

ELECTRICITY CONSUMERS COALITION OF SA

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28 January 2005

The Chairman
The Essential Services Commission of SA
GPO Box 2605
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Attention Mr Lew Owens

Dear Mr Owens

Draft 2005-2010 Electricity Distribution price Determination

Market Risk Premium and Equity Beta

The Electricity Consumers Coalition of South Australia represents the larger users of electricity in South Australia, and includes such companies as Adelaide Brighton Cement, OneSteel, Zinifex, Kimberly Clark, Holden, Mitsubishi and Seeley International. Electricity distribution costs are a significant cost for all members and therefore your recent draft determination on ETSA Utilities price review is of great interest to ECCSA members. We are in the process of reviewing the draft determination in detail and we intend providing you with a formal response to that document by the due date of 11 February 2005.

However we did notice with considerable interest that the ESCoSA has included in its draft determination that the equity beta to be applied in the development of the ETSA Utilities WACC, should be reduced from the level of 1.0 used by other energy regulators to a value of 0.8. We applaud this movement, even if we consider that a lower level (probably to 0.7) should be used. Because of the ramifications we recognise that this new level of equity beta level used by the ESCoSA will be heavily challenged, not only by ETSA Utilities, but by all regulated energy network owners.

Because of this probable challenge we have decided to provide you with additional data which we consider will assist the ESCoSA in defending (perhaps even further reducing) the equity beta proposed for ETSA. Accordingly we attached to this letter further work establishing that using an equity beta of unity is inappropriate for ETSA Utilities, and for all other energy networks.

We have also noted that you have proposed that the market risk premium should be held at 6% - the same level as used by other regulators in Australia. We continue to

be of the view that this level is too high and we have provided additional research into why ESCoSA should reduce MRP below 6% in this current environment. Our work is also included in the attached research paper.

We would like to meet with you and the ESCoSA officers involved in the WACC development for ETSA Utilities to discuss our additional research in more depth. We suggest that this occur later in February after you have received all submissions to your draft determination. We will contact you later to arrange a time if this is acceptable to you.

If we identify any further support for your decision on equity beta (or indeed about our contentions about MRP), we will forward these as soon as we are able to do so.

We look forward to the debate that will undoubtedly occur as a result of your draft determination.

Yours sincerely

John Pike
Chairman, ECCSA

2003/04 ESCoSA

ELECTRICITY DISTRIBUTION PRICE REVIEW

OF

THE ETSA UTILITIES REVENUE CAP

Observations In Relation to ESCOSA's Draft Decision On
Market Risk Premium And Equity Beta Applied to ETSA

by

Headberry Partners P/L and Bob Lim & Co P/L

for

The Electricity Consumers Coalition of South Australia

January 2005

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The National Electricity Market Advocacy Panel

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1. Introduction

This paper has been commissioned by the Electricity Consumers Coalition of South Australia to make observations on ESCOSA's draft decision on the market risk premium (MRP) and the equity beta (EB) proposed to be applied to ETSA. ESCOSA's draft decision determines an MRP of 0.6 and an EB of 0.8.

2. Some recapping of past issues related to the level of regulated WACC

The Capital Asset Pricing Model (CAPM) has been used by Australian regulators as the basis of setting a regulated return on monopoly network assets in the gas and electricity industries for the past eight years. The first instance of this occurred when the NSW IPART set the return on the AGL assets used to distribute gas in the Sydney area in 1996. It has most recently been used by the Queensland Competition Authority for price regulation for Queensland ports and the ESCoV has stated its intention for its use for price regulation of Victorian ports and in the electricity distribution pricing review. The NSW IPART has recently completed its draft determination on AGL Gas networks, using the CAPM to set the regulated rate of return.

In 1998 the ACCC and the ESCoV (then ORG) deliberated on the access arrangements application by the Victorian Government for the gas transmission and distribution assets prior to their sale. At that time, the Victorian Government believed that the regulated return should exceed 10% but the two regulators, after holding what was to become referred to as the "The Great WACC Debate of 1998" finally determined that the regulated return should be 7.75%, after first concluding in a draft determination that 7.0% was appropriate at that time. The requested value for MRP was 6.5% but in its final decision for MRP the ACCC stated a view that it should be in the range 4.5-7.5% and opted for the mid point of 6%¹.

The ACCC did however note that [Prof R.R.] Officer:-

"... provides support for the view that the MRP may be trending downward".²

Causing even greater confusion was that the Victorian Government initially sought an equity beta of 0.95. In its draft decision, the ACCC stated that equity beta should be 0.85 but then upwardly revised this input in its Final Decision to 1.2 stating³ that:-

¹ Page 53, ACCC Final Decision, Access Arrangement by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd for the Principal Transmission System Access Arrangement by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd for the Western Transmission System Access Arrangement by Victorian Energy Networks Corporation for the Principal Transmission System. 6 October 1998

² *ibid*, page 53

³ *ibid*, page 60

“On the basis of evidence presented, the Commission was not convinced that there were significant downside risks that outweighed potential upside benefits which would be on top of profits implied by the target revenue calculations.⁴ Nevertheless, the Commission does acknowledge that all of these risks are difficult to quantify. Accordingly it has adopted the suggestion of financial experts at the WACC forum, that they are taken account of by choosing beta estimates towards the top end of the plausible range.

In determining the beta pertinent to TPA, submissions have suggested that regulatory arrangements which are based on revenue caps or price caps are inherently more risky than the US rate of return regulation which provided the main source of benchmark firms for beta determination. As a consequence, [Energy Projects Division of the Victorian Government] has suggested higher beta assumptions than it originally proposed would be appropriate. The asset beta range for Transco in the UK, which is subject to a similar regulatory regime to TPA, was assessed by the Monopolies and Mergers Commission 1997 price review as being between 0.45 and 0.60. [It is reported later in this paper that the new UK regulator (Ofgem) has instituted significantly lower values for equity beta than used by the UK Monopolies and Mergers Commission in 1997.]

In addition, it was suggested that the ‘newness’ of the regulatory framework introduced perceived uncertainties on the part of investors which should be taken into account in setting the cost of capital via the beta value assumption.

The Commission accepts these considerations as being relevant and has acknowledged that commensurate increase in the beta estimates may be appropriate. The asset beta (equity beta) has been increased from 0.35 (0.85) to 0.55 (1.20).⁵ Given that the risks are compensated for by the higher beta which leads to a higher rate of return, it would be difficult to justify additional compensation should one of these risk events materialise and impose additional costs on the service provider.”

The Victorian Government publicly stated that the WACC level accorded by the ACCC was too low and considered stopping the sale process for the assets as it considered that it would not receive a reasonable sale price. In fact, the asset sale did continue and the Victorian Government received a higher sale price for the assets than that which it had originally targeted. This was the first demonstrable example of where, after asset owners claimed that they were being grossly disadvantaged by low returns being granted by regulators, it can be shown that regulators are in fact providing returns which exceed expectations of the market.

⁴ Upside potential for profits from increased productivity, judicious choice of annual price adjustments within the context of the price control formula, etc.

⁵ The market portfolio has an asset beta of about 0.7. Given the stability and maturity of the Victorian transmission system, an asset beta above 0.6 would be difficult to justify.

Since that time there has been continuing trade in regulated assets. Acquisition prices of regulated assets have consistently exceeded the regulated asset base (RAB) – recent examples demonstrating this competition for assets has been the sale of the “Epic Rest” assets to Hastings Funds Management and the DBNGP in Western Australia to an Alinta led consortium. That the purchase price for the regulated assets has consistently exceeded the RAB, is in spite of the fact that the RAB has been valued at a depreciated optimized replacement cost basis – a process which values assets by allowing the effects of inflation to be added to the asset value, contrary to the approach generally used by industry in the competitive market sector, which depreciates the purchase cost of assets.

Press reports and media releases by these new owners commonly justify the purchase of the regulated assets because of their certainty of cash flow and the long term security of return. Reflecting the acceptance of these views, bidding for regulated energy assets has been consistently strong, usually with at least 3-4 serious contenders.

That purchase prices have consistently exceeded the RAB valuation, strongly indicates that the WACC determined by regulators is at the high end of the feasible range.

2.1 The critical inputs to the CAPM formula

There are a number of the inputs to the CAPM formula where there is reasonable correlation of views between those providing the assets and those paying for the service. Certainly there appears to be wide acceptance that the risk free rate used should be the ten year Government bond rate, that the gearing should be 60% debt, and there are only marginal differences between an acceptable level for the debt premium. The input for the level of imputation (gamma) has been accepted at 50%, although it should be noted that some recent applications by regulated businesses have requested that this level should be reduced.

There are two inputs to the CAPM formula that are hotly contested, including in the ESCOSA review of ETSA. These are:-

- Market Risk Premium (MRP)
- Equity Beta (EB)

Although regulators have consistently used values of 6% for MRP and 1.0 for EB for decisions related to regulated returns for gas and electricity network assets over the past 5-6 years, they have also indicated that they have concerns that the levels of these two inputs they are currently using may be too high. However, they then consistently advise that they will not change the values until there is more evidence providing substantiation for making a change⁶.

⁶ For example, in ESCoV decision on gas distribution (2002), and ACCC on TransGrid (2004).

3. Issues surrounding Market Risk Premium

Generally Australian regulators have slavishly used an MRP level of 6% since the “Great WACC Debate of 1998”, although the NSW IPART has suggested that a range for MRP of 5-6% is more appropriate. It should be stated that regulators have used the 6% value as it is assumed to reflect a long term (historical) view of this input. They also have noted⁷ that shorter term views of MRP show that perhaps a lesser amount might well apply.

The MRP over the risk free rate in the CAPM formula is intended to reflect the fact that an investor of equity requires a premium over a risk free investment in order to accept the higher risk associated with the investment. This is not denied.

It has, however, been observed (including by ESCOSA in the ETSA review) that the MRP does vary with time, and analytical work by Prof R Officer shows that the MRP has in fact varied considerably over time. The table in the ESCoV gas decision (which is also presented by ESCOSA)⁸ shows this quite clearly.

TABLE C.2
HISTORICAL AUSTRALIAN EQUITY PREMIUM – 1882 TO 2001

Time period	Equity Premium: Returns	Standard Deviation	Standard Error of the Mean
1882-2001	7.19%	16.97%	1.55%
Different Ending Point:			
1882-1950	8.00%	11.11%	1.34%
1882-1970	8.16%	13.70%	1.45%
1882-1990	7.40%	17.33%	1.66%
Different Beginning Point:			
1900-2001	7.14%	17.94%	1.78%
1950-2001	6.51%	22.60%	3.13%
1970-2001	3.37%	24.38%	4.31%

Source: Information in the first three columns provided by Professor Officer. Original information published in Officer, R., ‘Rates of Return to shares, bond yields and inflation rates: An historical perspective’, in *Share Markets and Portfolio Theory; Readings and Australian Evidence*, 2nd edition, University of Queensland Press, 1992.

The clear implication of this work as discussed by ESCOSA, is that MRP has reduced over time, and has a current shorter term value between 3-4%. The ESCoV refers to other studies which replicate the observations that MRP does vary over time.

⁷ For example, in QCA draft decision on DBCT (2004) “... the Authority notes that empirical research by Dr Lally indicates that there has been a downward long-term trend in volatility, implying estimates based on historical averaging are too high, rather than too low.” (page 184)

⁸ ESCoV (then ORG) final decision on gas distribution 2002 page 324

Whilst ESCOSA refers to other studies considered by ESCOV, it does not specifically refer to the ESCoV commissioned Mercer Consulting to provide it with an independent view of what the then current expectation of MRP might be – Mercer opined that an MRP of 3% was the then current level (4% if imputation was accounted for). The ESCoV comments⁹:-

“Regarding Mercer’s opinion that a consensus of market participants agrees that the expected equity premium is lower than historical excess returns, the Commission considers that Mercer’s unique position, and lack of interest in the assumption about the equity premium that is adopted by the Commission, to justify placing weight on its views, together with the other available evidence.

The Commission has subsequently received a copy of the survey results, which show that the premium of 5.87 per cent related to the views on the premium expected in the past – the average of assumptions about the forward-looking equity premium was approximately 1 percentage point lower. Table C.6 sets out the results of the survey for the different classes of respondent. The survey also canvassed views about the equity premium in the US – these results are reported also for illustrative purposes.

TABLE C.6
RESULTS OF THE JARDINE FLEMING CAPITAL MARKETS SURVEY

	Responses	Australia		United States	
		Past	Expected	Past	Expected
Academics	26	6.30%	4.92%	6.72%	5.17%
Brokers	20	5.05%	4.50%	5.93%	4.68%
Asset Consultants / Trustees	4	6.67%	3.13%	5.67%	2.13%
Corporate Managers	11	6.05%	5.27%	5.78%	4.55%
Total	61	5.87%	4.73%	6.26%	4.70%

Source: Jardine Fleming Capital Partners Limited, The Equity Risk Premium – An Australian Perspective, Trinity Best Practice Committee, September 2001.

The Commission is cognisant of the disperse beliefs across the survey participants reported, as well as the response rate to the survey (less than 50 per cent), which it has taken into account in assigning weight to these results. Subject to those caveats, it notes that some of the observations that may be made on these results are as follows.

- the average of each of the classes is lower than the long-term average of the historical excess returns to equity;
- the simple average of views about the future equity premium are lower than the views about the past for every class of survey participant, and thus lower still than the long-term average of the historical excess returns to equity;

⁹ ibid pages 333 and 334

- corporate managers have the highest expectations about the equity premium – but the average of expected future values is lower than the long-term average of the historical excess returns to equity; and
- the average of views across the asset consultants and superannuation trustees is very close to the views of Mercer Investment Consulting.

Thus there is little doubt that MRP does vary with time, and that the current level of MRP indicates that it is lower than the historic average. As pointed out in Headberry/Lim in a submission to ESCOSA which was commissioned by ECCSA,¹⁰ there have been a number of structural changes in the Australian economy over the periods used to assess the varying MRP levels, and which might well have contributed to an enduring reduction in MRP¹¹.

Headberry/Lim calculates MRP (measured from accounting data released by 300+ companies using PBT/equity less 10 year bond rate) and this showed that the MRP over the past 15 years varied from -3.6% to +7.8%, averaging 3.03%. This again supports the Officer and Mercer views of the current MRP level being at ~3-4%. That the results of the Headberry/Lim report replicate results by other such luminaries as Officer and Mercer adds credence to the recommendation of Headberry/Lim that the WACC (and MRP) be benchmarked against the historic results of the EBIT/assets achieved by industry in the competitive environment.

More recent (and most importantly, independent) reports relating to the current level of MRP being less than 6% include:-

1. Mr Ian Macfarlane Governor of the Reserve Bank who states that

“It seems to me that the community has not yet come to terms with the fact that nominal rates of return on financial and real assets are likely to be much lower over the coming decade or so than over the previous two decades.”¹²

¹⁰ “Further capital markets evidence in relation to the market risk premium and equity beta values” by Headberry Partners P/L and Bob Lim & Co P/L, December 2003

¹¹ Another structural change that will impact on future ERP is the fact that recent high equity prices have been driven in part by the “Baby Boomer” phenomenon. Baby Boomers were in their maximum savings mode during the 1980s and 1990s and as equities were the main asset acquired this drove up equity prices, and so inflated the ERP. In the next decade there is an expectation that the Baby Boomers will commence selling these equities to finance their future as they have no other income. This will depress equity prices resulting in a fall in the ERP. This outcome is more fully developed in the article “Follow the money” Australian Financial Review 13-14 November 2004

¹² “Economic Opportunities and Risks over the Coming Decades” by I.J. Macfarlane, Governor, RBA, 13 November 2003)

2. Mr David Bassanese,¹³ commentator for the Australian Financial Review, opines that the long term market risk premium might be of the order of 3.3%. Bassanese suggests that this is much higher than the historical MRP over the past 20 years which he estimates at 2.25%.
3. Economic consultant, Winton Bates (in a letter¹⁴ responding to the Bassanese article) adds the view that MRP over the past 20 years is 3.3%.
4. Dr David Rees, head of investment strategy for CommSec notes¹⁵ that

“in Australia and elsewhere estimates of ERP vary from 0 to 8%. CommSec estimates it at 3.7% and argues that the ERP has been declining in recent years, both here and in the US, but may be ready to return to higher levels.”

3.1 Recent Ofgem Studies

A report by Ofgem¹⁶ in its recent review of the cost of capital¹⁷ also refers to a variation of MRP (also referred to as equity risk premium ERP) over time. It includes in its analysis the following observation

“Given the increasingly integrated nature of capital markets, Dimson, Marsh and Staunton argue that there is a strong case to adopt a global rather than a country specific approach when determining the prospective ERP. They present a forward looking ERP in the order of 3% on a geometric basis and in the order of 5% on an arithmetic basis. They argue that the ERP is almost certainly not as high as in the mid-1990s, and regard a 5%-6% geometric mean or 7.5%-8.5% arithmetic mean as excessive. The reduction in the expected ERP is due to a range of factors, such as a more stable business environment¹⁸ (e.g. end of the Cold War, increased international trade and investment flows) and better opportunities for investors to diversify (both domestically and internationally).”

Ofgem, and its consultants, have assessed the long term MRP in the UK (in the range 5%-8% depending on the basis of the calculation used) and this shows a remarkable similarity to the range of MRP developed by Officer. Ofgem asserts that the long term values of MRP observed in the UK are reflected in the US as well. Ofgem offers the observation that this is probably related to increasing international trade (globalization) and the better opportunities available for investors to diversify globally.

¹³ Australian Financial Review 27 September 2004 “Fat dividends may not last”

¹⁴ Australian Financial Review, 5 October 2004 (letters to the Editor “Real bond yields to hit 4pc again”)

¹⁵ Australian Financial Review, 27 October 2004 “High yields, low P/Es to continue”

¹⁶ The Office of Gas and Electricity Markets (the UK regulator for gas and electricity)

¹⁷ Electricity Distribution Price Control Review, Background information on the cost of capital March 2004

¹⁸ These sentiments reflect the observation of Headberry/Lim about the impact of structural change of markets.

In this regard it is worth noting that many of the investment funds operating in Australia have a significant proportion of their funds invested internationally¹⁹. In this regard it is pertinent to note that the Australian equity market represents only 2-3% of world equities market. Failure to invest offshore has the distinct disadvantage of limiting the returns available to Australian investors. If such a high proportion of Australian investment funds are placed off shore, it then comes as no surprise that the MRP in different developed countries is similar.

In defending their stance of holding the MRP at a high level, the ACCC and other regulators have often referred to the observation that as Australia is somewhat remote from other developed countries and is more isolated from international money markets, that there is some justification for holding the Australian MRP at higher levels than in the UK or the US. Based on the observed MRPs in these other countries which replicate the observed Australian MRP, this argument would appear to have little factual substantiation, and relies more on unfounded intuition or, at best, only a reflection of past conditions. There is little doubt that with its current exports, Australia is an active competitor in the world markets.

If the long term MRP is similar in each of Australia, the UK and the US, it would be expected that similar approaches to awarding MRPs by the regulators in each country would/should be similar.

Ofgem accepts that the MRP varies over time (both upwards and downwards) and highlights the importance of using a forward looking MRP as the best reflector of an appropriate WACC to be used for its forth coming regulatory period. Despite the fact that Ofgem recognizes that the long term average MRP is considerably higher, based on its analysis **it is of the view that the forward looking MRP to be used in its current review is in the range 2.5 to 4.5²⁰, a change over the past five years from the 3.25-3.75 used in 1999²¹.**

That Ofgem identifies the importance of recognising there is a need to accept there is a variation in MRP, is an issue that Australian regulators have failed to either understand, or worse, have decided is an issue to be left to regulators in the future.

¹⁹ One of the authors of this paper was a director of a medium sized investment fund and advises that the fund (on the advice of globally recognized investment advisers) operated with a nominal funding approach of 30% in international equities, 40% in Australian equities, and the balance in bonds, fixed interest and property.

²⁰ OFGEM report Electricity Distribution Price Control Review, Background information on the cost of Capital, March 2004, page 15

²¹ It is important to note that Ofgem uses 20, 10 and 5 year "gilts" as the basis for assessing its risk free investment rate. "Gilts" are issued by the UK government and thus equivalent to Australian government bonds

3.2 The implications of a variable MRP

This consensus view that recent shorter term levels of MRP are somewhat lower than a long term average of 6% raises a very important issue.

The WACC is intended to provide a forward looking estimate of financing over the next five year regulatory period. The WACC set by the regulator is intended to provide the regulated business with the ability to continue funding its existing assets and provide funds for capital expenditure. As such, it represents a common approach to financing their activities which applies equally to all regulated businesses regardless of their unique capital structure or methods for financing or raising funds.

There is little doubt from the surveys and estimates of MRP over time that the MRP does change. If regulators persist with using an MRP which is above the current market, this effectively penalizes consumers and creates an incentive for regulated businesses to over invest in order to obtain higher returns than they would get elsewhere. By using a long term average for MRP, the regulator is tacitly agreeing to provide higher returns to regulated businesses when the returns from the market are low (ie when the short term MRP is below the long term average) and lower returns to the regulated businesses when the returns from the market are high (ie when the short term MRP is above the long term average).

This will create a major asymmetric issue for all concerned – consumers, regulated businesses and regulators – at some point in the future. If regulators persist with basing returns on a long term average of MRP, then there must be at some point of time in the future when the long term average MRP will be lower than the shorter term MRP and therefore be insufficient **at that time** for an investor to provide equity to a regulated business.

Using the Officer data referred to above, the last 30 years have an average MRP of 3.37 (1970-2001). The long term average for MRP is estimated by Officer at 7.19 (1882-2001). Simply by just applying ratios to these numbers, this implies that for the period 1882 to 1970, the MRP would be 8.6%. Thus if at some point of time in the future the market returned to the implied returns of the period 1882 to 1970 of 8.6% and regulators persisted with using an MRP of 6% (as this is the long term average) then the owners of the regulated business would have **an insufficient return by some 100 basis points** to justify investing any more equity into the business²². The most obvious outcome of this would be that service provision would either commence running down or there, would need to be an increase in gearing. Either outcome places stress onto the regulated business.

As regulated businesses are essential services by their very nature, the regulators would then be placed in an extremely invidious position. They would either have to

²² Simply applied and assuming a gearing of 60%, the implication of using 6% MRP instead of 8.6% would result in a WACC **of at least 100 basis points below** the market levels needed at that time.

point out to the business that there would be no increase in the return thereby creating financial stress or, and the more likely scenario, the regulator would agree to an increase in the MRP to reflect the then current conditions. If the regulator did agree to increase the return to the business then it would have failed to execute its role in ensuring a balance between the needs of the business and the commitment to consumers to ensure equity between service and cost.

Owners of regulated businesses and regulators change over time. The only constant is the consumer. Regulators have the responsibility to ensure that their actions of today do not create problems for regulators in the future; these regulators of the future will also have to provide a balance in their decisions between regulated businesses and consumers. The outcome of continuing the practice of using inappropriate long term averages for MRP not only disadvantages consumers of today, but will also have the potential to do likewise to consumers at some point in the future.

In ensuring fairness to all, now and in the future, it must be accepted that there is an essential inconsistency in using a long term average as the basis of setting the MRP.

ESCOSA's draft decision has failed to recognize these issues, as well as failing to recognize the importance and relevance of the more recent studies undertaken by Ofgem and others.

4. Issues surrounding equity beta

Australian regulators have been consistently applying an equity beta of 1.0 for 5-6 years. This has been used as it is effectively the average equity beta for all businesses. It was also the equity beta calculated by the AGSM as representing the "Infrastructure and Utilities" sector of the stock market. As there were few regulated businesses listed on the stock exchange, regulators assumed that the "Infrastructure and Utilities" sector reflected the regulated businesses involved in electricity and gas transport – analysis of the companies comprising this Index shows the fallacy of this comparison.

In more recent times, regulators have accepted that an equity beta of 1.0 is probably on the high side of appropriate. In fact, the ACCC stated in its submissions to the Australian Competition Tribunal when the ACT heard the appeal by GasNet against the regulator's decision for the Victorian gas transmission business, that an equity beta of 0.7 was more appropriate to the Victorian gas transmission business.

During a meeting between the ACCC and representatives of energy consumers on 1 October 2004, the ACCC made an observation that there is no doubt that using an equity beta of 1.0 for gas transport is "intuitively" too high, and this intuitive

observation is supported by the Allen Consulting Group calculations²³ for the small number (6)²⁴ of Australian gas businesses available for comparison. This report suggests that the equity beta for regulated gas businesses should be 0.7.

The Allen report notes²⁵ that

“... there are sound arguments for relying upon the latest market evidence when deriving a proxy beta for the regulated activities of a regulated gas transmission entity. Exclusive reliance on the latest Australian market evidence would imply adopting a proxy equity beta (re-levered for the regulatory-standard gearing level) of 0.7 (rounded-up) for these activities. Moreover, regard to evidence from North American or UK firms as a secondary source of information does not provide any rationale for believing that such a proxy beta would understate the beta risk of the regulated activities. Rather, **the latest evidence from these [overseas] markets would be more supportive of a view that the Australian estimates overstate the true betas for these activities**, although concerns are expressed with the reliability of the beta estimates from these other countries.” (our emphasis added)

Despite the Allen observation that the calculated equity beta of 0.7 could well be too high, it was stated by the ACCC at the 1 October 2004 meeting that in accepting that the equity beta at 1.0 is too high, there is a problem in deciding what the figure should be. It was then stated by the ACCC that its “considered view” was not to reduce equity beta from the average of 1.0, but accepting at the same time that at 1.0 it is too high.

4.1 QCA and Dalrymple Bay

In its recent draft decision²⁶ (2004) on Dalrymple Bay Coal Terminal (DBCT) the QCA states that the equity beta for the DBCT should be 0.66. To support its view it based its draft decision on the report²⁷ commissioned from Allen Consulting Group on proxy betas for infrastructure facilities similar to the Dalrymple Bay facility. The QCA states (page 186) that:-

“ACG, in summary, identified the most important explanatory factors for DBCT’s asset beta as the nature of the product and customer base, pricing structure, and duration of contracts. Consequently, the ACG concluded that this implies that DBCT’s revenue is highly invariant to the state of the

²³ Allen Consulting Group Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities July 2002

²⁴ The six being AGL, Australian Pipeline Trust, Envestra, United Energy, AlintaGas and GasNet

²⁵ Allen Consulting Group Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities July 2002. page 5

²⁶ QCA Draft Decision Dalrymple Bay Coal Terminal Draft Access Undertaking October 2004

²⁷ Allen Consulting Group Dalrymple Bay Coal Terminal, Analysis of Proxy Betas September 2004

domestic economy. Along with a low operating cost structure, these factors jointly imply low systematic risk for DBCT.”

Whilst the views apply to the uniqueness of an export port facility, these same features which reduce the systematic risk apply equally, if not more so and with greater emphasis, to electricity and gas transport, with their unique products and market niches, lack of serious competition, guaranteed revenue streams and low risk on operating costs. The QCA (page 185) notes that whilst there is potential for competition to DBCT, DBCT is

“... in a strong competitive position, [with] possible inter-port competition, eg Gladstone and (potentially) Abbott Point, [being] a significant issue for DBCT.”

Analysis of the relative risks between an export port such as DBCT and energy transport, shows that if anything the security of revenue and continuing demand for the service business is even higher (implying a lower equity beta) for energy transport, than that enjoyed by DBCT.

4.2 Ofgem Study

Ofgem, as part of its recent price control analysis work, notes²⁸ that the observed monthly calculated equity beta of 1.0 for the period 1993-1999 for electricity businesses (and adopted by Ofgem in its 1999 review) has fallen approximately to a current level of 0.3 (page 16). Ofgem perceives that the higher equity beta was perhaps a result of the “TMT”²⁹ bubble and the benefit that regulated businesses provide “safe haven” stocks. This has exhibited the downward movement of equity betas for “safe haven” stocks and the upward movement of equity betas in “high tech” stocks. Reviews quoted by Ofgem attribute this effect would result in equity betas for electricity businesses being closer to 0.6-0.70 in both the UK and the US. As a result of their analysis Ofgem concludes (page 20) that:-

“Given the Smithers & Co report and Ofgem’s own analysis of the evidence, Ofgem has adopted a range for equity beta of 0.6 – 1 for its cost of capital calculations”

an equity beta for the regulated element of electricity businesses should lie in the range of 0.6-1.0.

4.3 The implications of the Ofgem analysis

One of the prime stated reasons for the ACCC and other regulators not to accept the findings of the Allen Consulting analysis of equity beta calculations is the view that

²⁸ Ofgem, Electricity Distribution Price Control Review, Background information on the cost of capital, March 2004

²⁹ TMT refers to the major influence technology, media and telecommunications stocks had on stock markets internationally during the mid to late ‘90s

there is a limited sample for comparison. It is then stated that in the absence of a large sample to give confidence it is “safer” for the regulator to consider that the equity beta be set at the market average ie at unity. Regulators state that setting equity beta at this level does not disadvantage the regulated business. Countering this, consumers have consistently stated that setting equity beta at unity results in a distinct financial disadvantage to consumers.

A further argument used by regulators (with the exception of ESCOSA and IPART-see below) to support their “safe” setting of equity beta at unity, is that the bulk of comparisons are from overseas observations and that the Australian market has different characteristics and therefore there might not be a direct comparison between the different markets. What this assumption overlooks is that by definition equity beta of unity is the average of the market regardless of the country and its market. All other equity betas are relative to this same average of unity. Thus it must be expected that similar equity betas would apply to similar businesses regardless of the country in which the calculation is made.

The Ofgem analysis provides a much larger sample for the analysis of equity beta and therefore provides a higher degree of confidence of the outcome. Ofgem has set the electricity distribution businesses equity beta in the range 0.6 to 1.0. This range certainly implies that an equity beta of unity is at the extreme upper range of an acceptable level.

4.4 IPART analysis

ESCOSA’s draft decision on EB at 0.8 is a significant move by an Australian regulator and is a recognition of the forward-looking expectation of the relationship between the movements in the returns to ETSA to the movements in the equity market as a whole i.e. by placing weight on the market evidence of betas, albeit at the upper end of observed equity betas.

The NSW IPART in its December 2004 draft determination on the AGL Gas networks applied an equity beta in the range of 0.8 to 1.0. The Tribunal took into account the views contained in the Headberry/ Lim study

“ that the proposed equity beta is too high and the comprehensive study on the equity beta it submitted in support of this view”³⁰.

IPART also undertook its own study of companies comparable to AGLGN that are traded on the Australian share market. The study shows that equity betas for these companies have historically been lower than unity and in the case of AGL (of which AGLGN is a subsidiary) the equity beta has decreased over the last three years. Whilst a backward-looking equity beta will not of itself reflect prevailing market conditions over the next 5 years, (the equity beta is a forward-looking parameter), it does, provide a relevant guide or consideration in indicating trends.

³⁰ IPART. Revised Access Arrangement for AGL Gas Networks December 2004. Draft Decision, page 83

5. The ESCoSA Draft Decision

ESCOSA's draft decision on the MRP and the equity beta only partially recognizes the absence of asymmetric risk in the rate of return adopted for ETSA. The Electricity Pricing Order (EPO) constrains the Commission in its review of ETSA, in particular, by preventing it from reviewing the Regulatory Asset Base and requiring it to accept that past capex and opex are prudent and efficient (in terms of the requirements of c1.7.2 (e) of the EPO). These are significant constraints on the veracity of the independent review, and more than likely provide ETSA with substantial additional regulated revenues (compared with a situation where all costs have to be rigorously assessed and justified).

Against this background, we believe that ESCOSA should determine for ETSA:-

1. A forward looking Market Risk Premium in the range of 3-4%
2. An Equity Beta in the range of 0.6-0.8.

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