Submission to AEMC consultation on AER rule change request

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The purpose of this submission is to contribute to the AEMC's important consultation on the AER's rule change request.

1 Introduction

A recent Garnaut report on climate change policy and the electricity industry highlighted a dramatic increase in Australian electricity prices since national regulation was introduced in 2006 — a large part due to network costs (Garnaut 2011). Garnaut recommended a thorough investigation into questions such as:

> Is the current regulatory framework generating excessive investment in distribution and intra-state transmission? Is there excessive investment in infrastructure ("gold plating") under the guise of reliability? Is investment being rewarded for relatively low risk investment at rates appropriate for more common riskiness of business investment, thus contributing to increases in prices? Is there an asymmetry in incentives for different kinds of investment …(Garnaut 2011 p.38)

These questions are relevant in the context of the AER's rule change proposal. The Victorian Competition and Efficiency Commission (VCEC), among others, has also recently called for a wider review of such issues by the Ministerial Council for Energy (MCE) (VCEC 2011 p.162). The effectiveness of the energy network regulation framework could also be

[1] The views expressed in this submission are the personal views of the author and are not the views of his employer, the Essential Services Commission of Victoria.

usefully considered in the Productivity Commission's forthcoming scheduled review of the National Access Regime.

Although there is a breadth of issues to be considered in the AEMC's review, this submission primarily focuses on selected aspects of the rule change proposal, including cost of capital issues.

2 The AER's proposal

There are a number of differences between the rules governing regulation of electricity transmission, distribution and gas pipelines. The AER's proposals seek to align the rules around a common model by adopting a single preferred approach in each identified case of inconsistency, especially where relevant to the cost of capital.

The main elements of the AER's proposal are as follows:

1. WACC reviews to be binding on reviews of access arrangements
2. use of a nominal post-tax vanilla WACC and prescribing the CAPM model for estimating the cost of equity
3. removing overly prescriptive rules, such as those concerning the method for setting the debt risk premium (AER 2011a p.25)
4. adopting a 'consider-decide' model for determining forecasts of efficient capex and opex (AER 2011a p.30)
5. greater discretion when rolling forward the RAB — e.g. enabling the AER to disallow certain capex in the previous period that was above the forecast — in order to improve incentives for efficient investment
6. identification and use of confidential information.[2]

[2] Other matters proposed by the ACCC include, *inter alia*, the ability to adopt actual or forecast depreciation, remove excessive or inefficient capitalised related-party margins, clearer and more consistent rules relating to pass-through events, and the ability for AER to introduce other incentive schemes.

This submission focuses mainly on items 1 and 2 above (which concern the cost of capital) and offers only limited comment on items 3 to 5. There are more issues relating to the cost of capital that could be considered by the AEMC, and this submission canvasses some ideas.

3 WACC reviews

3.1 The problem

Under the AER's proposal, WACC reviews will be undertaken separately from reviews of access arrangements. The 'persuasive evidence' test, used before re-determining parameters in the WACC review, would be removed. The outcome of each WACC review would be a 'statement on the cost of capital' (SOCC), which would apply for a maximum of five years to both electricity and gas networks. To be approved, all access arrangements submitted in that period will need to comply with the SOCC (AER 2011b pp.3-6).

The AER argues that these changes to the 'process, method and timing for determining the WACC' will remove the present duplication between periodic WACC reviews and the need to re-examine the WACC for each specific determination.

While, the aim of reducing administrative burden has merit, another effect of the AER's proposal may be to remove the availability of merits review for its decisions concerning the WACC. This appears to be the effect of removing the 'persuasive evidence test' and making compliance with the WACC review mandatory in all subsequent regulatory decisions. The AER notes:

> While it is the role of the AER to determine whether there is persuasive evidence, DNSPs have the right to contest that there is sufficient persuasive evidence. Decisions on whether there is persuasive evidence form part of the distribution determination and are therefore subject to merits review by the Australian Competition Tribunal. (AER 2011a p.16)

The MCE reviewed the decision-making framework in 2006 and adopted a limited merits review for the following types of AER regulatory decisions:

- to approve, revise or draft gas access arrangements
- pricing and revenue determinations for transmission and distribution in electricity (including the application of the regulatory test)
- certain ring fencing decisions. (MCE 2006 p.15)

The decision coming out of a WACC review (at present the Statement of Regulatory Intent (SORI)) does not appear to be subject to merits review.

3.2 Discussion

In recent times some of the AER's decisions on elements of the WACC were rejected by the Tribunal, including:

- use of a 5-year government bond rate rather than a 10-year bond rate was seen as 'an attempt to modify the model to one which operates by reference to the regulatory period' ('Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT 6.' at 47)
- discriminating between Bloomberg and CBASpectrum 'fair yield' curves based on only five data points was not considered reasonable ('Application by ActewAGL Distribution [2010] ACompT 4' at 39-40)
- after correcting methodological and statistical flaws in the study relied on by the AER, the best estimate of 'gamma' was found to be 0.25 rather than 0.65 ('Application by Energex Limited (Gamma) (No 5) [2011] ACompT 9').

In each case the Tribunal's reasons were sound. However, there is legitimate concern about cherry picking because decisions that appear to be unduly in favour of regulated businesses will not be appealed. For example, although the AER found the most persuasive evidence indicated the equity beta for electricity infrastructure was between 0.44 and 0.68, it adopted a higher value of 0.8 (AER 2009 p.244). Of course, the effectiveness of cherry picking relies on the existence of regulatory error.

It has been argued by some that the appeal process is ineffective and should be removed (see: Johnston 2011). Another view (expressed in another context below) is that the process of establishing precedents takes time:

> There is a period required in which regulators will learn what is what is required of them. In that period they may fall foul, even often, of review by superior administrative bodies or courts. The process is a learning one. Ultimately the aim should be that the strike rate for successful appeals or reviews is low. The ACCC should not be criticised because at present it has lost a number of large cases. Nor should the ACT, or the courts be criticised for regularly finding error in the ACCC's decisions. The process will work itself out over time. (Gleeson 2004 p.36)

The experience to-date suggests there have been regulatory errors and it would not seem wise or fair to remove the merits review in this context. Other options should also be considered. The 2006 Expert Panel on Energy Access Pricing concluded in favour of allowing merits review of decisions by the AER in relation to price and revenue controls, stating:

> … appropriate provision of merits review increases the confidence of all parties in a regulatory system, but that merits review processes that are not appropriately specified can lead to incentives to game the regulatory system and as a result delays and considerable cost.
>
> (Expert Panel on Energy Access Pricing 2006 p.92)

The strong incentives for regulated businesses to pursue appeals and the scope for cherry picking that they present suggests that some reform to the decision-making frameworks appears needed. This would be preferable to doing away with the merits review for cost of capital decisions. As Gordon and Makholm have emphasised, reliable review processes are an essential part of effective regulatory regimes. (Gordon & Makholm 2008 p.31)

This submission makes two suggestions to address shortcomings in the decision-making process. Firstly, it is suggested that the NER are too prescriptive and detailed in regard to the methodology for determining the cost of capital. By forcing a formulaic approach, they strip out the important role of judgement, and encourage selective appeals against

elements within the formula. Second, it is suggested that the merits review process may need reform to ensure that it does not simply represent another decision-maker having a different view.

3.2.1 Aggregating WACC parameters and the role of judgement

In *Epic Energy*, the WA Supreme Court emphasised that when determining a return on capital generally:

> Significant judgement is inherent in the selection of discount rates. Discount rates can be derived using a framework which is theoretically sound, however when determining required future rates of return, there is inherently a substantial degree of subjectivity involved in estimating variables, which by definition are unable to be observed. ('Re Dr Ken Michael AM; ex parte Epic Energy (WA) Nominees Pty Ltd & Anor [2002] WASCA 231' at 141)

The estimates of WACC parameters are subject to uncertainty. The electricity and gas rules encourage the adoption of a preferred value for each parameter and calculation the WACC as if these parameters were known with certainty. This is certainly the approach adopted by the AER (and several other regulators). If uncertainty is explicitly recognised, then there is an appropriate role for the exercise of judgement by the decision-makers (the AER Commissioners). For example, if ranges are adopted for some parameters it is possible to estimate a range for the cost of capital, from which the decision-maker chooses a preferred estimate (noting that there are interdependencies between some parameters, so that variation of one parameter may necessitate adjustment of another parameter). Another approach is to assign a probability distribution to each parameter, and use Monte Carlo simulation to calculate the probability distribution of the WACC. Again, a preferred estimate can be chosen.

The second and third approaches are consistent with an approach preferred by the Tribunal (in another context):

> In our opinion, the reasonable approach would be to consider the error involved in estimating each of the individual component parameters and from this derive a reasonable estimate of the range in which the true

> overall WACC value would be accepted to lie. ('Re Telstra Corporation Ltd (No 3) [2007] ACompT 3 ')

The Monte Carlo approach is particularly interesting, and has some potential benefits.

- Firstly, it elucidates the effects of parameter uncertainty on the WACC confidence intervals.
- Second, it does away with the need to include an element of conservatism in individual WACC parameters—which has less transparency. Any adjustments for conservatism (if that is desired) can be made to the overall WACC with better knowledge of the probabilities they entail.
- It provides for a clearer separation between the empirical exercise of identifying the confidence intervals of the WACC estimate with the decision-makers' discretion in deciding the most reasonable WACC.
- This separation may discourage cherry picking by regulated entities — i.e. appealing against only those WACC parameters that are unfavourable. A challenge to any element of the WACC decision would be a challenge to the whole WACC. The AER would have the opportunity to support its overall cost of capital decision, notwithstanding uncertainty or measurement error in the elements of the WACC taken singly. That said, there would inevitably be different views about the central estimates and confidence intervals of the individual parameters. Some of these confidence intervals may themselves by highly uncertain. Thus, it is not certain to reduce controversy.

Regulated businesses have often advocated the use of Monte Carlo analysis, perhaps motivated by the expectation that this would highlight the uncertainty of the decision. It would make transparent the probability that regulated businesses will not earn the cost of capital. However, as emphasised by Professor Bowman, there is nothing in the Monte Carlo approach that would constrain the regulator to adopt proposals put forward by regulated businesses (Bowman 2005 p.8). If anything, there is a

strong presumption against biased decisions. This is evidenced by Gilbert & Tobin's opinion that:

> … if the CAPM can be applied consistent with the Rules in two ways and one delivers an unbiased result and the other does not, then the former should be preferred (Gilbert & Tobin 2008 p.2)

Further, the Tribunal has indicated that any case for higher returns, due to asymmetric effects on investment with social costs, should be supported by a social cost-benefit analysis ('Re Telstra Corporation Ltd (No 3) [2007] ACompT 3 ' at 433–457). In short, simply defining a range of uncertainty doesn't in itself support any case for an upper bound WACC.

3.2.2 The merits review process

This section begins by briefly outlining some of the main elements of the merits review process and then explores some options for reform.

Applications for merits review can only be made in regard to 'reviewable regulatory decisions' and where:

- there is a serious issue to be determined
- the amount involved exceeds the lesser of $5 million or 2 per cent of the average annual regulated revenue of the service provider, or if non-financial effects would be material to the operation and effect of the determination
- the applicant has not breached specified conduct requirements during the original decision.

The grounds for review are that there has been: (a) an error of fact which is material to the making of the decision; (b) an incorrect exercise of the decision maker's discretion having regard to all the circumstances; or (c) the decision was unreasonable having regard to all the circumstances. The onus is on the applicant to establish any of these grounds.

If an application is accepted by the Tribunal on these grounds:

- users or consumer representatives have rights of intervention to participate as a party to the process if their interests would be affected by the decision or if they will add other perspectives
- the AER has the ability to raise other aspects of its decision not raised by the applicant for review.[3]

If the Tribunal does not uphold the AER's decision, then it can remit a decision back to the AER or it can 'stand in its shoes' and make the decision it should have made.

Most of the elements of this process are unexceptional, but it may be argued the grounds of appeal are vague. For example, 'the decision was unreasonable'. One standard of unreasonableness that is sometimes used is Wednesbury unreasonableness, which refers to a decision that is so unreasonable that no reasonable person acting reasonably could have made it. Unfortunately, the term 'unreasonable' can have a range of meanings:

> … unreasonableness as a ground of review is difficult to define with any certainty or clarity. … Despite many attempts to refine the concept it remains ill-defined and imprecise. (Sidebotham 2001 at 1)

The wider the meaning that is adopted for the term 'unreasonable', the greater the scope for the reviewer (the Tribunal) to substitute its own judgement for that of the delegated decision-makers (the AER Commissioners). There is a good argument for confining the concept of unreasonableness in this context, for example, as suggested by one author in another context:

> … the circumstances in which a decision can be held unreasonable must truly be overwhelming. Unreasonableness is intended to be a safety net only. The courts … must not use unreasonableness as a guise for hearing an appeal and so review the merits of a case and substitute their own decision for that under review. (Sidebotham 2001)

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[3] Some consider this is a curious provision because 'the decision maker should be presumed to be satisfied with all aspects of the decision'. Minter Ellison 2006, 'Merits Review under the National Gas Law', advice to Australian Pipeline Industry Association Ltd. However, it would allow the whole WACC to be considered if any single element is to be considered, if that were the AER's preferred strategy.

In some respects, similar issues can arise with respect to the ground of factual errors. These can be interpreted quite broadly. According to the Tribunal:

> … they include errors in findings as to matters such as:
>
> - the existence of an historical fact being an event or circumstance;
> - the existence of a present fact being an event or circumstance;
> - an opinion about the existence of a future fact or circumstance;
> - opinions based upon approaches to the assessment of facts or methodologies which have been chosen to be applied. ('Application by Energex Limited (No 2) [2010] ACompT 7' at 29)

Questions that can arise in relation to errors of fact include:

- whether all of the facts relevant to the case have been found, or whether there has been an error or omission in regard to the facts
- whether the facts relied on in making a decision are indeed facts
- the reasoning applied to facts can also be a matter of fact:

> … in most cases, the question whether the facts satisfy a statutory criterion involves questions of degree and evaluation and those are essentially matters of fact. ('Application by Energex Limited (No 2) [2010] ACompT 7' at 36)

The Tribunal's interpretation of the term 'facts', which may even encompass reasoning, seems quite broad. By comparison, the Macquarie dictionary relevantly defines a 'fact' as 'an actual or alleged physical or mental event or existence, as distinguished from legal effect or consequence.' Reasoning is 'the process of drawing conclusions or inferences from facts or premises' including the 'reasons, arguments, proofs, etc., resulting from this process'.

This discussion suggests that the terms 'unreasonable' and 'facts' can be interpreted quite broadly and if the role of the Tribunal is to be confined to that of a safety net only, then a greater degree of guidance may be needed in regard to the definition of these terms for the purposes of the energy network regulation regimes.

3.3 The solution

In this section it has been suggested that:

- Greater consideration could be given to taking the uncertainty of WACC parameter estimates into account in the process of combining those parameters. The Monte Carlo method is one approach. This may assist to separate the fact-finding exercise of estimating WACC parameters, and their range of uncertainty, from the decision-maker's role in using those facts to form a decision on the overall cost of capital.
- The effectiveness of the merits review process might be improved by providing the Tribunal with greater guidance on the scope of appeal. This includes guidance on the intended meaning of 'unreasonableness' of a decision in this context — perhaps Wednesbury unreasonableness[4] — and the meaning of 'facts'.

With regard to the role of the WACC review, there are several options that could be considered by the AEMC in addition to the AER's proposal and the *status quo*.[5] One alternative would be for the WACC to be determined periodically in a WACC review, but for the SOCC to be made subject to merits review at the time it is made.

As a variation on this approach, the WACC review could establish certain parameters, such as the market risk premium, and equity beta, and leave other parameters, such as the risk-free rate and debt premium to be determined during the access arrangement approval process. This option may better balance the benefits of process simplification and administrative

[4] There is a similar ground for judicial review. However, the Tribunal has specific expertise to better enable it to assess an issue of this kind in relation to a regulatory decision.

[5] The extent to which the AER must determine the WACC anew in each review, or follow its previous decision in the SORI, hinges on the meaning of "persuasive evidence". The Tribunal has made some observations about the meaning of these terms. It has interpreted "persuasive" to mean "able to persuade or induce a belief" and "evidence" to mean "any data or material (including expert opinion) from any source". 'Application by Energex Limited (No 2) [2010] ACompT 7'. This suggests the hurdle may not be high, with the primary obligation on the regulator to reach its best estimate of the cost of capital in each determination.

cost reduction against the detriments associated with inflexibility and risk the WACC may become too far out of line with market conditions. This is essentially the approach used by the Commerce Commission in New Zealand, which established a cost of capital methodology as part of its input methodologies (Commerce Commission 2010a). Some parameters are determined as part of the methodology, but the risk-free rate is determined shortly prior to the relevant period. Some regulators go further and allow for variation of the risk-free rate and the debt margin within the regulatory period on a year-to-year basis (see: ERA 2010). This is a further alternative that should be considered by the AEMC.[6]

Consumer advocacy groups have argued that there are barriers, including financial and information barriers, to their participation as interveners in merits review processes (Johnston 2011). The AEMC should consider options to alleviate these problems. For example, should the party that loses an appeal pay some amount toward the costs of consumer advocate interveners?

4 WACC formula

4.1 The problem

The AER's proposal is for both the NER and NGR to require use of the nominal post-tax vanilla WACC. The cost of equity would be determined using the CAPM. The AER considers 'it is unlikely that there would be a justifiable departure from the CAPM over the medium to long term' (AER 2011b p.11). But it notes that an alternative would be to permit WACC reviews to consider the methodology for determining the cost of equity.

When considering this proposal, it would be timely for the AEMC to consider whether the methods for determining rates of return on capital for energy networks in Australia are meeting the regulatory objectives — that is, promoting efficient investment and operation of electricity and gas services for the long-term interests of consumers. More international

[6] I am indebted to Sue Jaffer for pointing out this option.

benchmarking is needed of regulator-determined rates of return in different jurisdictions. This is a complex task, but available comparisons suggest that Australian regulators may provide relatively high equity premiums over risk-free rates (European Agency for Reconstruction 2006). The issues include whether the CAPM/WACC needs to be complemented by other analysis, and whether there are alternative methods of employing the WACC that the AEMC might consider.

4.2 Discussion

This section will discuss:

- international practices
- analytical methods that are complementary to, and used in conjunction with CAPM/WACC to assist decision-makers determine the rate of return
- an alternative method of employing the WACC for consideration.

4.2.1 International practices

The CAPM/WACC method for estimating the cost of capital is not used exclusively by regulators overseas. The UK and Europe, generally speaking, use this method, but the USA and Canada use quite different methods. The USA is eclectic and historically has given most attention to the Dividend Growth Model. The Canadians (subject to qualifications discussed below) use the historical utility sector return on equity, measured as a spread over the bond rate, and index this to current bond rates. (Canadian Energy Pipeline Association 2008; NERA 2008)

Regulators in the UK have been actively considering alternative approaches to the CAPM/WACC for determining the rate of return. There now appears to be a move away from exclusive reliance on the CAPM, complementing this with simulation modelling and investor surveys. (Ofgem 2009 p.48)

4.2.2 *Complementary analytical methods*

In Canada the 'fair return standard' includes three distinct requirements:

- comparability with other enterprises with similar risk
- maintaining the financial integrity of the regulated firm
- enabling the utility to attract capital on reasonable terms. (Canadian Energy Pipeline Association 2008 p.4)

The CAPM/WACC model directly addresses the first of these requirements. This can usefully be complemented by other analysis relevant to addressing other standards for the appropriate cost of capital. These include the following.

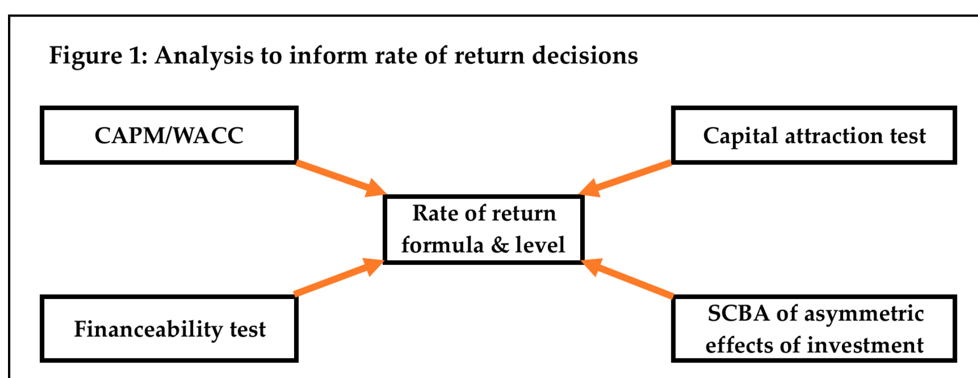
- **Financeability test**: Prior to finalising a price determination, IPART tests financeability by examining the forecasts for key financial ratios implied by the revenue requirement forecast. It considers indicators such as funds from operations interest cover; funds from operations over total debt; gearing defined as debt to total assets using regulatory values; and retained cash over total debt. The implied credit rating is assessed using Moody's criteria to confirm it is consistent with that assumed in the WACC (IPART 2010). Ofwat in the UK uses a similar technique (Europe Economics 2009).

- **Capital attraction test:** This test requires regulators whether the regulated rate of return would be sufficient to enable the business to raise capital for efficient investment programs, assuming they are efficiently financed and use appropriate risk mitigation measures.
- **Social cost-benefit analysis (SCBA) of asymmetric risk**: It is often argued, and sometimes accepted by regulators, that the social costs are greater for underestimating than for overestimating the WACC. However, the claim is not clear-cut, because overinvestment is an inefficient use of resources and not necessarily more efficient than underinvestment (see: NERA 2004). The Tribunal considered this question in 2006 and while it accepted it was possible for asymmetric consequences to flow from too high or too low a WACC,

> it did not accept a presumption in favour of overestimating the WACC. The Tribunal concluded that asymmetric effects on social welfare would need to be demonstrated using SCBA ('Re Telstra Corporation Ltd (No 3) [2007] ACompT 3 ' at 433-57). Thus, SCBA may also be an important consideration in WACC determinations.[7]

These observations suggest a process for determining the rate of return for network businesses combining several different analyses, as depicted in Figure 1.

Figure 1: Analysis to inform rate of return decisions



4.2.3 *An alternative method of employing the WACC*

There has been a wider debate about how to employ the WACC and the notion of a 'split cost of capital'. Helm argues that the historical RAB should be remunerated at the cost of debt, while a suitable average cost of debt and equity should be used for capex (Helm 2008). He suggests the RAB has an implicit near-guaranteed return under the regulated monopoly framework.

Putting aside Helm's contentious suggestion, there may be merit in considering the broader question. For example, under one approach, the regulatory WACC in force when an investment is made would continue to

[7] It is sometimes argued that real options are relevant to investment incentives and delay options may need to be compensated through an adjustment to the cost of capital. The New Zealand Commerce Commission has considered to these issues in some depth. It decided that no adjustment will be made to the cost of capital for real options. If a case is made, some asymmetric real options may be treated as a form of asymmetric risk to cash flows. Commerce Commission 2010b, 'Input Methodologies (Electricity Distribution and Gas Pipeline Services): Reasons paper'. (see pp.378,573-8)

be applied to the written-down value of that investment over its economic life. Thus, the WACC determined in a price review for the next regulatory period would apply to the investments made in that period over the remainder of the lives of those investments.

In this approach, the WACC applying to the RAB at the commencement of a regulatory period would effectively be a weighted average of past regulatory WACCs because each asset vintage would carry on being remunerated at the same WACC. But it would be necessary to apply a WACC to the RAB carried forward from the previous (i.e. current) regime. In principle, it should be the certainty equivalent of the uncertain future WACC determinations under the current framework. This would likely be higher than the cost of debt suggested by Helm, but lower than the historical average of WACC determinations, because those determinations had greater uncertainty, being reset every five years.

This alternative approach appears to have some advantages, and could be considered by the AEMC. Before noting the advantages, it should also be emphasised that there are disadvantages. The prevailing practice of applying a periodically updated value of the cost of capital to the RAB, valued at the depreciated replacement cost of the assets, corresponds loosely to the notional cost ceiling at which a hypothetical new entrant could supply the same market. However, this is only notional concept in industries (or those parts of industries) that are long-term natural monopolies with little or no scope for bypass. But the implications of the alternative approach for efficient access pricing would need detailed examination.

One advantage of the alternative is that it would seem to be consistent with an argument put forward by Davis and Handley in 1997. They argued that business owners should bear the risk of changes in the market cost of capital, which would change the market value of their asset:

> Investment decisions involve undertaking activities which rearrange the timing of cash flows and one risk involved is that of market changes in the value of time (interest rates). An increase (decrease) in market interest rates leads to a decrease (increase) in the market value of an asset which

> has a set of future operating cash flows expected (but unaffected by the change in interest rates).
>
> This does not mean that the future cash flows associated with the asset should change (or be allowed to change) when interest rates change. The risk borne by the owners of the asset is that the present (market) value of predetermined (risky) future cash flows will change. Consequently, regulatory price determination should not be conducted in such a way as to lead to changes in allowed prices on production arising out of past investments when interest rates change. (Davis & Handley 1997 p.182)

This alternative approach would be likely to result in less cash flow risk to the regulated businesses, but more asset value risk. It is likely that cash flow risk is more important to businesses with illiquid assets.

The return to an investment over its life would probably be more certain and hence the cost of capital would probably be lower. This may lower the costs to customers over the long-term consistent with the objectives.

The split WACC/RAB concept just outlined may merit further investigation. Conceivably, it might:

- reduce overall risk to the regulated businesses and thereby reduce costs to consumers
- assist to focus the regulatory determination process for the WACC on the cost of capital for new investment – more consistent with the notion of the cost of capital as applicable to projects rather than firms (on this distinction see: Europe Economics 2009 p.12).

That said, the split cost of capital approach outlined here is very different to the traditional model, and models used elsewhere, and would need careful consideration.

4.3 The solution

This section has discussed methodologies for deciding on the appropriate rate of return for a network utility. It has highlighted that, while the nominal vanilla post-tax WACC formula is a valid method, it can be usefully complemented by other relevant analysis. The proposed

stipulation of the nominal vanilla post-tax WACC as the only method for determining the cost of capital may unnecessarily narrow the analysis and preclude the complementary use of the other types of analysis discussed.

The use of complementary methods of analysis is consistent with the emphasis in section 3 on the distinction between fact-finding and analysis on one hand, and the judgement involved in reaching a decision on the regulatory return to capital. The scheme in Figure 1 is complementary to the suggestions presented in section 3.

An alternative approach to applying the rate of return on investment has also been outlined. This alternative might enable a lower cost of capital in the long-term by reducing unnecessary business risk for regulated firms. This is a formative notion only, but the AEMC might give consideration to this alternative.

Lastly, it needs to be recognised that regulators, through the way they conduct their functions, can influence the cost of capital. For example, Ofwat has argued that by facilitating regulatory stability and business confidence, it has brought about a reduction in the cost of capital by approximately 25 per cent.[8]

5 Specificity of the rules

5.1 The problem

The AER has proposed several changes to reduce overly prescriptive elements of the rules. This section provides only limited comment on the proposals, mainly addressiing the overall balance between prescription and delegation with respect to the AER's regulatory role.

[8] Ms Regina Finn, CEO Ofwat, presentation to ESC, 2011. This certainty has enabled water businesses in the UK raise funds by issuing 30-year corporate bonds. This longer-term debt funding has had an important role in reducing their cost of capital overall.

5.2 Discussion

Although the rule making power of the AEMC is quite broad, it is probably fair to say that some aspects of Parts 6 and 6A of the NER are relatively specific within the economic frameworks, mechanisms or methodologies ('National Electricity (South Australia) Act 1996' Schedule 1, ss.20,26D) For example:

- the default value of the nominal risk-free rate must be the annualised yield on Commonwealth Government bonds with a maturity of 10 years
- the target credit rating is to be BBB+ as rated by Standard & Poors
- the debt margin is the margin between the annualised nominal risk-free rate and the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to that used to derive the nominal risk free rate
- certain default or starting values of other parameters.

There appear to be opportunities to reduce the degree of specificity in some material respects without loss. The Expert Panel observed:

> … over-restriction of the regulator's flexibility can lead to an inability to deal with specific situations on their merits – an inefficient attempt to shoe horn all situations into a 'one size fits all' approach. Accordingly, the constraints imposed on or guidance given to the regulator should be the minimum necessary to achieve the objectives of the regime with some certainty. (Expert Panel 2006 p.12)

Over-prescription may result in lack of flexibility and adaptability to new facts or risks that become relevant. For example, although the nominal yield on 10-year commonwealth government bonds is a commonly accepted measure of the nominal risk-free rate of return, there are contrasting views (see: Davis 2005). Issues of this kind could be considered in the context of a regulatory review, such as a WACC review.

As mentioned by the AER, the methods of raising debt may change, with less reliance on corporate bond issues. Other approaches to estimating the

cost of debt could possibly provide further information or cross checks. For example, the actual interest rates that regulated businesses pay under new bank or syndicated loans, or estimating debt betas for corporate bonds of relevant grades and maturities.

In short, inflexibility may hinder the regulator from taking advantage of relevant information.

5.3 The solution

The AEMC should consider modification of the rules to reduce unnecessary specificity and provide the AER with appropriate delegation to use its own judgement on the detailed aspects of methodology.

6 The regulatory approval process

6.1 The problem

The AER submits that, in certain circumstances, the existing rules constrain its ability to require businesses to submit economically efficient operating and capital expenditure forecasts that serve the national electricity and gas objectives. It is required to accept a regulated business' forecasts of operating and capital expenditure if those forecasts 'reasonably reflect' the required expenditure. In some cases, if it disapproves a forecast, the AER can only amend it to the extent necessary to ensure it 'reasonably reflects' the required expenditure. The AER maintains that these stipulations prevent it from ensuring cost efficiency or the recovery of only efficient costs through prices to consumers. The AER also argues it is restricted from using broader benchmarking approaches and must instead use more intrusive 'line by line' assessments of the submitted capital works plans.

In part, this hinges on the meaning of the phrase 'reasonably reflects' in this context. This is one of the more complex aspects of the AER's proposal and only brief comment is provided here.

6.2 Discussion

The issue relates to a long-standing debate concerning the merits of the 'propose-respond' model. According to the Tribunal in 2003, this model removes the discretion of the regulator to determine the reasonable rate of return. Instead it must accept any proposal that falls within a reasonable range ('Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT 6.' at 42). In 2006, the Expert Panel on Energy Access Pricing rejected the propose-respond model in favour of the 'receive-decide' model, subject to one dissenting opinion (2006 ch.5 & appendix C). The panel was concerned that the range of uncertainty might be quite wide, and the propose-respond model would give regulated businesses an incentive to pitch their proposals at the top end of a feasible range. The dissenting view was that the propose-respond model provides better incentives for the parties to present reasonable proposals, provide information and reduce 'gaming'.

While the latter may be true for non-price related terms (such as the form of the standard access agreement) it is less likely to be relevant for price-related proposals, such as the rate of return or forecasts of the building block components.

This debate seems to have neglected the distinction between the 'propose-respond' model itself, and the notion that the regulator should be restricted to accepting a forecast within a 'reasonable range' — and what that means in practice. For example, the Victorian Rail Access Regime is a propose-respond process, but there is no presumption imposed on the regulator as to what it should accept as being reasonable. The Essential Services Commission (ESC) must:

- make a decision on a proposed access arrangement consistent with general principles including "the reasonably estimated financing costs associated with efficient capital expenditure"
- set out its reasons for making its decision
- specify the amendments, or the nature of amendments, or the matters to be addressed, for the ESC to approve it, and

- if those changes are not made, or matters not addressed, the ESC must withhold its approval, and only then does the ESC determine the access arrangement itself.

Absent a presumption imposed on the regulator to accept a proposal if within a 'reasonable range', there would be very little to the distinction between 'propose-respond' and 'receive-decide' approaches in practice.

If the presumption in favour of accepting the regulated business' forecast is intended to be 'light handed' then that intention may be misplaced in a context of strong market power, resulting in vagueness and poor outcomes. The regulator should be able to reject a proposed rate of return if higher than the best estimate of the most efficient cost. It is not desirable that the regulator should be obliged to accept a proposal falling within a 'range of reasonableness'. By eroding the regulator's authority this presumption would potentially reduce the effectiveness of the approval process.

6.3 The solution

In a price control framework, the process should permit the regulator determine what it considers to be reasonable costs in light of its statutory objectives and the relevant criteria. It is the purpose of the objectives to guide the regulator, and additional constraints of the kind in question could hinder the realisation of those objectives. Therefore, the AEMC should give consideration to removing those elements of the rules that give rise to any presumption in favour of the regulated businesses' proposals.

If this were done, and given the reforms to the appeal process suggested earlier, it is not clear that it would be necessary to remove the requirement that the AER accept or reject a network service provider's opex and capex forecasts. The AER would not be constrained in its preference for 'top down' benchmarking and modelling approaches.

7 Prudent investment test

This section briefly discusses some of the issues relevant to the *ex post* prudent investment test when updating the RAB. It does not address the

AER's specific proposed approaches relating to investment incentive mechanisms.

Some types of network investment are potentially contestable, such as network extensions. It would be timely for the AEMC to consider drawing a "line in the sand" to restrict the ability of businesses to "roll-in" such investments into their RAB, thereby setting average cost pricing. This procedure takes away financial disciplines from businesses and imposes a burden on regulators to assess whether there is sufficient economic justification for the investment. Absent the ability to "roll-in", and thereby cross-subsidise, the economic efficiency of an investment would be a prerequisite for a business to undertake it. That is, regulated businesses would have efficient incentives, as emphasised by Makholm:

> … if we can find consenting sellers and buyers willing to construct and commit to pay for new capacity, we need no other test for economic viability. We were asking for free competitive entry, which would only be possible if the economic consequences of that entry … did not impose costs on others. Incremental pricing would promote this entry by keeping the economic interests of new customers apart from those of current customers. Roll-in, by spreading costs among everyone, would not. (Makholm 1995 p.8)

In relation to other types of investments, the prudency of those investments can only be assessed *ex post* if the assessment is based on the information available to the investor at the time the decision was made. This suggests the test is primarily about the economic rationality of the decision-making process used by the business and whether appropriate project and risk management methods have been used to minimise the risk of cost overruns. The AEMC may wish to consider the Essential Service Commission's *Price Monitoring Determination for the Victorian Ports 2005*, which includes the following test:

> The Commission will accept that an investment has prudently been made if it is satisfied that the project has:

(a) been the subject of a detailed cost-benefit assessment by reference to the Victorian Government's procedures for reviewing major capital project; and

(b) the assessment demonstrated net economic benefits, and included analysis of the financial costs and benefits for the Provider of Prescribed Services; and

(c) been implemented in accordance with projections (that were considered for the purposes of the cost-benefit analysis referred to at paragraph (a) above).

For clarification, in considering whether an investment was prudently made, the Commission will consider the information that was available to and relied upon by the Provider of Prescribed Services at the time the investment was made, or what reasonably should have been known at the time.

If the Commission:

(a) conducts an assessment of prudence in accordance with …[the above]; and

(b) determines that there has been a significant deviation from the cost that was expected when the original cost benefit analysis of the relevant investment was conducted; and

(c) is satisfied that all appropriate project and risk management processes had been put in place and adhered to by the Provider of Prescribed Services, the Commission may determine that such additional costs have been prudently incurred by the Provider of Prescribed Services. (ESC 2005 clause 8.2)

8 Confidential information

This section briefly discusses some issues relating to confidential information but does not address the AER's specific proposal.

Under s.28ZB of the NEL and s.329 of the NGL the AER may disclose information provided in confidence after five business days if:

- it considers the public benefit in disclosing the information outweighs any detriment to the information provider, and

- it follows the process set out in those sections.

There would be public benefit in the AER publishing the basic financial accounts of the regulated businesses and accompanying statistical information. This would benefit consumers and consumer representatives, better enabling them to be informed as to relevant facts and to improve their submissions to the AER. Researchers and consumer representatives would be better able to carry out independent analysis of energy network business cost functions and productivity trends. This would benefit the AER by providing it with a wider range of analysis in submissions.

At the present time there is a curious discrepancy between the amount of information published by the ACCC for businesses subject to Part VIIA (Prices Surveillance) of the *Competition and Consumer Act 2010* — a 'light-handed' form of regulation — and the limited information published by the AER for energy network businesses subject to more prescriptive regulation. For example, the ACCC annually reports the financial accounts and statistical information for airports (ACCC 2011). In principle, there should be no difference in the degree of transparency (and certainly no reduction).

Publication of information of this kind would assist to ensure that access arrangement reviews are a trilateral process involving the regulator, network businesses as well as consumers and consumer representatives. It would also add to the transparency of the processes and the outcomes.

To serve this end, it is suggested that the AER:

- establish a policy on confidential information outlining the kind of information it would be of public benefit to disclose
- that policy should provide for the annual publication of standardised financial and statistical information similar in detail to that produced for the airports.

9 Conclusion

This submission makes the following suggestions:

- Reform of the merits review process is needed. Its effectiveness might

be improved by providing the Tribunal with greater guidance on the relevant meanings of 'unreasonableness' of a decision (perhaps Wednesbury unreasonableness) and of 'facts'. Other reforms are likely to be needed to address barriers to consumer representatives exercising their ability to intervene.

- The proposed SOCC should be subject to merits review at the time it is made.
- In order to balance process efficiencies with achieving the regulatory objectives, the SOCC could establish certain parameters, such as the market risk premium, debt premium and equity beta, and leave other parameters, such as the risk-free rate to be determined during the access arrangement approval process.
- The rules for determining the cost of capital should:
    - permit the uncertainty of WACC parameter estimates to be taken into account when combining those parameters (e.g. using the Monte Carlo method)
    - permit consideration of complementary methods of analysis such as financeability tests, capacity attraction tests and social cost benefit analysis of asymmetric risks relating to investment
    - facilitate in-principle separation of the fact-finding exercise of estimating WACC parameters and ranges of uncertainty, from the decision-maker's role in forming a decision on the reasonable rate of return.
- Consideration could be given to the merits of an alternative approach to applying the WACC presented in this submission, in which the WACC applying to investments made in a single period would continue to apply to the written down value of those investments over their lives.
- Modification of the rules to reduce unnecessary specificity and provide the AER with appropriate delegation to use its own judgement on the detailed aspects of methodology.

- The AEMC should consider drawing a "line in the sand" to restrict the ability of businesses to "roll-in" investments such as network extensions into their RAB. Incremental pricing should apply to such extensions.
- The price control framework should permit the regulator determine what it considers to be reasonable costs in light of its statutory objectives and the relevant criteria. Elements of the rules that give rise to a presumption in favour of the regulated businesses' proposals should be removed. However, it is not clear that it is necessary to remove the requirement that the AER accept or reject a network service provider's opex and capex forecasts.
- The AER should establish a policy on confidential information outlining the kind of information it will disclose, including the basic financial accounts of the regulated businesses and accompanying statistical information of the regulated energy network businesses.

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