



19 August 2010

**By email: [aerinquiry@aer.gov.au](mailto:aerinquiry@aer.gov.au)**

Mr Chris Pattas  
General Manager  
Network Regulation South  
Australian Energy Regulator  
GPO Box 520  
Melbourne VIC 3001

Dear Mr Pattas

### **Submission to the AER's Victorian Draft Distribution Determination 2011- 2015**

The Consumer Action Law Centre (**Consumer Action**) welcomes the opportunity to make a submission to the Australian Energy Regulator's (the **AER**) Draft Decision - Victorian Distribution Determination 2011 - 2015 (the **Draft Decision**).

Consumer Action strongly supports the Draft Decision and the level of scrutiny the AER has applied to the Distribution Network Service Providers' (**DNSPs**) regulatory proposals. We continue to have some concerns about the proposed increases by the DNSPs to their capital expenditure (**capex**) in relation to asset management and have also provided evidence that market conditions mean that the Market Risk Premium can be reduced to 6.0%. Our submission, including a report by Orion Economic Services (**Appendix 1**), highlight these areas and others where we believe the AER can continue to assess the DNSPs to ensure cost recovery is reasonable and efficient.

#### **Assessment Approach**

We strongly support the AER's approach to its assessment of DNSP regulatory proposals, which included a review of the DNSPs' historical performance and forecasts, and assessment of this against forecasts for the upcoming regulatory control period. As stated in our submission to the AER in relation to the review of regulatory proposals, we believe there is evidence that businesses do not always forecast accurately and subsequently, that they significantly over-recover on regulated income, to the detriment of consumers.

#### **Asset Management**

We support the AER continuing with this level of scrutiny for the revised regulatory proposals, sending strong signals to the market around what is reasonable and efficient cost recovery. The continuing claims that assets have reached the end of their lifecycle creating a significant bow wave effect across the DNSPs remain dubious, based upon the asset management plans used by each business. As such, claims for increased capex, in light of asset management, need to be assessed in detail.

## **Market Risk Premium**

In our first submission to the regulatory process, we argued that evidence suggested the MRP should probably be reduced to 6.0% again.

While the AER's Draft Decision rejects the DNSPs' claims for an increased MRP to 8%, maintaining it at 6.5%, we note the AER does not intend to reduce it further to 6.0% on the basis that there is insufficient market evidence to support such a decision. We strongly urge the AER to reconsider this decision, now that the current LIBOR and global market conditions provide additional convincing evidence supporting a reduction to 6.0%, as per our original contention.

Importantly, we highlight the significance of the MRP on DNSP revenues, and note that by realigning the MRP to 6.0%, it will strongly assist in ensuring consumers are not overcharged for energy services.

## **Victorian Bushfires Royal Commission**

The recent recommendations from the Victorian Bushfires Royal Commission in relation to bushfire mitigation, if adopted, will have significant potential cost impacts, for example the undergrounding of cabling. While we note that some of these costs could be dealt with as a pass through event, we advocate that the AER retains the materiality threshold for pass through events at 1%.

Beyond the 1% threshold, we believe that the same high level of scrutiny must be applied to pass through events as to this current regulatory review process, to ensure that the requested costs are reasonable and efficient and reflect an appropriate network solution for a particular high risk area.

## **Smart Meters**

We continue to have concerns about the cost allocation and return of benefits to consumers. There is no clear decision in relation to the manner in which benefits will be passed back to consumers. We recommend that in its final decision, the AER outline an expected timeframe and type of benefit that will be passed back through to consumers. For example, based on the requirement that as from 1 January 2012, all DNSPs must be reading smart meters remotely, we would expect to see increasing efficiencies in operational expenditure as a result of a reduced workforce, and higher efficiencies in network management. These efficiencies could be reflected in the latter half of the period covered by the AER's decision, that is the period covering 2012, 2013 and 2014.

Further, of significant concern is the increased incentive for retailers to load costs, even those only partially related to smart meters, into the Order in Council AMI pass through mechanism, enabling them more immediate cost recovery through a process that, due to the nature of the Order in Council, involves less scrutiny. Through the Order in Council process, AMI related charges are carved out of the regular DUOS charge and while this mechanism is sun-setting on 31 December 2013, it is essential that distributor costs are kept to a minimum as it will be difficult to pass revenue granted to the distributors upfront back to consumers later.

We urge the AER to remain vigilant in the consideration of costs within both processes to ensure any business as usual costs are considered within this review, not the Order in Council process.

### **About Consumer Action**

Consumer Action is an independent, not-for-profit, campaign-focused casework and policy organisation. Consumer Action provides free legal advice and representation to vulnerable and disadvantaged consumers across Victoria, and is the largest specialist consumer legal practice in Australia.

Consumer Action is also a nationally-recognised and influential policy and research body, pursuing a law reform agenda across a range of important consumer issues at a governmental level, in the media, and in the community directly. Consumer Action has been actively involved in energy advocacy work in Victoria and nationally since the 1990s. Over this time we have provided key consumer input into important energy regulatory processes for consumers, including the current Victorian smart meter rollout and initiatives relating to improved energy price and product information disclosure following the deregulation of Victorian retail energy prices.

Since September 2009 we have also operated a new service, MoneyHelp, a not-for-profit financial counselling service funded by the Victorian Government to provide free, confidential and independent financial advice to Victorians with changed financial circumstances due to job loss or reduction in working hours, or experiencing mortgage or rental stress as a result of the current economic climate.

### **Consumer Advocacy Panel grant recipient**

This project was funded by the Consumer Advocacy Panel ([www.advocacypanel.com.au](http://www.advocacypanel.com.au)) as part of its grants process for consumer advocacy projects and research projects for the benefit of consumers of electricity and natural gas.

The views expressed in this document do not necessarily reflect the views of the Consumer Advocacy Panel or the Australian Energy Market Commission.

Thank you again for the opportunity to make a submission to the Review. Should you have any questions in relation to this submission, please contact Janine Rayner on 03 9670 5088.

Yours sincerely

**CONSUMER ACTION LAW CENTRE**



Janine Rayner  
Senior Policy Officer - Energy  
Attach\*\*



Nicole Rich  
Director – Policy and Campaigns

Appendix 1.

**Orion Economic Services  
for the  
Consumer Action Law Centre**

**Review of the Revised Victorian Distribution  
Network Service Providers Proposals in  
Response to the AER Draft Decision for the  
2011-2015 Regulatory Period**

**August 2010**

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## Chapter One Support for the Australian Energy Regulator's Draft Decision.

### 1.0 Capital and Operational Cost Decisions

The Australian Energy Regulator's (AER's) draft conclusions on capital and operational costs and the AER's acceptance of the distributors' past behaviour of under-recovery as evidence of likely future costs are a solid basis for the Draft Decision, despite the fact that distributors in their Revised Proposals have proposed that the AER should have considered forward looking costs, and that they have again proposed higher values for both capital and operational costs.

#### 1.1 Capital Costs

**Table 1 Net Capital Costs, AER Draft Decision and Revised Proposals**

<b>\$million</b>	<b>CitiPower</b>	<b>Powercor</b>	<b>Jemena</b>	<b>SP AusNet</b>	<b>United Energy</b>
<b>AER Draft Decision</b>	567	1009	315	953	532
<b>Distributors Revised Proposals</b>	949	1606	582	1534	819
<b>Difference</b>	382	597	267	581	287

The distributors have all proposed substantial increases in most capital costs in their revised proposals on the basis of:

- rejecting the AER Draft Decision on Replacement Capital expenditure (Capex) and basing it on their original proposals;
- largely accepting the AER Draft Decision on new customer connections;
- rejecting the AER Draft Decision on Reliability and Quality Maintenance and proposing significant increases; and
- United Energy and Jemena in their Revised Proposals have sought increases in their Environment, Safety and Legal Capex allowances.

The proposal for additional Replacement Capex is primarily based on the “bow wave” impact on aged assets from a particular time period when many of their assets were laid down. However, for this to be the case the distributors would need to explain why this has not been factored into their Asset Management Plans (AMP) in the past, when many distributors have underspent on Capex in the last decade. In addition a number of the distributors have indicated that they have been able to extend the lives of assets which can be an important aspect of minimising the cost of assets. For example, United Energy claimed that:

- “Comprehensive and wide-ranging asset life extension programs were developed and implemented in the 1980's and 1990's
- Generally life extension provided us with a 10 to 20 year replacement deferment opportunity”<sup>1</sup>

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<sup>1</sup> Presentation to the Initial Meeting of the AER on the Victorian Distribution Price Review

In addition to United Energy, SPAusnet claimed that they had an asset life extension program as part of the broader AMP. So these two impacts would operate to reduce the impact of the “bow wave” of replacement capital. In addition the AER can monitor the impact of capital investment on service standards and can provide pass throughs for circumstances in which a distributor cannot maintain service standards with the approved capital allowance.

### **Recommendation 1**

That the AER use the proposed capital expenditures in the Draft Decision as the final approved capex expenditures, and not approve the distributors proposed capex increases.

## **1.2 Operational Costs**

For operational costs the distributors in their Revised Proposals have accepted the application of the 2009 actual opex as the starting point in the determination of operational costs, except for United Energy which is changing its business model. Two distributors have proposed reductions in the Revised Proposals (Powercor and SP AusNet), one has proposed an increase (Jemena) and one has kept its original proposal (CitiPower).

The distributors did not all accept the AER’s adjustment to the actual 2009 operational costs in relation to:

- removal of the related party margins (Powercor, CitiPower and Jemena);
- SP AusNet and United Energy did not accept a reallocation of overheads;
- exclusion of some management fees (Jemena, United Energy and SPAusnet);
- exclusion of some corporate strategy costs;
- assumed change between 2009 and 2010 for actual operational costs; and
- United Energy did not accept the forecast operational costs in relation to its new business model.

Related party transactions should be treated with great suspicion as they may involve gaming and they should be carefully analysed by the AER with market testing and benchmarking wherever possible. Where such arrangements exist it is also considered that a higher burden of proof is required before acceptance by the AER.

The AER’s assessment framework as set out in the Draft Decision provides a good basis for this evaluation, including in relation to related party transactions where it applies a presumption threshold, which assumes a contract price is not efficient if:

- the distributor and the contractor are related parties; and
- no competitive tender was conducted to procure services.

## **Recommendation 2**

That the AER should carefully analyse related parties with market testing and benchmarking wherever possible, and by utilising its information gathering powers fully. The AER must also require a higher burden of proof as essential before approving costs claimed for these functions.

### **1.3 Benchmarking**

All the distributors have argued that on the basis of benchmarking, the Victorian distributors are the most efficient nationally. However, United Energy provides a novel approach to demonstrate this. Firstly, United Energy uses consultants to criticise the AER's partial benchmarking, which was qualified by the AER, and then uses the same partial benchmarking to justify its supposed pre-eminent position on the efficiency frontier.

Many of United Energy's comparisons however are with Ergon Energy in Queensland which compares a largely rural distributor in Queensland with a predominantly urban distributor in Melbourne. No wonder such partial benchmarking looks good for United Energy.

The only way to clear up the presentation distortions in the Distributors' submissions with partial benchmarking is for the industry to provide the data for the AER to undertake a multilateral Total Factor Productivity analysis of the issue of efficiency.

## **Recommendation 3**

That the AER gather the data from the industry (by the use of the Regulated Information Notices (RINs)) to be able to undertake a multi-lateral TFP study of the Australian electricity distributors to limit the distortions of partial comparisons.

### **1.4 Bushfires**

The levels of capital and operational costs may change from the Draft Decision with the decisions of the Victorian Government on the 2009 Victorian Bushfires Royal Commission proposals. If the Victorian Government's Decision does not come before the release of the Final Report the AER will need to treat the issue as a pass-through and requires an open public consultation on such cost pass throughs.

It is also noted that SP AusNet has proposed a new initiative in its Revised Proposal to implement one recommendation of the Victorian Bushfires Royal Commission before a decision on the recommendations by the Victorian Government. The AER should not approve costs for the project (turning off auto-reclose devices off during the fire season in high risk areas) until the decision by the Victorian Government is taken and it is clear whether or not the business will, in fact, be undertaking that project.

## 1.5 Monitoring

It is positive that the AER Draft Decision proposes monitoring service outcomes in the areas of:

- Network average, as well as worst service KPI's;
- Network performance during major event days;
- Actual expenditures versus final approved benchmarks;
- Reinforcement and asset replacement expenditures and outcomes; and
- Network failure statistics.

In addition, the AER needs to go further in terms of information gathering from Asset Management Plans to:

- reduce the ability of distributors to game the regulator;
- reduce the problems of information asymmetry in regulation;
- reduce concerns with “bow wave” investment proposals; and
- simplify the approval of capital expenditure proposals.

A proposal to accomplish this is set out in more detail in Chapter 3 of this report.

The AER has also made important decisions in the following areas of concern:

- Efficiency and prudence of capital costs especially given many of the distributors' under-spending of capital allowances over the past regulatory terms;
- Customer contributions forecasts where our last report noted that historically the distributors have been poor in forecasting customer contributions and that the AER should look closely at a more accurate way of forecasting customer contributions;
- Deferral or prioritisation of capex where submissions noted the significant volumes of replacement capex/ageing assets sought by distributors and questioned whether deferrals could be considered; and
- Benchmarking, as the need to benchmark distributor capex was raised in a number of submissions, including a request for the AER to collate and make data available to stakeholders to enable them to more effectively comment on the distributors' proposals.<sup>2</sup>

### **Recommendation 4**

That the AER utilise its information gathering powers further in relation to understanding the detail of Asset Management Plans.

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<sup>2</sup> AER Victorian Draft Distribution Determination 2010-2015, June 2010, p 284 - 285.

## Chapter Two- The Market Risk Premium

### 2.0 Introduction

The Market Risk Premium (MRP) is the difference between the **market return** on a **portfolio** and the risk-free **rate** derived from government bonds and is a critical figure to estimate the Weighted Average Cost of Capital (WACC). The MRP is a forward looking variable and is therefore not easily measured, as such many assumptions must be made as to its calculation, for example, that historical evidence is a good predictor of future value. A sound analysis of current key debt markets and spreads from risk free rates provides a reasonable approach to analysing changes to the MRP.

In their initial submissions a number of distributors argued that the Global Financial Crisis (GFC) had resulted in:

- Material increases in the cost of capital across both debt and equity markets;
- General declines in the level of investor risk appetite;
- Reductions in liquidity and access to capital across virtually all markets; and
- Change in market views on acceptable gearing levels<sup>3</sup>.

In the Draft Decision the AER stated that various financial market indicators suggest that an 8 per cent MRP is unjustified, and an MRP estimate should not exceed 6.5 per cent. The distributors in their Revised Submissions all accepted the 6.5% MRP although all disputed its appropriateness in light of the GFC.

In our previous report on the distributors' initial proposals, it was proposed that falling credit spreads between corporate bonds and CGS and declining LIBOR rates, suggests a falling cost of debt and of the MRP. While the AER acknowledged the Consumer Action submission issue and agreed that increasing the MRP from 6.5 per cent to 8 per cent was unjustified in the current market circumstances, it considers that there was not sufficient market evidence to suggest a 6 per cent MRP should be used in the current determination.

The effects of the GFC have now further reduced since the publication of the Draft Report and world financial markets have nearly fully recovered which given the interconnections between debt and equity markets would suggest that the MRP has also declined to 6.0%.

### 2.1 What are the differences between debt and equity markets?

The debt market is the market where debt instruments are traded. Debt instruments are assets that require a fixed payment to the holder, usually with interest. Examples of debt instruments include bank loans and bonds (government or corporate) and housing mortgages.

The equity market (often referred to as the stock market) is the market for trading equity instruments. Stocks are securities that are a claim on the earnings and assets of a corporation. An example of an equity instrument would be common stock shares, such as those traded on the Australian Stock Exchange.

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<sup>3</sup> United Energy Distribution, Regulatory Proposal for Prices and Services, January 2011 to December 2015, p.136

## 2.2 How are debt instruments different from equity instruments?

There are important differences between stocks and bonds which include:

1. Equity financing allows a company to acquire funds (often for investment) without incurring debt. On the other hand, issuing a bond does increase the debt burden of the bond issuer because contractual interest payments must be paid— unlike dividends, they cannot be reduced or suspended.
2. Those who purchase equity instruments (stocks) gain ownership of the business whose shares they hold. In addition, equity holders have claims on the future earnings of the firm. In contrast, bondholders do not gain ownership in the business or have any claims to the future profits of the borrower whose only obligation is to repay the loan with interest.
3. Bonds are considered to be less risky investments for at least two reasons. First, bond market returns are less volatile than stock market returns. Second, if the company runs into financial trouble, bondholders are paid first, before other expenses are paid out. Shareholders are less likely to receive any compensation in this scenario.
4. The size of the debt market is around twice that of the equity market so debt is more widely available.

## 2.3 Why are these markets important?

Both markets are of central importance to economic activity. The bond market is vital for economic activity because it is the market where interest rates are determined. Interest rates are important on a personal level, because they guide decisions to save and to finance major purchases (such as houses, cars, and appliances, to give a few examples). From a macroeconomic standpoint, interest rates have an impact on consumer spending and on business investment. As interest rates rise the value of equities fall due to the additional costs companies must pay to produce.

Financial markets play a critical role in the accumulation of capital and the production of goods and services. The price of credit (debt market) and returns on investment (equity market) provide signals to producers and consumers—financial market participants. Those signals help direct funds (from savers, mainly households and businesses) to the consumers, businesses, governments, and investors that would like to borrow money by connecting those who value the funds most highly (i.e., are willing to pay a higher price, or interest rate), to willing lenders. In a similar way, the existence of robust financial markets and institutions also facilitates the international flow of funds between countries.

In addition, efficient financial markets and institutions tend to lower search and transactions costs in the economy. By providing a large array of financial products, with varying risk and pricing structures as well as maturity, a well-developed financial system offers products to participants that provide borrowers and lenders with a close match for their needs. Individuals, businesses, and governments in need of funds can easily discover which financial institutions or which financial markets may provide funding and what the cost will be for the borrower. This allows investors to compare the cost of financing to their expected return on investment, thus making the investment choice that best suits their needs. In this way, financial markets direct the allocation of credit throughout the economy—and facilitate the production of goods and services.

## The Key LIBOR Interest Rate

The important interest rate that applies to international wholesale funds is the London Interbank Offered Rate (LIBOR) which is the rate at which banks offer to lend money to one another in wholesale money markets in London. It is also a standard financial index used in U.S capital markets. It is calculated each day by asking a panel of major banks what it would cost them to borrow funds for various periods of time and in various currencies, and then creating an average of the individual banks' figures.

The LIBOR is the interest rate that the banks charge each other for loans (usually in Eurodollars). A Eurodollar is an American dollar on deposit in any bank outside the United States, and is therefore not subject to regulation by the U.S. Federal Reserve. This rate is applicable to the short-term international interbank market, and applies to very large loans borrowed for anywhere from one day to five years. This market allows banks with liquidity requirements to borrow quickly from other banks with surpluses, enabling banks to avoid holding excessively large amounts of their asset base as liquid assets. The LIBOR is officially fixed once a day by a small group of large London banks, but the rate changes throughout the day.

It's an index that is used to set the cost of various variable-rate loans. Lenders use such an index, which varies, to adjust interest rates as economic conditions change. They then add a certain number of percentage points called a margin, which doesn't vary, to the index to establish the interest rate you must pay. When this index goes up, interest rates on any loans tied to it also go up. Although it is increasingly used for consumer loans, it has traditionally been a reference figure for corporate financial transactions.

Back in the mid-1980's, the international banking system adopted LIBOR as a much needed benchmark for short-term, interbank loans. The LIBOR rates are now globally recognised indexes used for pricing many types of consumer and corporate loans, debt instruments and debt securities across the globe.

Interbank lending forms a critical part of modern financial markets. In normal times banks lend to each other in large volumes at a low cost for periods ranging for one night to a few months. These interbank loans are the marginal source of funds for many banks, including Australian banks.

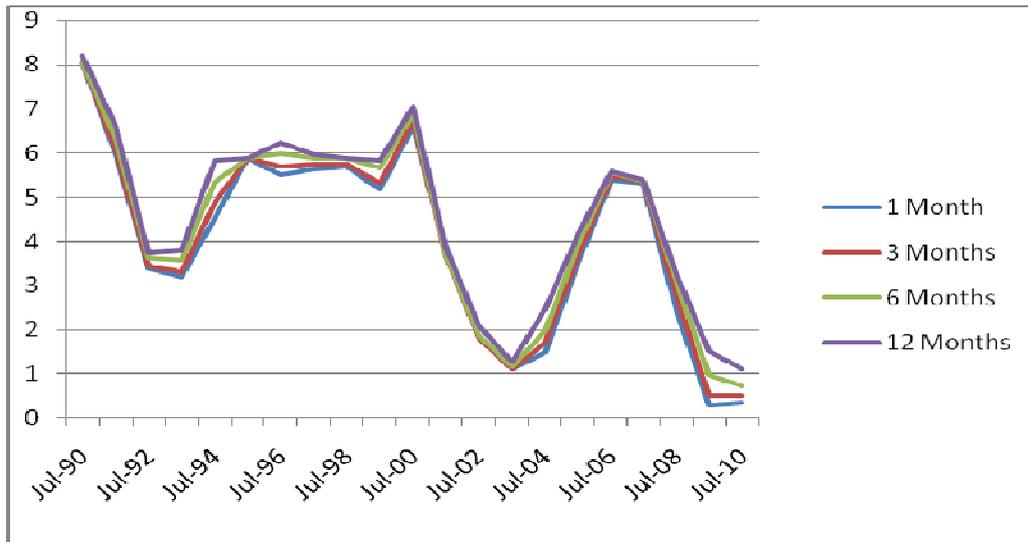
Aside from the market for short-term U.S government borrowing, the interbank market is usually one of the most liquid. The rate on interbank loans also is an important guide for other loans and for the pricing of bonds and equities. In normal times, the interest rates for interbank loans is lower than for other customers as banks are seen as low risk and hence investors require a smaller risk premium compared to other more risky loans.

The graph below shows the LIBOR interest rate of various terms from July 1990 to July 2010.<sup>4</sup> The graph shows that the recent peak as a result of the GFC for the LIBOR was in 2008-2009 and that it has declined since that time to reach its lowest levels in the last decade which implies that the GFC is over. This also suggests that as debt and equity markets are closely connected, the MRP may have also declined to be more consistent with a MRP of 6.0 rather than the 6.5 the AER allowed the distributors in the Draft Decision.

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<sup>4</sup> Source: [www.wsjprimerate/libor\\_rates\\_history.htm](http://www.wsjprimerate/libor_rates_history.htm)

**Graph 1: LIBOR Interest Rates July 1990 to July 2010. Various Terms**



**Table 1 LIBOR Date Comparisons with Latest Data 11/8/2010<sup>5</sup>**

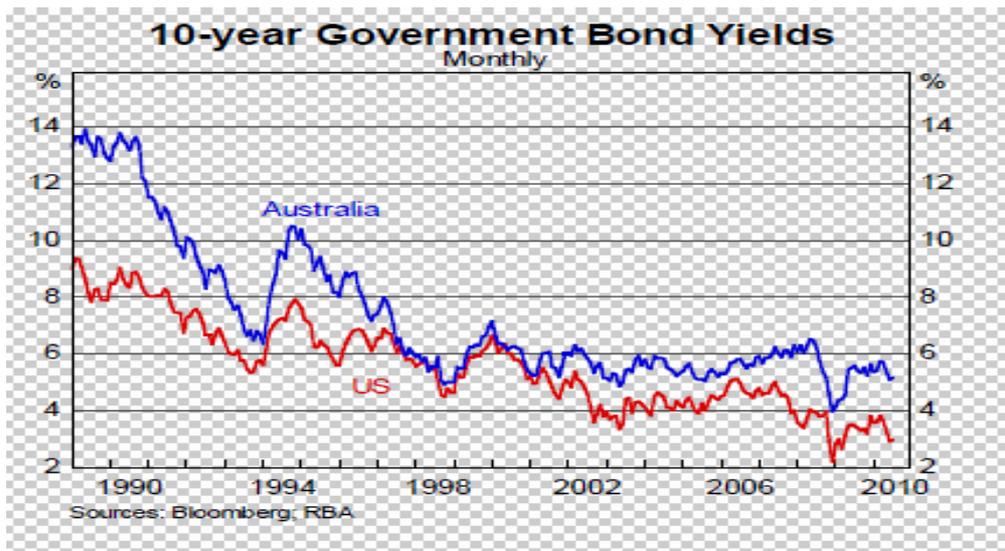
	This week	Month ago	Year ago
<b>1 Month LIBOR Rate</b>	0.29	0.34	0.27
<b>3 Month LIBOR Rate</b>	0.40	0.53	0.45
<b>6 Month LIBOR Rate</b>	0.62	0.76	0.89
<b>1 Year LIBOR Rate</b>	1.00	1.15	1.51

Table 1 above shows more recent data that the LIBOR has continued to decline to the date 11/8/2010 across all terms as compared to a month and a year ago.

Graph 2 below shows the yield on 10 year bonds from the US and Australia which are taken as a measure of the risk free rate from both those economies. The graph shows the increases from the GFC in 2008 – 2009 and the subsequent decline. So from the perspective of debt markets the evidence of the LIBOR and the 10 year Government bond yields suggest a solid move to easier markets compared to the past decade.

<sup>5</sup> Source <http://www.bankrate.com/rates/interest-rates/libor.aspx>

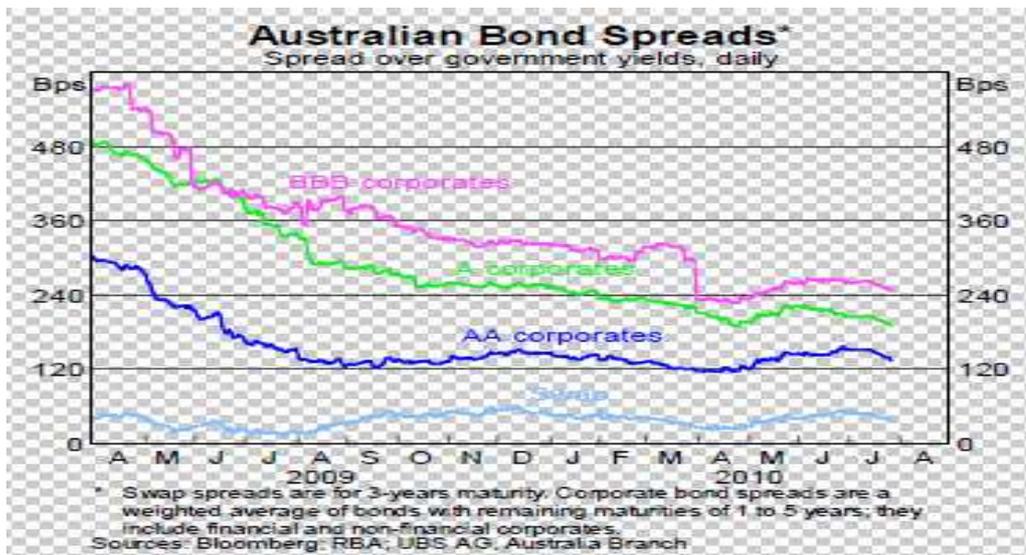
**Graph 2 - Australia and US Government Bond Yields**



**2.4 The Evidence from Bond Markets**

This graph below shows that the spreads between the Australian Government Bond (a risk free rate) and various corporate bonds of different risks have declined over recent times also suggesting that the MRP has declined.<sup>6</sup> This graph can be viewed as the MRP for risky assets but is usually a lower risk than the market MRP which covers all assets in the economy weighted by their individual value

**Graph 3 - Australian Bond Spreads**



The evidence presented above especially from the LIBOR and the domestic rates and spreads should provide enough evidence for the AER to reduce the MRP to 6% in the Final Decision.

<sup>6</sup> Reserve Bank of Australia, [www.rba.gov.au](http://www.rba.gov.au). Chart Pack

## Recommendation 5

That the AER decrease the MRP to 6.0%

## Chapter 3 Asset Management Plans

### 3.0 Overview

An Asset Management Plan (**AMP**) is an important tactical plan for managing an organisation's infrastructure to deliver an agreed standard of service at an efficient price. Typically, an Asset Management Plan will cover more than a single asset, taking a system approach - especially where a number of assets are dependent and are required to work together to deliver an agreed standard of service such as in a complex electrical system.

An Electricity AMP is a plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the life cycle of the asset in the most cost effective manner to provide a specific level of service. For example in the briefing by SPAusnet to the initial meeting with the AER it argued that it is:

- “Informed by a 30-year Network Development Strategy, which addresses the longer term capacity and investment requirements of the network”.

The key outcome of an AMP is that the need for spending on replacement or rehabilitation of existing assets is quantified and highlighted. An electricity distributor will be able to justify either prioritising these projects higher relative to other spending needs, or increasing their total capital spending to accommodate replacement. An AMP allows distributors to make judgements for given asset lives between additional maintenance and asset renewal.

It is important to assess the condition the assets are currently in within the electrical system, with their unique identifiers to enable easy manipulation of the AMP. This data could include information such as asset owner, age, costs, benefits, estimate of remaining life etc. This is important to understand what state the assets are currently in and what their technical lives may be given by optimum maintenance conditions.

The key components of an Electricity AMP are:

- Definition of a Service Standard
  1. Establishment of measurable specifications of how the asset should perform
  2. Establishment of a minimum condition grade
- Establishment of a whole-life cost approach to managing the asset
- Elaboration of an Asset Management Plan

The major ways an AMP can assist a distributor is that it allows:

- an efficient trade-off between asset maintenance and replacement through cost efficiency analysis which estimates the cost of both options and determines when replacement is required;
- a risk analysis of the two options;
- the interactions between aspects of the electricity system
- the effective integration of network augmentations and asset replacement; and,
- asset life extension programs to be evaluated.

AMPs are an essential tool for distributors to indicate they can meet Clause 6.5.7(c) of the National Electricity Rules (NER). Clause 6.5.7(c) of the NER also provides that the AER must accept the capex forecast included in a DNSP's regulatory proposal if it is satisfied that the total of the capex forecast for the regulatory control period reasonably reflects:

(1) the efficient costs of achieving the capex objectives;

(2) the costs that a prudent operator in the circumstances of the relevant DNSP would require to achieve the capex objectives; and

(3) a realistic expectation of the demand forecast and cost inputs required to achieve the capex objectives.

The most important objectives for AMPs are (1) and (2) above which set out the requirement for an efficient and prudent distribution operator.

In response to the specific recommendation regarding tracking expenditure for future determinations, the AER stated that over time it would expand its data collection and continue to establish policies, techniques and standardised systems and processes for data collection. The AER also stated that it is in the process of modifying RINs and the annual reporting regime to improve the data collection for future determination purposes.<sup>7</sup>

In this section another approach to monitoring the distributors is set out, that makes assessments of capex easier for the AER, minimises the ability of distributors to attempt to game the AER and reduces the information asymmetry of the regulator.

### 3.1 Objectives of AMPs

An AMP must include the objectives of justification and optimisation

- Justification - this gives visibility to the costs and benefits associated with providing the agreed electricity standard of service.
- Optimisation - this minimises the whole-life asset cost, including the operation, maintenance and replacement or disposal of each asset in the electrical system.

Clearly for either of the above to work, the Standard of Service needs to be defined (in a measurable way) for each asset in an asset system and for electricity distributors this is covered by the regulatory model. An Electricity AMP typically covers the following areas:

1. Electrical Asset System Description
2. Standard of Service Definition

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<sup>7</sup> AER Victorian Draft Distribution Determination 2010-2015, June 2010, p.344

3. Current Electrical Asset Performance
4. Planned Actions
5. Costs
6. Benefits
7. Potential Improvements

For example the presentation by SPAusnet at the AER's first meeting of the Victorian Electricity Distribution Price Review set out their Asset Management Plan as minimising asset life cycle costs by:

- Careful modelling of network performance risks;
- Focused condition monitoring programs;
- Sophisticated analysis of asset life extension and replacement options;
- Selective asset life extension programs; and
- Efficient delivery of asset replacement through integration with network augmentation projects.

JEMENA in their presentation at the same meeting argued that it employs a group of processes and systems to review, predict and manage capital expenditure, including:

- “Network asset management plan
- Asset performance indicators
- Life cycle management plan
- Capacity planning framework
- Technical compliance framework and plans
- Project governance and control

- With a number of key input drivers:

- Changes to technical standards
- Demand growth
- Asset utilisation
- Asset condition and ageing
- Unit rate changes”

### **3.2 A Standard of Service definition**

As described above a key aspect of AMPs is the need to define the Standard of Service for the various parts of the electrical asset system or group and describe how the system, as a whole, is intended to perform in a measurable way. A Standard of Service usually consists of two parts, a measurable performance specification, and a minimum condition grade.

The minimum condition grade should take account of the potential consequences of failure i.e. a new electricity substation in an expanding area should have a higher minimum. A fence protecting access to the substation from both humans and vermin, where the consequences of failure are significantly less will likely have a lower minimum. If further refinement is necessary, the minimum condition grade should also take into account the likely failure mechanism - if failure of an asset is likely to occur very slowly and can be monitored, then a minimum condition is unlikely to be required. Conversely an asset that is liable to a fast failure mode with little warning will likely require a higher minimum condition. For example SPAusnet argued that its approach to AMPs was based on:

“Rigorous cost benefit analysis of all expenditure decisions, including risk management in relation to asset performance and network reliability”

In managing AMPs it is important to understand what function the assets were designed to perform, and what minimum condition is considered acceptable. In electricity distribution systems the standards of service are specified in regulations making comparisons across distributors much easier.

### 3.3 Planned actions and lifecycle management

It is important in AMPs to understand what actions are planned to bring or keep the assets above their minimum condition, and to be able to perform their intended function. A number of the distributors have indicated that they have been able to extend the lives of assets which can be an important aspect of minimising the cost of assets. For example, United Energy claimed that:

- “Comprehensive and wide-ranging asset life extension programs were developed and implemented in the 1980’s and 1990’s
- Generally life extension provided us with a 10 to 20 year replacement deferment opportunity”<sup>8</sup>

In addition to United Energy, SPAusnet claimed that they had an asset life extension program as part of the broader AMP:

“Our asset replacement strategies minimise asset life cycle costs by:

- careful modelling of network performance risk
- focused condition monitoring programs
- Sophisticated analysis of asset life extension and replacement options
- selective asset life extension programs
- efficient delivery of asset replacement though integration with network augmentation projects”<sup>9</sup>

Given an increase in asset lives can lead to lower network costs and hence lower prices for consumers it seems important for the AER to assess the distributors’ capacity for increasing asset lives, especially since the United Energy claim set out above of a 10 to 20 year replacement deferment.

In addition the AER in their Draft Decision raised doubts about the use of Asset Management Plans on which to base large increases in capital expenditures.

“The AER’s investigation has found that the models and estimation techniques individually employed by all the Victorian DNSPs to develop their forecasts cannot be relied upon to give an accurate estimation of future needs. The AER considered the proposals for substantial increases in the volume of network build (augmentation and replacement) as compared to actual historical outcomes. This conclusion takes account of the impact of increases in peak electricity demand.”<sup>10</sup>

#### **Recommendation 6**

**That the AER investigates the capacity of each distributor to increase the life of assets**

<sup>8</sup> AER Presentation by the Distributors at the Initial Meeting of the Electricity Distribution Price Review

<sup>9</sup> Ibid

<sup>10</sup> AER Victorian Draft Distribution Determination 2010-2015, June 2010, Overview VII.

consistent with an efficient and effective AMP.

### 3.4 Costs and Benefits of AMPs

#### Costs

In designing an AMP it is important to establish the short, medium and longer-term costs for the assets in the electrical system. A forward looking cost-profile needs to be developed for operating, maintaining, refurbishing and replacing assets to sustain the defined Standard of Service. Ideally the cost-profile will extend to cover the life of the longest-lived asset in the system, so as to estimate the whole-life cost, and make it possible to determine the average annual costs.

The numbers provided for the initial year and the next three years (1 - 3), should be fairly accurate. Beyond that, estimates of costs are required so as to enable planning for any large expenditure items expected in the medium-term and to allow sufficient time to do a more in depth appraisal for an asset system that may require a change to the Standard of Service. Where assumptions have been made under the AMP, the basis for these should be provided to enable third parties to understand the AMP.

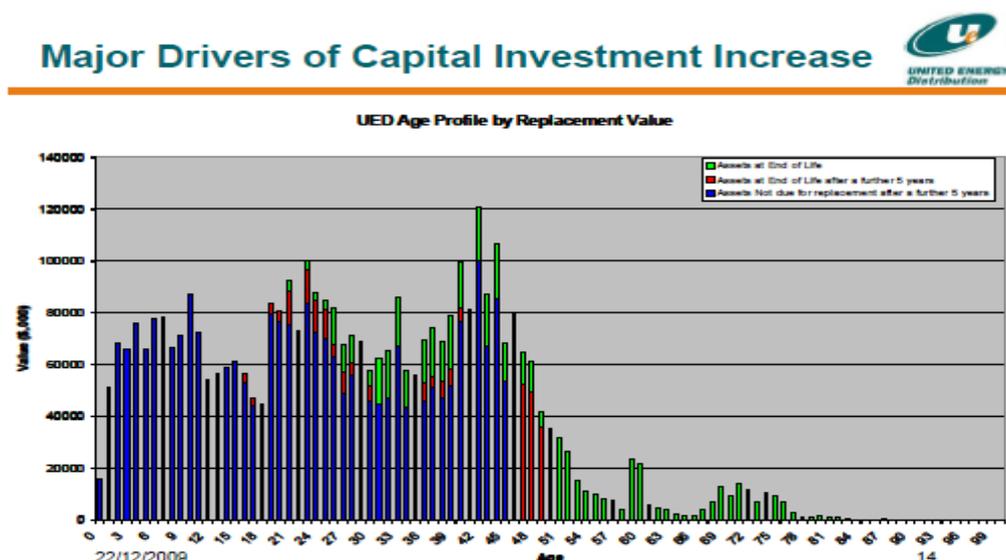
It is also important to understand what the planned actions are going to cost, as well as the ongoing "management" and overheads directly related to the particular electrical asset system. Two types of cost estimates can be made in an Asset Management Plan. A Cost-effectiveness analysis (CEA) is a form of economic analysis that compares the relative costs and outcomes (effects) of two or more courses of action such as additional maintenance and replacement. Cost-effectiveness analysis is distinct from cost –benefit analysis, which assigns a monetary value to the measure of effects – i.e. the costs and benefits. Cost – benefit analysis is used to examine the costs and benefits of investment proposals once renewal is proposed by the analysis of the AMP.

#### Benefits

Without exception, assets should provide some measure of the benefits that can be measured or explained. This will usually involve the translation of the standard of service into a monetary figure. Other benefits may be social or environmental, which may be difficult to quantify in monetary or quantitative terms, but some attempt to record all the relevant benefits is important, and more qualitative means may be employed. The expenditure on Asset Management needs to be justified in some way.

### 3.5 Distributor Approaches to Asset Management

United Energy and Jemena were typical of the distributors, who all argued that a bow wave on replacement capital was required given the age of the electricity assets.<sup>11</sup>



However SPAusnet argued that it was informed by a 30 year Network Development Strategy, which addresses the longer term capacity and investment requirements of the network. Given this statement it seems unlikely that a bow wave of investment would be required from this company's long term perspective.

Given the importance of AMPs in the justification of network replacement investment it is important to consider how a distributor may bias the AMP to present a false view of network capital requirements by:

1. reducing asset lives below what is technically feasible;
2. not increasing asset lives by that which is technically and efficiently possible;
3. including assets that are fake or by double counting assets across regulatory time periods; and
4. enhancing service standards over those required to maintain current service levels.

Given the distributors' reliance on Asset Management Plans for replacement expenditure it seems important that the AER should develop some expertise in AMPs and should ensure that the approach by the distributors is both efficient and effective. In addition, the AER's Draft Decision referred to the need to monitor capital works more comprehensively:

"In response to the CALC's specific recommendation regarding tracking expenditure for future determinations, the AER has over time expanded its data collection and accordingly, the AER is continuing to establish policies, techniques and standardised systems and processes for data collection. The AER is also in the process of modifying RINs and the annual reporting regime to improve the data collection for future determination purposes."<sup>12</sup>

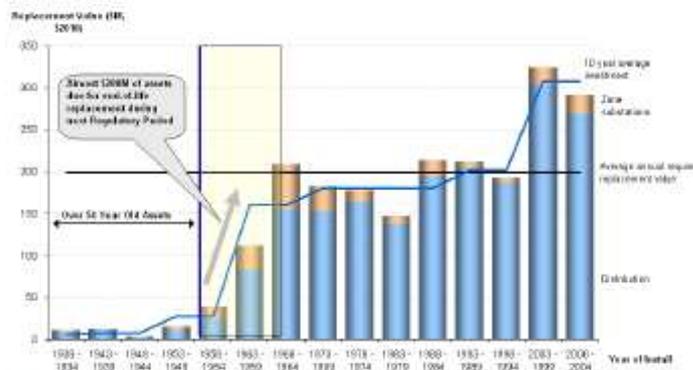
<sup>11</sup> AER Presentation by the Distributors at the Initial Meeting of the Victorian Electricity Distribution Price Review 2011-2015.

<sup>12</sup> AER Victorian Draft Distribution Determination 2010-2015, June 2010, P.344

JEN outcomes in the current regulatory control period  
**Aging assets**



Asset Replacement Value By Installation Year - 5 year blocks



- The JEN network is aging
  - A significant portion of the assets will be 50 years or older into the next five years
  - As a result a significant bow wave (almost \$200 million) of asset replacement is forecast to replace end of life assets
  - Otherwise, JEN's customers face increased unplanned outages due to equipment failure

**JEN has to replace its aging asset base** 13

It would make the AER's regulatory functions much easier if it could establish a firmer hand on capital costs and while the monitoring task outlined above will improve this activity it could be greatly enhanced by standardising the Asset Management Plans of the distributors and ensuring that asset lives are extended in an efficient and effective manner by each of the distributors.

**Recommendation 7**

That the AER requests that each of the distributors provide a copy of their AMP to the AER with current assumptions clearly set out so that the AER can evaluate each of them and determine if they are both efficient and effective.

**Recommendation 8**

That the AER develop a standard approach to assumptions and asset lives and require distributors to follow such guidelines as the AER chooses to establish for the AMPs.

**Recommendation 9**

That the AER consider simplifying the approval of capital expenditures with the use of each distributor's AMP and a forecast of business conditions to set out the expected capital expenditures and if the distributor proposes capex within 2% or 3% of the AER's estimate it should approve the proposal without further analysis.