



Major Energy Users Inc.

Australian Energy Regulator

Discussion Paper

on

Measuring the Debt Risk Premium

A Response

by

The Major Energy Users Inc

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Assistance in preparing this submission by the Major Energy Users Inc (MEU) was provided by Headberry Partners P/L and Bob Lim & Co P/L

The content and conclusions reached in this submission are entirely the work of MEU and its consultants

Addendum

Issue 1 – Evidence of actual interest rates and DRP

Since writing and submitting this analysis an MEU affiliate was provided with advice from the MCE SCO regarding the cost of debt provided by the Queensland Treasury Corporation to the Queensland government owned electricity distribution and transmission businesses Powerlink, Energex and Ergon.

This advice is as follows:

“... with regard to financing arrangements for the Queensland distribution GOCs, it is true that they source all debt from Queensland Treasury Corporation other than non-recourse funding.

However, the *GOC Act 1993* provides that the State does not guarantee any obligation incurred by a GOC, unless the liability is expressly undertaken on behalf of the State. Under this arrangement QTC operates the same as any other financial institution providing debt facilities to a client. It is essentially an intermediary financial organisation which enters the domestic and international markets to source the required funds.

In accordance with the National Competition Policy principles, GOCs are expected to operate on the basis that they do not gain advantages or disadvantages by virtue of their Government ownership. One of the most significant advantages GOCs could enjoy is the ability to borrow funds at a lower rate than private sector competitors, on the basis of the State Government's credit strength. That is, the interest rate at which GOCs could borrow funds might reflect the creditworthiness of the State of Queensland rather than the stand-alone credit of the individual GOC. To the extent this resulted in a lower cost of capital, GOCs would derive a competitive advantage over private sector competitors.

In order to prevent any such advantage, the Competition Principles Agreement requires a notional charge to be applied to the cost of debt for all GOCs. As a party to the Agreement, the Queensland Government has previously notified its GOCs of the application of a Competitive Neutrality Fee (CNF) to all borrowings and financial arrangements in the nature of debt obligations. The CNF is individually determined for each GOC in accordance with its stand alone credit rating and the market cost of debt, to ensure that the cost of funds paid by a GOC is equivalent to a similarly rated private sector entity.”

This response supports the MEU contention that government owned electricity businesses pay an interest rate on the debt provided by the related treasury

corporation at a rate considerably below the corporate bond rates used by AER in setting the WACCs.

There are five electricity entities that are “pure” network providers owned by governments – Powerlink, Energex and Ergon¹ in Queensland, Transgrid in NSW and Transend in Tasmania.

Of the remaining government owned electricity network businesses, EnergyAustralia, Integral Energy and Country Energy have significant retail functions and therefore analysis of debt premia for these entities would have to reflect that this retail function was a large part of their activities and would therefore distort the outcomes of any analysis.

The advice MEU received from MCE SCO was that the treasury corporations add a margin to the base cost they incur for funds (the Competitive Neutrality Fee) to reflect the debt risk premia that would be available to their fully related entities if they were required to access debt from the open market.

Reviewing the annual reports for these five businesses shows that each receives its debt funding from its related treasury corporation. Based on 2009/2010 financial year data from annual reports (ie after the global financial crisis) the actual financing cost and average debt for each (ie the arithmetic average of the debt levels at the start of the year and at the end) was used to calculate notional rate for debt. From this was deducted the average 10 Commonwealth bond yield (which averaged 5.50% for the financial year). The following table summarises the analysis.

Entity	Interest paid in 2009/10 \$m	Average debt used in 2009/10 year \$m	Effective interest rate %	Average 10 year bond yield % 2009/10	Notional DRP bp	AER DRP bp	Date of AER decision
Powerlink	196	3189	6.1	5.5	60	114	2007
Energex	225	3968	5.7	5.5	20	333	2010
Ergon	243	3826	6.4	5.5	90	333	2010
TransGrid	106	1501	7.1	5.5	160	349	2009
Transend	33	503	6.6	5.5	110	349	2009

Consistently the treasury corporations have charged the government owned businesses notional DRP levels below 160 bp which reflects the DRP used historically in regulatory decisions. Equally the AER has calculated a DRP above 300 bp in recent years, although the DRP calculated in 2007 by the AER was consistent with the levels previously used by the ACCC and jurisdictional regulators, and still currently used by T-corps.

It is accepted that the financial values used in deriving the notional DRP might have some bias in them and therefore might not be fully comparable, but the

¹ Ergon does carry out some retailing functions but the bulk of its activities are network provision

magnitude of the difference between the actual interest charges and the AER calculated interest charges is so great as to clearly demonstrate there is a very large problem with the AER approach.

The analysis raises two basic questions:

1. Why T-corps have calculated lower DRPs than has AER even since the global financial crisis, bearing in mind that the T-corps are required under the Competition Principles Agreement, interest rates that reflect the open market cost of debt.
2. Why the AER has provided the entities with a DRP far in excess of the debt costs that the entities are actually incurring, accepting that the AER is required to allocate debt costs that an efficient entity would incur.

In its draft decision on the Victorian EDPR (page 505), the AER advised that it sought to provide a debt rate that “equate[d] to a commercial cost of debt”. This is what the T-corps are required to do under the National Competition Policy.

The AER has advised that it has used the approach implied in the Rules and its own Statement of Regulatory Intent and this has resulted in the higher values for DRP than used historically. The T-corps have calculated market based interest rates, at values that are higher than the average 10 Commonwealth bond yield.

There is a basic difference between the market based cost calculated by three different T-corps and the way the AER has calculated the market based cost.

There is no doubt that the AER approach has resulted in a massive increase in unnecessary revenue (and hence increased profit) for the regulated entities from its approach in awarding such a large debt risk premium compared to what entities are actually incurring.

The AER has advised that its approach (using corporate bond rates) is the only method they have of independently assessing realistic debt costs. The same can be said of the T-corps who have set actual interest rates considerably lower than the AER.

Issue 2 – Requirements of the National Electricity Law

The National Electricity Law requires in section 7A(5) that a revenue and pricing principle is:

“A price or charge for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks

involved in providing the direct control network service to which that price or charge relates.”

During the second reading speech (2007 when the Law was being debated, the Minister (Pat Conlon) stated in relation to this principle:

“[This] principle ensures [that risks are appropriately compensated for when determining efficient revenues and prices] by requiring that prices and charges for the provision of regulated network services, allow for a return commensurate with the regulatory and commercial risks involved in providing the service to which that price or charge relates.”

The various T-corps also have this obligation in that the funds they lend to the regulated entities, is lent at a rate reflecting the risks involved. The T-corps responsibilities go further in that under the Competition Principles Agreement they must lend at a market rate to their entities.

The T-corps must provide debt to the related regulated entities at market rates. It is therefore an obligation of the AER to recognise that the entities have been provided with debt which is provided at a rate which recognises the regulatory and commercial risks involved. In disregarding the rates at which the regulated entities have actually acquired their debt, the AER has totally ignored this relevant principle in the Law.

Issue 3 – The Market Objective

The Market Objective requires the promotion

“...of efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the reliability, safety and security of the national electricity system”.

The second reading speech for the National Electricity Law (2005)² makes it clear that investment and use of electricity services will be efficient when services are supplied in the long run at least cost.

To provide a debt risk premium to a regulated entity at a level higher than the price at which a lender will lend to the entity in order to provide those services is not efficient in the terms that the Minister clarifies in his second reading speech.

For the AER to include for a higher cost of debt than an entity can actually source the debt in the open market is not efficient.

² See appendix 1.2

Conclusions from this additional analysis

1. There is a basic difference between what the AER considers is a market based DRP and what three different government treasury corporations consider is an appropriate debt premium to allow for their obligations to meet the requirements of the Competition Principles Agreement. The weight of evidence does not support the AER outcomes.
2. The AER is required by the National Electricity Law to ensure that the rate of return reflects the regulatory and commercial risks faced by the entity. This means that if lender is prepared to provide funds at a rate less than the AER might consider to be appropriate, then the AER must not provide a rate of return that is based on what the market considers to be efficient.
3. The Market Objective requires the AER to allow only efficient costs to provide the service as efficiency will deliver the least cost to consumers. If an entity can secure debt at a lower cost than that assessed by the AER, then to meet the Objective, the AER must use the actual costs, and not a higher cost.

1. Preamble

In its Consultation Paper on Measuring the Debt Risk Premium (DRP) in relation to the Victorian Electricity Distribution Price Review (EDPR), the AER is attempting to establish a better mechanism to calculate an appropriate return on the debt portion of the weighted average cost of capital (WACC), as the current approach is quite flawed due to the absence of supportive data.

Under the building block approach to setting regulatory revenues, the revenue includes an amount derived from the amount of capital provided (the Regulatory Asset Base) multiplied by the weighted average cost of capital (WACC). Previously the AER had relied on estimates from data service providers such as Bloomberg and CBA Spectrum to develop the DRP to be used in the weighted average cost of capital formula which was then applied to capital provided by the regulated network service providers.

In its draft decision for the Victorian EDPR the AER observed (page 505):

“The DRP (or debt margin) is added to the nominal risk-free rate to calculate the return on debt, which is an input for calculating the WACC. The DRP is the margin above the nominal risk-free rate that a debt holder in a benchmark efficient DNSP is likely to demand as a result of issuing debt to fund the business operations. **It is intended to equate to a commercial cost of debt.** (Emphasis added)

The underlying criteria used by the AER in its SORI³ in relation to the credit rating level were:

- the need for the rate of return to be forward looking that is commensurate with prevailing conditions in the market for funds and the risk involved in providing regulated distribution services
- the need for the return on debt to reflect the current cost of borrowings for comparable debt
- the need for the credit rating level to be based on an efficient DNSP
- the need to achieve an outcome that is consistent with the NEO
- the need for persuasive evidence before adopting a credit rating level that differs from the level that has previously been adopted for it”

The MEU agrees with the AER that in setting the debt risk premium (DRP), the outcome should “equate to a commercial cost of debt” reflecting the costs an efficient electricity network provider would incur.

³ Statement of Regulatory Intent

It must be remembered that under the building block approach, the provision of debt is intended to be a “cost recovery element” (similar to opex) and not a source of profit – profit for the entity is recovered in the equity risk premium.

The allowance the AER should therefore include for DRP should reflect the actual costs an efficient provider would incur. This means that the AER should develop a methodology to reflect this need, ie the DRP should be that which an efficient benchmark provider would incur **in an efficient debt structure**.

2. Debt risk premium (DRP)

The debt risk premium is defined in the National Electricity Rules⁴ (NER) as the premium required over the risk free rate (set as Commonwealth 10 year treasury bonds) to acquire debt and the AER, in its WACC decision in May 2009, determined that the debt benchmark would reflect a BBB+ credit rating.

The definition of DRP in the Rules is somewhat circular. The Rules define the risk free rate, and then define the DRP as the difference between the risk free rate and the:

“...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.”

Effectively the NER considers the return on debt (k_d) is to be the:

“...the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to [10 year Commonwealth Bonds].”

2.1 DRP and the NEO

The National Electricity Objective requires the “efficient investment and efficient operation of” network services as these will provide, in the long term, the “least cost” to consumers⁵. It is not efficient to pay a regulated entity a higher return than is needed.

Efficiency implies, in relation to the DRP, that the AER must determine a mix of debt (a debt structure) that is efficient, and not be hidebound to assessing DRP based on using just one type of debt structure. As the NER does not define what corporate bonds are to be, then the AER must assess what the DRP should be in terms of the efficient mix of debt so that its measure of DRP is based on an efficient debt structure.

⁴ See appendix 1.1 which includes the relevant excerpts from the NER

⁵ See appendix 1.2 – second reading speech for NEL

2.2 Efficient debt

The MEU considers that an efficient debt structure is a mix of bank borrowings and debt provided by the open market. However in May 2010, in its final decision on ETSA, the AER stated (clause 11.4.3.4) that

“The AER notes that the DRP is set with regard to the Australian benchmark BBB+ corporate bond rate. The experience of two particular businesses’ (SP AusNet and ETSA Utilities) recent capital raisings in isolation are not directly relevant but experience of individual businesses will be reflected in the fair value curve that is used to establish the benchmark DRP.

The AER determines the benchmark DRP by averaging the yield on a 10–year BBB+ corporate bond over the averaging period of 18 business days between 29 March and 23 April 2010 (to match the period used for estimating the risk–free rate).”

What the AER is effectively stating is that actual observations of debt raised and debt structures used by exactly equivalent entities are not relevant, but might impact on the “fair value curve” used to calculate the DRP based on a range of other non-related entities seeking debt from the open market. Further the AER will only consider that debt acquired in the open market is applicable to setting DRP.

2.3 Debt is not just “bonds”

The NEO requires the development of the weighted average cost of capital (WACC) along with many other elements, to reflect an efficient rate of return. To achieve this, the NER Clause 6.5.2(b) considers that debt structure must equate that used by:

“... investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider”

Clause 6.5.4 (e)(2) goes even further in requiring the AER to set the return on debt (that is the risk free rate plus the DRP) which:

“... reflect[s] the current cost of borrowings for comparable debt”

This clearly requires the AER to not only just consider the way the open market might price debt but to include other forms of debt an efficient provider would use in addition to debt sourced from the open market.

An efficient provider would acquire its debt on a portfolio basis. A portfolio would include debt from a mix of sources – from a number of banks, from the open market (often referred to as bonds), and internal sources (such as

funds held against future liabilities including employee provisions, trade creditors, etc) – each type being addressed with a variety of term lengths and maturity dates. It would be inefficient (and unwise) for a business to have all debt maturing at the same time.

The AER approach of assuming that all debt will have a cost the same as that obtainable from the open market does not reflect efficient debt provision. From the observations of Credit Suisse noted in section 4 below, it would appear that the AER approach of basing the DRP on just the open market for debt, does not deliver the least cost to consumers, as would be expected from an efficient provider.

The ACCC in its final decision on ElectraNet revenue reset in 2003 confirms this view (page 25) when it stated:

“The Commission understands that the interest margin associated with bank issued debt is generally lower than capital market interest margins. However, information on the debt margin associated with bank issued debt is generally not widely available. The Commission therefore considers that it is reasonable to use capital market data as the benchmark, which is biased in favour of the TNSP.”

Under the National Electricity Code, the ACCC was permitted to include such explicit conservatism, but under the NER, the AER is required to apply a level for the WACC that is “economically efficient” and delivers “least cost” over the long term to consumers. This means that such explicit conservatism is not permitted.

3. Corporate bond rate

The NER does not define what corporate bonds are, but the AER has assumed that these are formal debt raisings issued on the open market by corporate entities, which are often issued under the title of “bonds”.

A review of the definitions of “corporate” and “bonds” reveals that (Encarta dictionary⁶):

“A Bond [finance] is a certificate issued by a government or company promising to pay back borrowed money at a fixed rate of interest on a specified date”

and

“A Corporate Bond is a bond issued by a company rather than by a national or local government”

⁶ Similar definitions are in Collins English Dictionary and Oxford Concise Dictionary

This definition of a corporate bond would reflect that any debt raised by a corporate entity if it entailed an agreement to pay back the borrowed money at a fixed rate of interest at a specified time would be a bond. It does not require these bonds to be tradeable, although the AER seems to have restricted itself to assessing the DRP based only on tradeable corporate bonds existing on the open market.

The NER does define that only Australian corporate bonds may be used in developing the DRP. This restricts the AER from following what is good debt practice – that an entity would have a portfolio of debt instruments, including debt provided by overseas entities. This restraint results in the AER having a much reduced or “thinner” market from which to develop its benchmark DRP. However such restraint does not prevent the AER from assessing DRP based on other debt instruments, providing that they are from an Australian source.

4. Previous AER and state regulatory determinations

In its submission to the AER in relation to the recent ETSA Utilities regulatory review, the MEU affiliate ECCSA observed that the DRP allowed by the AER in relation to its draft decision was excessive in light of the actual cost of debt ETSA was incurring. The ECCSA provided evidence of a Credit Suisse report⁷ where CS observed, based on the AER assessment of DRP of [sic] 427 bp⁸:

“ETSA locked in 5, 7 and 10 year debt at an average margin of ~295bps in July -09. On that basis ETSA will be making a ~130bps benefit than the regulated allowance reflecting its higher credit rating (A-) ... against the regulated allowance (BBB+, 10year).”

This observation provides commentary on a number of salient issues, viz

1. The AER calculation would have provided ETSA with an unearned benefit of 130 bp on the debt portion of the rate of return allowed. To put this into context, the AER would have allowed a WACC of nearly 80 bp higher than ETSA was incurring for its WACC, or nearly an additional \$136m more in revenue over the 5 year regulatory period than ETSA would have actually incurred. Such a payment would not be efficient as it would not impact on the long term benefits to consumers.
2. The observation supported the ECCSA contention that an efficient provider would have a portfolio of debt instruments of varying durations

⁷ Credit Suisse, Company Update 1 December 2009, “Draft ETSA decision positive for SKI”, Page 3. SKI is the ASX code for Spark Infrastructure, part owner with CKI of ETSA, Powercor and Citipower

⁸ In fact the CS report is in error as the AER had set a value of 429 bp

3. That a privately owned electricity network provider (as distinct from the government owned electricity network providers⁹) have a higher credit rating than BBB+ assumed by the AER in its WACC review.

4.1 Historical allowances for DRP

Prior to 2008, regulatory decisions by the national and state regulators had set a DRP in the range 90 to 150 basis points, with a median between 120-130 bp with a lowest value of 90 bp used in the TG final decision in 2005¹⁰. Since the beginning of 2008, DRPs have been calculated by the AER to be as high as 429 bp (ETSA DD 2010) and yet as recently as in the AER Final Decision on the WACC review in May 2009, the implied DRP is 160-180 bp.

Whilst the ACCC and state regulators also used CBASpectrum and Bloomberg data to develop the DRP, at that time the Australian bond market was more liquid and development of a DRP was more straight forward, although regulators did note that they had to manipulate the data in order to generate 10 year BBB+ bond data. However there has been significant consistency in the generated values for the DRP over the decade from the first setting of DRP (at the "Great WACC Debate of '98" conducted by the ACCC and Victorian ORG) until 2008.

While it is accepted that the global financial crisis did have the impact of increasing the cost of debt, it must also be accepted that this impact will be relatively short lived, before the market reverts to more historical trends. To set the DRP for a 5 year period (or longer) based on effectively single point data¹¹, obviates the reality that over the period of the five year reset, the DRP will trend to its longer term values – this trend is already being seen in the falling values of DRP calculated by the AER.

Yet despite the observed downward trend, in the ETSA Utilities Final Decision in May 2010, the AER determined a DRP of 298bp yet one month later, in its draft decision for the Victorian EDPR, the AER set the DRP at 325 bp. This highlights that the data used by the AER is demonstrating extreme volatility and this can be attributable to the AER decision to use effectively single point data market to generate a DRP for the next five years.

That such a variation could occur in just on a month for the DPR to apply for the following 5 years is absurd and shows that the methodology is quite

⁹ As the MEU pointed out to the AER it is response to the Issues Paper to the WACC review in 2008, the government owned electricity network providers have credit ratings of AA and AA+

¹⁰ When it was the regulator, the ACCC used to assess financial indicators to identify if the WACC (amongst other elements) was set at an appropriate level

¹¹ The AER advised that for the ETSA Final Decision, it had used an averaging period of just 18 days, which in terms of the 5 year period the reset is to apply is just 1% of the time – effectively single point data

flawed. A well designed approach would demonstrate greater consistency in its outcomes.

5. Inaccuracies introduced by the AER approach

In addition to the fact that efficient acquisition of debt comes from a portfolio approach (types of debt, and varying maturities and durations), the AER approach fails in two other aspects

5.1 Scope of debt instruments

The single major cause of the inaccuracy of calculating the DRP is that the bulk of debt used in Australia by electricity network providers (and indeed most other businesses) is bank debt and not debt issued on the open market.

A review of the debt structure of the private electricity network businesses shows that bank debt is the major source of debt, with overseas bonds adding to it. The government owned electricity network businesses use bank debt and government bonds sourced from government owned investment vehicles such as Queensland Treasury Corporation. Few, if any, electricity network businesses have sourced any of their debt from the open market. This clearly implies that an efficient electricity network provider uses other sources of debt.

For the AER to set the DRP purely on the assumption that all debt will be sourced from bonds issued on the open market does not reflect what an efficient network provider would do, and introduces significant but unnecessary inaccuracies and conservatism.

5.2 Assessing the “corporate bond” market

Clause 6.5.2(e) requires the AER to use:

“...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 and a credit rating from a recognised credit rating agency.”

The AER has admitted that it cannot comply with this clause as there is no “observed” bonds that meet these criteria either in relation to quantity, duration or rating. To achieve the outcome the AER has to **calculate** a bond yield (as distinct from observing a number of appropriate bonds) which complies with the requirement. This means the rule is unworkable and should therefore be changed.

The AER identifies in its decisions that there is a thinly traded market in Australia for debt issued on the open market. For example in its final decision on ETSA and again its draft decision on the Victorian EDPR, the AER has identified that the forecasts for BBB+ rated entities is so thin as to be non-existent, and it has to use other debt issued against other credit ratings, and then interpolate the values to reach BBB+ credit rating. Even then, the market is still thin, and the AER has used bonds raised businesses dissimilar to electricity network businesses with a different degree of non-diversifiable risk such as:

- Coles Myer (a consumer retailing business)
- Snowy Hydro (an electricity generator/retailer)
- GPT (a listed property trust)
- Wesfarmers (a coal miner, consumer products retailer)
- Santos (a gas producer)
- BBI (a diversified infrastructure owner of ports, gas transport, ship loading, etc)

Of these, none had sought bonds over more than a 6 year period.

What is salient is that no electricity network providers are listed as raising debt in this way, yet despite the NER requiring the WACC to be based on:

“...a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider”

None of the entities used to provide the benchmark bond meet this very basic requirement. If there is no enterprise of a similar nature and risk to an electricity network provider, then the AER must find another approach to setting the DRP.

The trade in, and debt raisings from, corporate bonds in Australia has been greatly overshadowed by more traditional fund raisings by Australian businesses such as bank debt and equity raisings. This has caused the thin market in the “corporate bond” financial instruments.

This means that the AER has to find alternative ways of developing an efficient DRP for use in its WACC development.

5.3 Duration of the “open market” debt provision

None of the data from the open market has a debt maturity of more than 6 years (although the AER has found one – APT which issued 10 year bonds but at a different credit rating – yet the NER requires the AER to set a debt duration matching the risk free rate duration of 10 year Commonwealth bonds.

To meet this requirement the AER has extrapolated the shorter period debt to match the 10 year debt duration required. This introduces unnecessary risk.

Because of this introduced risk of extrapolation, the NER provides guidance to minimise risk where actual data is not available. For instance, when developing the risk free rate, the NER states that interpolation must be used. For example NER 6.5.2(d) requires that if there is no actual data available when setting the risk free rate:

“...the AER must ... determine the nominal risk free rate for the *regulatory control period* by interpolating on a straight line basis from the two Commonwealth Government bonds closest to the 10 year term and which also straddle the 10 year expiry date.”

This implies that interpolation is acceptable, but extrapolation is seen as less acceptable due to the risks implicit in its application.

5.4 Volatility of outcomes

Because of the approach used by the AER, this has resulted in a significant amount of volatility and this volatility must have a negative impact on both consumers and the network owners.

The regulatory environment should provide participants with a high level of certainty and consistency over time. If it does not, then there is a negative impact on investment, leading to greater risks for consumers. As noted in section 4.4 above, up until 2008, regulators have been setting the DRP in the range of 90 bp to 150 bp, with a median value well below 150 bp. The global financial crisis has caused the DRP to rise as lending was constrained, but in recent times, borrowing has become much easier. Equally the global financial crisis has resulted in very low (even negative) DRP values in most first world countries, as interest rates have been slashed in an endeavour to encourage investment.

Because of a very illiquid market and thin trading in Australia for bonds, the volatility of DRP calculated from tradeable corporate bonds has shown excessive volatility, especially in the wake of the global financial crisis.

The AER must develop an approach which reduces the volatility in forecasts of future movements. One of the main aspects of the AER approach is that it uses a short averaging period of time to set the forward estimates of the various variables used by it. To all intents, this means that the data is based on almost a single point in time. This introduces significant inaccuracy. For example the AER performance in forecasting the forward exchange rate has been demonstrably wrong and, with the benefit of hindsight, show gross errors were made in the

forecasts¹². Errors such as these add significantly to the risk participants have to manage.

The AER, in attempting to be “accurate” in its forecasts, has introduced major concerns for all. The problem with using data from effectively a single point in time is that it eliminates all of the moderating effects that comes from the “smoothing” effects of time.

In developing the market risk premium (MRP) the AER has assessed MRP over the long term – many decades in fact. If the AER attempted to use a forward looking MRP based on such a short averaging duration that it is effectively a single point in time, then the MRP would swing violently from large positives to large negatives over very short periods, making a mockery of the WACC developed using these swings. The AER has recognised that investor sentiment is fickle and causes large short term movements in MRP. To overcome this variability, the AER has sensibly used time to smooth the MRP, so that the value used does not vary significantly decade on decade.

The same issues (such as investor sentiment in valuing corporate bonds) affect the DRP and cause significant short term movements such as occurred during the global financial crisis. The same logic used to smooth the MRP should apply to the setting of the DRP

6. Summary

The AER approach to setting DRP does not comply with the NER or the NEO. It does not reflect efficient DRP levels as it excludes the (lower cost) source of debt most commonly used by electricity network businesses. As the approach used by the AER is acknowledged as being conservative (and therefore a higher cost than needed) it does not deliver the least cost to consumers. Therefore the AER must develop a methodology for setting DRP which reflects the major sources of debt used by an efficient notional network provider.

In all the recent AER assessments of DRP consistency and certainty over the long term have been ignored. Regulation should lead to consistent and certain outcomes and not provide wild fluctuations in values. In this regard large fluctuations increase risk and increased risk increases costs. Implicitly,

¹² See appendix 2 exhibiting the errors in the forecasts of the \$US/\$A exchange rate errors used in assessing future materials costs. The purpose of this example, is not to deride the AER ability to forecast, but to highlight that in attempting to be more accurate and accommodate future changes, the outcome is exactly the opposite – that greater error is introduced by attempting to be more accurate. Because of this the MEU considers that greater certainty and consistency is achieved by using longer term averages, rather than attempting to extrapolate from observations set in a short time frame.

fluctuations increase costs to consumers, thereby not delivering the least cost as is expected by economic efficiency.

The risk free rate is set on a 10 year term and the DRP is intended to mirror the term of the risk free rate. However achievement of this is not possible because there is:

- No extrinsic market data that provides a clear value for DRP that can be derived from using “observable” Australian 10 year corporate bonds. This means that there is a need to extrapolate from shorter term bonds. The NER implies that where data is not explicitly provided it should only be interpolated and not extrapolated.
- Almost no market for corporate bonds for businesses of similar “...nature and degree of non-diversifiable risk ...” to electricity network businesses.
- No strong and liquid market for any corporate bonds in Australia. If there is insufficient liquidity in a market, this introduces risk and risk increases costs to consumers.

This makes the requirement in the Rules unworkable as the wording of the Rules (especially clause 6.5.4(e) as interpreted by the AER contradicts the achievement of the NEO.

7. Conclusions

The AER has up to now has based its approach to setting DRP on the assumption that the DRP is the difference between the yield of Commonwealth treasury 10 year bonds and the yield of BBB+ Australian corporate bonds of 10 year duration. To obtain the yield of corporate bonds it has used published data from CBASpectrum and Bloomberg and extrapolated the data for duration and interpolated the data to get the correct credit rating.

In fact this approach does not comply with the Objective and the Rules as it:

- Does not incorporate the DRP that applies to the bulk of the debt (bank debt) acquired by electricity network businesses
- Has only a small population of bonds to work with reducing the diversifying benefit of a large population, thereby increasing risk (and therefore cost)
- Does not comply with the requirement of comprised of businesses with similarity to electricity network businesses, because:
 - Those bonds that are listed, few reflect the similar nature and risk to electricity network businesses,
 - Those very few bonds that might be applicable are mostly not as long as 10 years causing the need to extrapolate, increasing risk
 - Those even fewer bonds that might be applicable in terms of similarity and duration do not have the same credit rating as is

stipulated, creating the need to interpolate from those of a different credit rating.

Despite the AER misgivings about using actual experience of the electricity network businesses, it appears to the MEU that by not doing so, the AER is not recognising the requirement of the Objective to reflect economic efficiency in setting the WACC. Economic efficiency requires that the allowance the AER is to include for DRP should reflect the actual costs an efficient provider would incur.

This means that the AER should develop a methodology to reflect this need, ie the DRP should be that which an efficient benchmark provider would incur for its debt structure and not rely data which is inappropriate, insufficient and not reflective of actuality.

To the structural difficulties identified by attempting to follow the rules, are added the fact that electricity network owners do not source the bulk of their debt from the open market, but obtain it from lower cost sources. Persisting with the current approach means that consumers will be required to pay for an inefficient and not "least cost" outcome. This is contrary to the NEO which requires efficient costs only to be charged to consumers and that the outcome should be the least cost.

Overall, the Rules are inconsistent with the NEO and, further, the AER has identified that the Rules cannot be explicitly complied with. This means that the AER should seek a rule change to make their task one which will deliver a DRP which reflects the actuality of the cost of debt as it applies to the regulated networks.

Arising from this, the MEU would recommend a number of specific aspects the AER should consider in seeking a rule change:

1. The fact that all the electricity network owners raise debt from banks and very little from public raisings in the open markets
2. The fact that some of the privately owned electricity network owners have raised debt on the overseas bond markets (and swapped this back into \$A)
3. The fact that the large proportion of all electricity networks are government owned and would have a lower cost of debt than would be calculated from corporate bond markets

Whilst the AER has focused its review on the need for an outcome for the Victorian EDPR, there is the long term issue of trying to use a small and illiquid bond market to generate an accurate DRP which needs to be addressed. It is simply inadequate for the AER to try and reach a reasonable reflective and efficient DRP from the Australian tradeable corporate bond market.

8. Specific questions for stakeholders

1. Given the paucity of available data, the fact that CBASpectrum recently ceased publication of its fair yield curve, the characteristics of the recently issued APT bond and the Tribunal's recent decision on the DRP issue, the AER intends to examine the yields from the recently issued APT bond and those derived from Bloomberg in terms of their appropriateness in estimating the DRP for the Victorian DNSPs' distribution determinations. Please provide comments on the AER's intended process.

The MEU considers that the AER needs to develop a new approach to setting DRP based on what an efficient network provider would do, rather than relying on data that is inappropriate, insufficient and not reflective of what an efficient provider would do.

The MEU considers an efficient provider would source the bulk of its debt from bank loans as this is the most economically efficient approach to sourcing debt.

2. Given the uncertainty in determining whether yields from Bloomberg or from the APT bond are more appropriate in setting the DRP, the AER intends to take an average of the two. Please provide comments on the AER's intended methodology.

The MEU notes that Bloomberg data is of the wrong duration and of the wrong credit rating, and needs manipulation to attempt to make it fit the need.

Using the APT bonds is not appropriate, as the credit rating level is incorrect, and much of APT revenue is from non-regulated sources, whereas the electricity networks are all regulated.. This means that APT is not a business of similar "...nature and degree of non-diversifiable risk ..." to electricity network businesses.

To take an average of these two sources to generate a DRP is not appropriate.

A more appropriate outcome is to use an approach which reflects economic efficiency, such as sourcing debt from banks, as the electricity network providers do for most of their debt.

3. Do stakeholders agree with the AER's conclusions regarding information from other sources?

The MEU does not agree with the AER conclusions. The MEU considers that the AER approach does not deliver an economically efficient setting for DRP as an efficient network provider would source the bulk of its debt from bank loans. Additionally an efficient provider would source some debt from internal

sources and might obtain some debt as Australian and overseas bonds, although (because of the paucity of similar corporate bonds) this is not a preferred option by most electricity network businesses.

As most of the networks are government owned, much of the debt used by electricity networks is effectively sourced from bank debt and government bonds. The DRP on these government bonds is readily calculable for both duration and credit rating.

4. Are there other sources of relevant information the AER has not considered above?

The MEU considers that the AER should source information of DRP from banks which are the prime lenders to electricity network businesses, and from the financial statements of electricity network providers.

Financial statements from the businesses will provide quite accurate indications of what the cost of debt is to businesses with a similar nature and non-diversifiable risk. If the AER uses the outcomes from analysing the financial statements of all the electricity network businesses, it will have a much greater population of data to work with than just the proposed two sources (Bloomberg and APT).

The approach of using data from multiple network sources has some similarities with the Total Factor Productivity (TFP) approach currently under review by the AEMC.

5. Do stakeholders consider it necessary to use an alternative method for estimating the DRP during days in averaging periods where APT data are not available?

The MEU considers that the approach of using a short period in time to set DRP creates the potential for excessive volatility. Just as the AER considers that a long term average for MRP is a more appropriate approach than having the MRP assessed over short periods, the MEU considers the same long term averaging for setting DRP provides a lower risk outcome for all, with consistency and certainty being key drivers for setting appropriate and cost reflective values.

If the MEU approach is used, then an answer to question 5 is not needed.

6. Do stakeholders consider there is justification for making adjustments to the APT bond data to generate information during days where bond data are not independently available?

See answer to question 5.

Appendix 1

A1.1. National Electricity Rules – excerpts

Weighted average cost of capital

6.5.2(b) The rate of return for a *Distribution Network Service Provider* for a *regulatory control period* is the cost of capital as measured by the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider and must be calculated as a nominal post-tax *weighted average cost of capital (WACC)* in accordance with the following formula:

$$WACC = k_e \frac{E}{V} + k_d \frac{D}{V}$$

Where:

k_d is the return on debt and is calculated as:

$r_f + DRP$

where:

r_f is the nominal risk free rate for the *regulatory control period* determined in accordance with paragraph (c);

DRP is the debt risk premium for the *regulatory control period* determined in accordance with paragraph (e);

Meaning of nominal risk free rate

6.5.2 (c) The nominal risk free rate for a *regulatory control period* is (unless some different provision is made by a relevant *statement of regulatory intent*) the rate determined for that *regulatory control period* by the *AER* on a moving average basis from the annualised yield on Commonwealth Government bonds with a maturity of 10 years using:

(1) the indicative mid rates published by the Reserve Bank of Australia; and

(2) a period of time which is either:

- (i) a period (**the agreed period**) proposed by the relevant *Distribution Network Service Provider*, and agreed by the *AER* (such agreement is not to be unreasonably withheld); or
- (ii) a period specified by the *AER*, and notified to the provider within a reasonable time prior to the commencement of that period, if the period proposed by the provider is not agreed by the *AER* under subparagraph (i),

and, for the purposes of subparagraph (i):

- (iii) the start date and end date for the agreed period may be kept confidential, but only until the expiration of the agreed period; and
- (iv) the *AER* must notify the *Distribution Network Service Provider* whether or not it agrees with the proposed period within 30 *business days* of the date of submission of the *building block proposal*.

6.5.2 (d) If there are no Commonwealth Government bonds with a maturity of 10 years on any day in the period referred to in paragraph (c)(2), the *AER* must (unless some different provision is made by a relevant *statement of regulatory intent*) determine the nominal risk free rate for the *regulatory control period* by interpolating on a straight line basis from the two Commonwealth Government bonds closest to the 10 year term and which also straddle the 10 year expiry date.

Meaning of debt risk premium

6.5.2(e) The debt risk premium for a *regulatory control period* is the premium determined for that *regulatory control period* by the *AER* as 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 and a credit rating from a recognised credit rating agency.

Review of rate of return

6.5.4 (e) In undertaking a review, the *AER* must have regard to:

- (1) the need for the rate of return calculated for the purposes of clause 6.5.2(b) to be a forward looking rate of return that is commensurate with prevailing conditions in the market for funds and the risk involved in providing *standard control services*; and
- (2) the need for the return on debt to reflect the current cost of borrowings for comparable debt; and
- (3) the need for the credit rating levels or the values attributable to, or the methods of calculating, the parameters referred to in paragraph (d) that vary according to the efficiency of the *Distribution Network Service Provider* to be based on a benchmark efficient *Distribution Network Service Provider*; and
- (4) where the credit rating levels or the values attributable to, or the method of calculating, parameters referred to in paragraph (d) cannot be determined with certainty:
 - (i) the need to achieve an outcome that is consistent with the *national electricity objective*; and
 - (ii) the need for persuasive evidence before adopting a credit rating level or a value for, or a method of calculating, that parameter that differs from the credit rating level, value or the method of calculation that has previously been adopted for it.

A1.2 Interpretation of efficiency in NER

Second Reading Speech on NEL 2005¹³

“The market objective is an economic concept and should be interpreted as such. For example, **investment in and use of electricity services will be efficient when services are supplied in the long run at least cost**, resources including infrastructure are used

¹³ Hansard SA HOUSE OF ASSEMBLY Wednesday 9 February 2005 page 1452

to deliver the greatest possible benefit and there is innovation and investment in response to changes in consumer needs and productive opportunities.

The long term interest of consumers of electricity requires the economic welfare of consumers, over the long term, to be maximised. If the National Electricity Market is efficient in an economic sense the long term economic interests of consumers in respect of price, quality, reliability, safety and security of electricity services will be maximised.” (emphasis added)

Appendix 2 –

A2. Problems with forecast variability

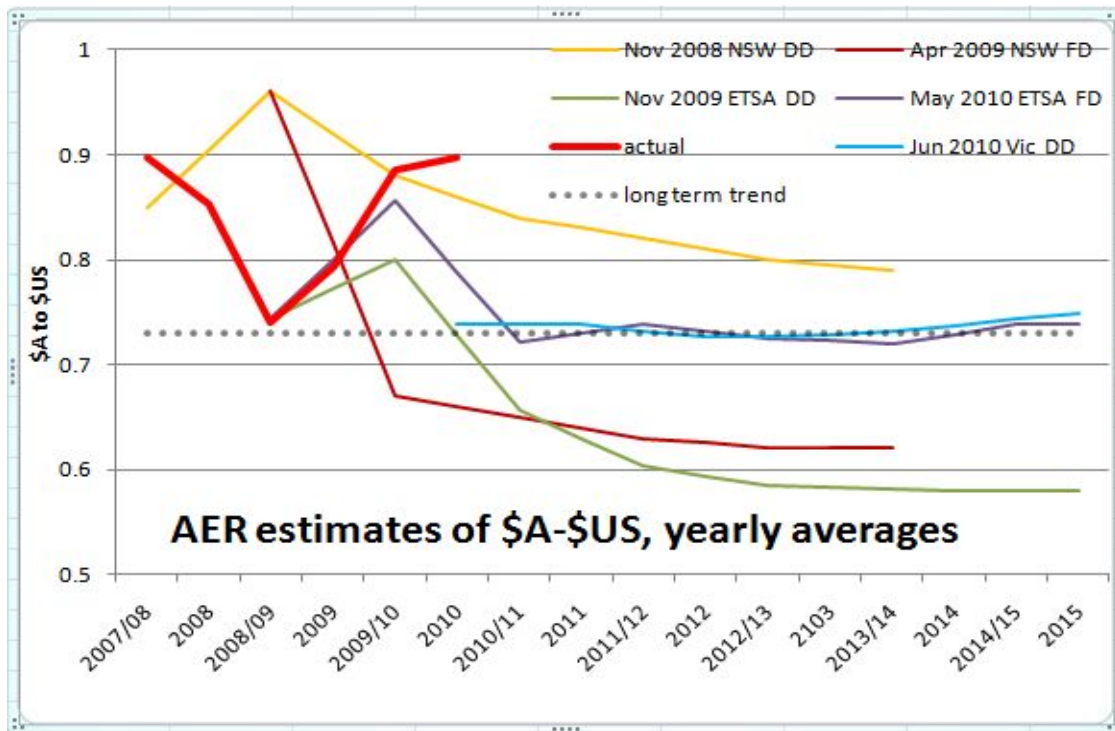
Example: US to Australian dollar exchange rates

The MEU has assessed the negative impacts arising from the AER approach to setting adjustments to forecast opex and capex to reflect potential moves in materials and labour costs.

Prior to 2007, regulators set opex and capex and assumed that future movements in the costs of material and labour would be accommodated by the application of inflation as measured by the consumer price index (CPI). In an attempt to be more accurate in ensuring forecast amounts would reflect actual future costs, the AER has introduced a methodology which forecasts future movements in material and labour indices.

The only certainty about these forecasts is that they will be wrong.

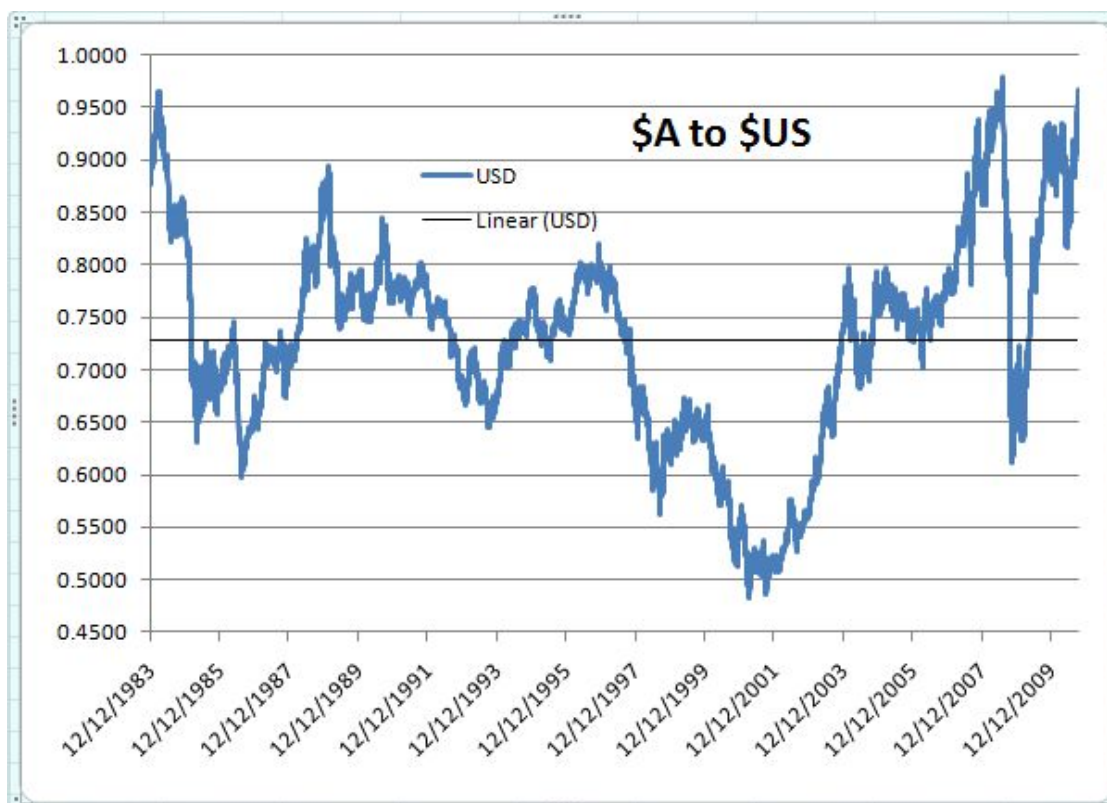
To exemplify the MEU concern, it points to the issue of exchange rate variation. In each regulatory decision the AER has proposed adjustments to material costs which are forecast in \$US, such as oil, steel, zinc and copper. The following graph plots the actual movement in the \$US and the \$A against the forecasts used by the AER in various draft and final decisions. This shows that there has been significant error between the forecasts and the actual movement to date, and massive variation in the forecasts.



Source: AER decisions

The long term trend for the exchange rate is the linear calculation based on the historical movements in the \$A since it was floated in 1983. This is shown in the next graph.

This shows that the longest period the \$A has been below \$US0.65 was just over 3 years, but the AER considered that this could happen for a longer period (ETSA DD and NSW FD) in the current 5 year outlook period. In fact earlier forecasts by the AER of what the exchange rate would be now were about 0.65, whereas in actuality it is approaching parity.



Source: RBA

The purpose of this example, is not to deride the AER ability to forecast, but to highlight that in attempting to be more accurate and accommodate future changes, the outcome is exactly the opposite – that greater error is introduced by attempting to be more accurate. Because of this the MEU considers that greater certainty and consistency is achieved by using longer term averages as the basis for inflation, rather than attempting to extrapolate from observations set in a short time frame.