AGL Electricity Limited response to

Electricity Distribution Price Review 2006 - 10

Issues Paper

INTRODUCTION

AGL Electricity Limited (AGLE) submitted its Price-Service Proposal (the Submission) to the Essential Services Commission (the Commission) in October 2004. AGLE's submission was based on, among other things, compliance with its Current Safety Obligations and assumed that there were no changes to its safety obligations. Should there be a change to AGLE's safety obligations prior to the Determination, AGLE reserves the right to resubmit cost forecasts based on these changed obligations. AGLE also provided, in the Submission, an alternative scenario, called the Safety Management Scenario, which indicated the impact of possible changes to AGLE's safety obligations. The Safety Management Scenario was based on one possible set of changes to its obligations, as detailed in Appendix I.

Although AGLE has been working with the OCEI towards the granting of exemptions, at this point in time, there have not been any changes to AGLE's safety obligations. Consequently, the Current Safety Obligations still apply.

The Commission released the "Electricity Distribution Price Review 2006-10 – Issues Paper" in December 2004 (the Issues Paper).

This document provides AGLE's response to a number of the issues raised in the Issues Paper. It must be stated that AGLE's silence on any particular matter does not constitute AGLE's agreement or otherwise with the Commission's views on that matter.

AGLE has chosen not to respond to questions regarding details of its forecasts. Rather, AGLE will work with the Commission's consultants on these matters.

GENERAL COMMENTS

Safety

In the Issues Paper, the Commission has said (page 37 and pages 65-66):

> *"In reviewing the distributors' case for costs based on literal compliance, the Commission considers the following points to be relevant:*
>
> - *First, with the exception of the Safety Management Scheme section of the Electricity Safety Act 1998 (section 111/113), there has been no change to this Act or to the relevant regulations (Electricity Safety (Management Regulations) 1999) since 1999 and none are anticipated for the 2006-10 regulatory period. A distributor may seek an exemption for cases where the required safety standard can be demonstrated to be achieved by means other than those prescribed in the regulations.*
> - *Second, although there remains some uncertainty surrounding the exemption process with regard to mitigating the distributors' legal exposure, the exposure is no different from that which has existed and currently exists in the 2001-05 period. If anything, the OCEI's risk management approach will result in reduced exposure regarding the OCEI's requirements and mitigate the outcomes of any legal liability claims.*
> - *Third, the distributors have provided copies of their ESMPs to the Commission. The Commission notes that there are inconsistencies between the distributors' ESMPs and the expenditure proposals submitted by the distributors.*
>
> *Given that the distributors' requirements in regard to the OCEI's safety regulations have not changed since 1999, it is unclear to the Commission why they should consider such costs are a step change, and why these costs should not already be reflected in the distributors' base opex."*

In relation to the first point, there has been significant changes in the interpretation of the regulations by the OCEI and the understanding of the extent of the obligations by the distributors since 1999. This has included the retrospective nature of the regulations and the ability and willingness of the OCEI to grant exemptions. These changes have resulted in a very significant increase in the amount of work, and expenditure, that is required for the distribution network to be compliant with the regulations. This level of work was never envisaged at the last review, as is evidenced by the distributor's submissions on these matters at the time of the previous review, and the OCEI's comments on those submissions.

Further, the framework applied by the Commission, which includes defining a step change to be a new or changed function or a legislative change, is not an approach that the Commission is obliged to adopt. However, the Commission is obliged to have regard to the cost of safety. If this approach does not allow the Commission to meet its obligations, then the appropriateness of the approach needs to be reviewed. AGLE does not consider that the question of 'whether there has been any changes to the legislation or relevant regulations or not' is a relevant consideration.

In relation to the second point, the Commission implies that as the distributors currently have a risk exposure due to non compliance with the safety regulations, it is acceptable for this exposure to continue. AGLE believes this is an inappropriate consideration for a number of reasons:

- AGLE contends that the Commission's acceptance of any level of non compliance with safety regulations is contrary to its primary objective and facilitating objectives contained in clause 8(1) and 8(2)(e) of the ESC Act;
- AGLE contends that it is not funded to carry this risk exposure and does not anticipate that it will be funded to continue to carry this exposure in the 2006 to 2010 period. Just because it has been carrying this exposure during this period does not mean that it has been appropriate for it to carry this risk, nor does it mean that it is appropriate to continue to carry this risk;
- It is not clear what the Commission is referring to by "the OCEI's risk management approach." It is AGLE's understanding the Act and regulations require a distributor to comply with the regulations unless an exemption to the relevant regulation has been granted.

In relation to the third dot point, AGLE's Submission is based on compliance with its obligations as they currently stand. Since AGLE has not been granted any exemptions relevant to this matter, AGLE's obligations are as contained in the regulations. The basis for the Safety Management Scenario is contained in Appendix I of the submission, which AGLE believes is consistent with its ESMPs.

Finally, the Commission questions if these costs are not already contained in the base costs. AGLE has stated in its Submission (table 1.1, page 5) that these are in addition to current levels of expenditure. If the Commission assumes that the costs of complying with the Safety Regulations are already reflected in AGLE's base costs it will be making an error of fact that will lead to a materially incorrect outcome.

Forecasting CAPEX

AGLE contends that a forecast of capital costs based on past levels of expenditure will not be as accurate or provide the best information as detailed analysis and modelling of the elements of capital expenditure.

The framework that is proposed by the Commission is likely to miss legitimate future costs because they are not reflected in the historical trend and cannot be justified on the basis of changes in function, legislative obligations or asset management policies. It is likely that this approach will not provide sufficient funds to cover a reasonable view of future costs. AGLE believes that the proposed approach is not one that best meets the Commission's objectives.

WACC

AGLE notes that the Commission has not addressed AGLE's suggested approach to the estimation of WACC in the Issues Paper. AGLE has a legitimate expectation that the Commission will give due consideration to whether AGLE's suggested approach is best able to meet the objectives specified in the ESC Act and will give AGLE an opportunity to respond to any specific issues that the Commission has in relation to that approach.

AGLE also notes that in representing AGLE's suggested approach in terms of the Commission's request for point estimates for each of the WACC parameters, the Issues Paper contains a number of errors. These are detailed in this response.

Cost of Labour

AGLE maintains its support for the conclusions reached by KPMG on this matter. AGLE understands that KPMG has reviewed the PEG report and will be providing a response in the near future.

Pass through of retailer failure costs

AGLE has proposed a pass through mechanism for losses that a distributor incurs due to the financial failure of a retailer that can not be recovered otherwise.

In response to this matter, the Commission has said the following (page 185):

> *The Commission notes that, in the 2001-05 price determination, the distributors were given an allowance under the revenue requirement for bad debts. AGLE did not discuss why this allowance was insufficient to cover any bad debts arising from the failure of a retailer, nor did AGLE set out what circumstances have changed so that AGLE would be more susceptible to the risk of a retailer failing or why the allowance for bad debts should be increased.*

AGLE contends that these matters are not relevant to this issue. The KPMG report,[1] upon which the allowance for bad debts in the 2001 to 2005 Determination was based, stated that (page 100):

> *In the draft Use of System Agreement it clearly states that the retailer bears the credit risk associated with all consumers in a straight-line relationship with the distributor and retailer. The draft Use of System Agreement also contains a number of credit support provisions to protect the distributor from the financial risk associated with the retailers.*

KPMG then went on to provide a benchmark for allowance for bad debts, presumably to cover bad debts other than those associated with consumers in a straight-line relationship and the financial risk associated with the retailers, as KPMG clearly assumed that the Use of System Agreement would fully protect distributors from consumers not paying their bills and from retailer failure.

However, at the time that the Determination was made, the Use of System Agreement had not been finalised. The final Default Use of System Agreement only

[1] KPMG Consulting (2000) "2001 Price Review – Cost Allocations – Final Report" September 2000

provided limited protection for distributors via the credit support provisions. Consequently, the final Agreement does not provide the level of protection that was envisaged at the time of the last Determination.

Under the Commission's approach of using 2004 actual expenditure as the reference year, any costs that were not incurred in that year will not be included in the distributor's required revenue. There were no incidences of retailer failure during 2004 for which AGLE incurred a loss. Consequently, unless explicit recognition is made, there will be no allowance in the forecasts for provision of bad debts, irrespective of what was allowed in the previous period.

The Incentive Based Regulatory Regime

The Issues Paper implies in a number of circumstances that the current incentive based regime is not working and proposes a number of changes, including:

- Removal of deferred capital expenditure from forecasts;
- The adoption of a 'sliding scale' mechanism for the weighting of capital efficiencies; and
- Incentives for long term reliability.

AGLE contends that in fact the incentive mechanisms are working. In general, the distributors have been able to deliver the forecast levels of reliability with reduced expenditure over the period. Further, in those incidences where reliability targets have not been met, the distributors have suffered financially and have had strong incentives to get things back on track.

The Efficiency Carryover mechanism and the S-Factor scheme operate over more than one regulatory period. For example, the S-Factor related to reliability in 2001 (the first year the scheme was in place) first affected tariffs in 2003 and will continue to affect tariffs until 2007. Similarly, the S-Factor related to reliability in 2004 will not affect tariffs until 2006 and will continue to affect tariffs until 2010.

For the Commission to intervene in these mechanisms now, with only 4 years of experience for schemes that have a 7 or 8 year cycle, would appear to be premature and will contribute to regulatory risk.

Further, a key objective in this area is long term reliability and an important factor for the Commission to manage is long term certainty about the incentives to invest efficiently.

Commission's Consultants

AGLE notes that the Commission has engaged consultants to assist it in assessing the reasonableness of the distributor's forecasts. AGLE requests the Commission make public the terms of reference under which these consultants have been engaged. AGLE wishes to know:

- The criteria that the consultants will use to assess the reasonableness of the distributor's forecasts;
- The requirements for the consultants to disclose their methodology; and
- The ability for the distributors to review draft reports for accuracy prior to them being made public.

ACTUAL REPORTED EXPENDITURE

AGLE has been engaged in discussions with the Commission and has been providing additional information in support of its regulatory accounts. AGLE believes that its Regulatory Accounts reveal the efficient costs of operating the distribution network. AGLE is continuing to work with the Commission and expects that resolution on this matter can be reached in the near future.

Issue 2.1 of the Issues Paper proposes that a related party service provider should be able to earn a “reasonable allowance for profit.” AGLE supports this view.

OPERATING AND MAINTENANCE EXPENDITURE

Step Changes

AGLE strongly opposes the Commission’s narrow definition of a step change to be a new or changed function or a legislative change. There are many reasons beyond a new or changed function or legislative changes that will lead to costs being different to those incurred in a particular reference year, including:

- Changes in interpretation of legislation, codes, regulations, etc;
- Changes in level of activity of existing functions, such as ramping up a program of work;
- Changes in the business or commercial (including legal liability) environment;
- Identification of previously unknown issues that require expenditure to address; and
- Changes in social and community expectations.

AGLE believes that the Commission’s step change approach is unreasonable and is being applied by the Commission too inflexibly, without consideration to any particular factual circumstances surrounding the relevant cost item. The Commission's narrow definition of a step change does not take into account, and does not attach sufficient weight to, a number of the matters to which the Commission is required to have regard in making its determination. Step changes should not be limited to only those arising from strictly new or changed functions or legislative obligations, but rather to any activity where the costs incurred in the reference year (2004) do not reflect the costs expected to be incurred in each of the years of the review period.

In relation to the step changes proposed by AGLE, AGLE believes that these costs represent reasonable forecasts of the additional costs that it will incur during the 2006 to 2010 period, over and above the costs incurred in 2004. AGLE will work with the Commission and its consultants to support these costs.

AGL

Rate of Change

AGLE maintains its opposition to the imposition of an approach that assumes a certain level of efficiencies in the future and removes these from the distributors required revenue. This approach is contrary to incentive based regulation and diminishes the effectiveness of the efficiency carryover mechanism.

This approach puts the distributor at considerable risk if these implied efficiencies cannot be realised. It is not a given that operating and maintenance costs will continue to fall. Although the operating and maintenance costs for AGLE were forecast at the last review to fall, AGLE has experienced an increase in actual operating costs for the period 2001 to 2003, even with the efficiency carryover mechanism in place (see Issues Paper page 22).

The Commission has stated that the 'rate of change' approach *"reduces the significance of the information asymmetry problems or imprecision associated with possible alternative 'bottom-up' approaches to assessing forecast expenditures."* (Issues Paper page 20). AGLE does not believe that an assumption on future levels of efficiency to be achieved from unknown actions can be as accurate or precise as a detailed analysis of the best available information on the cost of operating and maintaining the network.

CAPITAL EXPENDITURE

Forecast based on Historical Trend

The Commission proposes using an approach where (page 49):

> *"…the past trend in capex would be used as the starting point for assessing each distributor's capex proposals for the 2006-10 regulatory period.*
>
> *Where a distributor proposed a level of capex that deviated from the historical trend due to changes in function, legislative obligations or asset management policies, the Commission required the distributor to provide adequate supporting information to justify that variation."*

AGLE believes that this approach is unlikely to give results that are as accurate as forecasts of each cost category using the best available information and is likley to ignore legitimate future costs..

In preparing its Submission, AGLE considered the use of historical expenditure to forecast future capex. However, this approach was rejected as it failed to use the detailed information available and was not likely to result in an accurate forecast of required future expenditure.

AGLE believes that the Commission's proposed approach does not provide a reasonable basis for assessing forecast requirements.

Deferral of Capital Expenditure

Efficiencies in capital expenditure can be obtained in two ways:

- Spending less; and/or
- Deferring expenditure.

The efficiency carryover mechanism provides incentives for distributors to obtain efficiencies by both of these means.

The Commission states that it is considering removing capital that has been deferred from one period to the next from the capital expenditure forecasts (page 52). Such a change would significantly diminish the incentives for distributors to pursue efficiencies in capital expenditure and will give incentives for inefficient behaviour. Firstly, it will give distributors a stronger incentive to pursue efficiencies in the early years of the regulatory period than in later years. Further, it will give distributors an incentive to ensure that capital expenditure deferred from prior years of the regulatory period is spent in the penultimate year of the period, particularly where that expenditure would otherwise be required in the early years of the next period.

This proposal would also make the efficiency carryover mechanism asymmetric because, while the benefits of deferring expenditure to the next review period would be diminished, the penalty for bring projects forward from future period would remain unchanged.

This is contrary to the intent of the efficiency carryover and is unlikely to deliver optimum outcomes for customers.

The Office of the Regulator-General clearly articulated the problems with 'clawing back' past benefits in its first consultation paper for the 2001 price review[2]. The ORG recognised the impact on regulatory risk and the cost of capital.

> *"The first principle the Office will apply in striking this balance is that investors should be able to retain all the profits earned within each review period by outperforming the relevant benchmarks. If this principle were not maintained, and instead, price limits were set on the basis of clawing back excess profits from the previous period, then the principal purpose of the 'CPI - X' regulation would be undermined. Controls on prices would become controls on profits. Regulatory risks and the cost of capital would increase. There would be a shift towards a cost plus mentality and the incentive for the businesses to pursue efficiencies would be eliminated. Thus, although clawback of past excess profits may appear to have short-term attractions, the Office considers that it would have serious long term disadvantages for customers."*

AGLE endorses a continuation of this approach.

[2]Office of the Regulator-General (1998) "Consultation Paper No 1 – 2001 Electricity Distribution Price Review – Framework and Approach" page 21, June 1998

Asset Replacement and Weighted Average Remaining Life (WARL)

The Issues Paper states (page 76)

> *"Projected changes in WARL should be consistent with projections of capital expenditure over the forthcoming regulatory period. If WARL remains constant, the expenditure requirements should not vary from the trend in actuals. If WARL is projected to increase (that is, assets are becoming younger) then this implies an associated increase in replacement expenditure, in order to achieve this."*

This statement is incorrect and is an example of the likely errors that could occur through a reliance on past expenditure to forecast future expenditure.

WARL is a function of both replacement expenditure and the age profile of the assets. If there are a large number of assets that are due for replacement and the level of replacement expenditure remains constant then the WARL will decline.

Asset replacement expenditure must be driven by the number of assets which need replacing and not by the average life of the network. WARL is a very high-level summary of a large amount of information on asset ages at a point in time and is of little value in assessing forecasts in the way suggested by the Commission.

Asset Utilisation

The Commission indicates that its consultants will "need to assess the extent to which the utilisation of AGLE's and Citipower's HV networks could improve." It appears that the Commission has concluded that utilisation can only "improve" by increasing. This is an incorrect conclusion. HV network utilisation is a result of a number of variables including network type, load type, load density and network strategy. AGLE has a strategy of maintaining utilisation at a level that enables load transfers between feeders when faults occur. This strategy provides customers with a level of reliability that would not be available on the AGLE network if utilisation increased. An increase in utilisation might therefore lead to a less reliable network, a situation that most customers would not consider an "improvement".

Planning Approach

The Commission has made an error in table 4.3 relating to AGLE. AGLE uses probabilistic planning not deterministic.

RETURN ON CAPITAL (WACC)

Statistical Approach to Estimating WACC

The Issues Paper summarises the proposals of the distribution businesses within the constraints associated with the Commission's template structure. In respect of WACC, the template structure provides for single- or point-estimates for each of the WACC parameters only. In the Submission, AGLE proposed an approach that utilises more than point estimates of parameters to estimate the WACC.

> *"In order to overcome the problem of measurement error, AGLE has adopted an approach to estimating an appropriate WACC that applies a statistical methodology. This methodology recognises the probability distribution of variables that have material uncertainty, and combines them into a probability distribution using a Monte Carlo simulation "(page 93)*

It is the extent of the uncertainty about the parameters (and in fact the CAPM and WACC calculation) that has led to the regulated cost of capital being one of the most contentious issues in regulatory decisions. AGLE's proposed approach seeks to deal with this uncertainty on a transparent and objective basis. This approach reduces the need for exercise of judgement by regulators, increases transparency and reduces the arbitrariness that can arise in selecting values from a range within which the actual (but unknown) value lies. The report by Stephen Gray of Strategic Finance Group (SFG) (Submission - Appendix L) provides detailed explanation of why this approach is more appropriate and how it can be rigorously applied.

AGLE submits that use of a statistically based approach centred on use of a Monte Carlo simulation presents an important opportunity for regulators and regulated businesses to simplify regulatory decision-making about WACC and reduce one element of regulatory uncertainty. It also provides a rational basis for responding to the problem associated with underestimation of costs (and consequently providing insufficient incentives for investment) that has been identified in literature on regulatory economics and particularly by the Productivity Commission, as recognised in the Submission. The issues surrounding this problem are described in the Submission and also in KPMG's appended report (Submission - Appendix K) and Stephen Gray's report.

It is with some concern that AGLE observes that the Issues Paper does not mention this important issue. In fact, the Issues Paper, by not discussing AGLE's approach, does not accurately reflect the parameter values proposed by AGLE. Instead it appears to suggest that AGLE has simply not provided what the Commission requested by way of point estimates, without explaining AGLE's reasons for not doing so (ie its use of the statistical approach).

AGLE recognises that the statistically based approach represents a departure from the use of point estimates provided for in the Commission's templates and Final Framework and Approach. However, AGLE submits that this approach represents an appropriate development from the use of point estimates that has been used by the Commission and other regulators to date and requests that the Commission give full consideration to the use of the statistical approach proposed by AGLE. The Commission has a sound basis for such consideration in light of its Primary Objective:

"To protect the long-term interests of Victorian consumers with regard to the price, quality and reliability of essential services".

AGLE submits that an important component of the long-term interests of Victorian consumers requires that the returns available from infrastructure investment are sufficient to ensure the continued viability of service providers and to provide the appropriate incentives for future investment. Whether the regulated return is sufficient to achieve these objectives must be assessed against the service provider's true cost of funds. In practice, business cases for new investment are made by assessing the likelihood that the new investment will generate a return that exceeds the relevant cost of funds. The methodology proposed in AGLE's submission is designed to assist regulators to make exactly this assessment – it quantifies the probability that a particular regulated WACC provides a return that is sufficient to cover the true cost of funds. In this sense, the proposed methodology assists the Commission in the implementation of its Primary Objective. Indeed it is difficult to see how the Primary Objective can be fulfilled without analysis that determines the likelihood that the regulated WACC will be sufficient to meet the true cost of funds.

Moreover, the proposed methodology is really nothing new. All Australian regulators recognise that there is uncertainty involved in estimating several WACC parameters. It is also quite standard to recognise this uncertainty by assigning a reasonable range for these parameters. The proposed approach simply uses standard statistical techniques to produce a full probability distribution for the WACC of an efficient benchmark firm in a manner that is entirely consistent with the parameter ranges that have been specified for the uncertain WACC parameters. The framework for estimating parameters and calculating WACC is unchanged – all that is proposed is an examination of how different parameter values affect the WACC.

In addition, Monte Carlo simulation is a standard statistical technique that is often employed in standard financial applications. It is demonstrated in basic finance textbooks[3] and has been employed by Australian regulators.[4]

Another approach to incorporating parameter estimation uncertainty is for the regulator to choose a "conservative" point estimate for each uncertain parameter. AGLE submits that this approach is inferior on three grounds. First, choosing conservative point estimates does not properly accommodate the complex *interactions* between parameters as the simulation approach does. Second, conservative point estimates are assumed to result in a conservative WACC, but there is no way of knowing *how* conservative – the probability that the resulting WACC is sufficient cannot be determined. Third, for a parameter to be considered conservative, the regulator must have defined a reasonable range and then chosen a point toward the "conservative" end of that range. AGLE submits that the regulator should specify this range, as is done in the AGLE Submission. Once this is done, the mechanical simulation procedure can be used to determine the probability that the regulated WACC is sufficient to cover the true cost of funds.

[3] For example, see Brealey and Myers, Principles of Corporate Finance, 7th ed., 2003, McGraw-Hill, Chapter 10; Grinblatt and Titman, Financial Markets and Corporate Strategy, 2nd ed., 2001, McGraw-Hill, Chapter 22; Ross, Westerfield, and Jaffe, Corporate Finance, 6th ed., 2002, McGraw-Hill, Chapter 8.

[4] For example, the QCA employed Monte Carlo simulation analysis to investigate the appropriate capital structure in two recent determinations, uses Monte Carlo simulation to evaluate wharf movements and costs in its recent Dalrymple Bay Coal Terminal Draft Determination, and notes in the review of its WACC framework that Monte Carlo simulation is a technique that is also relevant in relation to parameter estimation and WACC.

AGLE also requests that the Commission more accurately reflect AGLE's Submission in future consultation documents.

Use of Prevailing Rates

The Issues Paper provides a discussion of the real risk free rate and the use of the 20 day average of yields on capital indexed bonds. In explaining the Commission's rationale for its use of this approach, the Issues Paper expresses the view "that the use of the prevailing market rates is in the interests of stakeholders over the long term". AGLE accepts that there are benefits to the use of the 20 day average of indexed-linked bonds as being an appropriate approach and has applied it in its Submission.

However, AGLE has in its Submission identified two aspects of the use of prevailing market rates that are partially addressed in the Issues Paper. These issues are:

- The need for an allowance for supply and demand in debt markets because the use of prevailing rates implies refinancing of debt by electricity businesses at the time of the review coming into effect. The raising of debt at the beginning of the new regulatory period is likely to result in costs of hedging - whether index-linked or nominal - and an allowance needs to be provided for this cost. KPMG's report in Appendix K (page 42,43) of the Submission sets out the rationale for an inclusion of such costs and AGLE has included an allowance of 25 – 35 basis points in its Submission; and

- The need for an allowance that reflects the fact that the Commission will make its Final Decision around August 2005, about four months before the Decision takes effect. There is significant scope for the risk free rate to move from the level that will exist in August to January when prices will apply. Given that the current yield on indexed bonds is at the lowest level in the last 10 years or so, the risk is that future movements in bond rates will be upwards rather than downwards. The relatively rapid downwards movements in bond rates experienced in 2004 indicates that rates can move a significant amount in a short period of time. For example, rates reduced by 0.605% over four months during the period from 29 July (3.275%) to 29 November (2.670%). The potential for increases in the risk free rate remains a risk for electricity businesses. Mechanisms for hedging against this risk are not presently clear; however, it is a potential cost that must be borne by them.

The Issues Paper recognises AGLE's identification of this issue and suggests that this cost is implicit in the equity beta, apparently because it is assumed to be an inflation hedge. This misunderstands AGLE's point as AGLE is referring to the movement in the real risk free rate rather than the nominal risk free rate and therefore is not inflation-driven. AGLE submits this cost needs appropriate debate and consideration and that an allowance in the WACC for potential movement in the risk free rate may be the simplest solution.

Market Risk Premium (MRP)

The Issues Paper states that AGLE provided a range for MRP of 6.00 per cent to 8.00 per cent[5]. While KPMG presents a range of 6 – 8 per cent as being strongly supported by the evidence it has considered - both historical and *ex ante*. AGLE has, in fact, proposed that the MRP be a normal distribution with a mean of 6.0% and a standard deviation of 1.8%. This distribution inherently describes the MRP (as measured) more accurately than a point estimate and is founded on historical data.

As set out in the Submission, AGLE has relied on the advice provided by KPMG (Appendix K of the Submission) and Strategic Finance Group in arriving at a probability distribution centred around 6.0%. Page 96 of the Submission sets out AGLE's rationale. The key points are:

- KPMG report provides extensive explanation of why a historical approach is superior to *ex ante*.
- KPMG report rightly concludes that the reasonable range for the historical mean is 6 – 8%.
- Stephen Gray notes that for the 120 year sample for MRP estimates the mean is 6.5% with a standard deviation of 1.8%
- Choice of a mean of 6.0% is on the low side of the valid historical range and more than adequately takes into account the possibilities of a downward trend that the Commission has inferred from *ex ante* and short term studies.

AGLE notes that the Issues Paper refers to there being "a number of weaknesses" in the use of long term historical returns. The weaknesses noted are the level of statistical uncertainty and imprecision that are inherent with measurement of the MRP. However the Issues Paper does not mention the weaknesses identified in the use of other methods noted in the KPMG report (Submission - Appendix K). AGLE submits that the other methods have greater weaknesses and these are well described in the KPMG report.

AGLE's approach in adopting a distribution centred around 6.0% is conservative (on the low side) and seeks to quantify the uncertainty and measure the effect it has on the computed WACC using statistical methods.

If the Commission were to persist with use of point estimates, AGLE believes it would have to use a higher MRP figure of at least 7.0%. For the Commission not to apply either the statistical approach (or as a poor alternative a higher MRP of 7.0% or greater), it is questionable as to whether the Commission will be complying with its Primary Objective of protecting "the long term interests of Victorian consumers with regard to price, quality and reliability of essential services". The potential underestimate of electricity business' cost of capital will impact on all three interests of consumers in the long term, as identified in the Commission's Primary Objective.

[5] In fact the Issues Paper reports AGLE as providing a range of 6-8% (page 90 and table A.5 page 234)6.0 – 7.8% (table 5.1 page 86)

Equity Beta

The Issues Paper seeks "comment on the distributors' proposal that the value of equity beta should change". As for other distributors, AGLE has proposed an equity beta (assuming 60% gearing) centred around 1.0. In AGLE's case this is presented as a uniform probability distribution in the range 0.9 to 1.1. As identified in its Submission (supported by the KPMG report in Appendix K) AGLE's proposed probability distribution reflects:

- Its view that there is no sound basis to deviate from recent regulatory decisions (including the Commission's 2001 EDPR Determination and its decision on the Gas business' Access Arrangements) for an equity beta oriented around 1.0; and
- Even the use of an equity beta of 1.0 is uncertain and a distribution around this estimate is statistically appropriate.

AGLE has observed the recent analyses by regulators of apparent trends in the betas of comparable businesses, which suggest that the betas have declined from 1.0 over the past 3 to 5 years. AGLE has sought advice from Professor Stephen Gray on the correctness of those analyses. Professor Gray's report will be provided to the Commission in the near future.

This report demonstrates that a proper understanding of the statistical inferences that can be drawn from recent studies of beta does not provide a sound basis for deducing that betas have reduced. Instead, the report shows the significant difficulties associated with measurement of beta and the high levels of imprecision that need to be properly reflected in estimates of beta and reflected in the estimation of an appropriate regulatory WACC. It suggests that the continued use of an equity beta mean of 1.0 is appropriate. AGLE also notes that Allen Consulting Group[6], after completing related but different analysis to Stephen Gray, concluded:

> *"We believe that the equity beta of the average Australian DNSP is 1.00 assuming 60% gearing."*

The Professor Gray report also provides a strong basis for ESCOSA to review its proposed adoption of a beta of 0.8.

As noted in the Issues Paper, the Commission has adopted an approach to beta estimates in its 2001 EDPR and 2003 Gas Access Arrangement review that recognises the problematic nature of beta measurement. We note that ACG expressed the view that:

> *"…the empirical evidence, together with the desirability of maintaining stability in regulatory decisions across time and in consistency in regulatory decisions across companies justifies the use of an equity beta of 1.00(for a gearing level of 60%) for the average regulated electricity distributor."*

AGLE submits that in the light of Professor Gray's report (supported by ACG's analysis) there is no sound basis to change the value of 1.0 for the mean of the equity beta.

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[6] Queensland Distribution Network Service Providers – Cost of Capital Study, December 2004 by The Allen Consulting Group, page 51.

Estimates of debt spreads

The Issues Paper invites comment on whether it is appropriate to use CBASpectrum data when determining debt margins and whether other data should be referred to.

AGLE's Submission raised concerns about sole reliance on CBASpectrum for determining debt spreads and suggested that other evidence should be considered. In KPMG's report (Appendix K pages 41,42) it discusses this issue in more detail highlighting a report by NERA[7] which clearly identifies underestimation of debts spreads by CBASpectrum.

Since that time, as a result of reports by Allen Consulting Group (ACG) for the QCA[8] and ERA,[9] ACG has identified Bloomberg as providing a similar service to CBASpectrum for estimating debt spreads. In addition, ACG identified Snowy Hydro as the longest corporate BBB+ rated bond traded in the market (8 – 8.5 year maturity). ActewAGL provided further evidence on debt spreads to the ICRC[10] with a quote for BBB corporate from Westpac Institutional Banking. ACG has also considered a number of other debt raisings which are more difficult to compare because they are either of shorter term or because they involve floating rates and are not easily related to Government Bonds rates.

Table 1 below summarises values for debt spreads for each of the sources identified above. AGLE has formed the view that this presents evidence that CBASpectrum significantly underestimates debt spreads for long term bonds and that the understatement is at least 20 basis points for BBB bonds and at least 25 basis points for BBB+ bonds.

Table 1 – Debt spreads

	CBA Spectrum		Bloomberg[11]		Westpac IB	Snowy Hydro
	Estimate (bp)		Estimate (bp)		Estimate (bp)	Actual (8 yr) (bp)
Date	**BBB**	**BBB+**	**BBB**	**BBB+**	**BBB**	**BBB+**
13 August 2004	113	103	130.9[2]	125.0[2]	139 - 154	128
27 October 2004	110	100.7	137.0[2]	129.3[1]	N/A	127.1[3]
20 day av (27/10/04)	N/A	100.7	N/A	127.3[1]	N/A	125.7[3]
14 January 2005	111	101	135.6[2]	128.6[2]	N/A	119

Notes:
1. ACG estimates of bond spreads interpolated from Bloomberg A and BBB fair market curves
2. AGLE estimates of bonds spreads extrapolated and interpolated to be consistent with the ACG methodology
3. ACG spreads for Snowy Hydro are 3.9 basis points less than figures AGLE has obtained from Bloomberg. We have used AGC's figures here.

The NERA report to ActewAGL provides an explanation for the understatement of debt spreads by CBASpectrum. It appears that CBASpectrum applies a

[7] Estimating the Debt Margin for ActewAGL, February 2004 by NERA.
[8] Queensland Distribution Network Service Providers – Cost of Capital Study, December 2004 by The Allen Consulting Group.
[9] Electricity Networks Access Code 2004: Advanced Determination of a WACC Methodology, January 2005 by The Allen Consulting Group.
[10] ActewAGL response to the ICRC's Draft Decision, August 2004.
[11] Bloomberg estimates of fair market curve debt spreads for some BBB and all BBB+ bonds have been interpolated by AGLE and AGC.

methodology where it replicates the curve shape of higher rated bonds[12] (AAA, AA etc) in developing the curve of spreads for lower rated bonds (BBB, BBB+ etc). The specific data for Snowy Hydro and the Westpac Institutional Banking (IB) quote support this explanation and indicate that the shape of the CBASpectrum curve is flatter between 5 and 10 year than occurs in practice.

Debt raising costs

The Commission has invited comment on whether debt raising costs should be included in the debt margin. AGLE refers to two of three elements of debt raising costs in the discussion above on Use of Prevailing Rates. In summary AGLE submits that allowances should be made for:

- expanded credit spreads to reflect the cost of accessing the inflation hedged bonds; and
- the timing difference between the date of Final Decision and the date of commencement of the regulatory period.

In addition, AGLE has identified the administrative costs of debt raising as an additional cost of debt. These have been recognised and accepted in number of regulatory decisions since 2002. A significant majority of regulators have provided 12.5 basis points for debt raising, which is consistent with the ACCC's Final Decision on GasNet's Access Arrangement[13]. In that decision the components of debt raising costs were identified as:

- Agency fee;
- Arranger fee;
- Credit rating fees;
- Dealer swap margin;
- Legal fees; and
- Placement fee.

Based on advice from Westpac Institutional Banking, the ACCC estimated the debt raising cost to be 12.5 basis points. As a consequence of the merits review of this GasNet decision, the Australian Competition Tribunal granted debt raising costs of 25 basis points. The information relating to the 25 basis points appears to have been provided confidentially to the ACCC by GasNet. AGLE has adopted this value in consideration of the judicial process that led to this outcome.

AGLE submits that an allowance of between 12.5 and 25 basis points should be included in the cost of debt.

[12] KPMG report (Appendix K) page 42
[13] Final Decision: GasNet access arrangement 2000, ACCC page 147

Equity raising costs

The Issues Paper invites comment on whether an allowance for equity raising should be included.

Equity is raised at the point of the initial float of a company with the associated up front cost. This is a cost of capital that should be recoverable over the life of the business. An annual allowance for this cost would be calculated as a return on the up front cost in perpetuity.

As the business continues to invest, it will raise capital from a number of sources over time. Some of this will be from retained earnings; however from time to time business will enter into new capital raisings either in the form of rights issues or other market offerings, and each of these will have associated costs.

AGLE has not sought to include equity raising costs in its Submission, chiefly because of the difficulty in quantifying this allowance. However, AGLE is of the view that this is a real and legitimate cost of electricity distributors for which an appropriate allowance should be provided if it can be estimated within a reasonable range of confidence.

Gamma

The Issues Paper invites stakeholder comment on whether there are new insights on the value of franking credits since 2001 that are sufficiently robust to suggest that the value of franking credits has shifted from 0.5.

In AGLE's Submission it has not sought to address if there has been any shift in the value of franking credits, as this may be difficult to demonstrate in any case. Instead it provided a report by Professor Stephen Gray of SFG which presents new, robust and authoritative evidence that the correct value of gamma is much more likely to be 0.0 than 0.5.

Professor Gray's paper does a number of significant things:

- It corrects analysis of data from work by Officer and Hathaway;
- It presents two new papers including one by Cannavan, Finn and Gray (2004) that has been peer reviewed and published in a tier 1 international journal; and
- It provides a clear map of the logic of arguments which lead to its conclusions in the light of new and existing evidence.

Conclusions

In summary AGLE submits the following in relation to the issues discussed above:

- The statistical approach based on the Monte Carlo simulation methodology proposed by AGLE provides a more rigorous approach for handling the uncertainty and imprecision which is a necessary part of the estimation of the WACC in a regulatory context. It provides a rigorous approach to overcoming the problem associated with providing insufficient incentives for investment (as a result of underestimation of costs) as identified by the Productivity Commission and others. AGLE submits this approach should be adopted by the Commission and by all infrastructure regulators and must be considered by the Commission in light of its primary objectives.

- The market risk premium adopted by the Commission should reflect the wide uncertainty in its measurement and that a mean less that 6.0% is unsustainable. If the Commission chooses to adopt a point estimate approach a value less than 7.0% is would be too low.
- Properly (ie statistically) interpreted market data provides no basis for adopting an equity beta meanof less than 1.0.
- The debt margin allowed by the Commission should reflect:
    - Estimation errors in CBA Spectrum debt spreads in the range of at least 20 – 25 basis points,
    - debt raising costs of between 12.5 and 25 basis points,
    - allowances for costs associated with acquiring debt at prevailing rates of the order of 25 – 35 basis points, and
    - an allowance or potential increases in the risk free rate between the date of the Commission's Final Decision and the commencement of the new tariffs (1 January 2006).
- There is important new evidence that gamma is much more likely to be 0.0 than 0.5.

EFFICIENCY CARRYOVER

The treatment of negative carryover amounts

AGLE believes that the most appropriate handling of negative efficiencies in the Efficiency Carryover methodology is on a year by year basis. Under this approach, a negative amount in any year is carried forward to be offset against a positive in subsequent years. A negative amount that is remaining at the end of the period is carried over to be offset in the first year of the next period.

AGLE does not support setting the efficiency in all years to zero where the NPV of the carryover amounts for the whole period is negative, as proposed by the Commission. This approach could significantly diminish the effectiveness of the efficiency carryover. A distributor who suffers a significant negative carryover in the early years the period will have less incentive to make gains in the following years and will be more inclined hold off making further improvements until the next period.

Relative Incentives for operating and capital expenditure

The Issues Paper states that (page 108):

> *Inherent in the current regulatory framework is the fact that the incentives to reduce operating and maintenance expenditure are greater than those for capital expenditure.*

The evidence does not support this view. The comparative performance report for 2003 shows that, in total, distributors have reduced capital expenditure by a greater amount than they have reduced operating and maintenance expenditure for each of the years 2001 to 2003, as compared to forecast. If the view in the Issues Paper was correct it would be expected that the distributors would have reduced operating and maintenance expenditure by more than capital expenditure.

DEMAND FORECASTS

The Issues Paper observes that there are a number of “unresolved issues” with the demand forecasts presented by the distributors. Several of these issues relate to apparent inconsistencies in data provided by individual distributors. There is also apparent inconsistency between the aggregate of the distributors’ forecasts and other external forecasts. AGLE will progress investigation of these issues as they relate to its own forecasts, including seeking advice from its independent forecasting consultant, NIEIR.

AGLE will continue to work with the Commission and its consultants on resolving outstanding demand forecasting issues.

SERVICE STANDARDS

AGLE’s MAIFI Target

As noted in the Issues Paper, AGLE is proposing a target for MAIFI that is higher than the target set for the 2001 – 05 period. The Issues Paper indicates that this could lead to a lower level of service. AGLE believes this is an incorrect statement in relation to AGLE’s proposed MAIFI target. The proposed target is based on the current level of service being experienced. AGLE’s achievement of this target in the future would maintain the current level of service. The reason for the proposed revision of the MAIFI target is that the target set in for the previous period was incorrect, as described on page 19 of the Submission.

Quality Service Measures

While the distributors currently report on service quality, AGLE contends that the data reported is unreliable because the definitions are ambiguous and unclear. AGLE sought the Commission’s clarification on a number of matters to do with reporting service quality in 2002. AGLE again seeks the Commission’s response on these matters.

Customer Service Measures

The Issues Paper implies that AGLE opposes setting a target for call centre performance. AGLE does not oppose the setting of a target and the reporting of call centre performance. AGLE’s concern is in relation to the inclusion of this measure in the S-Factor scheme.

SERVICE INCENTIVE MECHANISMS

Customer Service KPI

AGLE supports, in principle, an incentive regime on Customer Service but lack of data is an obstacle to its implementation at the start of the 2006-10 period. AGLE looks forward to working with the Commission to resolve these issues:

- The drivers of customer value from call centre performance are not well understood. There is, for example, no agreement on the relative value (hence appropriate standard) of performance during outage and non-outage periods; and
- While AGLE has measurement methodologies for call centre performance in place, these are not developed to a level appropriate for S-factor implementation.

Removal of Asymmetry

AGLE supports adjusting the S-factor formula to remove the asymmetry associated with symmetrical changes in performance for the following reasons:

- The incentive scheme was originally designed to be symmetrical, but in its current form it clearly does not achieve this aim;
- If it is not changed it would set a precedent that an identified asymmetry is knowingly preserved without a corresponding increase in allowed WACC; and
- The asymmetry may be immaterial at present but there is an important principle of fairness at stake.

AGLE supports the formula proposed by TXU but would consider other methods that remove the asymmetry.

Quality of Supply KPI

AGLE supports, in principle, an incentive regime on Quality of Supply but see obstacles to its implementation at the start of the 2006-10 period. AGLE looks forward to working with the Commission in the next regulatory period to resolve these issues.

A service incentive regime is fundamentally at odds with the Distribution Code approach of mandatory compliance to a predetermined service level. The Distribution Code would need to be amended to recognise any service incentive scheme:

- The distribution code assumes there is a single “adequate” level of power quality for all customers. It provides an incentive for distributors to deliver that level of quality through the possibility of regulatory sanction;
- It does not, however, provide guidance as to the basis on which distributors should prioritise quality improvement projects. Distributors are mandated to comply with the Code in all respects, whether or not this is in the customers’ best economic interests: and
- It does not provide any incentive to exceed Code levels of service, even though there is strong anecdotal evidence that some customers greatly value higher service levels.

Little is currently known about the value assigned to specific Quality of Supply attributes by various customers, hence it is difficult to set incentive rates and target levels on an economically sound basis:

- The KPMG willingness-to-pay study underlined the difficulties in determining the value end-use consumers place on particular Quality of Supply attributes. The results use the frequency of events where power quality is manifestly inadequate, as reported by customers, as a proxy for power quality; and
- It is difficult, if not impossible, to evaluate customer willingness-to-pay for particular attributes of power quality on the basis of the data currently available, and hence make appropriate investment and operating decisions concerning power quality.

Current monitoring equipment is oriented around reporting a sample of Quality of Supply information, hence overall network capabilities with respect to of Quality of Supply are not well understood. More comprehensive measurement would be required if the data were to be used as the basis for setting performance targets.

Long-term reliability KPI

AGLE is concerned that some of the Commission's comments appear to reflect a different understanding of the regulatory regime to that held by the AGLE, in particular the nature of risks/rewards to distributors associated with cumulative performance under the S-factor mechanism. AGLE's view is that:

- The regulatory regime is basically sound and includes incentives for long-term reliability that are appropriate given the nature of the networks.
    - The S-factor regime penalises underperformance for a period of five years (regardless of when that underperformance occurs) so long as reliability targets are not relaxed in the future. The existing incentive regime will drive distributors to optimise the trade-off between reliability and cost in line with the incentive rates.
    - AGLE is unaware of anything that could be done to a network to affect reliability in 20 years' time that would not also have a shorter-term impact and thus create an immediate S-factor incentive to improve
- The s-factor incentive mechanism is currently in the start-up phase and it will be several years before financial outcomes reach steady state. It is too early to draw conclusions or make significant adjustments based on long-term incentives which have yet to unfold.

AGLE does not support the inclusion of long-term reliability measures in the service incentive scheme. Such measures are unnecessary and have both in-principle and practical problems:

- The existing regime penalises underperformance relative to the target level. So long as the targets are not revised upwards, the existing regime already provides substantial incentives for long-term reliability. The regulator exercises control of both incentive rates and regulatory WACC, which ought to provide sufficient, non-intrusive mechanisms to ensure an appropriate level of investment.
- Mandating adherence to asset management plans or similar inputs would substantially reduce both scope and incentive for distributors to innovate in service delivery, as well as undermining the ability to efficiently respond to new information or new technology:

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    - Plans are made with incomplete information. It is entirely appropriate that when the available information changes, plans change.
    - Incentivising distributors to follow plans without specifying the content of those plans would simply lead to distributors setting plans that they know they can achieve, and would oblige the distributors to implement plans that are outdated or unnecessary (and hence inefficient).
- There is no demonstrated connection between operational measures of performance and the long-term reliability of a network.

The strongest step the ESC could take towards ensuring long-term reliability would be to ensure that the regulatory regime has a consistent incentive structure and targets from one review period to the next. Changing target levels for performance measures without directly funding them is contrary to the original intent of the regime.

Distributors who believe that efficiency improvements they make through investment and operating improvements will be clawed back by the regulator, will face an unattractive balance of risks and potential rewards from such investment and are therefore likely to refrain from investing. Adjusting targets to current performance levels between one regulatory period and the next will lead to just this outcome.

Distribution Loss Factor KPI

AGLE supports, in principle, an incentive regime on the distribution loss factor but draws the Commission's attention to the following points regarding its implementation:

- A nationally accepted approach to DLF estimation has yet to be agreed, and the variation between the estimation methodologies of different DBs probably exceeds the economic benefits.
- The efficient level of losses should be revealed through the incentive mechanism, not determined ex-ante. Hence the 'target' DLFs should be derived from the inherent capabilities of the existing networks.
- DBs should not be penalised based on the difference between actual and target losses. Actual losses are outside DBs' control to a large extent and accurate DLF estimation can be ensured in other ways. A nationally accepted methodology would remove much of the uncertainty around DLF estimation.
- Any incentive rates should be based on the long-run average energy cost (whether derived from market prices or generation costs) since in the short term energy prices vary greatly.

PRICE CONTROLS

Distribution tariff re-balancing constraints

AGLE supports an increase in the level of the distribution re-balancing constraint to a more appropriate level that reflects the changing business environment, with particular reference to the proposed rollout of interval meters. Due to the variability of the peak and off-peak habits of customers using interval meters it is unlikely that a re-balancing constraint of CPI + 2% will effectively allow AGLE to fully recover it cost of operations and maintenance of the network.

Transmission tariff re-balancing constraints

AGLE fully supports TXU's proposal to effectively remove the re-balancing constraint applicable to transmission tariffs, or at the very least, have the re-balancing constraint set to a minimum of CPI + 20%, as has been the applied level for practical purposes over the current regulatory period. A change in constraint to at least a minimum of CPI + 20% will allow AGLE to effectively recover increases in transmission charges, while still allowing effective tariff re-balancing to occur.

Experience has shown that the current re-balancing constraint is totally inadequate and leads to applications for a higher level to be made each year. Applying to the Commission for the re-balancing constraint to be lifted each year is an unnecessary cost and causes delays in time allowed for calculation due to the approval process.

Customer Consultation

The Commission is proposing that distributors:

- consult with customers prior to the installation of an interval meter;
- consult with customers prior to their reallocation to a time of use tariff following the installation of an interval meter; and even
- provide customer with an analysis of their future energy billing and information pertaining to how they can effectively use energy.

AGLE is strongly opposed to this view and does not believe the distributors have either a need or the right to carry out this consultation. Under the Use of System Agreement, retailers are responsible for dealing with customers. Further, it would not be acceptable for distributors to talk to customers about their energy use.

Timing of tariff approval

AGLE concurs with TXU that as a result of the timing requirements of the Annual tariff report, the CPI index used in the CPI-X price control formula will require a change to the June quarter CPI as the September CPI index which is currently used, would not be available in time. It will also be necessary to ensure that the forecasts and required revenue in the EDPR are in $2004 where $2004 is defined in relation to the June CPI rather than the September CPI as is presently the case.

With regards to any foreseeable issues by changing to a June CPI as apposed to the currently used September CPI, AGLE request that should any material change in CPI between the periods occur, provision for a change to the proposed prices included in the Annual Tariff report be allowed in order to ensure any material increase or

decrease as a result of the CPI movement between June and September is passed through to customers.

Passthrough provisions

In section 10.2.7 of its Issues paper the Commission has noted that while AGLE proposed that provisions should be made for the pass through of certain events AGLE did not provide sufficient information as to the materiality or frequency of the costs in question.

AGLE has identified two main areas where it believes the distributors are currently at risk of incurring unforeseeable costs that may have significant impact on the operations of the distributor as due to the timing of such events the costs were not recovered via prices through the fully distributed cost mechanism

The first area is related to one-off material increases in operating costs that were not envisioned at the time of the price review. For example, during 2004, AGLE was imposed with increased transmission charges that were caused by the imposition of a land tax on transmission companies.

The second area for concern as a distributor is the financial failure of a retailer. AGLE is seeking that a pass through provision be incorporated in the final determination to enable recovery out of pocket expenses should a retailer fail to pay its debts. This matter has been discussed earlier in this response.

METERING

Installation Costs

AGLE strongly supports the recovery of the cost of meter board replacement and other associated work, where that work would not have been required other than for the installation of the interval meter, through the metering charge. While, under normal circumstances, these costs would be borne by the customer directly, under the interval meter rollout, these costs are being imposed on the customer. AGLE believes it would be politically, publicly and socially unacceptable to impose these costs on the individual customer.

It has come to AGLE's attention that it may be necessary to install a safety switch as part of the meter installation under certain circumstances. If this is so, then this cost should also be recovered through the meter charge.

EXCLUDED SERVICES

In the Submission, AGLE proposed the escalation of excluded service charges by CPI each year, so as to maintain the real value of these charges and to reduce the need to apply for changes and the cost of providing these services increases. AGLE believes that this is a worthwhile approach that is in the best interests of customer, distributors and the regulator.