Submission to the Economic Regulation Authority re

Rate of Return Methodologies and Practices

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Introduction

In response to the recently released report commissioned by the then Office of Gas Access Regulation from the Institute for Research and International Competitiveness (IRIC) into rate of return issues, AlintaGas Networks (Alinta) wishes to make the following comments.

General

For a capital intensive and regulated business such as gas distribution, return on capital is an extremely important element, with the regulated return accounting for approximately 44% of total revenue. As this figure itself is a function of the allowable capital base and the rate of return, the attitudes of a regulator to rate of return issues are key to the regulatory process. Alinta therefore welcomes the release of the IRIC paper and appreciates this opportunity to respond to it.

Overall, the paper represents a comprehensive survey of the various issues associated with determining the cost of capital. It contains a good summary of the theoretical issues associated with the various methodologies. However, Alinta believes the paper does suffer from one significant shortcoming which is how it treats recent developments in regulation. This will be enlarged upon in more detail below, however, in summary, the paper does not appear to recognise the impact of regulatory developments such as the Epic Court case and the various reviews of the regulatory environment, all of which have implications for the way in which regulators assess what the appropriate cost of capital should be as applied under the Code.

The broad key conclusions of the Epic case, the Productivity Commission's (PC) Review of Third Party Access and the draft report from the PC's Review of the National Access Code can be summarised as:

- **Cost of Regulation -** Regulation has significant costs, both to regulated entities and to the wider economy, and these costs must be taken into account in how regulation is applied. In particular, the costs of trying to ensure that regulated businesses do not earn any profits deemed by regulators to be in excess of those that are reasonable, are likely to outweigh the benefits. In the context of estimating the cost of capital, this suggests that regulators should focus more on practical outcomes than on theoretical debates, particularly when the theories being applied are inherently imperfect.

- **Long Term Versus Short Term Customer Interests -** The interests of users will vary considerably according to the time frame chosen. In the short term, pricing at marginal cost will maximise user outcomes as prices are set at a level just above the costs of providing the services. However, marginal cost pricing, particularly in high fixed cost industries such as energy infrastructure, will not provide sufficient revenue to allow assets to be maintained, let alone expanded. Clearly user interests are in having a long term sustainable energy supply industry, which means price outcomes that support continued investment.

- **Asymmetric Regulatory Costs -** The costs of over and under compensation of regulated businesses are not mirror images of each other. The economic costs of under compensation will be higher than over compensation. An admittedly extreme example which highlights this very clearly is that of California, where regulators capped retail

electricity prices at a time of rising wholesale prices. Had this capping not occurred, electricity prices would have risen and, possibly, electricity producers and sellers earned a higher rate of return. The costs of what actually happened, however, were far in excess of this, including the Californian economy going into recession a year ahead of the US as a whole. Alinta submits that the rationale for regulation of energy infrastructure assets – that they are "bottleneck" assets which have a disproportionate impact on the economy – also makes them particularly prone to this regulatory asymmetry.

- **Regulatory Truncation -** In its recent draft report, the PC noted that, in the event of "excess" profits being earned, regulators are likely to try and capture this at the next review period. However, if profits are less than envisaged, meaning that a less than adequate return is being earned, regulators do not see a corresponding duty to restore profits to an appropriate level. The result will be more under compensated than over rewarded companies. This regulatory truncation means that regulatory risk may not be in practice as diversifiable as the paper suggests.

- **Workably Competitive Outcomes -** Ultimately the essence of the regulator's task is to replicate the outcomes that would be generated by a competitive market in a market that is subject to the influence of natural monopoly. Guidance as to what this means in practice was provided by the Epic case, which found that the standard regulators should apply is that of "workably effective competition". This standard provides for returns higher than those which might arise from a pure competitive marketplace. It also suggests that when setting allowed rates of returns, regulators should perhaps pay closer attention to what constitutes commercially acceptable rates of returns, which in turn suggests that how the cost of capital is measured in practice should override how the cost of capital is measured in the textbook.

Alinta believes these developments are extremely significant and change the way in which gas regulation should be applied in Australia. It is a concern therefore that the paper does not adequately address them and in some cases actively ignores them. Alinta submits that the paper would be significantly improved with an explicit discussion of regulatory developments and how they impact on how the regulator might assess what represents an appropriate cost of capital.

Report structure and background

As discussed earlier, Alinta believes an explicit term of reference should have been regulatory developments and how they impact on cost of capital assessments.

The discussion on page 4 correctly lists possible consequences from an inadequate rate of return but then goes on to state that the consequences of an excessive rate of return are "equally adverse". Alinta believes there is substantial evidence that this is not the case and submits that there is a clear disparity in costs between over compensating services providers and by extension their owners and workforce and, on the other hand, in under compensation resulting in lower levels of expansion and extension, lower capacity and in the worst case loss of supply. This view is supported by the PC in both its Third Party Access report and its draft report into the Gas Code.[1]

[1],Productivity Commission, *Review of the National Access Regime,* pp 82-83

Theories and practices of asset pricing

A key conclusion from the PC's draft report into the Code was that all methodologies such as Capital Asset Pricing Model (CAPM) are "inherently imperfect".[2] While this does not necessarily impact on the overall validity of the report's discussions on the pros and cons of various methodologies or its conclusion as to the most appropriate one, it should nonetheless have been raised as it has a definite impact on their application.

Page 8 notes that openness of the Australian economy "whose capital markets are well integrated with global markets". The implicit conclusion here is that risks and returns in Australia should therefore be identical to the global average. Alinta submits that this is not the case and agrees with the current Australian practice where regulators have typically used domestic market indicators. Alinta also notes that if this concept is to be properly applied, there are consequences for measures of risk as well as for parameters such as the value of imputation credits.

Page 9 suggests that the job of a regulator is to ensure that investors "earn only those returns which a competitive market would provide to the most skilful owners of that particular asset in the face of numerous competitors". To the extent that this statement supposes perfectly competitive outcomes it is inconsistent with the Epic notion of workably competitive outcomes, which is the definitive legal statement of how the Code ought to be implemented.

Page 10 states that "under the efficient markets hypothesis, expectations of individual investors should (on average) be correct". This appears to be a misunderstanding of the hypothesis, which is not that investors are always right in hindsight but rather that all available information is incorporated into the market price. It is, however, perfectly possible for these expectations to be proven wrong.

Preferred Methodology

Alinta agrees with the report's conclusion on page 13 that "in the face of no clearly superior approach, the CAPM continues to be used as the principal model for cost of capital computation".

Risk Free Rate

Alinta supports the use of ten year government bonds to determine the risk free rate and also believes that an average rather than spot rate is an important element in ensuring that market anomalies do not intrude on the calculations as discussed at pages 15-16 of the report. Alinta also notes that the recent Australian Competition Tribunal decision on GasNet's appeal against the Australian Competition and Consumer Commission (ACCC) supports the use of the ten year government bond as the benchmark risk free asset.

Market Risk Premium

The discussion of market risk premium on page 16 cites a 1998 report by Davis as suggesting a downwards trend in the market risk premium. This report is now six years old and Alinta suggests of questionable relevance – it obviously ignores recent events such as the "tech wreck" and September 11, both of which have arguably increased risk premia. While it is the case that, as the report suggests, most regulators have opted for 6%, there is

[2] Productivity Commission, *Review of the Gas Access Regime: Draft Report*, draft finding 7.2

no discussion in the report of key issues such considerable empirical evidence suggesting that Australian measured market risk premiums are higher, the impact of recent uncertainties and the over/under compensation arguments. Alinta believes that the report would have benefited considerably from a thorough examination of those issues.

Gearing Ratio

Alinta agrees that the 60% level used in most decisions is consistent with actual industry gearing as stated on page 20. This, combined with the Code notion of using industry best practice, supports continued use of this figure.

Inflation

While Alinta does not disagree with the comments concerning inflation on page 21, it is not clear whether the paper is advocating continued use of the difference between indexed and non indexed bonds or Consumer Price Index (CPI) predictions. Alinta advocates the former approach.

Pre Versus Post-Tax

Alinta notes the report's conclusion concerning this debate at page 22 that "neither the pre-tax real nor the post-tax nominal approaches have been clearly shown to be superior" but submits that this ignores the advantages of a pre-tax approach being less intrusive and more consistent with a philosophy of light handed regulation. Alinta does, however, agree with the difficulties in determining what tax rates to use in making a post to pre-tax transformation referred to on page 22.

However, a generally informative and objective discussion is not assisted by the final paragraph of this section on page 23 which states that"

> *"The issue for Government therefore is whether regulators should seek to ensure that tax concessions provided to natural monopolies are passed on to consumers in the interests of stimulating increased demand, investment and economic development."*

Alinta believes that this conclusion would be more balanced were it to refer to the trade-off between maintenance of a tax benefit provided to stimulate investment and lower prices to consumers. Alinta's view is that as the Government provided the benefit at a time when most regulatory decisions were pre-tax and on the explicit grounds of encouraging investment in long life assets, there should be a strong presumption that it did so with the intention that the tax benefits should be retained.

Imputation Credits

Alinta is concerned that this section does not do full justice to what is a reasonably complex part of the CAPM calculation. While it is the case, as stated on page 25, that gammas given by regulators in Australia are generally 0.5, this could be usefully be expanded upon.

The report's reference to the ACCC's view that the principle of "100% percent Australian ownership" be adopted is completely contradicted by the reference to the ACCC's statement that "there is no well founded basis for discriminating in favour of one type of investor or another…". By electing the assumption of 100% Australian ownership, the ACCC is discriminating against foreign investors. It is also unclear how the inability of foreign investors to take advantage of imputation credits may be offset by other CAPM

parameters, as the ACCC claims, any more than might be the case for Australian investors. The real issue is the identity of the marginal investor.

Professor Officer, whom the report cites as the basis of the gamma of 0.5, has stated that the marginal investor, who by definition sets the price of Australian stocks, is the foreign investor[3]. As foreign investors cannot utilise the value of tax credits, this suggests a gamma value closer to zero than 50%.

A 2002 study suggests that imputation credits "for the average company are valued at around 33 cents in the dollar by the representative investor".[4]

The evidence is by no means clear on this issue but Alinta submits that there is sufficient doubt as to how tax credits are valued in the Australian marketplace that gamma should be no more than 50% and there is a case to be made for less.

Assessment of factors underlying returns under CAPM

The discussion on page 27 about the problems of beta appears to overstate the case with its reference to stockmarkets rewarding firms that overstate their betas. As the report itself notes, one of the reasons beta cannot simply be based on observation is the lack of public listing. While the incentive alluded to may exist to some degree, Alinta believes it would be more appropriate for evidence that it has actually occurred to be presented rather than suggesting that firms have engaged in this type of behaviour. Another issue missed by this discussion is that it focuses on the problem of overstating the risk involved. As previous discussed, Alinta believes an understatement of the risk would be a more serious problem and any discussion of the uncertainties involved needs to recognise this.

The discussion of whether risks should be seen as systematic or non systematic and hence whether or not they should be compensated for misses the point that regulatory risk may not be diversifiable because of the regulatory truncation discussed by the PC.[5] If, as this notion suggests, regulatory upside is captured by regulators while downside is left with the regulated businesses, then regulatory risk cannot be diversified as the required offsetting non systematic events will not occur. This suggests that there may be a third category of risks – those which are non systematic but which nevertheless cannot be diversified away.

The suggestion on page 30 under the discussion of input costs that input cost risks can be mitigated by a service provider's ability to trigger an access reset at any time ignores the very substantial (hundred of thousands of dollars) costs involved in a reset. It is more accurate to say that the ability to trigger a reset provides some protection where the costs associated with the risk exceed the costs of preparing a new access arrangement.

While the general assumption underlying section 3.2 – that rates of return should not be set to cater for externalities – is valid, Alinta reiterates its view that it is a legitimate function of assessing cost of capital to consider issues such as symmetric risk of over versus under compensation and that this can be distinguished from the specific issues cited.

[3] Officer, R.R., "The cost of capital of a company under an imputation tax system", *Accounting and Finance,* May 1994, pp 1-17.
[4] Cannavan, D.; Finn, F.; and Gray, S.; *The value of imputation tax credits, working paper,* University of Queensland and Duke University, 2002.
[5] Productivity Commission, *Review of Gas Access.,* p 92

Comparisons of rates of return

Alinta agrees with the key conclusion in this section that:

> simplistic comparisons of rates of return allowed in regulated industries in different national jurisdictions does not add substantially to the rigorous assessment of the 'reasonableness' of rates of return offered in a particular jurisdiction.

Based on this conclusion, it follows as the report does note on page 40 that there is no basis for seeing Australian decisions as necessarily more generous than those allowed elsewhere simply because they may appear higher.

Conclusions

Alinta reiterates its major comment that the report does not adequately discuss the changes in the regulatory environment that have occurred in the last several years and which directly impact on how regulators are required to apply the Code, including on cost of capital.

With one exception, the broad conclusions of the report are unobjectionable. The exception concerns the conclusion on systematic risk. The phenomenon of regulatory truncuation means that regulatory risk, while technically non systematic, may also be non diversifiable, meaning that it cannot be automatically assumed that it should not be compensated for.

Regulatory risk

Section 6.1.2 does briefly touch on the issue of regulatory asymmetry, however, its approach seems to be to "assume away" the problem by saying that regulators should not do this. Alinta concurs but notes that as long they do this (and there is evidence that it does occur[6]) then it has implication for how regulation should be applied.

[6] ibid., p 94