and appearingly deliberately forced a confrontation with the regulator to obtain more certainty about its proposed investment programme. Similarly in the gas industry where a gas pipeline owner believed there were market opportunities for new pipelines being thwarted by the control regime then the matter could be re-litigated to reach a solution. The risk then becomes over-investment in gas pipelines "approved" by the Commerce Commission through a control regime under which the pipeline owners may not bear any risk if the assets are subsequently stranded.
- MEUG accepts there is an additional transaction cost to the economy of having to re-litigate poor decisions by the regulator, but that cost and risk is insignificant compared to the claimed increased under-investment risk by line companies if they are controlled.
- c) There was some discussion during the conference of significant natural disasters being an asymmetric risk and therefore justifying a higher WACC to assess the relative merits of regulating versus not regulating the gas line industry. MEUG believe this argument is incorrect. Such risks may be manageable by lines businesses through insurance and risk sharing with end consumers as part of commercially negotiated contract terms and conditions.
- d) Finally MEUG note that the Commission has already stated that it believes it has conservatively assessed costs and risks. This was reported by the Chair of the Commission (refer transcript 22 July 2004, p32-33) as follows:
- i) Ignored revaluation gains prior to 1997 and forecast revaluation gains were largely unchallenged;
  - ii) Did not challenge actual and forecast common and direct costs used by line companies;
  - iii) Did not challenge valuation of fixed assets (ie assumed ODV estimated by line companies and their assumed optimisations), valuation of other assets and depreciation assumptions used by line companies;
  - iv) Did not challenge forecast gas prices, forecast demand, forecast capital and forecast operating expenditure assumptions used by the line companies.

- v) Did not assume capital contributions by external players
- vi) *"We included metering that arguably is competitive and would have brought down the average and masked some of the excess returns if there were any in the non competitive part."*

Given these conservative biases already, to arbitrarily assume the 75<sup>th</sup> percentile for WACC also is, in the view of MEUG, going beyond a reasonable estimate of any perceived asymmetric risks.

Yours sincerely



Ralph Matthes  
Executive Director

Attachments:

- Ibbotson Associates, *"Cost of Capital 2004 Yearbook,"* Description of Methods Used, pp 33-37
- Ibbotson Associates, *Cost of Capital 2004 Yearbook, Data Through June 2004, Statistics for SCI Code 4, "Transportation, Communications, Electric, Gas and Sanitary Services,"* source: [www.ibbotson.com](http://www.ibbotson.com)