

# *Energy Users Coalition of Victoria*

**Australian Energy Regulator**

**Victorian Electricity Transmission Revenue Reset**

**SP Ausnet Application**

**A response**

by

**The Energy Users Coalition of Victoria**

**May 2013**

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

The content and conclusions reached are the work of the EUCV and its consultants.

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## **Executive Summary**

The Energy Users Coalition of Victoria (EUCV) welcomes the opportunity for presenting its views on the application from SP Ausnet (SPA) for a reset of the electricity transmission costs in Victoria.

Due to delays in the AEMC review of the AER proposed rule change package on network regulation, consumers are placed in the situation in which this revenue reset review is being undertaken by the AER within the demonstrably biased constraints within a set of unbalanced network rules that were promulgated by the AEMC in 2006.

Notwithstanding these constraints, clarification of key aspects of the AER's powers and, more appropriate, interpretation of the AER's responsibilities during the AEMC and other review processes (eg the Limited Merits Review) do require the AER to take a more holistic view of what the outcomes of a network regulatory review might provide. During the review of the AER network rule change proposal, there was considerable debate as to the AER powers under the "old" rules. Whilst the new rules do provide some clarity on what the AER powers should be, there was considerable support for the view that under the "old" rules the AER had considerably more scope for taking a holistic view than the AER actually used. The EUCV considers that the AER should use the powers it is supposed to have to ensure that the revenue reset of SPA uses the full scope of the powers the AER has to ensure the interests of consumers are to the fore.

In the EUCV's view, SPA appears to have become less efficient in the current regulatory period (AA3) than it was in the previous period (AA2). This is typified by the increase in historical cost of transmission at \$6/MWh in 2007 rising by a staggering 90% over the past five years. In comparison, prices for other TNSPs in the NEM have risen by considerably less, and SPA has moved from being the least expensive to the second least expensive.

Despite the very large increases in opex and capex allowed for AA3 which drove the massive increases in SPA prices, SPA is seeking even higher allowances for its opex and capex in the next (AA4) period. These increases are despite SPA under-running both opex and capex allowances during the current (AA3) period. At the same time, SPA has experienced a considerable reduction in electricity consumption.

The only relief from a cost point of view that consumers see from the SPA application is from the falling risk free rate which reduces the overall weighted average cost of capital from the level seen for AA3. That this is an exogenous factor shows that SPA underlines the fact that SPA has increased all other input

costs, thereby minimizing the impact of this exogenously driven reduction in input costs.

The EUCV has provided details in this submission of many elements in SPA's application which are unjustifiable or require deeper and rigorous investigation by the AER. In some areas, the EUCV challenges the AER to improve its analytical tools and processes to test aspects where empirical evidence demonstrates that the SPA proposals would appear to be unnecessary, inappropriate at this time or overstate the need.

The MEU notes that SPA comments that it consulted widely in the development of its application. In this regard the EUCV notes that, despite being a consistent contributor to regulatory reviews of SPA networks, no contact with the EUCV was made even though EUCV members are large users of electricity and gas in Victoria. The EUCV is available for such discussion with SPA and the AER.

The EUCV has provided responses to the questions raised in the AER Issues Paper prepared for this revenue reset of SPA

## 1. Introduction

### 1.1 The EUCV

The Energy Users Coalition of Victoria (EUCV) is a group representing large energy consumers in Victoria. The EUCV is an affiliate of the Major Energy Users Inc (MEU), which together comprise some 20 major energy using companies in NSW, Victoria, SA, WA, NT, Tasmania and Queensland.

The EUCV welcomes the opportunity to provide comments on the application for a revenue reset for the Victorian electricity transmission system.

Analysis of the electricity usage by the members of EUCV shows that in aggregate they consume a significant proportion of the electricity generated in Victoria. As such, they are highly dependent on the transmission network to deliver efficiently the electricity so essential to their operations. Being heavily dependent on suppliers of hardware and services, members also have an obligation to represent the views of their local suppliers. With this in mind, the members require their views to not only represent the views of large energy users but also those of smaller power using facilities, and even of the residences used by their workforces.

The companies represented by the EUCV (and their suppliers) have identified that they have a strong interest in the **cost** of the energy networks services as this comprises a large cost element in their electricity (and gas) bills.

Although electricity is an essential source of energy required by each member company in order to maintain operations, a failure in the supply of electricity (or gas) effectively will cause every business affected to cease production, and members' experiences are no different. Thus the **reliable supply** of electricity (and gas) is an essential element of each member's business operations.

With the introduction of highly sensitive equipment required to maintain operations at the highest level of productivity, the **quality** of energy supplies has become increasingly important with the focus on the performance of the distribution businesses because they primarily control the quality of electricity and gas delivered. Variation of electricity voltage (especially voltage sags, momentary interruptions, and transients) by even small amounts now has the ability to shut down critical elements of many production processes. Thus member companies have become increasingly more dependent on the quality of electricity and gas services supplied.

Each of the businesses represented by EUCV has invested considerable capital in establishing their operations and in order that they can recover the capital costs invested, long-term **sustainability** of energy supplies is required. If sustainable supplies of energy are not available into the future these investments will have little value.

Accordingly, EUCV (and its affiliate MEU) are keen to address the issues that impact on the **cost, reliability, quality** and the long term **sustainability** of their gas and electricity supplies.

The members of EUCV have identified that transmission plays a pivotal role in the electricity market. This role encompasses the ability of consumers to identify the optimum location for investment of its facilities and providing the facility for generators to also locate where they can provide the lowest cost for electricity generation. Equally, consumers recognise that the cost of providing the transmission system is not an insignificant element of the total cost of delivered electricity, and due consideration must be given to ensure there is a balance between the two competing elements.

Although the EUCV had actively participated in previous AER pricing and revenue reviews of the Victorian transmission and distribution networks, it was not contacted by SPA to discuss its current application despite MEU representing a significant number of large energy users. The EUCV remains available for consultations with SP Ausnet<sup>1</sup>.

## **1.2 The scope of this review**

The EUCV notes that this review is being undertaken in a period where there is considerable stress on electricity consumers as the cost of electricity has risen dramatically in recent years. To a significant extent this increase has been a result of changes in the National Electricity Rules in 2007 and 2008 following the promulgation of significantly unbalanced rules by the AEMC pertaining to the transmission network rules (chapter 6A) which (in conjunction with the distribution rules that followed the transmission rules) have very substantially disadvantaged consumer interests and resulted in much economic and social hardship.

EUCV recognises that this application has been made under the “old” Chapter 6A electricity rules and for a three year period. On the completion of this reset period, SPA will be subject to a new revenue rest under the new electricity rules. This is

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<sup>1</sup> SPAusnet should contact the MEU Public Officer at [davidheadberry@bigpond.com](mailto:davidheadberry@bigpond.com) if they want to undertake consultation with MEU.

unfortunate and is a result of the delays in the AEMC review of the AER network rule change package. Analysis has been made demonstrably clear that the “old” rules are considered by consumers (and by the AER and the AEMC) to be overtly unbalanced. But because the old rules are applied to this transitional period of three years all the disadvantages that consumers were exposed to under the “old” rules will remain, including the constraints that apply according to previous AER reasoning that prevent it from exercising a holistic assessment of the final revenue determined as the outcome of this review.

It is noted (with a great deal of regret) that the determination of the regulatory asset base is closely proscribed, the inputs to the CAPM used to develop the WACC are predetermined, the degree to which AER can determine inclusion of capital expenditure is limited, and the AER must allow the regulated businesses extensive freedom in determining the amount of depreciation to be included in the revenue.

By excluding these elements from detailed independent analysis (because of the application of the “old” rules) this revenue reset is limited to a review of the allowances for capex and opex, the debt risk premium, the standards of service, and the degree to which SPA is to be provided with incentives to perform more efficiently.

In principle, the “old” rules provide reduced scope for the exercise of judgment by the AER and the determination of outcomes from the review is therefore based more on a mechanical basis. Notwithstanding this constraint, it is still important that the AER recognizes the importance of ensuring the revenue allowed to SPA reflects the new approach to balancing the myriad of competing elements that makes up a revenue reset. Of greatest importance is that the AER ditch its previously unsound reasoning by taking a holistic approach to the review and its outcomes. In this regard, it is very pertinent that the AER takes careful cognizance of the reasoning and interpretation of the scope of the AER’s obligations and process in conducting revenue reset reviews that was provided by the Expert Panel appointed by SCER to review the limited merits review process (the LMR Panel) The LMR Panel points out that a regulatory review must not only reflect a balance between the needs of the consumer and the provider, but also of the needs of current consumers and future consumers.

Page 37 of the LMR Panel Stage 1 report states:

“[The National Electricity Objective] cannot reasonably be interpreted as meaning that the interests of consumers today are irrelevant, and that the only thing that matters is the welfare of energy consumers at some distant point in time. It does, however, mean that it is not just the interests of consumers who will vote

in the next election that count: there are future generations also to be taken into account.”

The clear implication of these observations is that current consumers should not be disadvantaged by the current use of inefficient practices which may not have a negative impact on future users. In terms of this revenue reset review, the AER must have regard for the costs that current consumers will bear when assessing the needs for the future consumers in terms of setting allowances (such as weighted average costs of capital) or investments to provide for future users of the network services.

A further point that has been made by the LMR Expert Panel, is that the AER sets an allowance on an ex ante basis for the use of the service provider. This is merely a “bucket of money” and it does not imply that any specific element used in deriving this monetary allowance necessarily supported any specific element in the build up of the monetary allowance provided. What is important is how this monetary allowance was used and whether it was used efficiently and in the long term interests of consumers. Essentially, an ex ante allowance (say) for capex cannot be approved as being efficient when it can and probably has been used for different purposes. This requires the AER to establish that the monetary allowance was used appropriately.

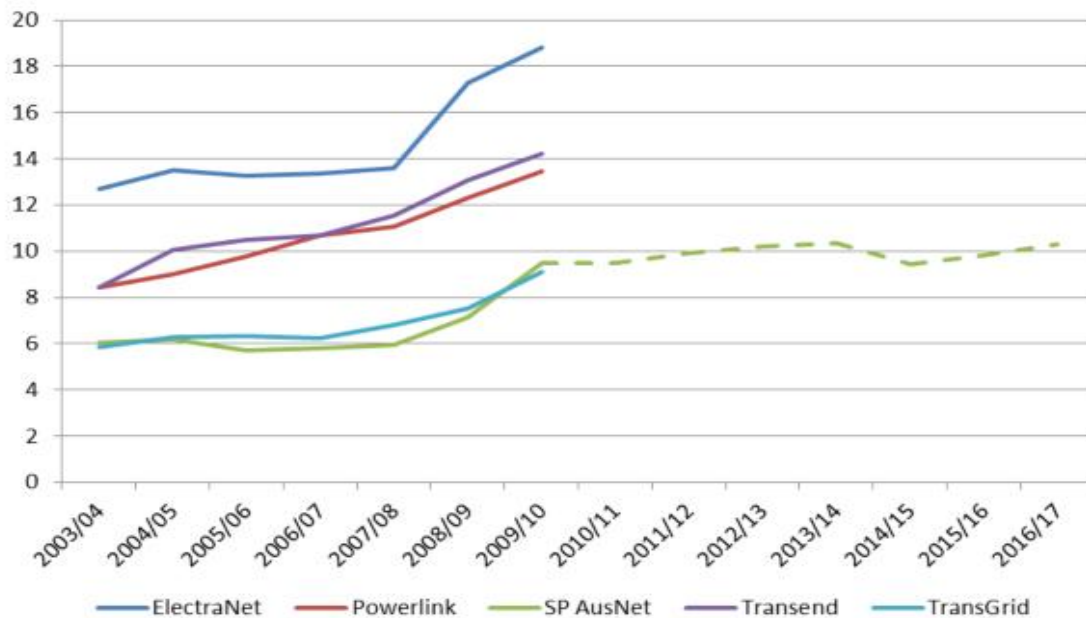
In addition to ensuring the funds provided were used efficiently, the AER has a responsibility to ensure that the funds are acquired in a way that provides clear signals to consumers to be able to modify their use of the services. This means that the AER must ensure that the pricing structures that are developed as part of the revenue reset review provide appropriate signals to consumers so they are incentivised to take actions so that the network can be operated more efficiently and that the assets have maximum utilization. By this means the costs for both current and future users of the service can reflect value for the money consumers are required to spend on the services.

### **1.3 A summary view of the SPA application**

To demonstrate that its network costs are efficient, SPA has provided a view of the cost of its services relative to the growth in consumption. It provides the following figure which shows the impact of its services on consumers which measure the cost of the services in terms of volumes of electricity used.



**Table 12.10: Comparison of historic and future prices (\$m/MWh)**



Source: AER Regulatory Report 2009-10, SP AusNet Regulatory Accounts and PTRM, AEMO National Electricity Forecasting Report 2012, p. 8-8.

Note – Indicative prices based on revenues divided by energy (transmitted). For comparison purposes, the AER Regulatory Reports use energy transmitted, therefore the forecast prices shown in this chart do not align with the prices in figure 12.9 due to the different types of energy data used.

The two aspects that this figure shows is that SPA, previously the lowest cost provider of electricity transmission in the NEM, is now the second least expensive. This growth in cost is despite SPA having a much denser consumption of electricity than TransGrid (its closest comparator) or any of the other TNSPs, and therefore should have the lowest unit costs.

It also shows that the historic cost of ~\$6/MWh in 2007/08 has risen by a staggering 70% in the past 5 years. In comparison, price rises in all other TNSPs have increased at much lower rates. In 2007, the EUCV pointed out in its response to the SPA application for the current period, that SPA was unjustifiably claiming a massive increase in its costs, even accepting that there was an increase in consumption forecast. The AER therefore needs to assess this application on the basis that the cost rise in the last period (AA3) is demonstrably excessive.

For SPA to state that its costs reflects a reduction in the first year of the next period and only modest increases thereafter, belies the fact that its cost structure is massively above (in proportional terms) what it was before the current reset period.

In fact, the only area where SPA forecasts a reduction in its cost structure for the next period, is in the return on assets which is caused by a low current risk free rate in the WACC formula. In point of fact, SPA is actually forecasting significant increases in both its opex and capex for the next period, despite under-running allowances in both during the current period.

Overall, the EUCV would have expected considerably lower costs for the next period, rather than the continuation of the growth in the current excessively high costs seen at the moment.

Against this background, we consider that the AER has a clear responsibility to ensure a certain amount of discipline is placed on SPA and that all claimed costs can be justified and are economically efficient. The EUCV would expect that given the past under runs in both capex and opex allowances in the previous period that much of the new claims for allowances should be rejected for the next period.

#### **1.4 The helicopter view**

The EUCV is unable to accept that the proposed maintenance of costs can be justified when assessed against a background and a foreground of falling consumption. Equally, we note that the applicant has provided arguments in support of each element of its claimed cost increases. In a competitive world, senior management of a business must and do take a view that any claimed increase in cost must be controlled in light of the potential implications for the firm's competitive position. In the regulated energy sector, however, legislation has provided the AER with the role of providing this discipline, and so it must ensure that the resultant outcomes are in keeping with what can be expected from the discipline of efficient drivers.

At its most fundamental level, an increase in selling prices of 70% over a 6 year period could not be sustained by any competitive business against an environment of falling consumption. For SPA to consider that this increase should be maintained and funded by consumers for another 3 years is unreal and must not be approved.

#### **1.5 The materiality of transmission costs**

It is often alleged (particularly by TNSPs) that of all the costs that consumers incur from the electricity supply chain, transmission charges are the least. Other than losses and NEMMCo costs, this statement has validity.

On page 18 of its application, SPA states that its costs are the smallest element of the average household bill of any TNSP in the NEM. This is merely due to the fact that SPA provides transmission services for the most dense electricity region in

the NEM, and therefore unit costs should be lower. In contrast the EUCV points to SPA becoming more expensive comparatively as shown in the chart above.

Transmission costs can be significant, and the closer a consumer is to the transmission supply point and the larger the demand of the consumer, the more significant transmission costs can become. It is, therefore, essential that transmission costs are not treated as insignificant, and are addressed in a comprehensive manner.

#### 1.6 AER questions

<b>SP AusNet's consumer and community engagement</b>	<b>EUCV response</b>
Are you satisfied with the level of engagement that SP AusNet has undertaken? If so, what in particular did you appreciate? If not, what additional engagement could SP AusNet have done?	No SPA did not contact EUCV despite EUCV being a consistent contributor to SPA reviews since 1998
Has SP AusNet communicated the pricing implications of the proposed CBD rebuilds and other major replacement capex projects?	No SPA has not contacted EUCV

## 2. Forecasts of demand, consumption and input cost changes

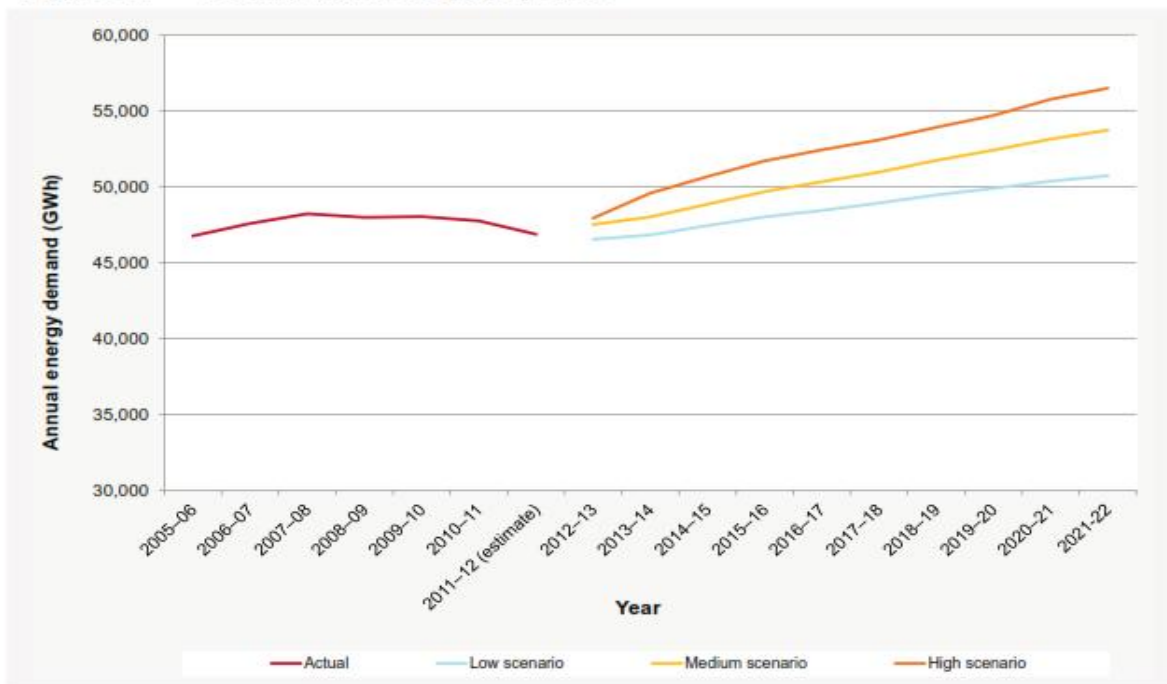
### 2.1 An overview of electricity (demand and consumption) forecast changes

The EUCV recognises that SPA is not responsible for augmenting the Victorian electricity transmission system to meet increases in demand – this is the responsibility of AEMO. However, SPA is required to replace assets due for replacement on an age basis with assets that meet any expected increase in demand.

SPA has advised that it is using the latest AEMO data as the basis for expected demand increases

In its forecast of future charges, SPA uses AEMO data from its 2012 assessment of expected consumption. AEMO, in its 2012 ESoO, shows that there was a decrease in consumption over the current period as the following chart from the AEMO 2012 ESoO shows

**Figure 3-11 — Victorian annual energy projections**



The impact of this declining consumption during the current period results in a significant increase in unit costs (\$/MWh) to consumers. The proposal by SPA

marginally reduces the unit costs (a result stemming from the low risk free rate) whilst opex and capex costs both increase.

The expected consumption by the end of the next (three year) period is forecast by AEMO to be much the same as at the start of the current period, so the opex and capex SPA is claiming for the next period are overstated relative to those costs they had early in the current period.

## **2.2 Escalation forecasts for labour and materials**

### **2.2.1 Wages cost growth**

SPA seems to express a preference for using BIS Shrapnel (BIS) calculated AWOTE as the basis for general movements in labour. Despite its preference, SPA opts for a BIS Shrapnel calculated LPI which is not productivity adjusted. In this regard, the EUCV notes that the AER has most recently used LPI calculations from Access Economics (DAE) which were not productivity adjusted but applied improvements in productivity as an explicit adjustment to forecast labour allowances.

SPA considers that the LPI should be adjusted to remove the Waste Services (WS) element from the EGWW sector, to better reflect the EGW sector that it considers it operates in. However, the EGWW cost structure is a series developed by the Australian Bureau of Statistics which no longer produces the series for EGW labour. Therefore, BIS has interpolated the share of the WS and its cost structure to develop its unique EGW series of labour costs. This means that the BIS LPI for EGW is not an independently derived calculation and requires assumptions to be made.

SPA considers that the exclusion of the WS is required because otherwise this distorts the LPI value downwards and the outcome is not representative of the electricity sector. The EUCV observes that this argument is erroneous on a number of counts:

1. The EGWW series is independently developed and requires no interpolation
2. The base for the EGWW series was set with shares from all four sectors established and any subsequent movements are relative. The assumption made by SPA is that the rate of change for the WS sector is lower than those of the other three elements included in the series, yet provides little substantiation as to how this assumption is reached.
3. If the incorporation of the WS element of the series is seen as inappropriate for an electricity transmission business, the EUCV asks why the gas and water elements are any more appropriate than the

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waste sector. Using the SPA argument, it should be seeking to exclude not only the waste element but also the gas and water elements as well.

SPA observes that the many other regulated firms have debated with the AER about the form of labour forecast escalation. What the regulated firms have all failed to recognize is that the outcome of using LPI has not disadvantaged the regulated firm because consistently, actual opex costs have, over time, been generally less than the regulated allowance. On this basis alone, there is no sound reason for the AER to vary from its present practice of using LPI which is based on independent data to forecast future labour cost changes.

The EUCV is also concerned that the forecasts made by BIS have exhibited considerable variation to actual outcomes when compared to those made by DAE. The fact that there are significant variances between forecasts and actuals (more often in overstating future movements benefiting the NSP) results in a lowering of confidence for their use for this reset review (see section 2.2.3 below).

The EUCV considers that:

- Capex and outsourced labour costs should be adjusted for forecast movements in the DAE construction LPI
- Direct labour costs should be adjusted for forecast movements in the DAE EGWW labour LPI
- Productivity improvement be stated as explicit adjustments

This approach maintains consistency with previous AER decisions and provides regulatory certainty of approach. In any case, SPA has not provided adequate reasons for change from AER practice in its proposal.

### 2.2.2 Materials cost growth

SPA provides a report from SKM providing a view of the movement in material and the movement in the \$A-\$US which adjusts these to reflect local costs. It then provides a view of the likely changes in materials costs over time based on research by CEG.

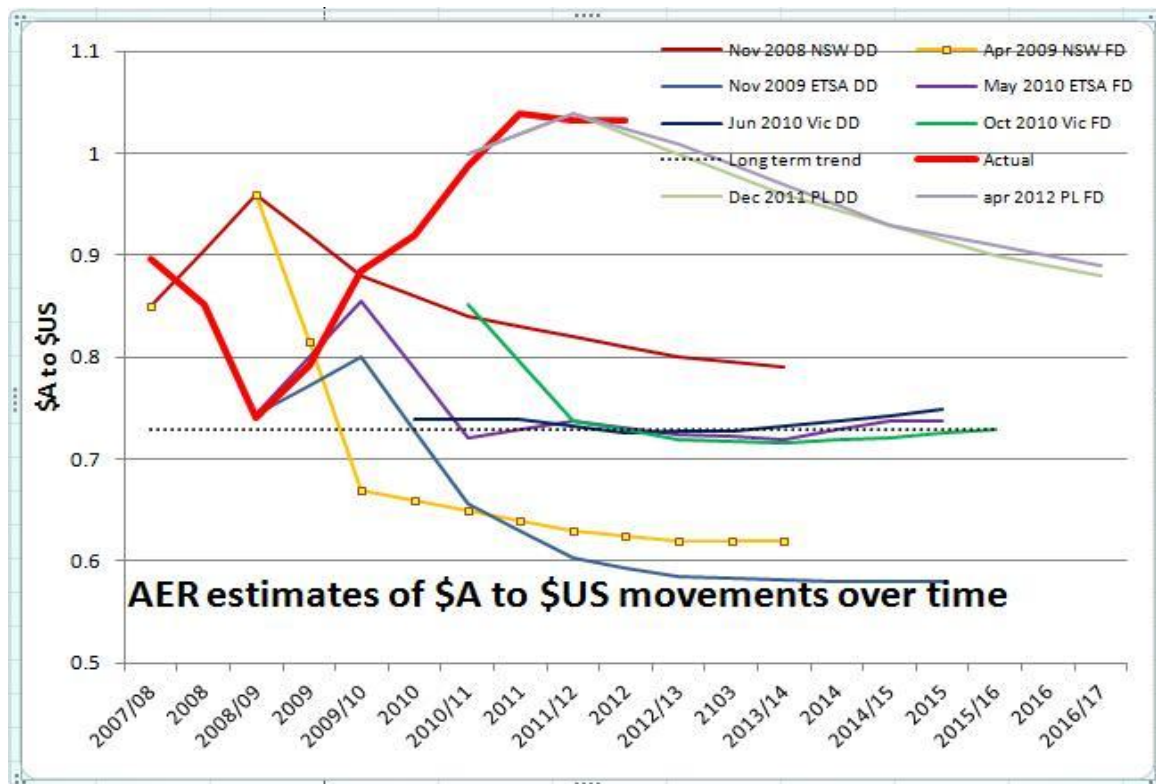
What SPA (and SKM) does not do is provide the weighting of each material element to its mix of materials and demonstrate that the weighting is reflective of its actual mix.

The EUCV is concerned that forecasts of materials cost movements are

based on assumptions that are inappropriate for the use to which they are put. For example,

- If the forecasts are to be used for budgeting purposes then they will include a degree of conservatism. There is no indication as to the degree of conservatism that has been used in their development
- How accurate and robust have these forecasts been in the past? Has there been any assessment to compare the forecasts with actual costs to identify the degree of accuracy implicit in the forecast?

To assess the accuracy of forecasting of future costs, the ECCSA has been plotting forecasts made by the AER in terms of \$A-\$US over a number of years in AER regulatory pricing decisions. This shows that the forecasting accuracy has been extremely poor, and the inaccuracy has provided regulated firms with a considerable benefit at the expense of consumers.



Source: RBA data, AER decisions

What this shows is that the forecasting accuracy of the AER and various consultants has been quite poor. When the obvious inaccuracies in assessing the \$A is added to inaccuracies in forecasting the change in cost of specific materials and then adjusted to "real" values by estimating the

value of the general market inflation (CPI) the inaccuracies become cumulative.

The EUCV again considers that the AER needs to find another approach to making adjustments to capex and opex allowances to reflect future movements in input costs. The current approach has caused considerable harm to consumers (as can be seen from the inaccuracies in the forecasts of the \$A) and could, in the future, cause harm to regulated firms.

In previous submissions, affiliates of the Major Energy Users – MEU – (of which EUCV is one) have suggested that this inaccuracy could be overcome by the use of an escalation factor unique to the energy market which the AER would generate annually for adjustments to allowed revenues rather than use the CPI.

The decision of the AER to not use such an approach is strange. The argument put by the AER was that allowing for annual adjustments to allowed revenues by using the CPI provided some certainty for consumers and regulated firms. However, especially for revenue cap decisions, there are frequently massive adjustments in tariffs because of large movements in other input costs. There are large swings in current year revenues caused by under or over recovery of the allowed revenue in the previous year coupled with large swings in returning to consumers the benefit of the inter-regional settlement residues. MEU members report seeing transmission tariffs vary year on year by as much as 20%.

If swings of this magnitude can occur without using an input cost adjustment index, then the AER argument fails to be legitimate. Even the AER preference for allowing adjustments of CPI results in considerable variation as allowances for inflation made in revenue reset decisions have been in error by more than 100%.

Many industries use cost input adjustment indices that are not the CPI to reflect the industries' special needs, so a decision to use a more accurate approach for allowing for variation in input costs would not be ground breaking in the least.

### 2.2.3 Labour and material forecasting inaccuracies

As part of the analysis for the decision to use LPI in lieu of AWOTE, the AER provided a table of the past performance of Access Economics (DAE) and BIS Shrapnel (BIS) in forecasting actual labour movements (see for example



table C2 in section 3 of the AER draft decision on the Multinet gas application).

This data is quite fascinating and from it the AER concludes that the LPI forecasting by DAE is more stable and exhibits less volatility than does BIS forecasting and so the AER considers the DAE forecasting is preferred.

What the AER does not do is to assess the actual accuracy of the forecasts over time. For example, the DAE forecast for EGW made in 2007 for year 2010/11 shows a small under-run compared to the actual LPI. Yet these forecast errors are compounded – the forecast for 2010/11 is the compounded increase of all the previous years of data. When compounding is implemented, the actual increase in LPI for 2010/11 based on movements from 2007 implies labour costs in 2010/11 were 24% higher than in 2007. The DAE forecast for the same period shows an increase of 26% (the BIS increase is nearly 29%).

Further, the errors between the actual values and the forecasts show a consistent overestimation of future LPI values. The number of times the forecasters underestimated the actual LPI is 25% whereas the overestimates comprise 60% of the forecasts – the balancing 15% is where the forecasts were accurate. On this basis the forecasters are likely to overestimate the LPI 4 times more than they get it right and underestimate it 2 times more than they get it right.

These actual calculations and comparisons show that the forecasts are biased towards overestimation and so impose increased and unnecessary costs on consumers.

The EUCV considers that the AER should also review the accuracy of material forecasts over time to ensure that the forecasts are not biased in a similar manner.

### **3. SPA WACC**

#### **3.1 About the weighted average cost of capital (WACC)**

In the recent reviews of network resets, there has been advice from the applicants that there is a need to set the WACC parameters to values that provide an increase in the WACC or a reduction of the amount of tax that is subject to imputation. Considerable effort by applicants has been devoted to “drilling down” into available data to “prove” that changes are required to provide a WACC that reflects “reality”. What no one, including the AER, has done is to assess whether the outcome of the various levels of WACC calculated are efficient and reflect an outcome that provides an efficient WACC – one that provides an adequate return to the network provider but neither over provides nor under provides when compared to what occurs in the competitive market.

This view is supported by the Chair of the AEMC, Mr John Pierce, who is reported as stating<sup>2</sup>:

“You've got to have the right rate of return. The first question is, what's the minimum rate of return necessary to attract funding so people will invest in the sector. Secondly, we want people to operate efficiently so what we need is an efficient benchmark rate of return... we want them to try and beat it so the shareholders get the benefit of it, so that next time around it can be shared with customers.

"But if they don't ... then you also want the shareholders to suffer ... if I'm inefficient, I want the shareholders to carry that risk, not customers.”

Some of the claims made by applicants have ultimately been referred to the Australian Competition Tribunal (ACT) for a ruling. In the case of imputation the ACT has determined the proportion of dividend subject to imputation. The ACT has also been heavily involved in the way the AER has used scarce publicly available data on the values of Australian corporate bonds in order to manipulate minimal data into a form which might be used to infer a debt risk premium for the benchmark BBB+ rated entity.

The applications from various network owners tend to accept parameters that are on the “high side” and sought to increase those considered by them to be on the “low side”. For example, some have sought an increase in the market risk

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<sup>2</sup> “High power rates: it's a poles and wires story”, SMH June 12, 2012

premium to a high of 844 bp and expended considerable effort, argument and appeals to get debt risk premiums well in excess of 400 bp.

It is obvious that the recent low yields for 10 year CGS has raised concerns with all network owners as they provide considerable evidence that a long term 10 year CGS has a much higher value (by some 250-300 bp) than the current levels experienced. As a result some network owners have argued that either the long term average 10 year CGS should be used as the basis for the CAPM calculation, or that higher levels of market risk premium should be used to accommodate what they consider to be a disparity in the calculations for the equity and debt components of the WACC that arises from a low risk free rate.

What concerns consumers is that all such approaches are “all one way” as when the approach used by the AER has resulted in levels of debt risk premiums well in excess of actual costs, the regulated businesses have not sought lower levels – in fact they have actively sought, through the ACT, for even higher levels to be used. After enjoying the benefits of a financial market that has resulted in higher levels of WACC than was incurred, it is therefore somewhat perverse to seek a significant change in the approach to setting the WACC parameters because the outcome of the previous approach is not as attractive.

In its responses to the WA Economic Regulatory Authority (ERA) in response to its Draft Decision on Western Power, the WA Department of Finance made the following observations<sup>3</sup>:

“The Authority's attention is also drawn to the risk of using a 20 day average to calculate the risk free rate given the significant degree of uncertainty and volatility in international financial markets at present.

Given the turmoil in the financial markets emanating from Europe at the moment and the cascading effect that has on international financial markets, it would seem risky to base a five year WACC determination on a 20 day average in this environment.

The Authority is therefore requested to consider this matter further in its deliberations and determine what would be a more appropriate averaging period that ensures Western Power is not 'locked in' to an artificially low return on its assets for the entire five year regulatory period, as a result of this current market

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<sup>3</sup> Page 2 Dept of Finance submission to ERA dated 29 May 2012 available at

[http://www.erawa.com.au/3/1181/48/western\\_powers\\_proposed\\_revised\\_access\\_arrangemen.pm??utm\\_source=ERAwebsite&utm\\_medium=HTML&utm\\_content=TextLink&utm\\_campaign=MostViewed](http://www.erawa.com.au/3/1181/48/western_powers_proposed_revised_access_arrangemen.pm??utm_source=ERAwebsite&utm_medium=HTML&utm_content=TextLink&utm_campaign=MostViewed)

volatility.”

However, this view to change the approach used for over 15 years to setting regulated WACCs is then undone when the WA Department of Finance then seeks for the ERA

“...to consider the importance of regulatory certainty and how it impacts Western Power and indirectly, its end consumers.”

Regulatory certainty is at the very basis of the AER Statement of Regulatory Intent (SORI). To vary from the longer term practices introduces uncertainty, so the AER has to be cognizant of the risks inherent in changing regulatory practices because the wider financial environment has changed. The AER maintained its flawed practices for setting the debt risk premium (which benefited the regulated firms) despite clear evidence that the financial environment had changed. The AER decision to continue the use of the flawed process (coupled with successful appeals from regulated firms) delivered considerable harm to consumers and increased profits to the regulated firms.

In its recent draft decision on Western Power the ERA decided to use the 5 year CGS rate, an MRP related to the 5 year CGS of 600 bp, an equity beta of 0.65, a credit rating of A-, a shorter borrowing term than 10 years to reflect actuality of the debt portfolios seen in the market<sup>4</sup> and less reliance on the Bloomberg data. This change has been precipitated by a recognition of allowed WACCs being seen to be considerably higher than the actual costs of capital incurred by the low risk network monopolies.

The ERA revised approach has tended to reset the calculated WACC to a level which more reflects what actually is occurring in the wider market. Whilst the ERA decision is, at the time of preparing this submission, still at draft stage, the arguments included in it are very detailed and provide totally different conclusions to those that ElectraNet and its consultants provide.

The EUCV makes the above general comments because there is considerable debate as to whether the current approaches used to assess what represents a reasonable weighted average cost of capital. In particular, it should be noted that recently ElectraNet sought to get changes to the Rules to receive a better outcome for itself. The EUCV notes that the AER is addressing this problem as part of its Better Regulation program.

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<sup>4</sup> This approach has the added benefit of increasing the population of corporate bonds to provide greater reflection of the actual costs

### **3.2 The WACC for SPA**

Chapter 6A of the national Electricity Rules is quite prescriptive in what the WACC parameters are to be and how they are calculated. Specifically, Chapter 6A requires there to be a review by the AER of the WACC parameters every 5 five years (the “WACC review”) and that the outcomes of that review must be applied to all decisions on electricity transmission networks until the next review. As the next review does not take place until late in 2013 for a decision in 2014, the parameters determined at the 2009 review still apply.

At the 2009 WACC review, the AER determined that:

- The risk free rate is to be the 10 year CGS averaged over a short period before the final determination is made
- The market risk premium (MRP) is 650 bp
- The corporate tax rate is 30%
- Gearing is 60% debt and 40% equity
- Equity beta is 0.8
- The value of imputation credits is 0.65
- The debt risk premium is to be calculated from the 10 year Australian BBB+ rated corporate bond rate

SPA has applied these parameters in its current application. This is despite SPA already gaining a benefit from a number of aspects that actually reduce its actual cost of capital. For example:

- SPA operates at a higher gearing than 60% yet has an A- credit rating
- Observed equity betas are closer to 0.65 than to 0.80
- The AER has in recent decisions reduced the MRP to 600 bp

Under the Chapter 6A Rules, the WACC parameters are set at the WACC review. Therefore there is no need to address any of the parameters other than the debt risk premium (DRP) for which there is considerable debate and little useful direction in the Rules.

### **3.3 Debt risk premium**

The main area of contention remaining is the approach to developing the debt risk premium (DRP). The AER has been attempting over the past 5-6 years to develop an approach to the development of the DRP from scarce market data that delivers outcomes that are significantly higher than the actual costs of

debt incurred by networks.

There is no doubt that regulatory decisions made since the onset of the GFC in 2007 have provided a DRP at a level greatly in excess of the actual cost of debt acquired by regulated firms. Government owned networks have been granted allowances for the cost of debt at 200-300 bp above the cost they actually incurred, and privately owned firms have been granted debt costs some 100-200 bp above their actual costs.

Implicit in the Electricity Rules is that the rate of return is to be efficient and to reflect best practice. There can be no doubt that recent regulatory decisions by the AER have not provided efficient levels for the cost of debt. The AER itself has noted that the cost of debt actually incurred by energy networks have been significantly below the benchmark allowances used and as a result the AER has attempted to introduce new data into the approach they have conventionally used. Appeals to the ACT have resulted in these attempts being found to be inconsistent and the ACT has even suggested that the basic approach used by the AER for assessing the debt risk premium might be flawed.

Despite the fact that the outcomes of their approach deliver patently incorrect and excessively high DRP values, the AER has continued to use a methodology which requires interpolation and extrapolation of a non-transparent data set which itself is based on a very few data inputs. Such an approach cannot be demonstrated to produce an efficient outcome.

However, the Rules do permit the AER to use other approaches to developing a debt risk premium. The EUCV considers that the AER has a responsibility to consumers not to continue the use of a flawed process that delivers a DRP well above the efficient level.

The EUCV has reviewed the annual reports of the four privately owned electricity and gas network firms operating in Victoria and listed on the stock exchange<sup>5</sup>. The outcome of this review is tabulated below<sup>6</sup> providing the actual DRPs

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<sup>5</sup> As most of the electricity transmission and distribution businesses are government owned, they borrow from state treasuries which have even lower lending costs. State treasuries have AAA credit ratings and lend at a small premium to their associated networks

<sup>6</sup> Whilst it is recognized that each of the separate networks are part of a larger group, the information does not differentiate the different types of infrastructure (eg DUET has a much wider asset type base than the others) and APA Group has mainly gas assets, many of these are unregulated. With this in mind, a regulated energy

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(compared to the 10 year CGS) for the parents of these electricity and gas transport businesses.

<b>Actual DRP (bp)</b>	Credit rating <sup>7</sup>	Debt/assets	2008	2009	2010	2011	Av'ge
AER allowed (elec trans)	BBB+	60%	211	211	211	211	211
AER allowed (elec dist, SPA)	BBB+	60%				405	
AER allowed (elec dist DUET)	BBB+	60%				374	
ESCV allowed (elec dist)	BBB+	60%	130	130	130		130
ACCC allowed (gas trans)	BBB+	60%	299	299	299	299	299
ESCV allowed	BBB+	60%	215	215	215	215	215
SP Ausnet (elec trans and dist, gas dist)	A-	66%	-50	80	60	50	35
APA (Gas trans)	BBB	69%	100	310	240	300	235
DUET (Multinet and United gas dist)	BBB-	80%	80	160	190	200	160
Envestra (gas dist)	BBB-	81%	150	330	220	290	250
Arithmetic average for energy firms	BBB	74%	70	220	180	210	170

This EUCV analysis provides some interesting observations:

- The allowance provided by the AER considerably exceeds the actual premium incurred by each firm and that provided by the ESCV exceeded the average cost incurred by the gas distribution businesses but was marginally lower than that allowed for the DUET electricity distribution<sup>8</sup> business.
- That the credit ratings of all the businesses reflect higher gearings for

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network monopoly would be expected to have a lower risk profile than other assets in the parent businesses and therefore the debt risk premium for the regulated entities will be lower

<sup>7</sup> Sourced from ERA draft decision on Western Power Table 71, page 174

<sup>8</sup> Despite the DRP allowance being lower for the electricity distribution business, United Energy still exceeded its allowed revenue and expected profit

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the businesses but that the credit rating of BBB+ is more reflective of a higher gearing than 60% debt/assets

- The calculated DRP varies year on year but that the main cause of this is not so much a variation in the cost of the debt but more that the movement of the DRP reflects the year on year movement of the risk free rate.
- None of the actual debt risk premiums reached the level of 328 bp claimed by SPA in its application.
- Efficiently acquired debt is well below the benchmark sought by SPA and well below the benchmark DRP allowed in recent revenue resets

An efficient debt risk premium does not provide an outcome which is demonstrably higher than the costs actually incurred by a “going concern”. The Chapter 6A Rules require the DRP to be calculated from 10 year Australian corporate bonds. However, the process for developing this outcome from the very small number of bonds appropriate bonds requires interpolation (to get to BBB+ credit rating) and extrapolation to get to 10 year bond rates

There is no doubt that the approach used by the AER to establish a debt risk premium is flawed and delivers a DRP well in excess of the actual costs incurred by an efficient service provider. Similarly the approach developed by PwC and used by SAP in its application reflects similar flaws. Regardless of which approach is used (AER and PwC) there is no doubt that network owners have consistently been able to acquire debt at a cost well below the allowances provided by the AER and other regulators. This shows that there are more efficient methods of debt acquisition than the approach used by the AER.

The Electricity Law and the Electricity Rules are specific that the costs allowed a service provider are to be efficient and not less than needed to provide the service. To award a debt risk premium that is demonstrably not efficient and significantly exceeds the actual costs is not in accordance with the Law or Rules and the AER must deny the approach proposed by ElectraNet and implement an approach that delivers an efficient outcome.

The EUCV considers that the market evidence indicates that the debt risk premium should be no more than 170 bp above the 10 year CGS or 195 bp above the 5 year CGS. This value of DRP compares favorably with the value of 203 bp (vs the 5 year CGS) calculated in the ERA draft decision for Western Power.

The regulatory approach used in Australia is based on incentives, so that the providers will actively seek to make its operations more efficient and for these



savings to be passed onto consumers in the long term. This means that the first assessment of the regulator is to identify how the regulated firm has improved its efficiency and for these efficiencies to be built into the future allowances. The second stage of ensuring efficient outcomes, is for the performance of the regulated firm to be benchmarked against “best practice” seen in the provision of the services.

This means that the AER is required not just to use approaches that it has used in the past, but to actively recognize what is “efficient” and “best practice” so that the long term interests of consumers are integrated into each regulatory decision.

However, what SPA is seeking is a DRP of some 328 bp. When compared to its credit rating of A- it would be expected to achieve a lower cost of debt than the BBB+ used as the AER benchmark. That this has happened is shown by the actual cost of debt SPA has incurred in recent years revealing a DRP well below 100 bp (see table above). With SPA being awarded a DRP of 328 (as it seeks) when it’s actual DRP is below 100 bp, merely provides SPA with a windfall benefit. This is not in the interests of consumers nor does it reflect an efficient allowance for the provision of debt.

### **3.4 Pass through events**

The use of “pass throughs” is a mechanism for the regulated entity to reduce its risk by passing these onto consumers. Regulators have been inclined to accept this approach as they (rightly) fear that an allowance in the costs to accommodate this risk might be too high reflecting the likelihood of exogenous low probability high impact events.

The recent decision by the AER to allow a pass through of costs above that covered by insurance resulting from the Victorian bushfires recognises that this was a low probability high impact event. There is a concern that the event itself might not be exogenous, and the outcome of the current court case might determine if this is the case.

In the current Rules there are defined elements where the “pass through” of actual costs is permitted. In particular SPA notes that a terrorism event should be a pass through even though it is no longer specified as an allowed pass through in the rules.

The EUCV considers that each NSP should provide adequate insurance (either external or self insurance) to cover the bulk of the likely risks the NSP faces. Where the cost of such insurance is too high relative to the likelihood of the event occurring, the EUCV accepts that such a risk might be transferred to consumers

as balancing the cost premium for managing this risk would be excessive compared to the likelihood of it occurring.

However, it is important to recognise that in a competitive environment, the ability to pass through costs to consumers is not possible, and firms have to absorb the costs (either through insurance or directly) of any exogenous impact. Because there is the ability to pass through such costs to consumers by regulated NSPs, the AER must recognise that with this transfer of risk there needs to be a compensating reduction in the equity beta to reflect the reduced risk faced by NSPs.

## **4. SPA Depreciation**

### **4.1 Early retirement of assets**

SPA notes that some of its assets need to be replaced earlier than their age might indicate; ie that the asset is not fully depreciated but from condition monitoring, early replacement is warranted to prevent the asset failing whilst in service. SPA comments in the case of some transformers that this unexpected deterioration is a result of operating the assets at excessively high loads for extended periods of time

This has the impact of SPA not only obtaining recovery of its return of capital earlier than might be planned, but also for consumers incurring higher costs as the replacement assets have a higher depreciated cost than the assets being replaced and therefore the return on capital for these assets will be higher than might be the case if SPA had ensured the assets lasted for the expected time.

In the reverse of this situation, SPA has the incentive to replace assets as soon as they are fully depreciated, rather than retain in service assets that are fully depreciated but are still used and useful. This particularly applies where the return allowed on assets (allowed WACC) is higher than the actual WACC the NSP incurs.

This driver is unique to the building block approach to revenue setting in that a fully depreciated asset does not attract any return (WACC times zero is zero), whereas replacing a written off asset does attract a return. As opex is recovered at cost under the building block, the profits for a regulated business come only from the return on assets. In a competitive business having written off an asset is seen as a positive if the asset is still used and useful as the costs for production are lower.

In a competitive environment, the price of an article produced tends to be based on the short run marginal cost in order to be competitive. The import of this is that the price used for sale does not recover the long run marginal cost, which includes for the depreciation of the assets used to create the product. It has been observed by many businesses that their recovery of depreciation is usually less than the actual investment made, and that this observation is predicated on the nominal value of depreciation as used by the ATO. In a regulated environment the “real” value of depreciation is incorporated into the building block, enhancing the costs to consumers.

Bearing in mind that competition does not appear to allow businesses to in fact recover depreciation (either nominal or real values) the AER must be particularly aware of the potential to game the depreciation of assets.

In the past MEU and EUCV members have seen electricity supply authorities continue to use assets long after the asset has been written off financially, so the technical life of many assets is really longer than the average used to financially depreciate the assets in the building block approach. Physical life of an asset is related to many more aspects than just time. Assets lightly used and well maintained will generally be useful longer than the expected asset life. The care used in manufacturing and the basic design parameters also greatly impact on asset longevity.

Thus EUCV has a deep concern that assets still used and useful will be taken from service by TNSPs as the TNSPs no longer get any return for them, and replaced with new assets on which they do get a return, yet when assets appear to need early replacement, the NSP is permitted to do this without any penalty being applied.

#### **4.2 When should assets be replaced?**

Whilst the ability of TNSPs to secure new sources of funds has been seen not to be a major issue, competitive businesses tend to have more challenges in raising new sources of funds. Because of this, competitive businesses consider that there has to be a strong financial justification to inject capital rather than continue to have higher opex. The approaches vary between companies but to justify capex, the opex savings must recover the capital required usually within 1½-3 years.

It is of concern to consumers that TNSPs do not use a financial model to justify replacement, relying more on time based approach supported by physical asset management approaches, such as condition monitoring. The EUCV agrees that physical asset management must be a standard tool for identifying when an asset requires replacement, but we also believe that such asset management must include for a financial tool to address the commercial need for asset replacement.

The AER should require SPA to incorporate a financial tool into its asset management program to identify when it is commercially sensible to replace an asset, rather than use physical asset management alone.

## 5. SPA Opex

The EUCV makes a general observation about the reasons SPA seeks an increase in the opex allowance for period AA4. Many of the aspects of the SPA application in relation to opex which SPA uses to justify an increase in the opex are not new and therefore are not step changes as such.

For example, SPA refers to added opex needed as a result of its expanded condition monitoring opex program. In its previous applications, SPA has advised that it requires increased allowances to implement a conditioning monitoring program and to act on the outcomes of the program.

In its application in 2002 (for AA2), SPI Powernet commented (page iv) that:

“Within the context of the network’s ageing asset profile and utilisation rates, the asset management plan proposed by the Company focuses on a program of managing its assets to maintain high levels of performance while achieving the lowest life cycle cost to transmission users.

The plan includes required allowances for major asset replacement, increased maintenance and refurbishment and condition monitoring and assessment.”

On page 14 of its application in 2007 (for AA3), SP Ausnet commented:

“The asset works program between 2008 / 09 and 2013 / 14 will continue to focus on managing operational risk to within an acceptable band through:

- repair and prevention of tower corrosion through painting and component replacement;
- significant repair or refurbishment projects for switchgear, gas insulated switchgear refurbishment and repairs to power cables and instrumentation;
- reduction in occupational health and safety and environmental risk, through asbestos removal programs, switchyard resurfacing, removal of lead contamination and repair of transformer oil leaks; and
- \_infrastructure maintenance, advanced condition monitoring and miscellaneous works.”

The 2013 application makes similar references.

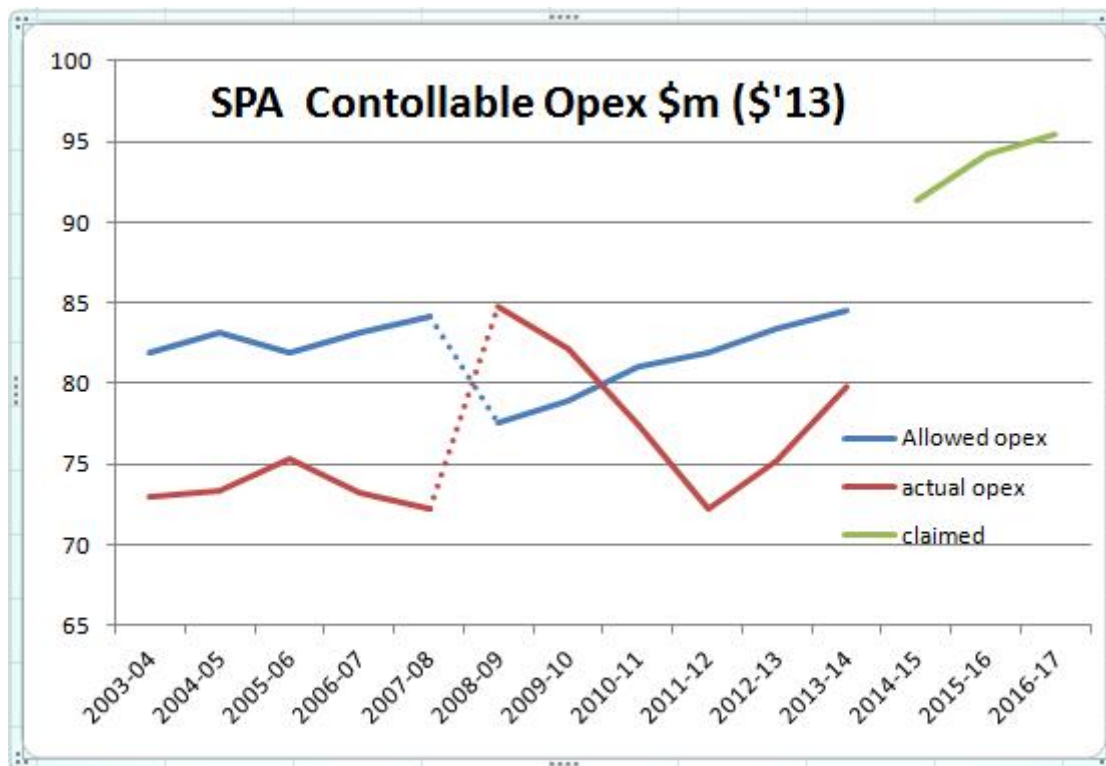
What concerns the EUCV is that the same “new” approach is being used as the basis for increased opex allowances. The EUCV considers that the AER needs to assess whether there should be a greater attention to past statements for justifying

increased allowances when assessing the new program. Considering each application in isolation of what has gone on before could result in the AER allowing greater increases for costs (opex and capex) than might be warranted.

### 5.1 Opex historic, allowed and claimed

The following chart has been developed from data in SPA applications 2002, 2007 and 2013. Forecast controllable opex claims from SPA average \$94m pa for the next three years whereas current controllable opex averages \$79m pa, a step increase in controllable opex of \$15m pa or nearly 20%.

In terms of costs to consumers, this increase alone adds some \$0.30/MWh or nearly 3.5% to the total cost of the service to consumers



Source: SPA applications 2002, 2007, 2013

The chart clearly shows that there is little justification for the large step increase from \$80m pa to \$92m pa. Augmentation of the network has been minimal (meaning there has been little “growth” opex needed), real input cost increases are modest, and the long term opex for SPA has been in the range of \$75m-80m pa for a decade.

Actual opex has been lower than the regulatory allowances and the overall performance of the network has increased with actual opex being less than the allowed opex.

On this high level basis of comparison, the EUCV sees that an increase in opex is not justified.

Under the building block approach opex is provided at cost. The only ways a TNSP can make a profit on its opex is:-

1. to game the regulator and so have an allowance greater than that actually needed,
2. for the TNSP to actively seek savings in opex, hold the benefits during the period and share the underrun in the next period, and/or
3. seek to increase capex to replace assets requiring extensive maintenance costs<sup>9</sup>, and so reduce opex.

Of these options, 1 and 3 should not permit the TNSP to have any future sharing of the under runs.

## **5.2 Escalation of the benchmark opex.**

SPA has identified that the benchmark efficient opex is the revealed cost for 2011/12. To this SPA has added step changes, asset growth and wage cost escalation.

The EUCV views on the wage cost growth aspects have been addressed in section 2 above.

SPA notes that SPA has rolled in assets previously included in VENCORP/AEMO augmentations and that this increases the regulated opex. SPA provides a list of the assets included in this transfer (appendix 5C) but does not provide the opex costs associated with these, the contracts with AEMO that these are covered by, nor details as to how the transfer of the assets is adjusted with the AEMO contracts<sup>10</sup>. Therefore EUCV is not able to assess whether there is any double

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<sup>9</sup> In this regard it should be noted that there is an incentive for TNSPs to reduce its opex (and so earn an incentive) and to increase capex as it is capex which provides the profits to the business

<sup>10</sup> The EUCV understands that AEMO augmentation contracts tend to be shorter than the expected life of the assets involved, so the AER should ensure that there is no exceptionally large opex allowances transferred as a result of this approach.

counting. The EUCV expects that the AER will ensure that any transfer from contracts with AEMO are seamlessly integrated into the regulatory process.

The following table<sup>11</sup> compares the average opex forecast for the next three years with the opex breakdown provided by SPA for the benchmark year and identifies the percentage change for each element. Excluded are the asset growth group 3 costs and IT efficient savings.

\$M (\$'13)	average 2008/14	benchmark year	average 2014/17	% real increase over benchmark year
Direct Maintenance	26.4	25.4	32.9	29%
Maintenance Support	6.2	5.1	5.9	16%
System Operation	5.0	5.7	6.6	16%
Health & Safety	0.8	0.7	2.5	252%
Taxes / Leases	5.1	5.4	5.4	0%
Insurance	3.8	4	6.3	58%
Asset works	8.4	4.2	8.2	94%
Asset works support	1.1	1	1.3	30%
Finance	3.6	3.6	3.7	4%
HR	0.9	0.5	0.5	0%
IT	5.8	6.4	7.0	9%
Other	5.1	4.1	5.1	25%
Management Fee	6.4	6.3	6.8	8%
<b>Total Controllable</b>	<b>78.7</b>	<b>72.4</b>	<b>92.2</b>	<b>27%</b>

Source data: SPAapplication 2013

The table highlights that the real increase in costs from the base year is some 27% (17% above the average AA3 costs) and there are some step changes that need to be added, but the major source of the increases lie with direct maintenance, health and safety, insurance, asset works and asset works support and “other”. There are significant increases in the system operation as well.

In attempting to rationalise the reasons for the increases the EUCV has tried to examine the underlying reasons for the increases from the detailed breakdown with other information provided.

<sup>11</sup> The Table is an amalgam of the data from SPA tables 3.5 and 5.22 and excludes asset growth group 3 costs and other non-controllable opex



For example, in table 5.2, SPA reconciles the base year opex with step changes and the forecast opex. This table is reproduced showing the percentage increases in each category leading to the new total.

Comparing the above table with the reconciliation table, it is clear that the core difference between the \$72.4m for the benchmark year and the \$63.1m used in the reconciliation table is basically the asset works of \$9.1m detailed as non-recurrent costs.

The only other item that needs to be addressed is that insurance has been excised and replaced with a “bottom up” assessment.

<b>Opex Component</b>	<b>Opex Cost \$M (\$'13)</b>	<b>% increase on benchmark year</b>
Base year opex	63.1	
<b>Plus</b>		
Insurance costs	6.4	10%
Asset base growth (due to Group 3 roll-ins)		
Labour escalation	3.3	5%
IT efficiency savings		
Step changes	10.4	16%
Asset works (including management support)	9.1	14%
<b>Total</b>	<b>92.2</b>	<b>46%</b>

Source data: SPA application

The EUCV notes that other than insurance there is little ability to rationalise the step changes, noting that the asset base growth and IT efficiency savings are not included in the benchmark year comparison above.

Excluding the increase in asset base growth and IT efficiency savings the bulk of the cost increases lie within step changes and an error in the insurance.

The base year costs include some \$4m for insurance. To this SPA has added the full amount of insurance developed from its bottom up assessment thereby double counting the \$4m of insurance included in the benchmark year. This needs to be rectified

### **5.3 Steps changes in opex to be identified**

As an overall observation, SPA has not identified any savings that have resulted from the extensive capex program that occurred in AA3. The EUCV would expect there to be a considerable benefit in the opex allowances to reflect a resultant reduction in opex.

There is no explanation as to what costs are included in "other" yet the forecast is for an additional \$1m pa above the costs incurred in the benchmark year.

#### **5.3.1 Insurance**

SPA advises that its insurance costs have increased from the base year allowance of \$4m pa in AA3 to \$6.4m pa for AA4.

However, the cost of insurance in 2012/13 and 2013/14 is forecast to be \$4.6m and \$5.2m respectively. The EUCV can see that as a result of the 2009 "Black Saturday" experience that insurance costs might rise but by 2016/17, they are expected to reach \$7m pa. SPA provides no rationale for this massive and rapid escalation of insurance yet it is aware that the AER has granted a pass through of the Black Saturday costs over and above the insurance provision.

If consumers are to be liable for pass throughs for high impact low probability occurrences then it would be expected that the insurance premiums would not increase as quickly as claimed.

#### **5.3.2 Aging asset profile**

SPA claims as a step change that the age of their assets has increased the opex.

SPA states that new condition monitoring has resulted in more maintenance requirements for overhead lines and claims that \$3.9m is required. The EUCV considers that this is a normal part of operations and is not a step change as such. The EUCV also considers that the existing (base year) operations would have included for this activity and to add it again is doubling counting.

SPA notes that they will introduce corrosion risk mitigation for a cost of \$9.5m. This presupposes that they have not been addressing corrosion of their assets under the current program. SPA alleges that other TNSPs are painting their towers in order to mitigate the risk of corrosion. Good industry practice would have been that corrosion would be addressed as part of

routine maintenance and the EUCV cannot see how this can be considered to be a step change. The EUCV also considers that the existing (base year) operations would have included for this activity and to add it again is doubling counting.

### 5.3.3 Changes in compliance

AEMO has introduced a new requirement that outages be forecast 13 months ahead whereas current requirements are for 6 months ahead. While this is a step change, the EUCV queries the amount claimed.

SPA refers to the Terrorism Act 2003 and advises they are required to do more than in the past. It is not clear whether these are new requirements post 2011/12 (the benchmark year) or should have been carried out in the past. The EUCV is not convinced this is a step change.

### 5.3.4 Regulatory changes

If SF<sub>6</sub> needed for circuit breakers has a levy imposed as from 1 July 2012 this is a step change.

Changes to the network rules did occur but the EUCV does not consider the requirement to employ additional staff to manage overlaps is a step change. The number of manhours required to carry out the tasks has not changed.

SPA has also claimed a number of IT step changes:

- Training for SCADA simulator
- QA/QC testing support
- 24/7 security on IT network
- Service standards reporting

These are not imposed new requirements but apparently require a total of 7.25 FTE additional employees. The EUCV considers that these activities should have been in operation in the base year (and if they were not, they should have been). The EUCV does not consider these are step changes

### 5.3.5 Other step changes

SPA has claimed as step changes:

- Review of new technology and research. Whilst the EUCV can see that this work might be useful, it is not a requirement for the delivery of the services

- Reclassification of communications activities. If this is to be transferred to recurrent opex, there needs to be a reason for it to be recurrent and an adjustment in non-recurrent opex.

### 5.3.6 Asset works

SPA notes that the asset works carried out in 2011/12 was below average for AA3 and therefore there needs to be an adjustment made to reflect the change. The EUCV notes that the average cost of asset works and asset works support in AA3 was \$9.5m pa and in 2011/12 was \$5.2m – this compares with the average amount of \$9.5m pa forecast for AA4.

### 5.3.7 Health and safety

The forecast for AA4 in relation to health and safety has a step increase of some \$2m but SPA fails to explain why this increase has occurred.

## 5.4 External benchmarking

SPA provides some ITOMS benchmarking of current opex in its application in section 3.6. The clear import of this benchmarking is that SPA in 2009 was seen as quite efficient. However it is one thing to determine that some years in the past that SPA opex was efficient to assessing whether the controllable opex sought in the future is equally efficient. The EUCV considers that it is important to benchmark the forecast opex against benchmarks to demonstrate that the opex sought is efficient. It is also important to recognise that not all the Victorian transmission costs are included in the SPA cost base as there are significant elements that are included in the AEMO cost base in its role as the notional Victorian transmission service provider.

SPA also adds some outturn benchmarking of costs/MWh between each of the NEM TNSPs. As noted in section 1, this benchmarking does not reflect the unique benefits that SPA has from where it operates.

## 5.5 AER questions

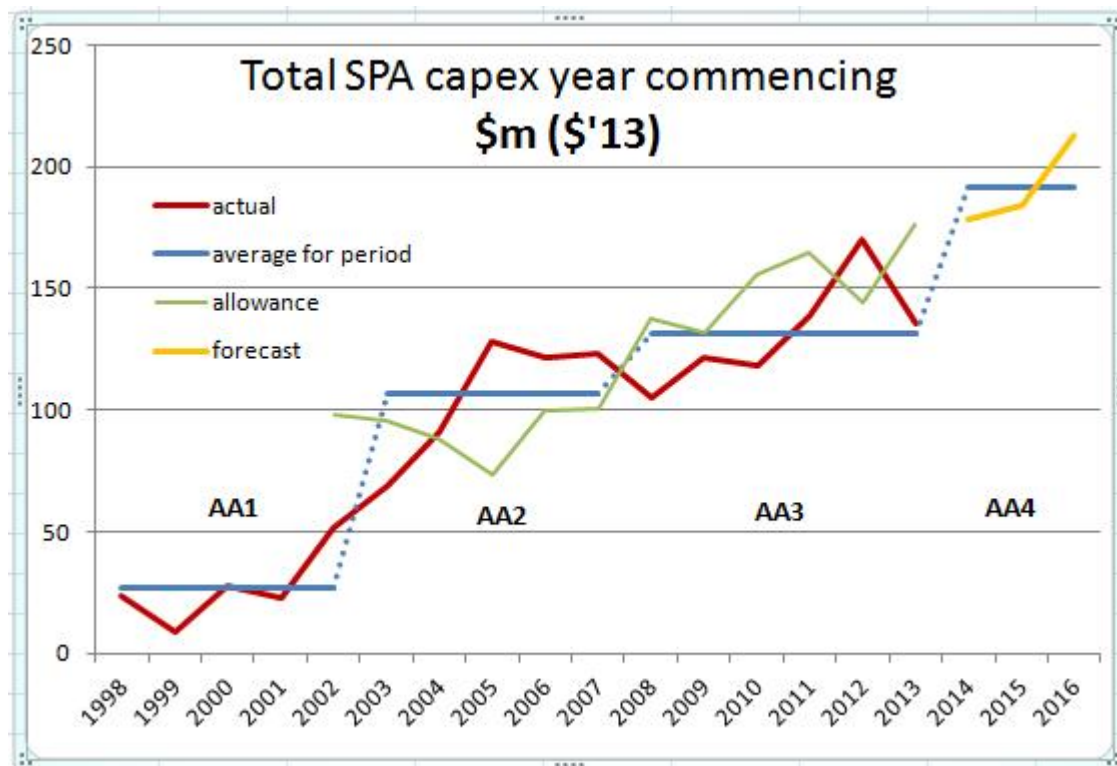
<b>Historical opex</b>	<b>EUCV response</b>
What should be inferred from SP AusNet's underspend during the 2008–14 regulatory control period?	The allowance for AA3 was too high
Has SP AusNet's opex underspend affected its ability to provide a reliable and safe	As SPA provided better service as measured by the STPIS, the

supply of electricity? (Note: reliability and service standards information is provided in Appendix B).	underspend did not reduce service
<b>Opex step changes</b>	
Are the opex step changes already included in the base year?	Yes, see comments above, particularly with reference to insurance, but also others should have been included in the base opex
Are the opex step changes necessary?	See comments above
Are there alternatives options that SP AusNet should have considered?	
Are SP AusNet's proposed corrosion management practices good industry practice?	There needs to be a balance between increased opex and the benefits of deferred replacement made to demonstrate the reasons. Not all structures are exposed to high corrosion so this needs to be examined as well.
Is there value to consumers in increasing opex to increase security for critical infrastructure?	In theory yes, but in practice the risk needs to be assessed in detail. Low probability high impact issues need careful consideration otherwise large costs will be incurred against outcomes that have a high probability of never occurring.
<b>Asset works opex</b>	
Has SP AusNet justified its proposed asset works opex?	By setting the value of asset works at the average of the AA3 period, there is an implication that the asset works allowance is reasonable. However the fact that asset works in the last three years reduced and there was an overall under-run on this element implies that using a six year average might distort the reasonableness of the assumption
Is SP AusNet's categorisation of asset works	The issue of whether refurbishment is

expenditure as opex appropriate?	capaex or opex is vexed. Analysis is needed to identify whether capitalising refurbishment provides a lower cost to consumers rather than expensing the cost needs to be examined. This can only be carried out with a forecast of the WACC over a number of periods.
What conclusions should be drawn from SP AusNet's low asset works spend over the 2008–14 regulatory control period?	Based on the information provided, the only conclusion that can be drawn is that the AER provided too high an allowance

## 6. SPA Capex

SPA capex for the Victorian transmission system is presented in the following chart showing the actual capex in comparison to the forecast for the next period. The average actual capex for each period is also shown as is the ACCC/AER allowances for capex.



Source: Derived by EUCV from SPA applies for AA2, AA3 and AA4

This highlights that the proposed capex for period AA4 is quite excessive when seen in context with the capex incurred in periods AA2 and AA3. It also highlights that SPA in periods AA2 and AA3 tended to expend capital later in each period than in the earlier years, minimizing the impact of capex overspends and underspending early in each period, maximizes the benefit of the underspend in each period.

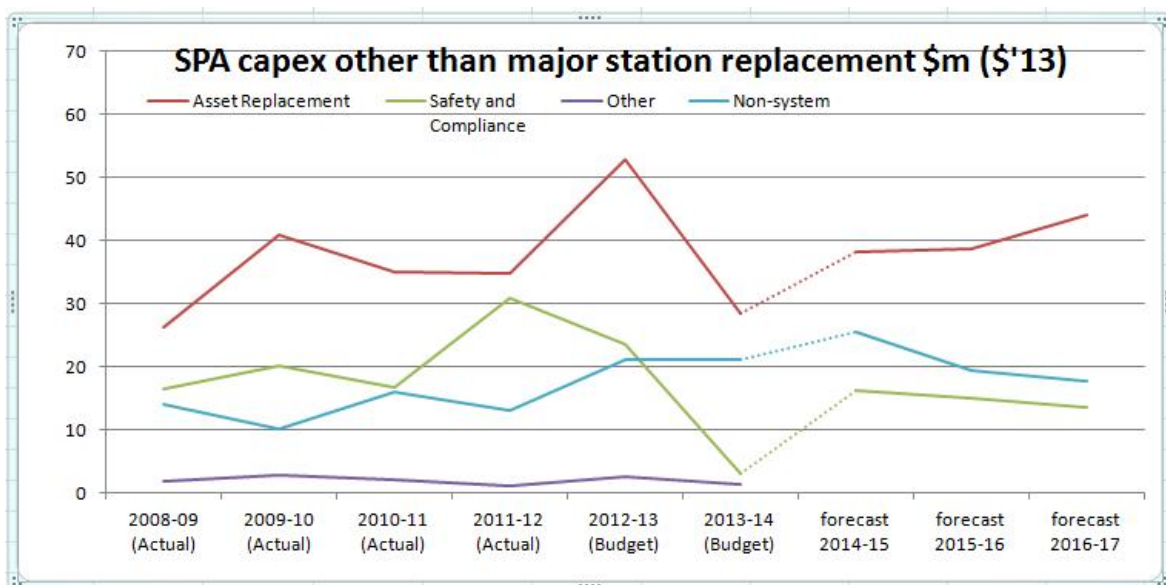
What the chart also shows is that SPA has under-run its allowed capex considerably since 2002 by some \$90m in net terms, providing SPA with a considerable benefit. In fact, the benefit that SPA accrued from this under-run in capex during AA3 has been calculated by EUCV to be worth some \$40-45m over the six year period. The reasons for the capex under run have not been provided but SPA has sought and was allowed a significant increase of \$25m pa in the capex allowance from AA2, yet appears to have under run the AA3 capex

allowance by an average of some \$20m pa, implying that the step increase in capex for AA3 was not really warranted.

SPA is seeking an average step increase in capex between AA3 and AA4 of \$65m pa, which is a step increase of 46%. The bulk of this increase is for CBD and major replacement at substations.

### 6.1 Breakdown of the forecast capex

Analysis of the SPA capex in AA3 and its forecast for AA4 is revealing.



Source: SPA applic for AA4

Examining the proposed capex for AA4 compared to that of AA3 shows that the total capex forecast for all capex other than CBD rebuilds and major station replacements is essentially constant with the average for all capex other than CBD rebuilds and major station replace for AA3 being some \$73m pa whereas forecast for AA4 this same work is forecast to average \$76m pa. This overview provides some degree of confidence that the claimed amounts from SPA for these categories are reasonable.

Despite this general “in principle” acceptance that the capex for these categories would appear to be reasonable, there is a need to investigate the detail of each of the programs that contribute to this amount of capex planned for AA4.

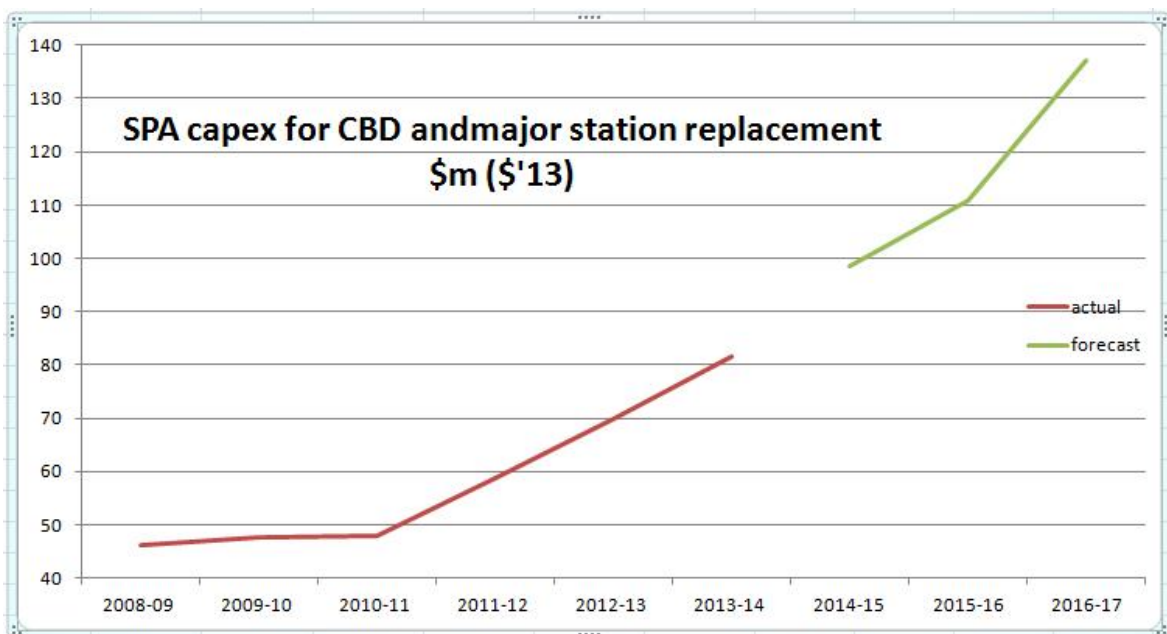
In particular, the IT budget shows a 40% average step increase totaling some \$4.5m pa which seems out of proportion. The EUCV is unable to justify this increase from the detail provided by SPA.



## 6.2 CBD and major station replacements

The costs proposed for the CBD and major station replacement program constitutes the bulk of the proposed increase in capex.

In contrast to the other capex elements, there is little confidence that such a large increase is justifiable. The following chart details the changes in this category over time. Unfortunately, the applications for AA2 and AA3 do not provide the breakdown for capex as was included in the current application (for AA4), so the data breakdown for AA2 is not available. .



Source: SPA applic for AA4

This shows that during AA3, the capex for CBD and major station replacement doubled and the forecast for AA4 showing a trend for another doubling for this element of capex.

SPA provides details for the reasons for this capex in AA4 but fails to identify that much of this same work was to be carried out during AA3. For example, work on the two CBD substations (Richmond and West Melbourne) was included in capex for AA3. The EUCV raised serious concerns in its responses to the SPA applications in 2007 regarding whether the costs were reasonable<sup>12</sup>. Despite the

<sup>12</sup> Specifically the issue of whether the higher costs for FIS switchgear was warranted

EUCV concerns, the AER allowed for this work to be included and carried out in AA3.

SPA identifies the approach by AEMO to not augment the transmission network but instead to occasionally overload assets with the resultant impact that transformers lives are reduced. SPA cites the time that the Victorian demand reached 10,630 MW. However, it is pertinent to comment that the Victorian demand has only exceeded 9500 MW (ie 10% below the highest peak demand recorded) only six times in the last seven years for relatively short times, so the implication that this is a common experience is misleading. It would not be expected that with such few examples of where transformers might have been overloaded then any deterioration of the transformers from this cause might be quite modest.

SPA identifies that its transformer failure rate exceeds the CIGRE Australian average and that 14% of all transformers exhibit high levels of deterioration. The EUCV questions whether this was caused by exceeding demand levels or whether poor maintenance practices led to this outcome.

In addition to the Richmond and West Melbourne station works currently in hand, SPA identifies work planned for another six substations to be carried out in the next three years (AA4).

The EUCV has no ability to identify from the documents provided, whether all of this work should be carried out now or could be deferred (the AER should establish the reasons from SPA). However, the EUCV notes from the table 4.5 in the application that the AA4 capex will result in a considerable reduction in average age of transformers and circuit breakers. The following table uses the data from SPA table 4.5 to highlight some anomalies.

Asset Type	Weighted Average Expected Life (years)*	Average age	Average age without AA4 capex	Average age with AA4 capex	reduction in average age by
		2012	2017	2017	2017
Transformers	45	33.6	38.6	29	4.6
Circuit Breakers	57.9	21.6	26.6	18.6	3
Structures	91.1	42.2	47.2	47.9	-5.7
Conductors	70.2	39.4	44.4	44.7	-5.3

This shows that without any AA4 capex the average age of transformers by 2017 will be 85% of the expected life of transformers and therefore some investment is required now. The capex proposal for AA3 was expected to reverse this ageing trend but the decision by SPA to defer this work not only provided SPA with a financial benefit, but increased risks to consumers without consumers getting any compensating financial benefit. But now consumers are being asked to fund the projects again!

What is concerning is that the planned transformer replacement program will not only arrest the increase in average age, but will reverse the trend by reducing the average age of all transformers by 4.6 years. This implies that the transformer replacement program might well be overstated in need.

In the case of circuit breakers, without AA4 capex, the average age would be less than 50% of the expected life, indicating that possibly no investment in circuit breakers is required in AA4. With the planned AA4 capex, the average age of circuit breakers will reduce to about 1/3<sup>rd</sup> of the average expected life. This implies that little capex for circuit breakers is required in AA4.

Intriguingly, the EUCV also notes that the average age of structures and conductors increases by more than the 5 year elapsed time between 2012 and 2017, even though there is planned investment for these assets as part of the asset replacement program. This anomaly should be investigated.

As the average age of structures by the end of AA4 will be some 50% of the average life expected, little capex is probably needed. At the same time, the opex program for AA4 includes considerable attention to structure maintenance to increase the lives of the structures so the average age (as a proportion of expected extended life) might well reduce.

In the case of conductors, the lack of replacement in this category increases the average age to be nearly 2/3<sup>rd</sup> of the expected life, implying that some attention is required to this category.

In the absence of better data, the EUCV recognises that this approach is simplistic and looks only at averages. However, it does provide an indication that the capex program proposed is likely to be significantly overstated. The EUCV considers that there is a strong possibility that a number of the projects proposed in the CBD and major replacement program could be deferred into the next regulatory period (AA5) with little risk to reliability.

### **6.3 The relationship between capex and opex**

There is a relationship between capex and opex. With the increase in capex for refurbishment, there must be a proportionate reduction in opex, as this is what justifies the replacement of old assets with new assets. Notwithstanding this inverse relationship, SPA proposes to increase its opex from current levels.

Where there is growth in a network there is an expectation that there would be additional opex attributable for new capex, but where capex is about replacing old assets with new, or replacing old with something new but larger, there is no justification for added opex.

The AER must recognise the inter-relation between capex and opex as far as the SPA application is concerned. The fact that SPA has no responsibility for augmentation of the network (this is an AEMO responsibility) makes the relationship between capex and opex, one of offsets for SPA, (based on the principle that an increase in SPA capex must lead to a reduction in SPA opex), and that the starting opex is the current level of opex, and not the inflated level requested in the application!

In this regard the EUCV points out that there is an economic driver for TNSPs to replace assets rather than continue with incurring opex. It is the building block approach which provides this driver, as opex is recovered at cost whereas assets achieve a return which provides the profits for the regulated business.

The AER must ensure that the capex used does result in opex being proportionately reduced.

#### 6.4 AER questions

<b>Historical capex</b>	<b>EUCV response</b>
What, if any, conclusions can be drawn from the current period that will assist us in assessing SP AusNet's forecast capex?	See comments above
How well do you think SP AusNet has explained the reasons for the underspend? What aspects do you think could be explained further?	Not well at all, especially that by underspending it received considerable commercial benefit
Has SP AusNet's capex underspend affected its ability to provide a reliable and safe supply of electricity? (Note: reliability and service standards information is provided in	The service performance increased compared to the targets in the STPIS implying that the under-run did not reduce performance

Appendix B).	
<b>Asset management</b>	
Has SP AusNet adequately demonstrated the benefits and outcomes of its asset management framework and how these are accounted for in the capex forecast?	No, see comments above The asset management program was first implemented in period AA2 and continued in AA3.
<b>Forecasting methodology</b>	
Is SP AusNet's capex forecasting methodology robust?	No, see comments above
<b>CBD rebuilds</b>	
Is the rationale for these two projects well set out by SP AusNet and persuasive?	See comments above. The EUCV considers that much of the projects was to be carried out in AA3
Are there alternatives which SP AusNet should have considered? In particular, is the proposed conversion of the switchgear from air-insulated switchgear to more expensive gas-insulated switchgear justified? What factors justify use of this equipment?	See comments in EUCV responses to the SPA application and AER DD for AA3 in 2007 The response to this question requires considerable engineering review
<b>Non CBD rebuilds capex</b>	
Is the rationale for these projects well set out and persuasive?	No, see comments above
If not, What parts of the proposal do you consider appear unjustified and may need further support from SP AusNet or investigation by the AER?	See comments above implying a deferral should be considered
<b>Assumptions and inputs</b>	
Are the assumptions and inputs appropriate?	The principles behind the assumptions make sense, but there is little ability to test these as the detailed information associated with them is confidential. The EUCV has commented on some of

	the assumptions and inputs in section 2
Are there other assumptions and inputs that should be considered?	

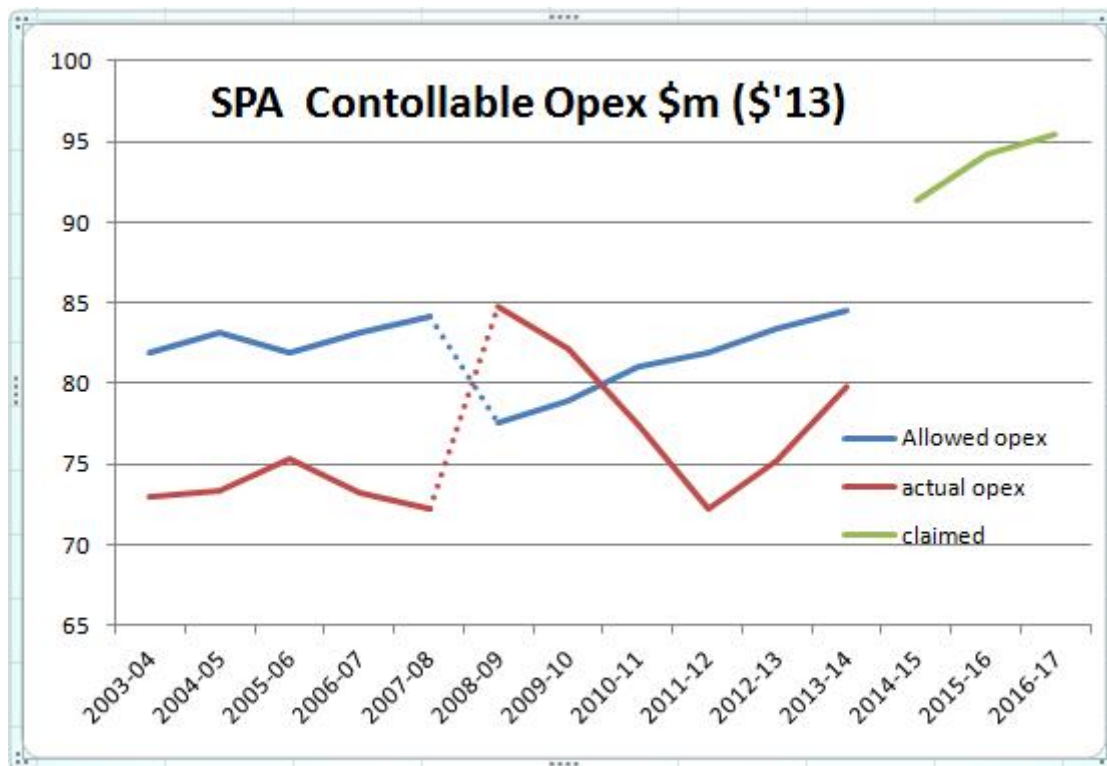
## 7. SPA Efficiency gain

The EUCV is totally supportive of an opex incentive scheme to encourage regulated businesses to reduce their costs. The benefit of this is that SPA can reduce the costs of providing the service, and by sharing the savings with SPA, consumers will be better off in the long term.

There are two caveats to this in-principle support

1. The savings should be the outcome of actions by SPA and not just because SPA was able to convince the regulator at the last reset to give a comfortable allowance, and
2. The savings achieved will continue to be shared for a period into the future.

SPA advises that there was an under run in the opex allowances granted in the current period and this generates a payment to under the Efficiency Benefit Sharing Scheme (EBSS). The under-run on opex was seen in the last four years of the period with over-runs in the first two years. The following chart is the same as that developed for section 5 above.



Source: SPA applications 2002, 2007, 2013

SPA identifies that they over-run the allowable opex in the first two years of the current period (AA3) but improved their performance over time. This trend in under-running allowances was replicated in the previous period (AA2) and was also seen in the first period (AA1) from 1998. This consistent under-running of opex provides a view that the opex savings being made are not so much an outturn of continuous improvement (which is the intention of the EBSS) but an indication that SPA has been able to convince the regulator of the need for higher allowances for opex, allowing SPA to earn both the immediate benefit of opex under run but an additional benefit into the following period

The fact that the actual opex has seldom approached the allowed level gives rise to a very real concern that the bulk of the opex under run since 1998 has been the result of regulator “gaming” rather than SPA causing real savings from their own actions.

The EUCV does not support providing SPA a benefit which is unjustifiable and contributes to an incentive to overstate opex claims by excessive amounts.

With this real concern in mind, (as demonstrated empirically above) it is suggested that the AER seeks detailed advice from SPA supporting that savings really have been achieved by direct operational actions of SPA. SPA must be required to provide details of specific actions they have taken, and the resultant cost savings that resulted before any sharing of this opex underrun is permitted.

As this underrun is so consistent, the EUCV is sceptical as to its validity as an “earned” underrun as distinct to a “gamed” under run. With this in mind, the EUCV considers there is no justification for any carry over into the next period.



## 8. Service standards

SP Ausnet has advised that its service standards performance has been good and provided the following table demonstrating this.

**Table 3.7: Current Period STPIS Performance (Service Component)**

Parameter	Target	2008	2009	2010	2011	2012	Weight (% MAR)
Total circuit availability (%)	<b>98.73</b>	99.12	99.02	99.15	99.11	99.25	0.20
Peak critical circuit availability (%)	<b>99.39</b>	99.80	99.85	99.67	99.80	99.79	0.20
Peak non-critical circuit availability (%)	<b>99.40</b>	99.93	99.94	99.81	99.88	99.91	0.05
Intermediate critical circuit availability (%)	<b>98.67</b>	99.42	99.06	99.82	99.29	99.67	0.25
Intermediate non critical circuit availability	<b>98.73</b>	99.53	98.97	99.01	99.09	98.91	0.25
Number of events greater than 0.05 system minutes per annum	<b>6</b>	1	6	1	0	2	0.125
Number of events greater than 0.30 system minutes per annum	<b>1</b>	1	2	0	0	1	0.125
Average outage duration – lines (mins)	<b>382</b>	226	177	319	129	207	0.125
Average outage duration – transformers (mins)	<b>412</b>	263	395	818	1048	147	0.125

Note – 2008 data is from April to December only. 2012 performance data will be audited by the AER by March 2013.

As can be seen SPA generally out performed its service targets in all categories most of the time. As a result SPA has earned considerable financial benefit from this performance.

SPA also commenced including a market performance impact component (MIC) measure late in the current period and has shown a considerable improvement in its performance in this important service measure over the term of the current period. SPA has sought to have the MIC included in the next period.

SPA also is a party to an incentive arrangement with AEMO (availability incentive scheme – AIS). SPA notes that the service standards incentive scheme (STPIS) and the AIS have a close correlation and therefore achievement in one results in achievement in the other, effectively increasing the power of the incentive.

SPA also notes that MIC and AIS tend not to work so closely and achievement in one might actually detract from achievement in the other.

As consumers pay for both the AER and AEMO schemes, the AER needs to assess whether the overall financial reward SPA gets from the three schemes (STPIS, MIC and AIS) is appropriate. As the AER has been at pains to point out in its approach to the Incentives component of the Better Regulation program, there is a need to ensure consistency between the various incentives offered to NSPs in their regulatory processes.

The EUCV is aware that the AER has revised its STPIS in recent months, with some categories of service performance changing and a consistent method for setting the targets for the next regulatory period. SPA has proposed targets in its application based on the previous 5 year average performance but the EUCV considers that the AER should impose on SPA targets that are consistent with the revised approach which are designed to set targets which hopefully reflect the recent trend in performance rather than long term historic averages.

SPA has proposed its targets for the STPIS in its table 8.1<sup>13</sup> which reveal that if the new targets were applied to the historic performance, SPA would earn a bonus in more Years than they would incur a penalty. Further in relation to loss of supply event frequency, SPA is setting targets higher than the average performance in the previous years.

Some of the targets set (eg average outage duration) are heavily biased by one outlier event which raises the target excessively. As was discussed during the debate of the new STPIS arrangement, there is an incentive on a NSP to deliberately “load up” a year where there was poor performance in order to

1. Move outages into the bad year (as there is a cap on the penalty) into other years in order to get maximum bonus in the other years, and
2. Load up a bad year in order to increase the target for the next period

The EUCV is concerned that SPA may have deliberately used these practices in setting the targets for the coming period

SPA has also proposed asymmetric caps and collars to the targets which could impact the targets for the coming year.

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<sup>13</sup> SPA application page 152/198

The EUCV considers that the AER needs to address these issues in its assessment of the SPA application.

As a general observation, the EUCV supports the principle of rewarding better service, but such rewards should be earned by greater dedication and effort, and not by setting lower targets.

SPA has requested large increases in capex and opex, and this should result in better performance overall in the absence of any rewards. What we see is that a lower overall performance is proposed by SPA, with an increased reward for achievement. What is of concern is that it is consumers that will pay for the increased capex and opex that will cause the improvements in performance.

The past performance outcomes in AA3 achieved by SPA and the bonus they get was based on the AER allowing SPA lower standards than were implied from the performance in AA2. In its response to the AER draft decision on SPA application for AA3, the EUCV commented (page 47<sup>14</sup>):

“The EUCV points out that the AER proposed standards are lower than the current standards, ie that SPA will be required to provide a lower standard of service than consumers currently are entitled to.

The reasons given for expecting a lower standard of service in the next period is that SPA will be carrying out a larger amount of capital works than it did in the current period. This is to a degree inconsistent with the facts. The AER permitted capex program is much the same as the capex program applying in the last three years (ie years commencing 2005, 2006 and 2007). Examining the performance in two of these three years shows that SPA would receive a bonus based on the current benchmark performances. As the standards are proposed to be reduced from current performance, then an even greater incentive bonus would apply using the proposed reduced standards in years where the capex program is much as it will be in the new period.

Consumers are prepared to pay for above standard performance but do not consider that reducing standards is in their interests, especially when considering

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<sup>14</sup> The EUCV response is available at <http://www.aer.gov.au/sites/default/files/EUCV%20-%20submission%20on%20draft%20decision%20%28November%202007.pdf>

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that the circumstances are little different from the activities seen in years 2005 and 2006.

The AER should not reduce the performance standards unless there is a clear and equitable reason to do so. The protestations of SPA that their large capex program will cause a greater number of outages in order to complete the works loses credibility when the capex program imposed by the AER is little different from that of the most recent years.”

Historic service levels indicate what can be achieved with the levels of capex and opex applying at the time. With the amount of capex that occurred in AA3, there was an expectation that service levels would deteriorate and accommodation for this expectation was provided. In fact, the reverse applied and service levels improved despite the proposed levels of capex.

With high levels of opex and capex, there is an expectation that service performance will increase reflecting better conditioning monitoring (and the associated early action that results) and replacement of old with new. The AER must ensure that the performance targets reflect the outcomes of the capex and opex programs built into the new reset. If capex and/or opex allowances are higher than in the past, then there has to be a compensating outcome for consumers in terms of better service performance which should be reflected more challenging performance targets.