

CONSUMER CHALLENGE PANEL

Submission to the Australian Energy Regulator (AER)

Consumer Challenge Panel Sub Panel 3 (CCP3)

**Response to AER Preliminary Decisions and revised proposals
from Victorian electricity distribution network service providers
for a revenue reset for the 2016-2020 regulatory period**

Sub Panel CCP3

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1. Introduction

The purpose of this document is to deliver the views to the Australian Energy Regulator (AER) of the Consumer Challenge Panel (CCP) charged with providing input into the revenue reset for the 2016-2020 regulatory period for the five Victorian electricity distribution network service providers (DNSPs):

- AusNet Services (AusNet);
- CitiPower (CP);
- Jemena Electricity Network (JEN);
- Powercor (PC); and
- United Energy (UE).

CCP Sub Panel 3 (CCP3) has carried out this review. CCP3 comprises David Headberry, Beverley Hughson and David Prins.

CCP3 has only provided input in passing regarding those aspects of the Preliminary Decisions where the AER has typically carried out its own detailed assessment. Such issues include the approach to the roll forward of the regulatory asset base, escalation and growth factors, and other areas where the AER has what could almost be termed automatic processes.

The AER Preliminary Decisions provide a comprehensive assessment as to its views on the DNSP proposals and follows the pattern established for the reviews of DNSPs in NSW, SA and Queensland. Because of this, CCP3 has instead focused on aspects of the Preliminary Decisions where it considers that there are significant issues to be addressed that will have considerable impact on the outturn assessments made by the AER in its role of establishing allowed revenue sufficient for the efficient benchmark DNSP to deliver the services required by consumers.

It is of extreme concern to CCP3 that the Preliminary Decisions by the AER imply that the outcomes for consumers are quite positive. However, the benefits to consumers are basically predicated on the current very low costs for funds. When the costs for funds return to the long term averages, the AER Preliminary Decisions would have resulted in significant increases in the costs consumers have to bear for the provision of the electricity distribution services. In their revised proposals, the DNSPs rejected many aspects of the AER Preliminary Decisions.

Another major criticism of the AER Preliminary Decisions is that there is an apparent lack of cross-referencing between the different elements of the Decisions. For example, in assessing the allowances for opex, there is an assumption that the base year opex is efficient, and that the opex allowance for the next period will continue to be efficient if there are adjustments made for step changes, growth, price escalation and productivity. This assumption completely overlooks the fact that the allowance for repex has massively been increased in the Preliminary Decisions. As opex is quite dependent on the age of

the assets, a significant increase in repex (i.e. replacement of ageing assets with new) should have a measurable impact on future opex, but the impact of this repex is ignored in the assessment of efficient future opex. If repex is to be the same as in previous periods, then it could be assumed that opex would not be affected. But this is not the case. The fact that the assessment of opex is made independently of the impacts of the repex allowance highlights that there is insufficient cross pollination of information between the teams within the AER. CCP3 refers to this as the "silo effect", and notes that there are other elements of the Preliminary Decisions that reflect this "silo effect".¹ CCP3 recommends that the AER implement an oversight and coordination function where there is an assessment made of aspects of a decision on one element which could impact other elements of the decision. In the absence of such a detailed oversight and coordination role, CCP3 considers that there could be excessive allowances granted that will result in less efficient outcomes for consumers.

A third issue for CCP3 is that because of this "silo effect", there is a penchant for each assessment made by the AER to provide for a conservative outcome. CCP3 recognises that there is a view that overall the AER should be conservative. Such a view would be based on the premise that a slightly higher (i.e. inefficient) revenue allowance is more preferable in the long term interests of customers than the risk of under-recovery of efficient costs. This is because if it were consistent over time, under-recovery of efficient costs would lead to investment that is below efficient levels, and thus could lead to reliability of supply that is lower than the efficient level. However, even this view would not justify the overall substantial overestimation of the total allowance that results from the cumulative effect of a series of conservative decisions.

It concerns CCP3 that a direct outcome of the "silo effect" is that conservative decision making is compounded. If every decision by the AER is conservative, this leads to conservative decision making upon conservative decision making, with the result that the ultimate decision is far more conservative than is efficient. For example, in setting the equity risk premium, the AER has identified a market risk premium that is conservative, and then set an equity beta that is also conservative. The outcome is the compounding effect of two conservative assessments being multiplied, with the result being more conservative than either of the individual conservative premiums applied to either of the market risk premium or the equity beta values.

The AER is required to ensure that its Preliminary Decisions are "in the long term interests of consumers". CCP3 is not convinced that the Preliminary Decisions deliver outcomes for consumers that meet this criterion. CCP3 provides its views in the subsequent sections as to why it considers this is the case.

¹ For example, the opex and capex teams made different decisions on whether to accept or reject Jemena's maximum demand forecasts.

Recommendations:

1.1 *The AER should ensure that there is better cross referencing of each of the individual team decisions (silos) to ensure that the impacts of one team's decisions are reflected in assessments made by other teams.*

1.2 *The AER should ensure that it does not introduce substantial overestimation of the total allowance as a result of the cumulative effect of a series of conservative decisions in its regulatory decision making processes.*

2. Consumer Engagement

In its response to the proposals made by the five Victorian DNSPs, CCP3 provided a comprehensive assessment about what it considers consumer engagement is meant to achieve and the value and detriments of the various tools used by DNSPs to provide consumer engagement. In its response, CCP3 commented that:

"... consumer engagement can provide some guidance to a DNSP, but cannot be deterministic, due to the many issues that surround the various approaches that are being used."

In its Preliminary Decisions, the AER did not make significant comment about the issue of consumer engagement. Instead it noted that none of the DNSPs had used the outcomes of their consumer engagement as the basis for seeking increased revenues. This was in contrast to proposals from DNSPs in SA, NSW and Queensland, where there had been various levels of increased revenues sought based on the outcomes of consumer engagement that had been undertaken.

There is validity in the AER's approach not to address the issue of consumer engagement substantively in its Preliminary Decisions. However, CCP3 considers that the AER has overlooked that a fundamental element of the DNSP consumer engagement had in fact been used by the DNSPs to support their proposals. All the DNSPs had observed that their consumer engagement had reinforced a view that consumers were content with the current levels of reliability, and therefore steps had to be taken to maintain the current reliability performance. Further, consumers are not prepared to pay a premium that leads to increased reliability. This is addressed further in sections 6.4 and 6.6 of this advice, where there are investments proposed by the DNSPs that could lead to increased reliability are discussed. The increased levels allowed for repex will also improve reliability. Section 7 of this advice also addresses this issue of reliability, and the potential costs for its achievement.

CCP3 also points out that consumer engagement about reliability is extremely subjective. There is a remarkable difference in the reliability of supply across all consumers – even those within the same DNSP area. It is important to take this into account when drawing conclusions from consumer engagement about reliability. CCP3 made this point in its earlier advice regarding the DNSP proposals.

The lack of comparative information (within a network, between networks, and longitudinally over time) raises real concerns that the conclusions that consumers are "generally happy" with their levels of reliability are quite flawed. With this in mind, CCP3 considers that the AER Preliminary Decisions are flawed where they make this assumption when assessing the various elements used to develop the building block for the revenue allowances.

It is the view of CCP3 that there is a need for the AER to address the extent to which the DNSPs are following the AER's Consumer Engagement Guideline, carrying out consumer

engagement effectively and appropriately, and drawing substantiated conclusions from their consumer engagement activities.

CCP3 considers that good consumer engagement can assist a DNSP to develop a better regulatory proposal. This activity needs to be continuous over time, and not just be focused prior to a regulatory proposal preparation. The risk for consumers is that consumer engagement becomes just a procedural matter – effectively a "box ticking" exercise.

The revised proposals include significant increases in revenue. It is clear that the issues that led to the increases in revenue were not discussed with consumers, and therefore do not reflect any consumer engagement input. In this regard, CCP3 cites the changes in approach to setting the rates of return used in the revised proposals, and the rejection of the AER Preliminary Decisions on capex.

Recommendations:

2.1 Deeper analysis is required of the Preliminary Decisions and the revised proposals, to ensure that there are not added costs which would lead to increased reliability.

2.2 Consumer engagement needs to be continuous, and not merely assessed as a compliance issue and box ticking exercise.

3. Benchmarking

In its report to the AER on the proposals by the DNSPs, CCP3 commented:

- In relation to asset management:

"CCP3 considers that the Victorian DNSPs have used their asset capital efficiently to date. However, the DNSPs are proposing significant increases in their capex for the 2016-20 regulatory period. It is important that the impact of this additional expenditure forms part of the AER's overall considerations of the capex proposals."

- In relation to augmentation:

"The utilisation data provides a view that there is little need for augmentation, when considering that greater utilisation in the past has been readily accommodated. The utilisation data supports the intuitive view that the declining peak demand data experienced in Victoria reflects a lesser need for augmentation capex."

- In relation to opex:

"CCP3 considers that the benchmarking carried out should be used to inform the assessment of the base year efficiency. Except for the outcome identified for CP, the benchmarking generally supports the approaches taken by the five DNSPs to set their base year opex."

The AER Preliminary Decisions all observe that historic performance of the DNSPs reflect efficient practices. In particular, despite the declining opex productivity of the DNSPs, the AER base year opex performance is considered to be efficient, and can be used as the basis for establishing the opex for the next period.

In the updated benchmarking report for the NEM DNSPs, the addition of the 2014 data reflects an overall continuing decline in Multilateral Total Factor Productivity (MTFP) for all DNSPs in the NEM (including the Victorian DNSPs), except for Ergon Energy and Essential Energy which show an improvement, albeit off a low base. It is of particular concern to CCP3 that the MTFP is still declining for the Victorian DNSPs, as they generally exhibited a superior MTFP at the start of the series (2006).

The 2014 opex Partial Factor Productivity (PFP) data also continues the same rate of decline noted by CCP3 in its earlier advice. This is particularly important as the AER has determined that the Victorian DNSPs are considered to be efficient and that, for opex, their base year (2014) opex is efficient and should be used as the basis for forecasting opex for the 2016-20 period. In section 4, CCP3 describes in more detail its concerns with the AER assumption that the Victorian DNSP opex is efficient because it is the most productive in the NEM.

In its earlier report, CCP3 commented that the benchmarking had indicated that the productivity of the Victorian DNSPs had deteriorated faster than the NEM average, and

the AER should have recognised this in setting the forecasts for opex. CCP3 considered that the base year opex could be used as a starting point for setting future opex allowances, except perhaps for CitiPower. CCP3 also considers that the decline in productivity seen over the past few years needs to be arrested. This should be achieved through a requirement for a set increase in productivity to be achieved each year in addition to the incentive to reduce opex.

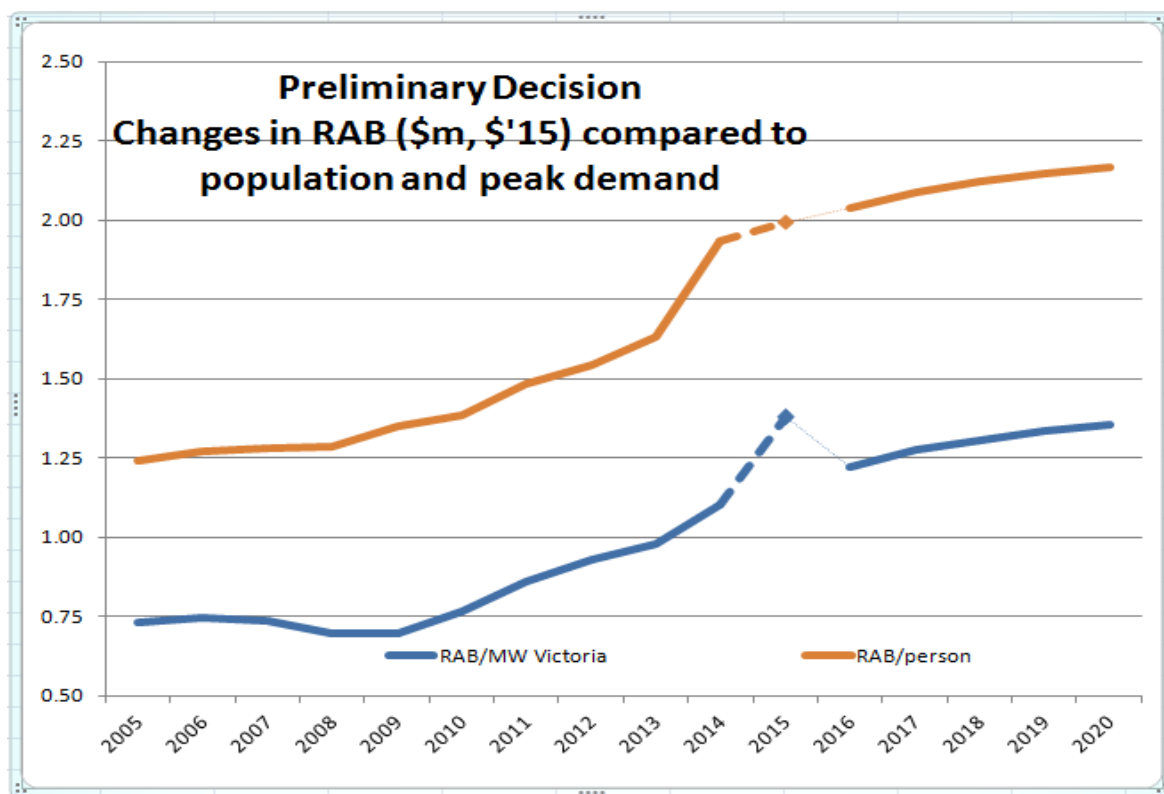
The historic benchmarking is essentially based on a reasonably consistent amount of replacement capex (repex) being used by the DNSPs over time. The significantly increased repex seen in the latter years of the 2010-2015 period and forecast for the 2016-2020 period should lead to lower opex in coming years. Repex particularly has a significant impact on opex, as replacement of older assets with new should result in lower opex. In its Preliminary Decisions, the AER has agreed to significant increases in repex for the Victorian DNSPs and for other DNSPs in the NEM. With this in mind, all opex for the last 1-2 years and for the next 5 years should see a significant increase in productivity from the current downward trend seen across all DNSPs.

As consumers are funding the increased repex, the improvement in productivity that should result must be built into the forecast opex, rather than be allowed to be captured in the opex (efficiency benefit) incentive scheme (EBSS), where the DNSPs are likely to acquire unearned bonuses.

All DNSPs are seeing a reduction in utilisation, yet at the same time are still seeking augmentation capex. This declining utilisation is having a significant detrimental effect on the ratio of cost to benefit provided by the network to consumers. The AER needs to monitor closely the utilisation of the network over time, in order to ensure that consumers are not required to pay for assets that are not needed. To this end, the AER should be requiring the DNSPs to identify ways to reroute electricity flows to avoid the need for augmentation, and/or to move assets from areas of low utilisation to areas requiring augmentation.

Of particular concern to CCP3 is its analysis of the growth in the regulated asset base (RAB) over time. Usually the single largest cost element in the regulatory decision is the return on the capital involved (i.e. $WACC \times RAB$). This normally comprises 50-70% of the total revenue requirement, though in the current low interest environment $WACC \times RAB$ is typically a lesser proportion of the total revenue. However, the RAB is also a component of the regulatory depreciation, leading to a view that of all the various elements, the RAB is one that impacts the revenue allowance the most.

With this in mind, CCP3 has tracked the growth of the RAB for the Victorian electricity distribution assets in real terms (\$'15) against two controls – peak demand and population. This benchmarking (depicted in the following chart) shows that the value of the assets used in distribution has grown considerably over the last decade, and the AER Preliminary Decisions and the revised proposals continue this growth in RAB.



Source: RIN data, DNSP proposals, CCP3 analysis

The chart² shows that the AER Preliminary Decisions are continuing a trend which started at the time of the last regulatory decision of permitting the asset values to grow faster than either population or electricity demand. Under both measures, the RAB will have grown in relative terms by the end of the 2016-2020 period by 70-80% over the 15 years of the past decade and the next regulatory period, i.e. from 2006 to 2020.

This growth is unsustainable, and will impose on future consumers a significant but probably unnecessary cost. There has been much said in recent years regarding the "Death Spiral", where increasing costs lead to more consumers opting out of using the network assets, placing a larger burden on those consumers remaining, and in turn causing more consumers to opt out.

Unfortunately, this high level benchmarking carried out by CCP3 is not a feature of the AER suite of benchmarking, yet it highlights a major concern of consumers that they are continuing to pay more and more for the same level of service. This issue is addressed in more detail in section 6 of this advice.

In its earlier report, CCP3 noted that although the amount of unserved energy was declining over time (implying that service performance was improving), SAIDI was either relatively constant or increasing, with SAIFI showing signs of improvement over time.

² The upturn in RAB/MW for 2015 reflects the cool summer experienced, coupled with the relatively high capex forecast for the last year of the regulatory period.

Essentially, the service performance data indicates that there might be some improvement in service levels, but such improvement was modest at best. This assessment reflects observations from consumer engagement that most consumers consider that levels of service reliability have not seen significant change over time.

CCP3 also noted in its earlier advice that the utilisation of the assets was declining, reinforcing the view that consumers were paying for assets that are not used.

CCP3 considers that this benchmarking analysis shows that the AER Preliminary Decisions have overstated the needs for capex, in that the Preliminary Decisions have not arrested the upward trend in relative terms seen in the 2011-2015 period, where there was significant over investment. CCP3 addresses this concern in more detail in section 6 below.

Overall, CCP3 is concerned that the AER Preliminary Decisions have not used the benchmarking data to which it has access to its maximum potential to ensure that the allowed revenues are the most efficient they could be. Further, the revised proposals seek higher levels of revenue than in the AER Preliminary Decisions. This supports a view that consumers are paying much more for the same service than they should be paying.

The lack of high level benchmarking (such as carried out by CCP3) is an outcome of the "silo effect" referred to in section 1 above. Each "silo" assesses the DNSP claims in relation to the parts of the proposals that are addressed by that "silo". The overall impact of the decisions made is not readily seen, and nor are the impacts on future consumers seen. At best, the overall effect of the individual inputs from each of the "silos" is seen in the assessment of the impact of the decision on prices for the regulatory period. In the case of this regulatory period, the outcome is seen as a price reduction (in real terms) driven predominantly by the low cost of capital. The assessment of the RAB increase is not addressed at all, yet it is this that will heavily impact future consumers.

Another aspect of benchmarking arises with price impacts seen between each regulatory reset. Consistently the AER and the DNSPs provide a view of how the change to the new revenue allowance will be seen in the transition between regulatory decisions. CCP3 has noted that the AER preliminary decision provides a significant reduction in prices from those applying in the previous decision. It is concerning that the prime driver of this reduction in prices is from the lower cost of capital rather than from other actions the AER has taken in the reset process. The cost of capital is inherently an exogenous element of the reset process, and one over which the AER and the DNSPs have no control. The lower cost of capital that currently applies masks the impact of the massive increase in the RAB that has occurred over the past five years.

To ensure that the underlying cost impacts of capex and opex growth and other financial adjustments (such as depreciation) from the reset process are more clearly seen, CCP3 considers that the AER should also provide a view of what the impact of its decision on prices would have been in the absence of the change in the cost of capital. This would highlight the impacts of those decisions over which the AER has control.

The AER needs to carry out more high-level benchmarking than it currently does, and to relate this back to the main cost drivers (peak demand and population growth), to provide the service delivered by the DNSPs.

Recommendations:

In its earlier advice, CCP3 made three recommendations that it still considers should be implemented. A further two recommendations are now added.

3.1 The AER should conduct a more detailed examination of the trends in the benchmark productivity data, in order to establish if it should accept 2014 expenditures as the basis for their forecasts of allowed operating expenditures.

3.2 The AER should undertake further analysis of trends in Unserved Energy (USE), reliability, and asset utilisation as part of its assessment of future expenditure requirements.

3.3 The AER should make more use of financial benchmark data to assist it in assessing the rate of return parameters, such as the cost of debt for the benchmark efficient firm.

3.4 The AER should benchmark the change in RAB to identify if its decisions are resulting in further increases, as a continuing increase of RAB in relative terms is not in the long term interests of consumers.

3.5 The AER should carry out a simplistic assessment of its decisions using long term average costs of capital to assess the impact of its decisions under "normal" costs of capital. This would allow benchmarking between periods to identify how decisions compare on a common basis.

4. Operating Expenditure (opex)

4.1 Background and overview on operating expenditure (opex)

In Section 3 above on the use of benchmarking, CCP3 reiterated its concern that the AER's approach limited the opportunity to drive much needed improvements in the operating and capital cost productivity of the Victorian DNSPs.

The drive for greater productivity should be an important principle for the AER. It is not sufficient, particularly in this more challenging era, for the Victorian DNSPs to be allowed to "sit on their hands" with respecting to operating cost efficiency. Yet this is effectively what the AER's Preliminary Decisions are allowing to happen. CCP3 draws this conclusion in the broader context of its concern that the AER's Efficiency Benefit Sharing Scheme (EBSS) may not be providing the incentive for efficiency improvement now the market has matured. This is addressed later in this section.

Consumers have already funded the extensive augmentation and replacement of the Victorian distribution networks (see section 4). Consumers have already funded the roll out of "smart meters". Consumers have already funded smarter grids and upgrades to the DNSPs' IT systems.

Consumers are now surely entitled to see some pay back for all this funding in greater productivity and reduction in operating costs, at least for ongoing activities.

CCP3 therefore concludes that it is not in the long-term interests of consumers in Victoria that the AER's Final Decisions continue to accept the 2014 revealed operating costs as the basis for the operating cost forecasts for 2016-20, while it does not also incorporate a specific allowance for productivity growth across the regulatory period.

Providing specific allowances for any additional operating cost items such as costs associated with the bushfire mitigation programs does not preclude the AER from applying an efficiency coefficient to other parts of opex that capture ongoing "normal" activities. Indeed, over the longer term, the investments in bushfire mitigation should lead to further reductions in operating costs as the additional investment and vegetation clearance in 2011-2015 improves the reliability of the Victorian network and should reduce maintenance costs, particularly in rural and regional areas.

While CCP3 will comment on various specific aspects of the AER's Preliminary Decisions and the DNSPs' responses, its overriding concern is with the following:

- The AER's acceptance of the base year 2014 as "efficient", without considering the overall declining trend in efficiency to 2014;
- The absence of a specific productivity factor in the forecast period;
- The impact of changes in capitalisation policy on the base opex costs and measures of efficiency;

- The lack of any explicit links between past and current capital expenditure and future improvements in operating cost productivity; and
- Similarly, there is a lack of any linkage between claimed savings under the EBSS and future savings in the forecast opex.

These criticisms are not new. CCP3 raised them in its previous advice to the AER. CCP3 is therefore looking to the AER to provide a clear statement about how it will incorporate these issues into its decision making for its Final Decisions.

The following section provides a brief summary of the advice that CCP3 provided to the AER in response to the DNSPs' initial proposals. CCP3 considers that much of this advice is relevant to its current response to the AER's Preliminary Decisions and the DNSPs' revised proposals.

4.2 CCP3's advice to the AER on the DNSPs' initial opex proposals

In its response to the DNSPs' initial proposals for the 2016-20 revenue control period, CCP3 noted that the Victorian DNSPs were proposing total opex for 2016-20 that amounted to an increase of 40% over the estimated actual expenditure for the 2011-15 period. After adjusting for the changes in capitalisation and service allocations, the overall increase was 21% compared to 2011-15.

If approved by the AER, this would represent a cumulative increase in opex over two regulatory periods of 84% without adjustments, or 60% with adjustments in real dollar terms. CCP3 considered this outcome was not justified, and was not in the interests of consumers for the AER to approve these operating cost increases.

Having considered the reasons provided by the DNSPs for these increases, CCP3 included in its August 2015 overview advice to the AER as follows:

- The DNSPs' opex proposals do not adequately reflect the past and planned investments in smart metering, replacement capex, bushfire prevention measures and information system and communication technology enhancements. It is appropriate that consumers begin to see benefits from these investments but that is not seen in the DNSPs' proposals.
- To date, CCP3 does not see the supposed benefits to consumers of the operation of the efficiency benefits sharing scheme (EBSS). Despite Victorian DNSPs' spending less than their opex allowance in earlier regulatory periods, and receiving rewards under the EBSS, the DNSPs' proposals do not include a pass through of these savings; opex still increases.
- The proposals reveal significant changes in capitalisation policies and different service allocations. This has clearly distorted the outcomes and made effective benchmarking considerably more difficult. For example, 20 per cent of CitiPower's forecast opex includes costs associated with changes to its own capitalisation policies.

- Similarly, the DNSPs have adopted various approaches to reallocating costs that were previously approved under the AMI cost recovery mechanism to standard control services. CCP3 estimates that this involves a reallocation of costs to standard control services worth about \$300 million across the five Victorian DNSPs. CCP3 understood that the metering service costs (now classified as alternative control services) included “metering provision, installation, maintenance and reading and data services”. There seems no basis for the allocation of \$300 million dollars to standard control services.
- The concept of “step changes” being only new expenditure factors not captured in historical trends appears to be at risk of being abused; there are few step-down changes, despite the much greater investments in the 2011-15 period.
- Similarly, trend changes appear to be overstated by the DNSPs who are still forecasting increases in labour costs above CPI. CCP3 is also concerned with the assumption that there is no increase in productivity over the regulatory period (except for Jemena). The productivity factor in the “trend” analysis is allowing stagnation in capital and labour efficiency against the trends seen in the economy as a whole.

CCP3’s recommendations arising from the analysis above included a recommendation for improved and explicit links between past and planned capex and forecast operating costs.

CCP3 also sought a comprehensive review of the role of the EBSS in driving greater efficiency and of the AER’s 2008 Cost Allocation Guidelines to ensure greater consistency in approach, particularly to the allocation of overheads.³ Similarly, CCP3 considered that the “step-change” mechanism was open to abuse, and there needs to be further clarification about how it operates. The process for forecasting labour costs also needed further consideration by the AER with the view to establishing a consistent framework.

Finally, CCP3 urged the AER to review the purpose and application of the productivity factor in the trend analysis. CCP3 concluded:⁴

*The AER should review the purpose and application of the productivity factor in the trend analysis. Setting productivity growth to zero sends a poor message to the businesses. **The review should include consideration of the impact of the productivity factor with the benchmarking analysis and the EBSS incentives.** [emphasis added]*

Overall, CCP3 sees little need to change this advice and associated recommendations. CCP3 observes that while the AER has cut back some of the proposed step changes and

³ See, AER, *Victorian Electricity Distribution Network Service Providers Cost Allocation Guidelines*, June 2008

⁴ Consumer Challenge Panel CCP3, *Response to proposals from Victorian electricity distribution network service providers for a revenue reset for the 2016-2020 regulatory period*, overview, 10 August 2015.

trend increases, it still accepts the 2014 actual operating costs as a reasonable basis for its forecast or operating costs through 2016-20 (subject to minor changes), and does not adjust the forecast opex for improved productivity, or via the option to apply a “step-down”.

In saying this, CCP3 has noted the response by the AER to its conclusions above. CCP3 agrees that the “productivity growth” factor in the trend component is designed to represent changes / trends in industry productivity. This is precisely why CCP3 considers that it must be reviewed, as its current “function” is circular, and is effectively redundant. That is because all the regulated electricity networks come under the same AER regulation umbrella. If the regulatory framework is not driving greater productivity, then the efficient frontier, by definition, does not change (or may even decline). So this component of the AER’s trend analysis cannot be used effectively to achieve the necessary goals.

This issue is discussed in more detail in section 4.3.2.

CCP3 recognises that since the AER’s Preliminary Decisions were published, the Victorian Government has progressed further in its legislative agenda arising from the Royal Commission into the 2009 Victorian bushfires.

CCP3 also recognises that this will require some additional capital expenditure particularly by the regional and rural DNSPs. However, this additional capital expenditure should also have benefits over the term of the regulatory period, for example, by reducing operating costs as the network system is replaced or upgraded and made safer under the scheme. These savings must be incorporated into the DNSPs’ forecasts of future opex. There will also be impacts on future capex (as assets have been renewed earlier than expected), and it should be a consideration when setting future STPIS targets – although at this stage, it is not clearly the case.

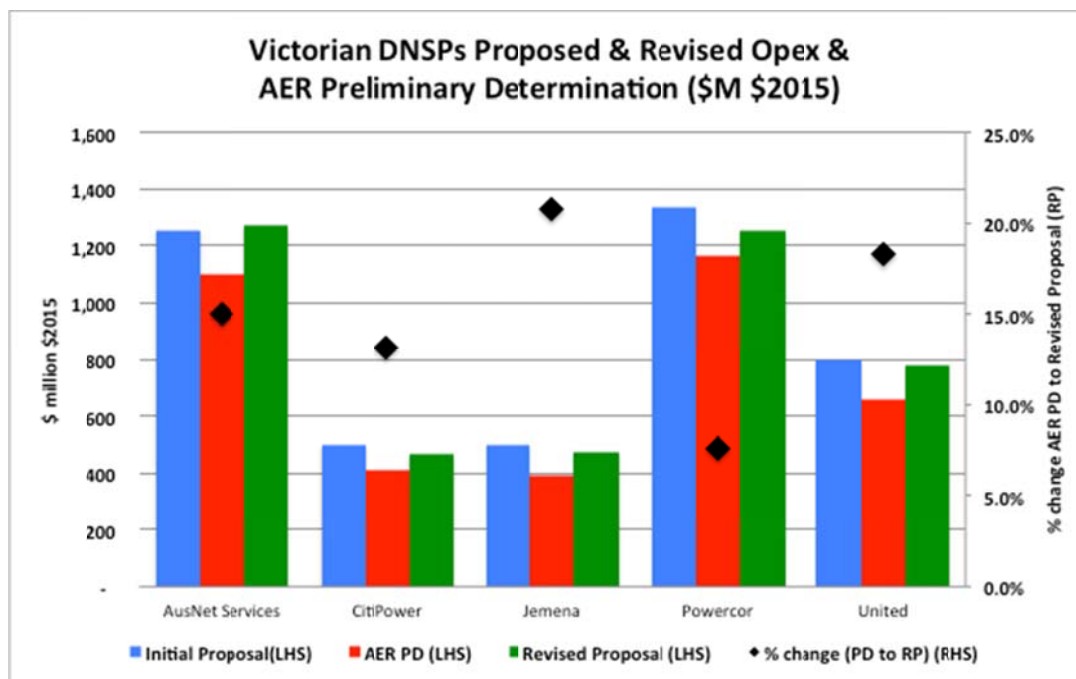
In addition, the Victorian Government has amended the legislation relating to vegetation management, and this should also lead to a reduction in operating costs compared to the 2011-2015 regulatory period.

The task facing the AER is to ensure that these changes in costs are captured in its Final Decisions. For instance, when considering the DNSPs’ revised operating cost proposals, it is clear that there is some small reduction in overall opex for all the business except AusNet, as compared to their initial proposals (approximately 3% reduction on average). However, the revised opex proposals remain substantially above the AER’s Preliminary Decisions.

These increases in the revised proposals compared to the AER’s Preliminary Decisions amount to a total of \$510 million (\$2015), or nearly 14%. The increases range from 8% for Powercor to 21% for Jemena.

Figure 4.1 below illustrates the five-year operating costs in the DNSPs’ initial proposals, the AER’s Preliminary Decisions (PD) and the DNSPs’ revised regulatory proposals (RP).

Figure 4.1: Victorian DNSPs proposed Opex for 2016-20 & the AER’s Preliminary Decisions



Source: DNSPs’ proposals, CCP3 Analysis

The DNSPs’ response to the AER’s Preliminary Decisions is even more concerning given that the AER’s operating cost allowance in its Preliminary Decisions is in real \$2015 dollars similar to or more than the previous period (2011-15) actual opex. That was, in turn, significantly greater than the period before that (2006-2010).

CCP3 considers that the significant decline that has already been seen in the productivity of the Victorian DNSPs will inevitably continue even under the AER’s Preliminary Decisions. It is imperative that the AER’s Final Decisions consider these overall trends in forecast productivity, and that the AER makes its decisions accordingly.

The next sections in this report will provide a more detailed assessment of the AER’s Preliminary Decisions and the DNSPs’ revised proposals. The revised proposals do not provide any confidence for consumers that the DNSPs have recognised the implications of the changes in the Victorian electricity market.

That is, while the revised proposals talk about new technologies and changing electricity usage, their opex proposals do not suggest that the network businesses are focused on innovation that is directed at increasing productivity and decreasing prices.

4.3 The AER’s Preliminary Decisions – Overview and Issues

4.3.1 The AER’s Preliminary Decisions – key elements

As highlighted in Figure 2 above, the AER has reduced the opex allowance for each of the Victorian DNSPs. The key components of the AER’s Preliminary Decisions included the following:

- Largely accepted the 2014 actual opex as efficient opex for the base year;
- Did not accept the DNSPs’ forecasts for rate of change in prices, most particularly labour costs;
- Did not accept forecasts of output growth in demand;
- Did not apply a productivity growth factor;
- Did not accept many of the step changes proposed by the DNSPs; and
- Allocated all opex relating to the advanced metering infrastructure (AMI) to the alternative control category of metering costs.

Table 4.1 below provides a summary of CCP3’s initial response to the AER’s Preliminary Decisions.

Table 4.1: Summary of CCP3’s initial view of the AER’s Preliminary Decisions

Forecast Component	Vic Networks proposals (overview)	AER Preliminary Decisions	CCP Initial Comments
Base Year	Accept 2014 as base year with no efficiency adjustment (as occurred for NSW and Qld)	Accept 2014 as base year with no efficiency adjustment	Benchmarking study reveals significant declines over 2006-2013 in efficiency measures. AER should examine 2014 in light of this
Trend	Proposing cost increases above CPI Significant output growth No productivity growth (except Jem)	AER rejects proposed price increases (labour & materials) & output growth forecasts – allows above CPI for labour costs AER does not apply productivity growth factor	Largely agree with AER re price increases & output growth, although +CPI growth in labour costs needs investigation Strongly disagree with productivity set at zero
Step Changes	Significant step changes for bushfire management & insurance Consumer engagement & DMIA driving other changes	AER rejects most step changes AER rejects proposals by all DNSPs to allocate some smart meter opex to standard control services (27% - 79%)	CCP generally agrees with AER, but consider that overhead cost allocation still an issue that must be sorted Lack of clarity on Govt policy also an ongoing issue
Overall	Significant increases in opex over 2011-15: 25% (UE), 31% (Jem), 35%,(AusN) 44% (P’cor), 75% (C/Power)	AER rejects significant increases But does allow for real dollar increases in opex over regulatory period	The \$real increases in opex do not seem justified given the static condition of the market. Changes in cost allocation & service classification make assessment more difficult. Impact on future efficiency?

Source: CCP3 presentation to public forum, November 2015.

4.3.2 CCP3's response to the AER's Preliminary Decisions

In the following sections, CCP3 highlights the areas of agreement with the AER, and areas where CCP3 has stronger disagreements with the AER.

CCP3 supports the AER's Preliminary Decisions on opex in the following areas:

- **CCP3 supports the AER's use of AEMO forecasts of demand**

The demand forecast is an important component of the AER's opex "base/step/trend model". CCP3 has noted previously that networks have historically over-forecast demand in their regulatory proposals.

CCP3 therefore considers it is important for the AER to use an independent third party forecaster. AEMO meets that criteria and has extensive data on electricity use and experience in forecasting both volume and peak demand. While this does not guarantee an absence of error it does guarantee an absence of bias.

- **The AER is correct to reject most of the step changes proposed by the DNSPs in their initial proposals**

CCP3 agrees with the AER that the step changes should only relate to matters that are significant and reasonably quantifiable. There is a tendency for the DNSPs to present a range of small cost increases without considering the overall ups and downs from year to year. This results in a cumulative bias in the DNSPs' proposals.

CCP3 also agrees that more "speculative" costs should not be included in the step changes. For instance, where legislation or rule changes are mooted, but the details of the change are not clear, it is generally not appropriate for the AER to allow a step change in the ex-ante forecasts.

- **The AER is correct to reject internal labour cost increases based purely on current EBA arrangements or forecast EBAs**

The AER's forecast of internal labour costs (including contract labour) of just over CPI is made in the context of the historically low wage increases that have occurred over the last year and significant reduction in the external pressures on labour costs for the electricity industry.

The AER has reasonably relied on the forecast of change in the wage price index (WPI) for the electricity, gas, water and waste services industry. CCP3 also considers that it is reasonable, given the uncertainty around a five-year wage forecast, for the AER to average the forecasts from two well recognised forecast providers.⁵ As the AER states, one of these forecast service providers has a history of over-forecasting wages, the other has a history of under-forecasting so that an average of the two appears to provide the best forecast.

⁵ The AER uses an average of the forecasts by Deloitte Access Economics (DAE) and BIS Shrapnel.

The DNSPs have, in contrast, tended to rely on Enterprise Bargaining Agreements (EBAs) for the near term forecast and a single forecast provider for the longer term together with a forecast of future trends in EBAs for the industry.

With respect to the short-term forecasts based on current EBAs, the DNSPs have argued that the EBAs represent binding agreements between employers and employees. CCP3 agrees it is a binding agreement just like the DNSPs' other contractual arrangements with third parties and suppliers.

However, CCP3 also responds that the content of an EBA is at the discretion of the two parties. It would be very unsatisfactory and poor regulatory practice if the terms of an EBA, including annual wage increases, became a simple pass through cost to consumers. This is little different from if the AER allowed a pass through of all contractual costs, a practice that would be unacceptable in an incentive based regulatory regime.

As noted, the AER is entitled to benchmark labour costs (internal and contracted) against broader industry measures rather than just the EBAs. However, there may be value in the AER taking some account of the circumstances prevailing at the time the EBAs were agreed.

Labour conditions have changed quite quickly and EBAs settled two years ago would be finalised under quite different conditions. What might look excessive now may have been an "efficient" outcome at the time the EBA was formed.

However, the impact of this should be strictly time limited – EBAs are normally for 2-3 years and most should be rolling out now. Any new EBAs that exceed the current forecasts for the industry are the responsibility of management and should not be funded by consumers. Moreover, the impact of existing EBAs will be implicitly included in the base year (2014) assessment of actual costs, and in this way carried forward to future opex allowances.

Of course, the businesses are free to establish whatever EBA they believe is appropriate although CCP3 would expect pressure for improved productivity if wage increases are above the norm so the total wage bill (including contract labour) remains within the AER's forecast. This is no different from the wage negotiations occurring in competitive businesses where salary increases above CPI are offset by agreed productivity improvements.

- **CCP3 agrees with the AER's forecast of non-labour costs (no real increases)**

The AER has reasonably derived a relevant "weighted average producer price index" based on a weighting of five producer price indices published by the Australian Bureau

of Statistics (ABS)⁶, selected on the basis of their relevance to the electricity distribution industry. The weighted average producer price index calculated by the AER indicates an annual growth of 2.6%, versus a CPI of 2.8%.⁷

There has been very significant volatility in commodity prices such as iron ore, steel, and oil. Most commodity costs are lower than they have been for a while, and most have declined substantially since 2011 peaks. The Reserve Bank of Australia (RBA) for instance, notes that commodity prices have, on average, declined by some 55% since 2011.⁸

As noted above, this suggests that material costs in the networks 2014 base year should be lower than the AER's forecast for 2011-2015 – if they are not, CCP3 would expect the AER's Final Decision to examine why not.

Given this low base for commodities, the AER's forecast of an average annual CPI increase for non-labour costs is reasonable, if somewhat conservative. CCP3 would expect over the 5-year period, commodity prices might turn up from the current low base, so an average of CPI across the 5 years is acceptable to CCP3. However, it does illustrate the point that CCP3 cannot see where the savings from the low base of current commodity prices are captured in the DNSPs current opex.

- **CCP3 agrees with the AER's interim treatment of AMI related costs, i.e. including these costs as part of the alternative control services (ACS)**

The fact that the DNSPs themselves had no consistent position on how these costs should be allocated to standard control services (SCS) and alternative control services (ACS) is indicative of the difficulty in disentangling AMI costs following the completion of the roll-out phase. It is, for instance, concerning that the proportion of metering opex allocated to SCS varies from 27% to 79% according to the AER's Preliminary Decisions and that one DNSP (AusNet) claimed that the allocation was confidential.⁹

CCP3 notes the AER's commitment to reviewing this interim decision as part of the revision of the Distribution Ring Fencing Guideline and in association with the expiry of the AMI Order in Council on 31 December 2016. CCP3 understands that the AER's intention is that only "business-as-usual" costs of maintaining the metering infrastructure will be allocated to SCS.

⁶ The AER sources the data from the ABS catalogue 6427.0. See AER, Preliminary Decisions, Attachment 7, Table B.10 in the respective Preliminary Decisions.

⁷ AER Preliminary Decisions, Attachment 7, Table B.10 in the respective Preliminary Decisions

⁸ RBA, Statement of Monetary Policy, February 2016, International Economic Developments. <http://www.rba.gov.au/publications/smp/2016/feb/international-economic-developments.html>

⁹ AER, Preliminary Decisions, Attachment 7, Table A.3 in each of the AER's Preliminary Decisions

It is essential that this process is undertaken in consultation with all stakeholders in order to facilitate competition in metering. Smart meters have come at a significant cost to consumers in Victoria and to date the benefits to consumers are not at all clear. It is important that future metering costs are subject to competitive pressures and this can only come about if the AER adopts an effective allocation of metering and metering infrastructure costs between ACS and SCS.

CCP3 would also add that the Ring-Fencing Guidelines must be sufficiently specific to show the variation in approach to cost allocation that is seen now in the DNSPs' proposals and in other areas of cost allocation (such as the allocation of overhead costs).

CCP3 does not agree with the AER in the following areas of the AER's Preliminary Decisions

- **CCP3 does not agree that the AER should accept the base year opex (2014) of each of the Victorian DNSPs as "efficient"**

The AER's position appears to be based in the first instance on its benchmarking analysis. As the Victorian DNSPs on average over the last eight years (2006-2013) were more efficient than interstate DNSPs it follows, according to the AER, that the Victorian DNSPs' actual opex in 2014 must be efficient.

CCP3 contends that the evidence indicates a very significant decline in productivity as noted in its previous submissions and in the introduction above. The AER explains this decline in productivity by reference to, for instance, the additional opex arising in the 2011-2015 regulatory period from the new bushfire management requirements. The AER states that this was forecast to be 9.0% of total opex.¹⁰

However, the AER also states:¹¹

To the extent that the AMI roll-out is mostly complete and the associated benefits have now largely been realised those benefits will be reflected in the service providers' base year expenditure.

In other words, the AER is saying that the network's actual opex in the base year 2014 should be reduced from historical levels because of AMI savings. So should this not lead to productivity improvements that offset in part the bushfire related opex increases?

Similarly, in the AER's price trend forecast, the AER highlights the very rapid reduction in labour cost growth, producer price indices, and commodity / material costs in the last few years (see discussion above). These changes should have a favourable impact on input costs and overall total and partial factor productivity.

¹⁰ See for instance, AER, *AusNet Services Preliminary decision 2016-20, Attachment 7 – Operating Expenditure*, October 2015, p. 7-61

¹¹ See *ibid*, p. 7-65

CCP3 is also unclear about whether the base year (Cal 2014) has been consistently adjusted downwards for the impact of the Carbon Pricing Scheme on DNSPs' input costs as revealed in their regulatory accounts, as the Scheme continued until 30 June 2014.

CCP3 concludes from this that while the increased bushfire obligations clearly added to costs relative to outputs, and this would vary between DNSPs, there were other savings that should offset at least some of these additional costs.

The point being, that CCP3 does not consider the AER has undertaken a sufficiently critical analysis of the 2014 base year, particularly given the clear evidence of the continued declines in both multi-factor (MTFP) and opex partial factor productivity (MPFP) that consumers observe from the most recent AER benchmark performance reports. See also section 3 above.

Figure 4.2 below illustrates the decline between the average MTFP scores and the 2014 MTFP scores. If the comparison was between the peak score and 2014, the decline would be even starker. In addition, as noted above, the AER's 2015 benchmarking report indicates even more steep declines in the opex partial factor productivity over 2006-14.¹²

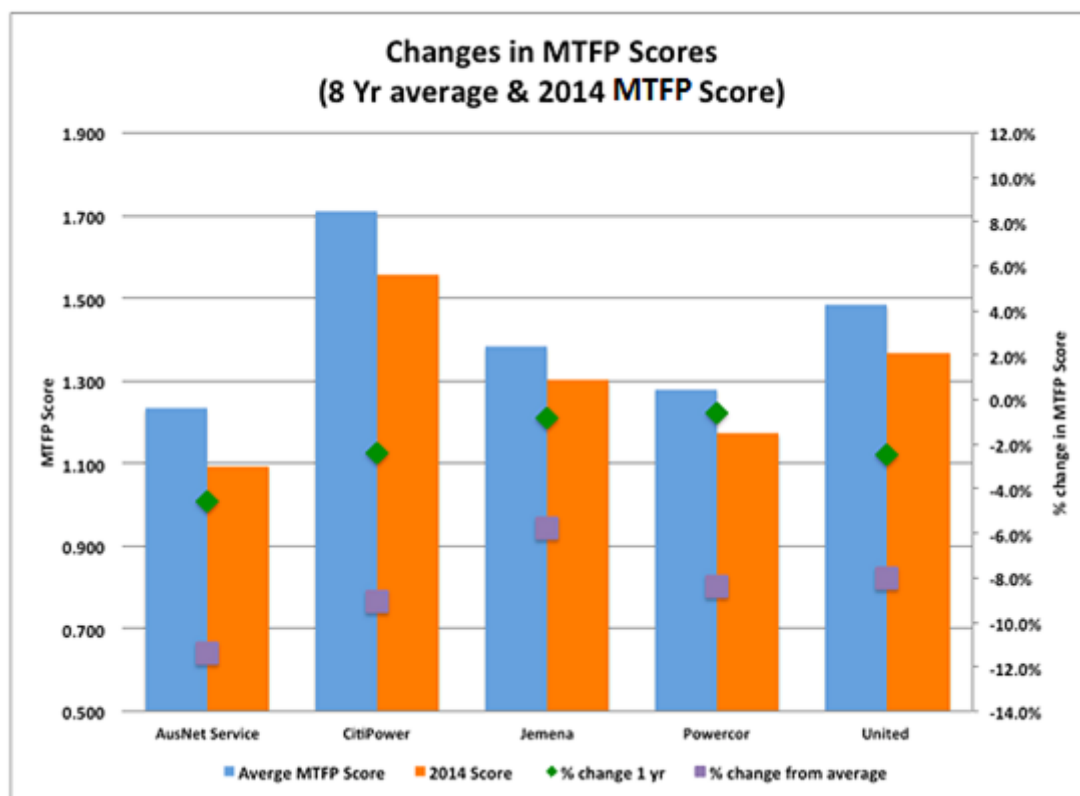
CCP3 does not think that the AER can just "accept" this situation based on its comparison of average efficiency scores across DNSPs in the NEM. For instance, the AER notes the decline in AusNet Services productivity to 2013 but then assumes that 2014 will not be much different (i.e. it does not trend the forecast for 2014), and also relies on the concept of "materially inefficient" or "materially worse than its peers".¹³

The base year opex (2014) has the most significant impact on the whole five-year opex allowance. It therefore accounts for a significant portion of the overall revenue allowance. However, for most of the Victorian DNSPs, 2014 MPFP is at its lowest point, with further significant declines between 2013 and 2014.

¹² The data on MTFP is from the AER's 2015 Annual Benchmarking Report. Unfortunately, the AER does not provide a table of outputs of the MPFP (opex partial factor productivity).

¹³ See AER, *Preliminary Decision AusNet – Attachment 7 – Operating Expenditure*, October 2017, p. 7-30.

Figure 4.2: Comparison of average MTFP and 2014 MTFP scores



Source: AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2015, Table 1, p. 9. CCP3 analysis. Note: Negative percentage changes mean that the MTFP has declined (is less efficient)

Given the marked decline in productivity from 2006 through to 2014 in an almost unbroken trend, Victorian consumers deserve a more thorough breakdown of the 2014 base year costs and an opportunity to examine where costs have increased and where costs have decreased (as for example, the AMI savings and commodity price savings). Given the extent of some changes from the average, CCP3 considers such an analysis is essential.

- **CCP3 does not agree with the AER that the productivity factor should be zero.**

The AER appears to have misunderstood the point that CCP3 is made in its previous submission on the productivity factor where it sought a review of its operation in the regulatory context.

CCP3 is aware that the productivity factor in the AER’s “base-step-trend” opex model is meant to represent the change in productivity at an industry level. That is, in the parlance of efficiency benchmarking, productivity growth represents a shift in the efficiency frontier of the industry.

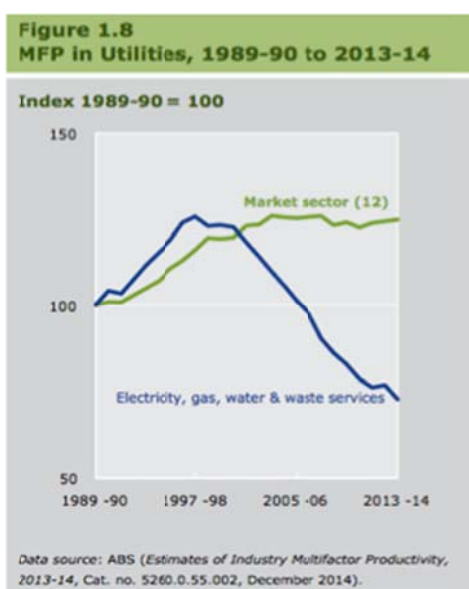
This is precisely the difficulty with the productivity function as interpreted by the AER. It becomes circular. That is, if the productivity function is set to zero by the regulator, then it implicitly allows networks to continue to sustain operating costs per

customer¹⁴ observed in the base year of the AER’s “base-step-trend” approach, providing that base year meets the loose criteria of “not being materially inefficient”.

Moreover, from an industry perspective, there is no driver to improve the overall frontier of efficiency of the regulated network industry, as the most efficient network (averaged over some historical period) sets the “frontier” and the most efficient will always be regarded as sufficiently efficient for the AER to accept its base year expenditure and by default, its operating costs per customer.

CCP3 has already highlighted the decline in the productivity of the electricity network industry (both MTFP and MPFP) above and in section 3. Figure 4.3 below illustrates the current trends in multi-factor productivity in the utility industry as a whole.

Figure 4.3: Trends in MFP in Australian Utilities 1989-90 to 2013-14



Source: Productivity Commission, Productivity Update, July 2015, p. 21.

It is clear that the trends seen in the electricity industry are replicated in the industry as a whole (noting that electricity networks will make up a significant component of the overall industry figure).

The consumer question is: why have the large capital expenditures (the excuse for higher MTFP) not resulted in reductions over the period in opex productivity?

The policy question is: what can be done to turn this trend for declining productivity around in key regulated monopoly utilities, given it is a drag on the overall economy?

¹⁴ Or per some other function such as the weighting of customer growth, line length and ratcheted peak demand as used by Economic Insights.

The practical question is: what can be done within the framework of the AER's current regulatory powers?

The answer to the latter question appears to be "not much", or at least it seems "not much" other than to use a zero productivity growth factor rather than a negative growth factor.

However, the AER's analysis of the productivity issue is difficult to follow. In the first instance, the AER cites the conclusions of their own expert advisor, Economic Insights (EI). EI clearly considered that decline in productivity was abnormal and should be time limited. EI stated:¹⁵

***We also note that a situation of declining opex partial productivity is very much an abnormal situation** as we normally expect to see a situation of positive technical progress rather than technical regress over time. While we acknowledge the distinction between the underlying state of technological knowledge in the electricity distribution industry and the impact of cyclical factors that may lead to periods of negative measured productivity growth, **the latter would be expected to be very much the exception**, step change issues aside. [emphasis added]*

However, sustained opex productivity declines in the Victorian DNSPs have been observed since 2006. Simplistically, a long period of decline in opex seems less about cyclical factors and more about an absence of regulatory or competitive pressures.

Moreover, the AER has also noted that both the electricity transmission and gas distribution businesses have and/or propose productivity growth yet these too are capital-intensive utility businesses.

Consumers expect that the AER should explain why, given above, it appears relatively sanguine about the ongoing decline in productivity.

Major stakeholders, represented through the Victorian Energy Consumer and User Alliance (VECUA), are certainly concerned.¹⁶ The Victorian Government also expresses concerns about the direction of productivity.¹⁷

Having noted all this, however, the AER's response is surprisingly cautious:¹⁸

*Cyclical factors and regulatory obligations for the distribution sector may be the reason for the lower measured productivity in the distribution industry compared to transmission and gas distribution industries. **Over the medium to long term, however, we expect the distribution network service providers to have underlying productivity growth rates comparable to the electricity transmission and gas distribution industries.** This is*

¹⁵ Quotation cited in AER, *AusNet Services Preliminary Decision*, Attachment 7, p. 7-63.

¹⁶ See for instance, VECUA, *Submission to the AER Victorian Distribution Networks' 2016-20 Revenue Proposals*, 13 July 2015

¹⁷ DEDJTR, *Submission to Victorian electricity distribution pricing review*, 13 July, 2015

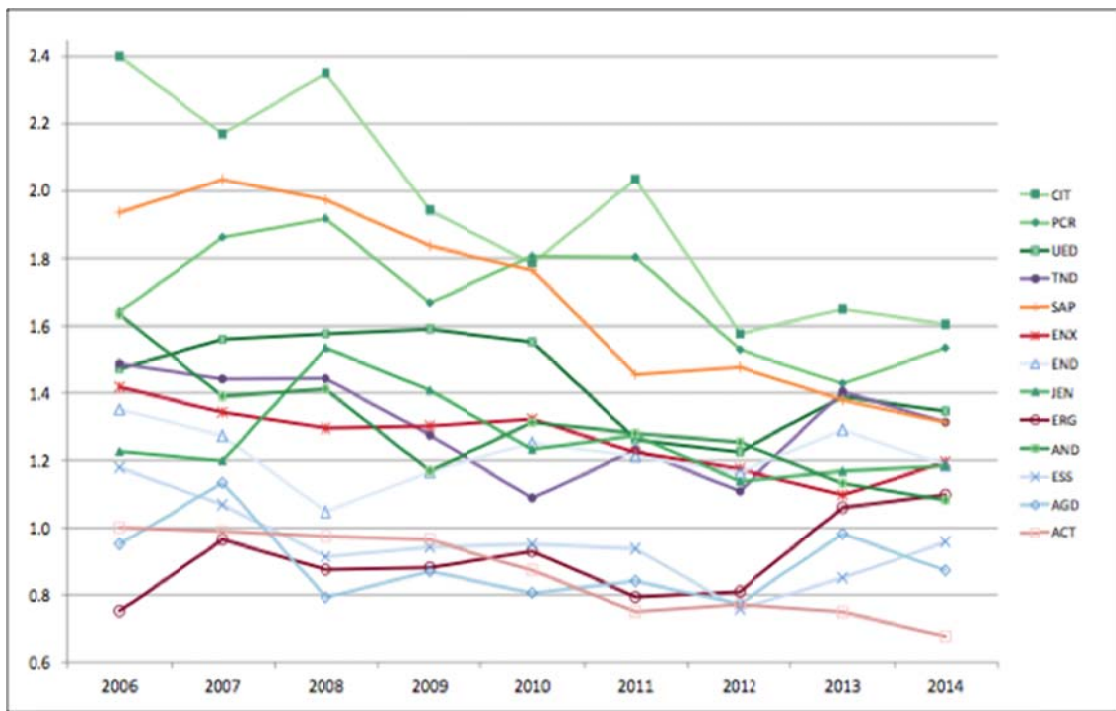
¹⁸ AER, *AusNet Services Preliminary Decision*, Attachment 7, p. 7-64

because the specific factors that have resulted in declining productivity for the distribution industry are unlikely to apply over the medium to long term and the distribution industry should be broadly similar to other energy networks. In the absence of information suggesting when this return to positive productivity growth will occur we are satisfied that the best forecast of productivity growth is zero. [emphasis added]

CCP3 finds this an unsatisfactory response to the issue. CCP3 regards the AER’s apparent confidence that the “return to positive productivity growth” will occur organically over the medium to long term as somewhat misplaced given the history of productivity since 2006.

CCP3 reiterates: the productivity decline has occurred almost every year for all Victorian DNSPs since 2006 measures (the AER’s series does not go back further), as illustrated in Figure 4.4. This is hardly a cyclical event; it reflects something more fundamental – particularly when the same period has seen increases in capex for replacement and augmentation and extensive investment in metering and IT.

Figure 4.4: Opex partial factor productivity 2006-14



Source: AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2015, Figure 6, p. 12.

Nor is it readily explained by increased regulatory obligations relating to the bushfires. The declining trend in opex productivity preceded this and in any case does not explain why Ausgrid declines much more than PowerCor (both have a high proportion of rural areas) and CitiPower (an inner-city DNSP) declines more than both (on some measures).

Finally, CCP3 seeks guidance on what the AER means when it talks of “medium to long term” return to productivity growth. When can consumers expect a dividend from the investments and regulatory framework?

It would be very useful if the AER could include in its Final Decisions for the Victorian networks analysis of the expected trends in MTFP and MPFP measures over the course of the regulatory period using the benchmarking formula. In this way, the CCP and other stakeholders can see if the AER’s decisions are consistent with its expectations for productivity growth turnaround.

The assessment of future trends will be complicated by the proposals by some DNSPs (in particular, CitiPower and Powercor) to revise their approach to the allocation of corporate overheads such that all corporate overheads were to be allocated to operating costs from 1 January 2016. CCP3 understands that both DNSPs proposed this revision as part of their April 2014 application to the AER for an amendment to their respective Cost Allocation Methodology (CAM) to apply from 1 January 2016.¹⁹ The AER approved the revised CAM in 2014.²⁰

However, a preliminary analysis by CCP3 suggests that this revised allocation of corporate overheads will add some 30% to CitiPower’s base year opex and some 18% to Powercor’s base year opex. These changes to the base year then flow through to the 2016-20 regulatory period.²¹

CCP3 seeks clarification of the AER’s analysis of the EBSS & productivity growth

CCP3 has noted that in the absence of a productivity growth factor, the only regulatory driver for opex improvements is the EBSS. CCP3 also noted that there was little observable relationship between the amount of payments from consumers to the DNSPs under the EBSS and the measured productivity of the businesses. For example, CCP3 has calculated that over the course of 2016-20, the AER’s Preliminary Decisions allow the Victorian DNSPs to recover over \$80 million in EBSS payments arising from their opex performance in the 2011-2015 period. However, this same period saw a continued reduction in opex partial factor productivity across all the DNSPs.

This is in part at least because EBSS is measured against the AER’s opex forecast allowance. If the AER’s forecast opex is too generous, then DNSPs have an opportunity to receive EBSS payments even while measured productivity declines.

¹⁹ See CitiPower, *Cost Allocation Method*, Version 9, April 2014; Powercor Australia Limited, *Cost Allocation Method*, Version 9, April 2014.

²⁰ AER, Final Decision, *CitiPower and Powercor, Revised Cost Allocation Method*, 17 October, 2014.

²¹ CCP3’s assessment is based on AER Preliminary Decisions for CitiPower and Powercor, Attachment 7, Figure 7.4

In other words, almost everything relating to the opex allowance, including the opportunity to gain EBSS payments, reverts back to the AER and the quality of its assessment of the base year (price and output growth having limited net impact in a mature market).

More specifically in response to CCP3's request for a review of the relationships between benchmarking, productivity growth and the EBSS, the AER states:²²

We consider that the incentive to minimise opex is primarily set at the margin. We designed the EBSS to work with the ex-ante opex and our opex forecasting approach to provide a continuous incentive at the margin. We designed the incentive to balance the incentive to reduce capex and maintain the level of service. The incentive at the margin is unaffected by the forecast productivity growth to the extent it is not based on the individual NSPs own historic productivity growth.

While CCP3 would welcome further clarification of the above statement, it seems that the AER is saying that the EBSS is not a substitute for a productivity factor but is rather an incentive used in combination with the other incentives to ensure an appropriate balance between capex, opex and reliability performance.

If this is the correct interpretation, then it further highlights the need for an examination of the role of the productivity function, and how it might be reasonably measured by the AER and utilised in the regulatory function. This is particularly important, as there must be questions about whether the EBSS has provided sufficient incentives to reduce costs under the base-step-trend approach, particularly when applied to a mature industry with existing strong returns achieved under the current regulatory processes rather than competitive markets. Such an organization is not necessarily driven by pure profit maximisation actions.²³

CCP3 is aware that IPART has adopted a productivity growth measure that it can apply to the industries it regulates.²⁴ While CCP3 is not familiar with the details of this process, it does suggest that the AER could explore some options to provide an independent assessment of an efficient frontier and any trends in that efficient frontier.

²² For example, *ibid*, 7-65

²³ In a mature industry without competitive pressures and with high and stable returns, there is an argument that the drive for management to implement further cost efficiencies decreases. The management goals relate to ensuring the firm's viability and an acceptable level of profit; to "satisfice" rather than maximise (as posited, for instance, by Professor H A Simon in "Theories of Decision Making in Economics", *American Economic Review*, Vol XLIX, June 1959. J K Galbraith also contended that a modern mature organisation is not necessarily driven by profit maximisation. The flow of capital to the organisation can be assured by continuance of a reasonable, minimal rate of profit. See Galbraith J. K, *The New Industrial State*, 1967.

²⁴ See for instance, IPART, *Cost indices – productivity factor*, October 2014.

CCP3 also believes that policy makers, including the AEMC, should examine this issue further.

The need for such an examination is highlighted by the revised opex proposals from the Victorian DNSPs discussed below in section 4.3.3.

4.3.3 DNSPs' revised proposals and CCP3's response

Since the AER's preliminary decision there have been developments that have influenced the DNSPs' revised proposals. The following factors appear to be the most important across the five networks, although each network has some individual areas of concern.

- Developments in the regulatory requirements including Victorian Government legislation, Essential Services Commission (ESC) and rule changes by the AEMC under the Power of Choice umbrella;
- AER's treatment of labour and material cost allocations and more labour and material unit cost forecasts;
- The AER's removal of step changes;
- The need for additional step changes; and
- The allocation of all Advanced Metering Infrastructure (AMI) costs to Alternative Control Services (SCS).

CCP3 comments as follows on two of these areas, the regulatory changes and the labour and material cost forecasts:

Regulatory changes

The DNSPs have cited regulatory developments as listed below which impact on the forecast step changes:

- **The Victorian Government has finalised changes to the Electricity Safety (Electric Line Clearance) Regulations (now ELC [2015])**

The regulations were amended in 2010 (ELC [2010]) and these changes resulted in increased vegetation management costs for all DNSPs but particularly DNSPs with a large rural base. For instance, AusNet's reported vegetation management costs increased from \$16.5M (\$2015) in 2009 to \$48 M (\$2015) in 2013 as a result of the regulation changes.²⁵

The ELC [2015] reinstates the exemptions that were allowed under ELC [2005] and while it increases some other costs the net effect should be a decrease in vegetation management costs. In practice, this would amount to a step-down from the 2014 base year opex.

²⁵ AER, *AusNet Services Preliminary Decision*, Attachment 7, Table A-1, p. 7-37.

The AER has sought advice from Energy Safe Victoria (ESV) and from the businesses on the impact of these changes.

For instance, AusNet has suggested its 2014 base year costs do not include the additional expenditure and no step-down is required. AusNet states that it had “applied and received” an exemption from the ESV for the management of reduced clearances to insulated service cables. AusNet therefore reports that:²⁶

Accordingly, since October 2013, AusNet Services’ actual vegetation management costs reflect obligations which are substantially similar to the new management obligations contained under regulations 4 and 5 of the Electricity Safety (Electric Lines Clearance) Regulations 2015. This includes during 2014 base year for the current period.

Other DNSPs make similar comments. For instance, Powercor states that the ESV first permitted a transition period between 2011 and 2014 to implement the ELC [2010]. The ESV also allowed Powercor to adopt modified clearance practices from 2014. Therefore, Powercor concludes that their vegetation management expenditure during 2016-20: “will not decrease relative to base year vegetation management expenditure” as a result of the change in regulations”.²⁷ CitiPower claims the changes in ELC [2015] will have a net increase in costs.

It seems therefore that the net impact of the change to the ELC [2015], while important, remains unclear. The AER states that the ESV will advise the networks on the implementation of the new regulations and costs should be more apparent after that.

CCP is still left with the following additional questions:

- Given the ESV’s willingness to accommodate the DNSPs’ concerns during 2011-2015, have the networks spent the additional regulatory allowance and if not, will the networks receive EBSS payments simply by virtue of the fact that the ESV did not enforce the requirements to the level expected?
- What impact has this had on the 2014 base year and are further adjustments required in the light of the information provided by the DNSPs?
- **The Victorian Government has signalled that it is intending to legislate to adopt Chapter 5A of the NER which contains the national connections framework. While, the timing of this is not confirmed, it is expected to occur by 1 January 2017.**

This replaces the current Victorian Connections Guideline 14 and the DNSPs claim that this will add some costs to their businesses to manage the new arrangements. The DNSPs have proposed a step change to recover the ongoing additional costs of the 5A

²⁶ AusNet Services, *Revised Regulatory Proposal 2016-20*, p 4-25

²⁷ Powercor, *Revised Regulation Proposal 2016-2020*, January 2016, p. 178

connection policy. This amounts to changes of some \$2M across the regulatory period.

This is another example of small costs that may be off-set by reductions in other costs. In general, CCP3 does not support step changes of this type.

- **The Essential Services Commission of Victoria (ESCV) has introduced changes to the Guarantee Service Level (GSL) Scheme.**

The DNSPs are reporting very significant cost increases as a result of the new GSL Scheme. For instance, AusNet is claiming a forecast GSL payment totalling \$46.3M (\$2015) over the course of 2016-20,²⁸ although AusNet also notes that it has not had time to absorb the impact of the ESCV's final decision (published on 24 December 2015). This contrasts with the AER's GSL allowance of \$28M (\$2015) for the period.²⁹

Powercor suggests that the net impact is around \$6.1M.

CCP3 has not considered the detail of the GSL changes. However, it considers that it is important for the AER to provide some clarification on the reasonable costs of the change to the GSL arrangements. The AER will need to determine if these costs warrant an adjustment to its current process of averaging five years of historical payments.

- **The AEMC continues to develop the rules around the Power of Choice program including the introduction of competition in metering, and the changes to the arrangements around embedded networks.**

The networks consider that the AER has rejected the option that these costs would qualify as a nominated pass through event. As a consequence of this, the DNSPs are seeking recognition of the assumed costs of some of the Power of Choice programs in their opex forecasts. The opex impact of these programs appears to be less than \$1 million a year for each DNSP.

CCP3 does not agree with the DNSPs' on this issue in part because of the uncertainty surrounding the expenditures. This includes a lack of commitment from the Victorian Government to implement the amended rules for meter contestability. There is a possibility that the Victorian Government would extend the current Order-in-Council and the monopoly of the Victorian DNSPs on metering.

Moreover, CCP3 believes that there needs to be considerably more certainty about the processes and responsibilities of the various market participants and meter providers as well as the AEMO procedures.

²⁸ AusNet Services, *Revised Regulatory Proposal 2016-20*, Table 4.18, p. 4-37

²⁹ AER, *AusNet Services Preliminary Decision*, Attachment 7, Figure 7-4, p. 7-20

However, CCP3 considers that there should be some mechanism where legitimate cost increases can be recovered once the details of the Power of Choice regulations and associated processes and procedures are better understood. If the regulated pass-through mechanism does not provide for this, then CCP3 would agree that some other mechanism might be required.

Labour cost forecasts

Having considered the updated forecasts of the DNSPs in their regulatory proposals, CCP3 sees no reason to revise its previous support of the AER’s methodology of averaging forecasts from two separate forecast service providers (Deloitte Access Economics and BIS Shrapnel). Further details are set out in section 4.3.2.

CCP3 has also considered a variety of independent forecasts of wages by industry and overall. They consistently point not only to a history of much slower growth in wages as indicated in Figure 4.5 below from the RBA’s Statement of Monetary Policy (November 2015).

They also point to a significant declined in expectations for wage growth consistent with economic forecasts of below trend growth for some time. Figure 4.6 illustrates the expectations of both firms and union officials for “the year ahead”.

Figure 4.5: Wage Growth by Industry

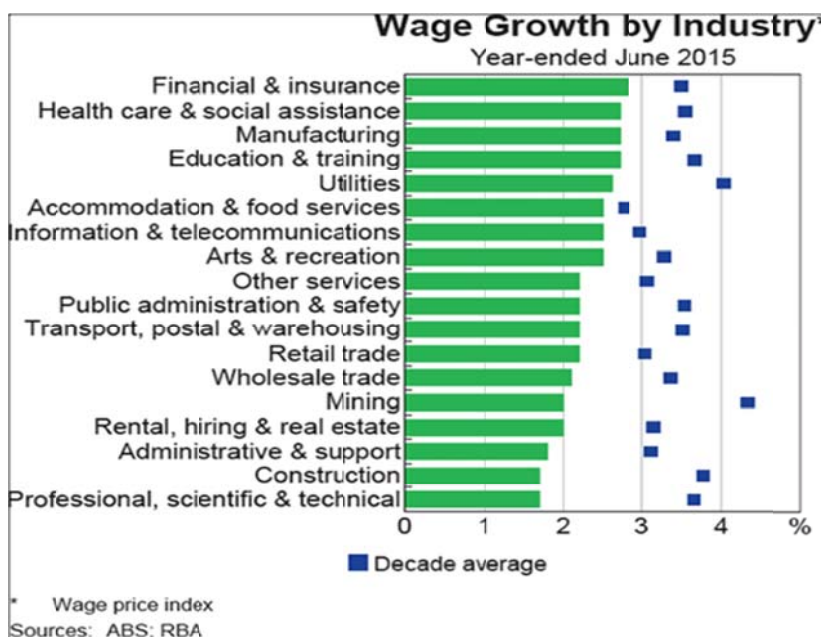


Figure 4.6: Wage Growth Expectations



Source for Figure 4.5 and 4.6: RBA: Statement of Monetary Policy, November 2015 (Graphs 5.8 & 5.9)

The RBA concludes as follows:³⁰

Low wage growth has been broad based across public and private sectors, industries and states. All industries have experienced wage growth below their decade averages. Over the past year, wage growth has generally declined further in industries where employment outcomes have been weaker and has been little changed in industries where employment has increased.

In their revised proposals, the DNSPs continue to argue for higher labour costs increases, in part because they consider industry wide forecasts are not relevant to the future EBA claims by specialist skilled labour. However, it is difficult to believe that with manufacturing and mining in decline, the same pressures on skilled labour costs will apply in the future. CCP3 notes also the RBA's observation (above) that the decline in wage growth has been widespread and across "all industries".

A further argument by the DNSPs in their revised proposals relates to whether the AER should accept EBA based cost increases as a basis for forecasting future opex. The DNSPs reject the AER's argument that accepting EBAs will remove incentives for negotiation.

³⁰ RBA Statement of Monetary Policy, November 2015.

<http://www.rba.gov.au/publications/smp/2015/nov/05-price-and-wage-developments.html>

The DNSPs contend that the EBSS and profit maximising objectives will provide incentives for negotiating an efficient EBA.

CCP3 considers that this argument by the DNSPs may be putting the “cart before the horse”, at least with respect to relying on forecast EBAs. The DNSP’s have significant incentives to over-forecast their expected costs during the regulatory process. It is only after the cost allowance is set is there an incentive to do better than the allowed/expected costs.

The DNSPs also argue in their revised proposals that the AER is bound to accept the wage rate growth set out in the relevant EBAs, as abiding by the EBAs is a regulatory obligation or requirement. For example, Powercor states:³¹

We are bound by law to comply with EBAs and thus the AER is required to ensure our expenditure forecasts for the 2016-2020 regulatory control period compensate us for the costs of complying with our EBAs.

CCP3 agrees that a DNSP is bound by its EBAs. However, the specific price terms of this EBA are set by negotiation between the parties and sit outside the economic regulatory framework. This is no different, in principle, from other contractual agreements from suppliers that the DNSP may enter into. The DNSP must comply with the terms of the contract with suppliers under various commonwealth and state laws, but this does not make the contract prices an automatic pass through, at least not in an incentive based regulatory regime.

The test is not one of law but of efficiency and whether the outcome of the historical EBA negotiations and forecast EBA outcomes represent the best forecast in the prevailing circumstances during the regulatory period.

However, CCP3 considers that some current EBA’s may be relevant to the extent that they were reasonable at the time they were formed. Specifically, many current EBAs reflect a time when the economy and wages in the industry were rising quickly. If so, then these EBA’s they may be a relevant consideration, but not a determinative consideration. In addition, as noted previously, the EBA related higher costs will be captured in the 2014 base year and will therefore influence the opex in each year of the forecast regulatory period.

Non-labour costs

As outlined in section 4.3.2 above, CCP3 generally supports the AER’s approach to assessing non-labour costs using ABS producer prices indices for relevant industries. The ABS data point to an increase in non-labour costs of around close CPI.

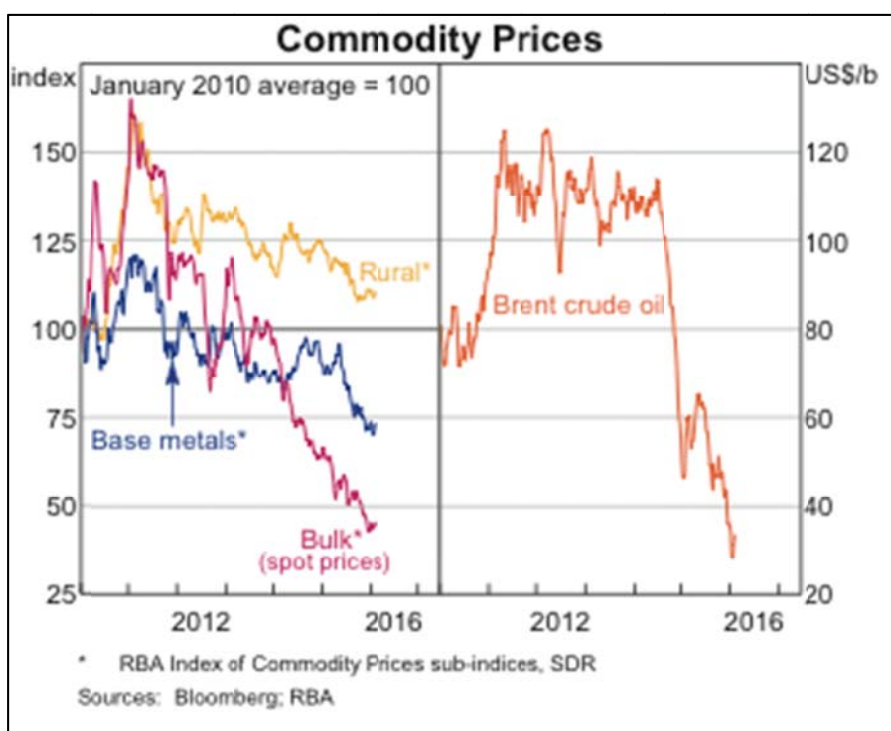
Another factor is the consideration of commodity prices, as these prices influence the cost of materials used by the DNSPs. While much of this will flow through to the capex allowance, at least some commodity costs will feed into operating costs.

³¹ Powercor, *Revised Regulatory Proposal 2016-20*, February 2016, p.69

The commodity market has been going through a period of steep decline in prices due to a chronic oversupply relative to demand. For example, the RBA reports significant declines in commodity prices including base metals and oil. Figure 4.6 from the RBA's latest Statement of Monetary Policy illustrates that since 2011 commodity prices have fallen by around 55%.³²

Given these trends, the AER's forecast of CPI annual increases in non-labour costs seems, if anything, to be overstated. However, given some prices are likely to be at the bottom of the cycle, CPI is, perhaps, a reasonable expectation over a five-year period as discussed in Section 4.3.2 above.

Figure 4.6: World Commodity Prices



Source: RBA, "Statement of Monetary Policy", February 2016, Graph 1.19, p 12.

The DNSPs have, however, generally proposed increases above CPI in non-labour costs in their revised proposals for 2016-20. For instance, Powercor proposes real price increases in "materials costs" (particularly after 2016)³³ and around zero real price increases in

³² RBA, *Statement of Monetary Policy*, February 2016, p. 12. (data as at 5 February)
<http://www.rba.gov.au/publications/smp/2016/feb/pdf/international-economic-developments.pdf>

³³ See Powercor, *Revised Regulatory Proposal 2016-2020*, January 2016, Table 4.7, p. 93.

other non-labour costs.³⁴ The net non-labour costs are therefore greater than CPI in the revised proposals.

One reason given by the DNSPs for the proposed increase in the prices of materials above CPI is based on their forecast of movement in the AUD-USD exchange rate. It is important to consider the exchange rate issue but the forecasts provided by the DNSPs consultant, Jacobs, indicates a largely constant relationship between AUD-USD over 2016-20 of around 0.70 (AUD/USD).³⁵ This does not in itself, therefore, explain a year on year real price growth in materials. Moreover, CCP3 would expect an efficient DNSP to hedge its exposure to the exchange rate.

The trends in commodity costs discussed above also illustrate that the allowances in the 2011-15 determinations were well in excess of the actual outcomes even allowing for exchange rate factors. CCP3 is interested to hear how these much reduced costs for both wages and commodities are captured in the 2014 base year for each of the Victorian DNSPs. The trends also raise further questions about why operating cost productivity continues to decline to 2014.

Recommendations:

4.1 *The AER should undertake a comprehensive review of the mechanisms available to it to drive productivity improvements for Victoria and elsewhere including the use of benchmarking to set the base year, the productivity factor in the trend analysis and the interaction of these two factors with the EBSS.*

4.2 *Separate to 4.1, the AER should provide more detailed analysis of the 2014 base year given that it benchmarking reveals a continued decline in multifactor and partial opex factor productivity.*

4.3 *The AER should require the DNSPs to explicitly identify the opex savings to consumers (and other benefits) from past expenditures on AMI, replacement capex, bushfire related asset augmentation, IT and communication systems.*

4.4 *The AER should revisit the operation of the step change component of the opex forecast and defines clear parameters around what is and what is not a step change.*

4.5 *The AER should revisit its 2008 Capitalisation Policy Guideline with the aim of progressively adopting a consistent approach across all NSPs in the allocation of costs. Current differences between NSPs, and regular changes in capitalisation of costs undermine the value of benchmarking.*

4.6 *The AER should proceed as soon as possible with the development of the new Ring-Fencing Guideline and ensure opportunities for community consultation as the outcome may have a significant impact on network prices and competitive metering.*

³⁴ Ibid, Table 4.8, p. 94

³⁵ Ibid, Table 4.6, p. 92

5. Forecasting – customer numbers, peak energy demands, and total energy to be distributed

This section covers forecasts by the DNSPs of customer numbers, peak energy demands, and total energy to be distributed in the coming regulatory period. These forecasts are important because they underlie forecasts of operating and capital expenditure, which are key components in the building block analysis undertaken by the AER to set the DNSPs' future revenue requirements. All other things being equal, over-forecasts of these numbers would result in a higher revenue requirement than is appropriate being determined by the AER.

Further, these forecasts are used directly to translate future revenue requirements into tariffs. Inaccuracies in forecasting customer numbers, peak energy demands, and total energy to be distributed for any given year will result in under- or over-recovery by the DNSP in that year against the determined revenue requirement for that year. Under a revenue cap, the amounts of any under- or over-recovery are carried over to following years, and the tariffs for those following years are adjusted accordingly. Ultimately, the adjusted tariffs fall on consumers, who will end up paying differing amounts from those that had been anticipated in the price paths in the AER's Final Decisions.

AEMO's National Energy Forecasting Reports are an authoritative well-researched source for electricity forecasts. AEMO published its National Energy Forecasting Report for 2015 in June 2015. AEMO issued an update in December 2015, but this update did not affect forecasts for Victoria.

In general, CCP3 agrees with the AER's approach to basing its forecasts on AEMO forecasting which is independent and unbiased. CCP3 recognises that the DNSPs have access to additional information in the distribution business to which AEMO does not have access. However, CCP3 considers that the information that AEMO has is sufficient for forecasting purposes, and the DNSPs have not shown why the additional information to which they have access makes their forecasting superior to that of AEMO.

5.1 Customer numbers

Customer number forecasts are important in the capex forecasts. In the Victorian DNSPs' regulatory proposals, customer numbers were the driving force behind the augex growth, except for AusNet, which reduced its augex despite its high customer number forecasts.

In its response to the proposals made by the five Victorian DNSPs, CCP3 commented that the AER had noted in its Issues Paper that the businesses' proposed growth in customer numbers was broadly in-line with recent historic growth rates, with the exception of CitiPower and Jemena. These two businesses forecast faster growth in customer numbers than has occurred in previous regulatory periods.

At that time, CCP3 looked in more detail at CitiPower and Jemena's forecasts, given that those two had been identified as being not in line with recent historic growth rates. CCP3 could not find all the data underlying the customer number forecasts, and commented

that the DNSPs should provide the underlying modelling showing how their projected growth rates are derived, to facilitate checking by AER.

In its Preliminary Decisions, the AER stated that in the case of AusNet, Powercor and United Energy it was satisfied that the trend in forecast customer numbers represented a reasonable forecast, and used customer numbers provided by the DNSP. The AER used its own forecast of customer numbers for CitiPower and Jemena.

CCP3 agrees with the AER's approach to forecasting customer numbers in its Preliminary Decisions.

5.2 Peak energy demands

The maximum flow of electricity that must be accommodated at each point on the network is a key driver of the cost of providing distribution network services. The larger the peak flow on a given part of that network, the larger the capacity of network assets must be at that location.

In its previous advice, CCP3 showed that in recent years, for each year for each DNSP the maximum demand was over forecast in all cases. Over the past few years, AEMO has also consistently revised downwards its forecast peak demands, increasing concerns about peak energy demand forecasts.

CCP3 summarised that the AER should pay particular attention to the DNSPs' maximum demand forecasts and whether they have been over-estimated, given the facts that:

- The forecasts of maximum demand are key drivers of revenue requirements;
- The DNSP forecasts exceed and contrast with AEMO's forecasts;
- The DNSPs have consistently over-forecast maximum demands in the past.

CCP3 advised that all aspects of the forecasts should be critically analysed. CCP3 concurred also with the AER's view in its June 2015 Issues Paper that growth in peak demand would depend, among other things, on the tariff structures chosen by the network businesses. These might change substantially during the next regulatory period, as discussed in section 9 of this advice.

In its Preliminary Decisions, the AER did not accept the Victorian DNSPs' forecast maximum demands. Instead, the AER utilised AEMO's 2014 transmission connection point maximum demand forecasts.

CCP3 agrees with the AER's approach to forecasting peak energy demands based on forecasts from AEMO.

CCP3 is however concerned that in its Preliminary Decision the AER accepted Jemena's peak energy demand forecast for capex purposes, but did not accept Jemena's peak energy demand forecast for opex purposes. CCP3 would expect to see consistency in the AER's decision making within a single Preliminary Decision. The issue here may be related

to CCP3's concern regarding AER staff working in "silos" which was discussed in section 1 above.

In their revised proposals, the DNSPs are now proposing higher maximum energy demand forecasts. CCP3 would support the AER if it were to update its energy demand forecasts based on the latest information available from AEMO. However, CCP3 does not otherwise support higher peak energy demand forecasts in the DNSPs' revised proposals that result from differences in methodology rather than updating of AEMO forecasts.

5.3 Total energy consumption

In its previous advice, CCP3 noted that in their regulatory proposals four of the five Victorian DNSPs were forecasting faster rates of growth in energy consumption in the future than had occurred in the past. CitiPower forecast substantially higher growth in energy delivered in the future compared to the previous regulatory period. CCP3 advised that the AER needed to consider if these growth rates were appropriate.

CCP3 noted that only AusNet Services was forecasting lower demand in the future compared to the past, despite growth in customer numbers. In order to ascertain why it might be that AusNet Services' forecast differed so much from those of the other DNSPs, CCP3 investigated the methodologies that each had used. CCP3 found that it may be significant that AusNet Services was using interval data from the rollout of Automated Metering Infrastructure in Victoria ("AMI data") in ways that other DNSPs may not be doing.³⁶ CCP3 advised that the AER should be investigating whether the DNSPs were making use of the AMI data that is available to them to refine and increase the accuracy of their forecasts.

In its Preliminary Decisions, the AER noted that energy efficiency has contributed to decreased consumption of electricity, and this trend was likely to continue. Energy efficiency measures included mandatory energy efficiency building requirements and other government incentives, as well as greater customer awareness of energy usage, improving appliance efficiencies and replacement of aging appliances.

AEMO also forecast in June 2015 that Victoria is not expected to recover to its historical high level of operational consumption (in 2008–09) until 2030–31, when population is projected to be 1.7 million higher than in 2014–15.

In its Preliminary Decisions, the AER supported the use of AEMO forecasts of total energy consumption. However, total energy consumption was not a direct driver of expenditure and regulated revenue for the Victorian DNSPs.

CCP3 would support an approach to forecasting energy consumption based on forecasts from AEMO.

³⁶ See for example AusNet Services *Appendix 4B Demand Forecasting Methodology* page 19

Recommendation:

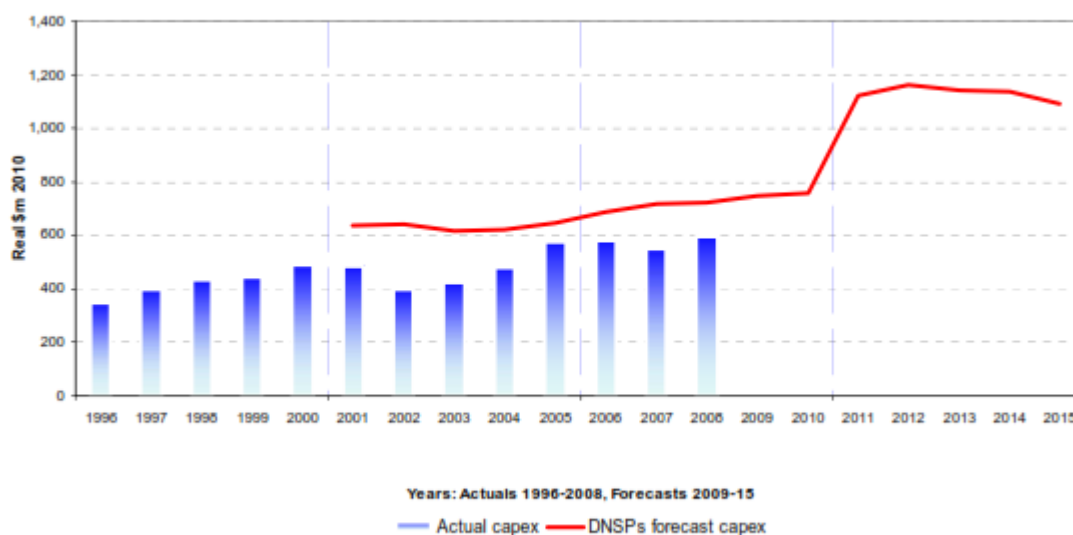
5.1 *AER should maintain its approach of basing forecasts on those from AEMO which are independent and unbiased.*

6. Capital expenditure (capex)

CCP3 has a concern that capex allowed over the years has been excessive. Even in these current Preliminary Decisions, the AER has granted more capex than was used in the 2011-15 period.³⁷

CCP3 has investigated the changes in regulated asset base (RAB) relative to the number of customers served and the peak demand they impose on the network. This investigation has been undertaken to establish whether there has been too much capex granted in the past, and in the AER Preliminary Decisions. CCP3 considers that this high level analysis the AER Preliminary Decisions deliver not only unwarranted increases in capex, but lock in the excessive amounts of capex allowed in the past.³⁸ The following chart is drawn from the AER draft decision for the review of the reset for 2011-15 period.

Figure 8.1 Capital expenditure trend analysis



Source: AER internal analysis.

This chart serves to highlight that until 2010 the overall amount of capex had been relatively steady, but with the change in the NER Chapter 6 rules that impacted the reset review for the 2011-15 period, capex claimed by the DNSPs significantly increased and so did the capex allowances granted by the AER. The outcome of this over-investment by the DNSPs throughout the NEM resulted in a decision to reduce the power of the driver to the overt over-investment ("gold plating") that was occurring. This leads to a conclusion that the actual investments made by the Victorian DNSPs in the 2011-15

³⁷ Despite the AER reducing the amount of capex in its Preliminary Decisions from the initial proposals, the revised proposals still seek more than the AER considered to be efficient in its Preliminary Decisions.

³⁸ CCP3 considers that the RAB is a critical element in the building block as it impacts the return on assets and the recovery of depreciation.

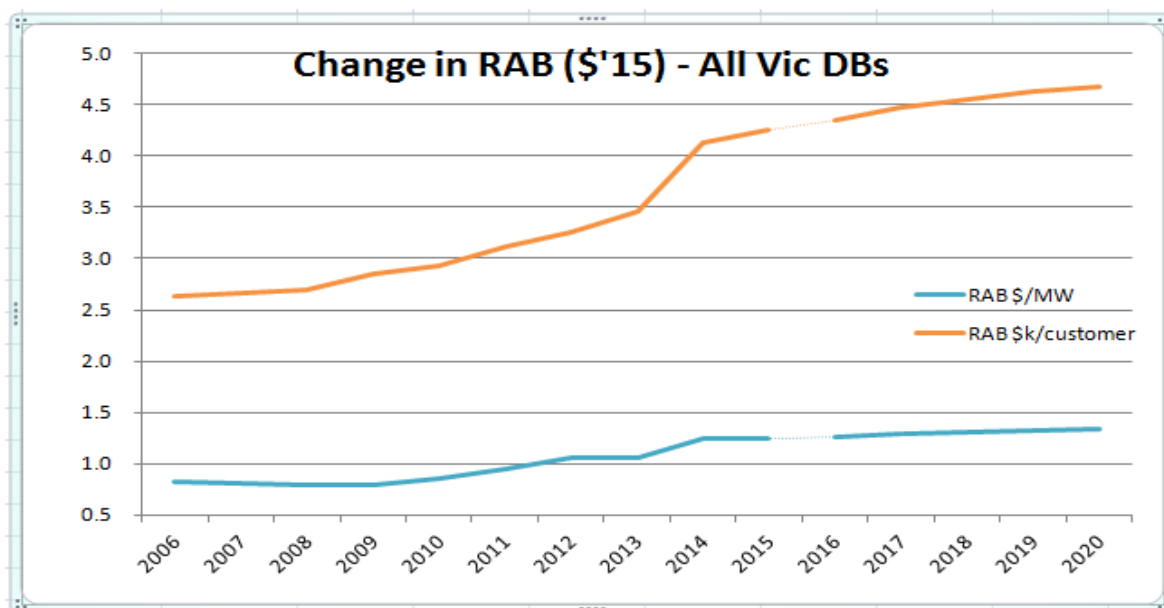
period (and allowed by the AER at the time of the reset) were probably greater than was efficient. CCP3 therefore considers that using the actual expenditure of the DNSPs during the 2011-15 period is probably not a credible representative of future need. When seen in context, CCP3 has serious doubts that any trend analysis or even modelling primarily based on 2011-15 actual costs is legitimate as it clearly reflects an aberration.³⁹ As a result, CCP3 considers that the actuals in 2011-15 should be moderated and seen in context with actuals that were outcomes before the rules incentivising overinvestment were implemented. Effectively, CCP3 considers that actuals over a longer period than the last 5 years should be used for developing views on capex trends.

Despite this clear aberration, CCP3 is aware that asset benchmarking by the AER implies that the Victorian DNSPs are among the more efficient of the DNSPs yet the chart in section 3 (Benchmarking) shows that against two primary drivers (peak demand and population), the amount of capital invested by the Victorian DNSPs continues to increase yet, as also noted in section 3, the level of service provided has remained relatively constant – i.e. for the same level of service (i.e. no increased benefit), consumers are paying for a considerably increased asset base, despite a fall in consumption and flat peak demand.

Rather than use Victorian population as a driver, CCP3 has also calculated the growth in RAB for Victoria compared to peak non-coincident demand and numbers of customers connected to the DNSPs.

The following chart reflects the RAB of all the Victorian DNSPs related to their numbers of customers connected and the total non-coincident peak demand across all five of the DNSP networks. The forecasts for customer numbers and 10% PoE for demand are from the DNSP proposals. The historic RAB and customer numbers are from actual RIN data and, for the forecast period, from the AER Preliminary Decisions (RAB) and DNSP proposals Customer numbers).

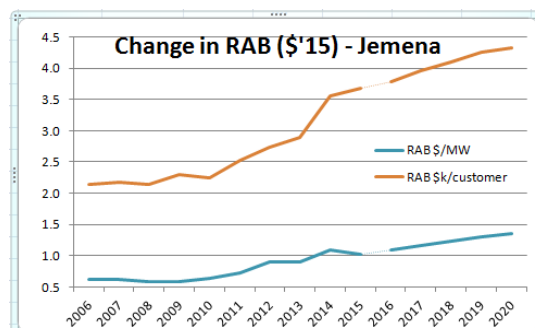
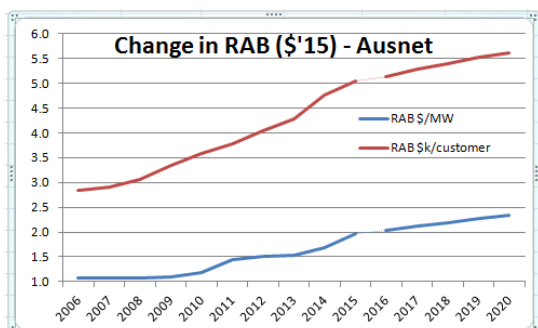
³⁹ During the 2011-15 period, the rules were changed to limit over-investment across the NEM.

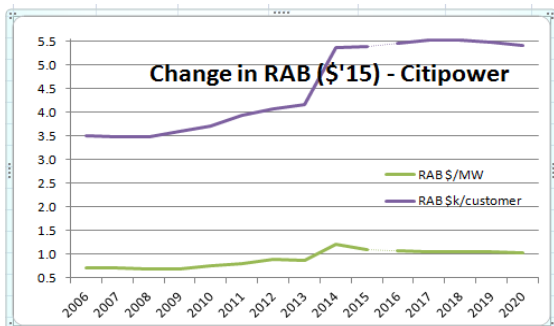
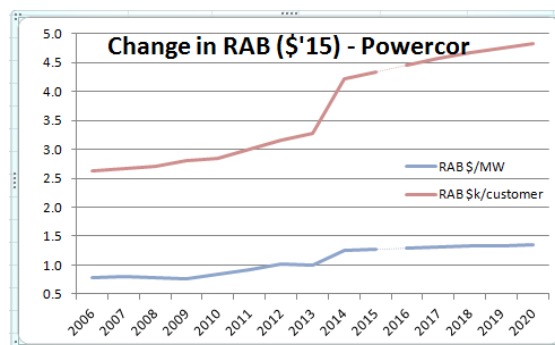
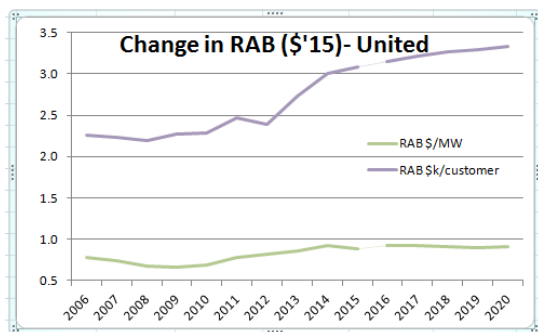


Source: AER Preliminary Decisions, RIN data, DB proposals, CCP3 analysis

As well as highlighting that the value of the assets needed to deliver to the peak demands expected has continued to increase, the chart also shows that the costs to add new customers is considerably greater than the value of adding these customers is to the already connected customers. In theory, adding new customers to the network should only occur if the additions are efficient - i.e. that the addition of the new customers does not result in increased costs for existing customers. The concept behind price cap regulation (which applied in Victoria up to and including the regulatory period ending 2015) was an incentive to the networks only to augment efficiently so that existing customers would benefit from adding new customers. In fact, the reverse has applied - that new customers have increased costs for all customers, even more so than the increases in peak demand.

The following five charts show the RAB for the five DNSPs relative to each DNSP's customer numbers and peak demand, with inputs developed on the same basis as the earlier chart for Victoria overall.





Sources: AER Preliminary Decisions, RIN data, DB proposals, CCP3 analysis

Compared to the values as at 2006, each DNSP exhibits an increase in relative RAB (against peak non-coincident demand and customer numbers) to the end of 2020 based on the AER capex and depreciation allowances are for AusNet (119% and 97% respectively), CitiPower (45% and 54% respectively), Jemena (120% and 103% respectively), Powercor (73% and 84% respectively) and United 17% and 47% respectively); over all five DNSPs the increases relative RAB are 61% and 78% respectively.

The relative consistency of the growth in RAB (whether measured against demand or customer numbers) across the DNSPs is interesting. They exhibit similar trends, albeit to a greater or lesser extent depending on the DNSP.

The conclusion drawn by CCP3 is that the AER allowances (and the DNSP actuals) for capex have been and continue to be too large as they increase the RABs (and hence the cost) for no benefit to consumers.

Recognising that RAB is a major driver of the cost for the service provision, CCP3 considers that the charts provide some insights into where the asset cost growth has come from.

1. The increases in cost compared to customer numbers reflect that adding new customers has not been efficient and the approach to new customer augmentations is socialising costs more than is efficient, resulting in existing customers paying more for their service when new customers are added.
2. To an extent, the growth in cost compared to demand is that augmentations have not been efficient.

3. The increase in RAB reflects a view that there have been too many long lived assets (e.g. replex) built into the RAB (short lived assets (such as IT) would be quickly factored out of the RAB through depreciation). This implies that more replex has been added to the network than is efficient.

At a high level, CCP3 is concerned that the continuing growth in the RAB highlights that there is an excess of capex being allowed and/or actually used and then rolled into to the RAB without any assessment as to the impact of the increase. In a climate of falling or static consumption and peak demand, it is simply unacceptable to continue to increase the asset base as has occurred for over a decade and as allowed in the preliminary decisions. That such growth should continue is something that the AER must address as the cost to future consumers will be just too great if the RAB continues to grow as in the past.

Such a view of the high capex proposed is more poignant when it is considered that the DNSPs in years past, have delivered the same levels of reliability and performance with much less capex than it is seeking for the 2015-20 period.

While an obvious solution is for depreciation to be accelerated, this will increase costs to current consumers and accelerate the current trends for consumers to use the networks less due to the high costs involved. The approach to depreciation in the revised proposals recovers capital faster than under the depreciation approach used for previous AER decisions. CCP3 is concerned that increased capex coupled to faster depreciation results in higher costs to current consumers than is efficient or needed to provide the services, and still imposes unnecessary costs on future consumers.

In this regard, CCP3 points out that the current high costs for electricity transport are already driving consumers to use the assets less in order to reduce their electricity supply costs and this is transferring the costs of the network more and more onto the remaining consumers who don't have the same ability to reduce the impacts of the higher network costs.

Overall, the capex proposals by the DNSPs and included in the AER Preliminary Decisions continues the trend of higher costs and increasing under-utilisation.

CCP3 is also concerned that the implications of the increased capex (and increased rate of depreciation) is being masked by the current low rates of return. The apparent outcome of the proposals by the DNSPs is that prices will be less or no greater than current prices. In fact, while this is true under the current low rate of return, when rates of return revert to long term averages (the current risk free rate is some 300 basis points below the long term average), the real impacts of the increased capex and increased depreciation will be seen and result in massive increases in prices.

CCP3 considers that the revised proposals and the AER Preliminary Decisions have to reflect that the increases in capex proposed will cause considerable hardship in the future and cause consumers to be even more aggressive in their attempts to reduce their exposure to the increased network prices. A significant side effect of such aggressive

actions will be for disadvantaged consumers who will have less ability to implement actions to ameliorate the future price rises and will bear the bulk of the cost impacts.

6.1 AER approach to capex

The AER has used a suite of assessment techniques to identify if the proposed capex is efficient and, if not, what might be considered efficient capex. In this regard, CCP3 sees that the AER assessments are made with little regard to the costs incurred or allowed elsewhere (e.g. increased repex is not reflected in increased productivity in opex).

Benchmarking historic asset efficiency measured by multilateral TFP, (i.e. capex per customer and capex to demand) shows that the Victorian DNSPs are in the "more efficient" range and, so too the AER asserts, is the capex forecast by the AER in its Preliminary Decisions.

The AER has also used trend analysis, category analysis and predictive modelling coupled to an engineering analysis to assist in assessing the capex needs

CCP3 accepts that the AER has been diligent in assessing the capex allowances, but points out that despite all of this pointing to efficient capex allowances, at the high level assessed by CCP3, the capex allowance cannot be seen as efficient as consumers have seen massive increases in the RABs to date in relative terms while not seeing any increased benefit, and the AER preliminary decisions continue this upward trend in the value of the RABs.

Further, CCP3 is concerned that much of the AER assessment has been compared against the capex seen over the past five years - a period where it was recognised that capex (and opex) were overly incentivised by rules that had to undergo significant change in order to reduce this incentive.

Because of its concern at the apparent dichotomy between the high level assessment and the more detailed AER analysis, CCP3 has delved more deeply into the AER tools it has used. The following sections examine in more detail why the RAB has increased so much in relative terms over the past five years and is forecast to continue increasing with the AER Preliminary Decisions, when longer term historic data indicates that the RAB should be much lower.

6.2 Augmentation capex (augex)

The driver of augex is increases in demand.

AEMO released its point demand forecasts for the Victorian DNSPs subsequent to CCP3 earlier advice to the AER. These AEMO forecasts show that the majority of connection points are expected to have lower demands than those experienced in the past. The connection point forecasts cover the forecast period 2016-20 and include the regulatory period 2021-25, so care is needed to assess only the increases in demand forecast for the first 5-6 years of the forecast rather than the entire 10 year period.

A review of the connection point forecasts is useful and frustrating - useful in that the forecasts show where there are expected significant increases in demand from the past demands recorded (i.e. the growth pockets in the networks) and frustrating because the AEMO data does not show what the rated capacities are of each connection point. Overlying this connection point data is that overall peak demand of the 2016-20 period is to be less than actually accommodated in the past and that there is an overall decline in utilisation of all DNSP assets.

Of those connection points showing significant increases in demand there are probably only five connection points: Cranbourne and South Morang (AusNet), Fishermans Bend (CP) and Altona West and (PC) and Tyabb (UE) that the point connection data implies there might be a need for augmentation. In the absence of actual ratings it is possible that some of these do not require augmentation, especially as utilisation rates across all networks is falling.

There are another 9 or 10 connection points where there is forecast a lesser increase in demand that might well be served by the current assets in place and in the absence of ratings of each connection point, it is again difficult to identify if the current assets have some spare capacity. In this regard, CCP3 noted in its earlier report that the utilisation of assets declared in the RIN data shows a significant declining trend, so it is probable that there is some spare capacity at each of these connection points.

Of the remaining 57 connection points, demand is forecast to be either much the same as in previous years or have decreases in demand forecasts. CCP3 assumes that there is unused capacity in all network assets downstream of the connection points where demand is forecast to be flat or have a small increase and therefore considers that there is little need for augmentation at these connection points.

Overall, in the absence of the actual ratings of the connection points, there are only the five connection points named above (i.e. Cranbourne and South Morang (AusNet), Fishermans Bend (CP) and Altona West (PC)) that CCP3 considers there is merit in examining the need for augmentation resulting from the increasing demand to meet the needs of the expected downstream network demand increases occurring during regulatory period 2016-2020.

As a general observation, CCP3 considers that the only augmentation capex that is required is to strengthen the existing networks to accommodate the new developments that are forecast to be developed during the 2016-20 regulatory period.

The following table comprises data from the AER Preliminary Decisions and the networks' revised proposals. It also sources data from the AER draft decision in 2009 for the actual

expenditure for the 2006-10 period to assist in comparing the longer term needs for each category.⁴⁰

Augex \$m (\$'15)	2006-2010 actual +50% ESL	2011-2015 Actual	Initial proposal 2016-20	AER Preliminary Decision	Revised proposal 2016-20
AusNet	\$224	\$460	\$314	\$267	\$329
CitiPower	\$67	\$186	\$203	\$119	\$202
Jemena	\$80	\$115	\$141	\$93	\$104
Powercor	\$155	\$217	\$362	\$242	\$311
United	\$197	\$183	\$167	\$127	\$124
Total	\$724	\$1,161	\$1,187	\$848	\$1,070

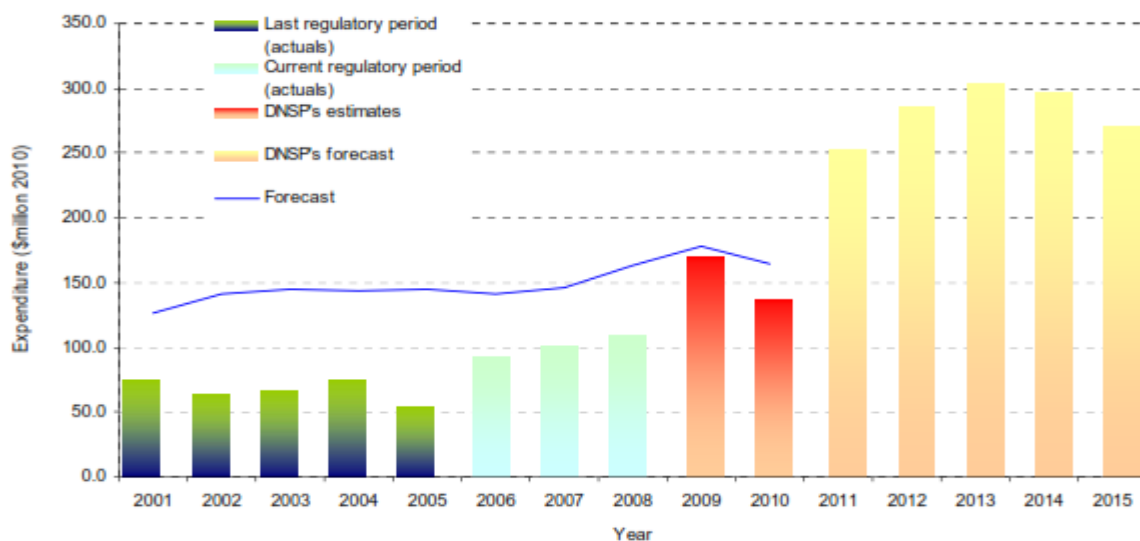
The table highlights that that the claims for augex for 2016-20 are much the same as the actual augex incurred in the 2011-15 period. It is striking that in the case of 2011-15 the period commenced with a large allowance for augex based on an expected significant increase in peak demand, driving a need for augex in the early years of the period. In stark contrast, the 2016-20 period is commencing with a forecast of little or no growth in peak demand, such that the expected peak demand by the end of the period is still below the actual peak demands seen in the past.

The longer term trend on augex is typified in the following chart drawn from the AER draft decision for the 2011-15 reset process. This shows the amount of augex since the beginning of the century to 2010.⁴¹

⁴⁰ The data in the AER draft decision for 2011-15 reset is not exactly comparable to the current assessments, as in addition to the augex/load/reinforcement and repex/RQM categories, there is also an Environmental, safety and legal (ESL) category of capex. CCP3 therefore has allocated ESL capex between augex/load and repex/RQM on a 50/50 basis. While this might not be accurate, it does assist in identifying long term trends.

⁴¹ While the chart covers all DNSPs the detailed charts for each DNSP in the same draft decision generally follow the same trend. CCP3 accepts that the forecasts for the 2011-15 decision reflect a view that demand was further increasing and that is why the AER allowed an increase in augex. That not all the allowed augex was actually used reflects the changes in the forecasts of peak demand.

Figure 8.2 Total reinforcement expenditure - all Victorian DNSPs



Note: The expenditure amounts in this figure are on a fully absorbed basis.

It is concerning that the AER augex allowances for 2016-20 are so high when compared to the actual augex in 2011-15 where, in the early years, there was an expectation of significant growth. This comparison is even starker when compared to the actual augex for 2006-10 and 2001-05 periods - two periods where significant growth occurred in peak demand.⁴²

Two major issues arise from this analysis

1. The augex incurred in the 10 years 2001-10 were periods of significant demand increases. The period 2011-15 was a period of falling demand yet the amount of augex used in 2011-15 significantly exceeded the amount of augex incurred in both the preceding periods – 2001-05 and 2006-10.
2. Over the period 1999 to 2010, the peak demand in Victoria rose from 7.5 GW in 1999 to 10.4 GW in 2009, a rise of nearly 40%. This was clearly a period of dramatically increasing demand forecasts yet at the same time the amount of unserved energy was modest and the amount of augex actually used was less than the amount sought for the 2011-15 period. Although the DNSPs were awarded significant amounts for augex in the period 2011-15 to reflect the expected and actual increases in demand for that period, they did not use the all the amounts allowed because the expected peak demands forecast did not eventuate.

⁴² For example, the peak demand seen in 2009 is one of the highest seen in the period 2000 to 2015 and still exceeds the forecast peak demands expected by 2020.

At a high level, it is clear that the amounts of augex claimed for 2016-20 and approved in the Preliminary Decisions are excessive when assessed over the longer term. While the revised proposals reduces the amount of augex from that claimed in the initial proposals, the revised amounts still exceed that considered reasonable by AER's Preliminary Decisions.

CCP3 questions whether the AER analysis, based mainly on actual augex for 2011-15 properly considers the overall longer term trend to meet peak demands expected.

At the start of the 2011-15 regulatory period, there was forecast a significant amount of growth which underpinned the augex allowances for the 2011-15 period. The 2010 ESoO forecast the medium growth of 50% PoE peak demand in Victoria to result in a 11,129 MW peak in 2015-16 and it was on this basis that the AER provided its view on the augex needs for the Victorian networks. The 2015 NEFR observes that on the same basis the forecast peak demand in Victoria for 2015-16 will be 9,783 MW - some 12% lower than the 2010 ESoO forecast. For the sake of comparison, the highest peak demand recorded in Victoria was in 2008/09, at 10,505 MW.

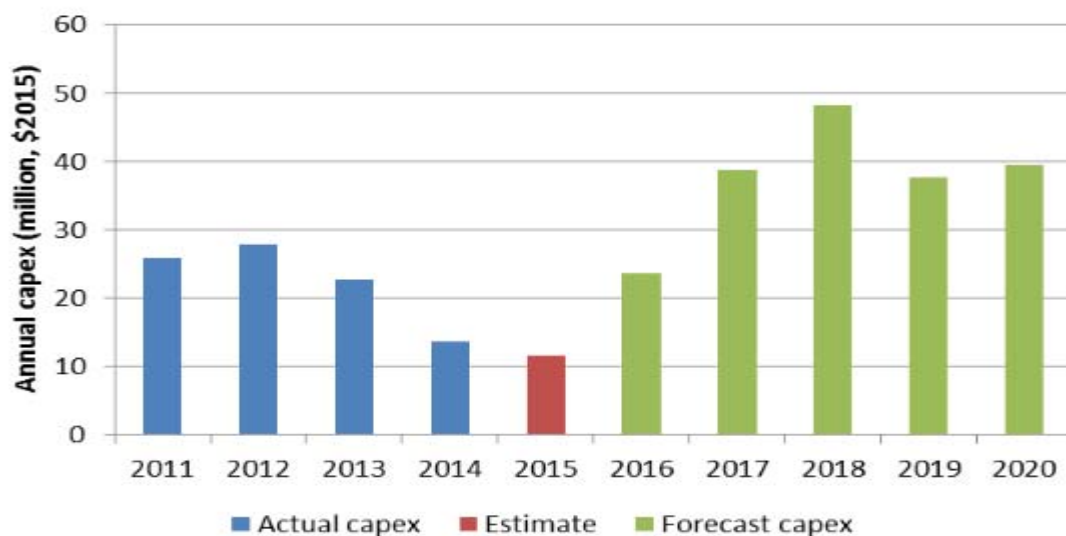
CCP3 points out that the AEMO forecasts were the basis for the AER allowances for 2011-15 period and the excessively high forecasts (which did not eventuate) were the reason for the significant under-run in augex during the 2011-15 period. AEMO commenced revising downwards its forecasts in 2013. This leads to a need for even less augex, especially after this downward trend was realised. CCP3 considers that the excessive allowance could have also contributed to inefficient augex in order to gain the long term benefits of over-investment.

So until early 2013, the augmentations that were being carried out were based on the excessively high forecasts but only when it was realised that the forecast demands were unlikely to occur did the DNSPs slow down on augmentation investments.

CCP3 considers that the AER trend analysis may well have been impacted by a slowdown in augex later in the period but equally by an incentive to spend later in the period to use up available capital. CCP3 considers that the trend analysis needs to reflect these two aspects.

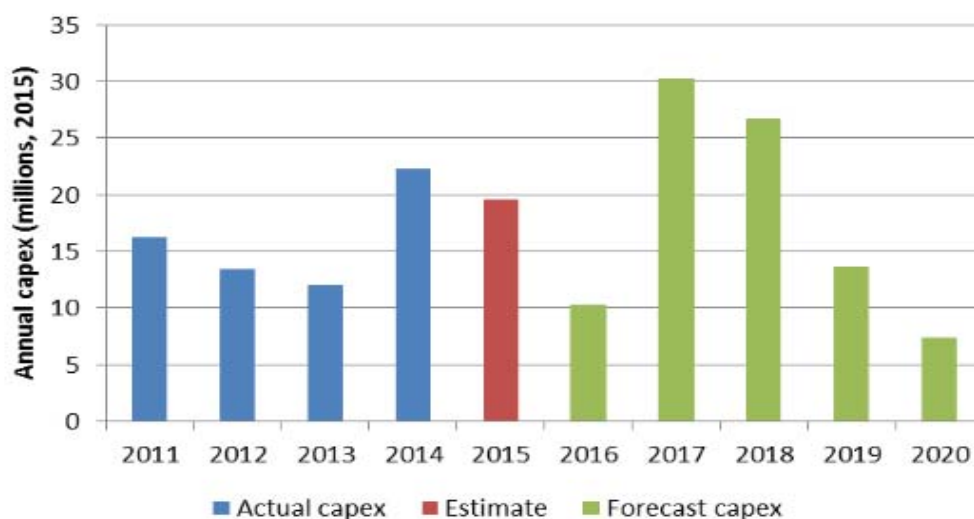
These two features are reflected in the two following charts, one for Powercor showing the first example of a distortion (as do the trend charts for both CitiPower and United) and then for Jemena (as does the trend chart for CitiPower) showing the second. AusNet clearly used most of its augex allowance in 2011-15, and its forecast for 2016-20 reflects a much reduced need for augex compared to the trend.

Figure 6.7 Powercor's demand-driven capex historic actual and proposed for 2016–20 period (\$2015, million, excluding overheads)



Source: AER analysis, Powercor's reset RIN, Powercor's response to AER Powercor 002.

Figure 6.7 Jemena's demand-driven augex historic actual and proposed for 2016–20 period (\$2015, million, excluding overheads and one-off projects)



Source: AER analysis, Jemena's reset RIN Table 2.4.6, Jemena's response to AER Jemena 002.

On the basis of this analysis, CCP3 considers that the trend is best reflected in the two or three lowest actual (as distinct from forecast) augex amounts used in the 2011-15 period as this is more consistent with the longer term historical amounts. For example, in the case of Powercor, CCP3 considers that augex for 2016-20 should be about 60% of the actual augex used in 2011-15.

CCP3 is aware that the DNSPs all consider they must increase investment in certain pockets of their networks where demand is rising. In principle, CCP3 agrees that where demand is forecast to rise, investment is required. However, CCP3 is also aware that it is easier to argue for an increase in capex from a bottom up approach but the top down analysis based on demand increases across the networks does not support the purported need. The low utilisation of the existing assets reinforces this view.

The bulk of augex assessed by AER as being appropriate is allocated to AusNet and Powercor, with the AER assessing the other three DNSPs all having similar but significantly lesser amounts than allowed AusNet and Powercor. The revised proposals by the five DNSPs show that AusNet and CitiPower maintain their views that their augex initial proposals are correct and no reduction should be made. In contrast, Jemena and United have accepted the AER decision and Powercor's revised proposal reduces its initial claim but not to the level of the AER's assessment in its Preliminary Decisions.

CCP3 is not convinced that the AER Preliminary Decisions for augex are efficient based on the long term historical data or the high level assessment of need and the low utilisation of the existing assets. Further, even with the AER proposing a lesser amount of augex, this still results in the RAB increasing but without any clear benefit accruing to consumers. As the DNSP revised proposals overall do not reduce the augex to a lesser amount than allowed in the Preliminary Decisions, CCP3 also considers that the revised proposals are not efficient (except perhaps for United which slightly reduces its augex from that allowed by the AER in the United Energy Preliminary Decision and below the level seen in 2006-10).

CCP3 makes the following observations on specific issues:

- Some DNSPs claim that the AEMO forecasts should not be relied on and contain errors. CCP3 considers that the AER must use independent advice on forecast demand as the DNSPs have a vested interest in overstating future demands as this has the potential to overstate their augex needs leading to a potential benefit under the capex incentive scheme (CESS). Further, increasing capex has the potential to further improve reliability providing a benefit under the reliability incentive scheme (STPIS). In contrast, AEMO not only has the necessary skills to forecast expected demand but has no interest in overstating (or indeed understating) the outcomes. That the DNSPs consider their forecasts as more accurate than those of AEMO, CCP3 points out that the DNSPs were just as wrong in their 2010 forecasts for 2011-15 as AEMO was.
- CCP3 is concerned that the DNSPs have not looked at more cost effective solutions to expected increases in demand (and the resultant need to augment the networks). CCP3 points to the AusNet program which avoids the need for augmentation to accommodate relatively short periods of very high demand by granting discounted tariffs to some end users who are prepared to load shed on demand. Such an approach reflects the reality that for most of the time the networks are under-utilised and, in many cases, is much more cost effective than

augmentation. In this regard, CCP3 points to the ever increasing RAB values (in relative terms) highlighting the need to find more cost effective solutions to augmentation (especially as there is acceptance that the demands in the DNSP networks are increasingly becoming more "peaky").

- Reference is made by some DNSPs that they need augex in order to accommodate the increasing connection of rooftop PV, and not implementing network augmentation will prevent some consumers from benefiting from lower electricity costs. CCP3 points out that network charges are the single largest component of the delivered cost of electricity. Proposals to increase the cost of the network in order to potentially reduce the price of a lower cost element in the supply chain do not seem efficient. In particular, the cost of the network augmentation is socialised to all consumers, yet the benefits of the rooftop PV are taken by individual consumers. This means that there would be an increasing cross subsidy which will particularly negatively impact disadvantaged consumers.
- AusNet rejects the AER Preliminary Decision to reject undergrounding of some cables, because pruning is insufficient or not possible in order to provide vegetation clearance. CCP3 comments that AusNet does not appear to have examined the issue in its entirety. For example, the NPV of the opex avoided could offset much of the capital proposed, yet no reduction in opex is offered. The new vegetation clearance regulations came into force in 2010, and CCP3 addresses the impacts of the 2010 regulations and the 2015 regulations in section 4 of this advice.
- CitiPower rejects the AER view that decommissioning of the 22kV feeder from WMTS is not needed. CCP3 agrees with the AER that this work is not initiated as a result of increased demand; therefore it is a repex project. Just because previous similar projects might have been classified as augex does not change the fact that the project is not augex as it is not a result of demand increases. The AER has not rejected the project but considers that it should be part of the repex program. If CitiPower considers the project is required, then CCP3 considers it should be carried out within the repex budget.

6.3 Customer connections

The AER Preliminary Decisions on customer connections reflected a view on forecast volumes of new connections and used historical data to assess the cost of each connection. Capital contributions are assessed by using the ECSV guidelines and/or NER Chapter 5A. In its earlier advice, CCP3 observed that although there is forecast legislative change to change the capital contribution assessment process from the ESCV guidelines to the AER guideline, the basis of the calculations should continue on current rules until they are changed. If and when the legislative change occurs, then there should be a pass through change (positive or negative) triggered to reflect the difference in approach.

The Preliminary Decisions accepted the DNSP proposals in the case of AusNet, Jemena and United. The AER did not accept the proposals by CitiPower and Powercor, although

the AER advised CitiPower that the AER had made an error in its calculation. CCP3 considers that the AER approach in relation to the CitiPower and Powercor allowances for customer connections is appropriate as it is consistent with what has been accepted by the other DNSPs, and therefore by the notional efficient network.

However, CCP3 is concerned at the significant differences between the DNSPs with regard to the amounts of customer contributions recovered for the new connections. In percentage terms these differences are significant, and this raises the concern of CCP3 that the different DNSPs have differing approaches to implementing the guidelines on customer connections. The less the new customers contribute to new connections, the more is carried by existing customers, effectively socialising the costs of new connections. The more of the cost that is socialised, the greater the likelihood of the DNSPs encouraging new connections. This can lead to inefficient outcomes.

The DNSPs have revised their forecasts of new connections with some exhibiting significant increases. CCP3 considers that any variations to future growth need to be based on fully independent assessments and this should be the only basis for revising the AER Preliminary Decisions.

There is also some objection to the AER use of historical data as the basis for the cost of high volume connections. CCP3 considers that just as opex and capex trends provide powerful arguments for assessing realistic future cost allowances, so too do the historic costs for providing new connections.

6.4 Replacement capex (repex)

CCP3 is very concerned at the extent of repex allowances that the AER has provided to the DNSPs in its Preliminary Decisions. The DNSPs have all rejected the AER allowances in their revised proposals, and sought more than the AER allowed in the Preliminary Decisions. Overall, the amount of repex sought by the DNSPs in the revised proposals is only marginally less than that initially sought, although Jemena's revised proposal increases the amount of repex seen as appropriate in the initial proposal.

The following table comprises data from the AER Preliminary Decisions and the networks' revised proposal. It also sources data from the AER draft decision for 2011-15 summarising the actual expenditures in each category⁴³ for the 2006-10 period. The allowed amounts for 2011-15 were drawn from the AER Final Decision

⁴³ The data in the AER draft decision for 2011-15 reset is not exactly comparable to the current assessments as in addition to the augex/load/reinforcement and repex/RQM categories, there is also an Environmental, safety and legal (ESL) category of capex. CCP3 therefore has allocated ESL capex between augex/load and repex/RQM on a 50/50 basis. While this might not be accurate, it does assist in identifying long term trends.

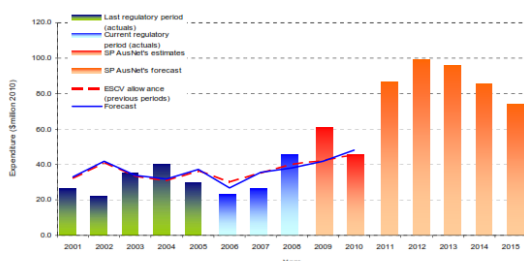
Repex \$m (\$'15)	2006-2010 RQM +50% ESL actual	2011-2015 allowed RQM + 50% ESL	2011-2015 Actual	Initial proposal 2016-20	AER Preliminary Decision	Revised proposal 2016-20
AusNet	\$270	\$552	\$687	\$901	\$758	\$804
CitiPower	\$205	\$300	\$153	\$260	\$199	\$260
Jemena	\$96	\$196	\$163	\$224	\$224	\$256
Powercor	\$314	\$558	\$443	\$722	\$609	\$672
United	\$146	\$350	\$406	\$585	\$424	\$564
Total	\$1,031	\$1,956	\$1,852	\$2,692	\$2,214	\$2,556

The table highlights that the 2011-15 actual repex is a massive increase from that used in the previous (2006-10) period. While AusNet and United overspent on allowed repex in 2011-15, the other three DNSPs underspent their allowances. Despite underspending by three of the DNSPs all are seeking considerably more repex than was spent in 2011-15, and over twice what was spent in the 2006-10 period.

CCP3 has deep concerns that repex forecasts by the DNSPs and that allowed by the AER for 2016-20 are excessive, and reflect the actual over use of repex in 2011-15. The repex used overall in 2006-10 was nearly half that used in 2011-15. This raises concerns that the AER repex allowance for 2016-20 is based on an erroneous and overstated basis. To test this, CCP3 has identified that long term repex has been considerably less than actually used in 2011-15, yet the reliability of the service provided in 2006-10 is much the same, at a time when consumers were getting the same service as now, but at a considerably lower RAB and hence cost.

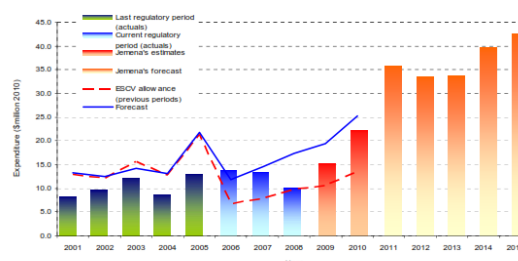
The longer term trend on repex is typified in the following charts drawn from the AER draft decision for the 2011-15 reset process, and shows the actual amount of Reliability, Quality Maintained (RQM) capex from 2001 to 2010.

Figure 8.9 SP AusNet RQM capex — historical and proposed (\$'m, 2010)



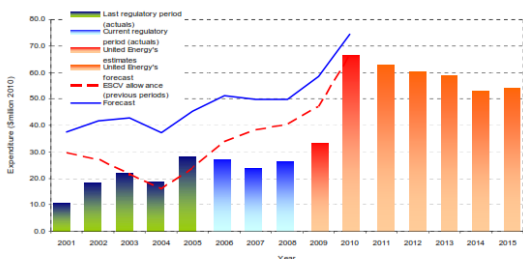
Source: RIN templates. These numbers are fully absorbed as historical allocations were not available.

Figure 8.7 Jemena RQM capex— historical and proposed (\$'m, 2010)



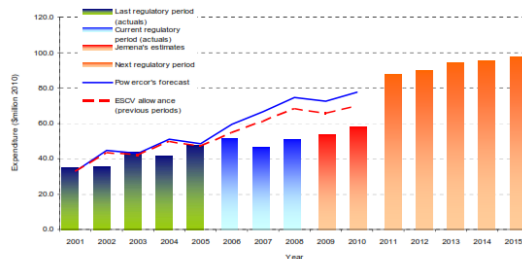
Source: RIN templates. These numbers are fully absorbed as historical allocations were not available.

Figure 8.11 United Energy RQM capex — historical and proposed (\$'m, 2010)



Source: RIN templates. These numbers are fully absorbed as historical allocations were not available.

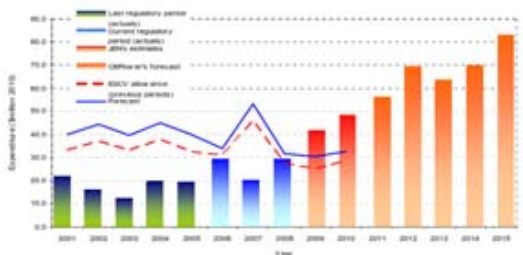
Figure 8.5 Powercor RQM capex— historical and proposed (\$'m, 2010)



Source: RIN templates. These numbers are fully absorbed as historical allocations were not available.

Source: AER DD 2011-15 reset

Figure 8.3 CitiPower RQM capex— historical and proposed (\$'m, 2010)



Source: RIN templates. These numbers are fully absorbed as historical allocations were not available.

A common theme over time for all DNSPs is that they forecast considerably more RQM than they actually used for the decade 2001-10, and over the same period they did not use all the RQM allowed. All DNSPs forecast RQM to be much higher in 2011-15, yet other than AusNet and to a lesser extent United, there was significantly less repex used than was allowed for the period. Reliability was maintained at much the same level as occurs now and is forecast for the 2016-20 period.

So why are the allowances in the AER Preliminary Decisions (and DNSP claims) so much higher than the longer term trends, and the actual repex seen in 2011-15 and over the 2001/2010 periods?

First, CCP3 considers that the AER has not addressed in context the actual trends over the 15 years of regulation. CCP3 considers that the most important outcome of whether sufficient repex has been used is whether the reliability measures (SAIDI, SAIFI and USE) show an adverse trend. In all cases, reliability did not suffer as a consequence of the lower repex in the first decade or since 2011. There is, however, a very good chance that the reliability measures for 2016-20 will show improvement as a result of the higher repex in 2011-15, whereas in 2001-10 the lower levels of repex delivered similar levels of reliability to those now seen. As noted in CCP3 earlier advice, benchmarking shows that overall, reliability has been static or only marginally improved since 2006. This indicates that the historic levels of repex have been maintaining the average reliability sought by consumers.

Thus on the basis of long term trend analysis, historic repex has been sufficient to maintain reliability at levels acceptable to consumers. Therefore the increase in repex allowed by the AER is unnecessarily high and is likely to lead to improved reliability which

consumer engagement has clearly advised consumers do not want – i.e. they are not willing to pay more for improved reliability.

Second, AER repex modelling is flawed, not so much by the structure of the model, but by the inputs used. The repex model uses as inputs the actual replacement rates for each element actually used by the networks. The replacement rates are then multiplied by the cost of each element activity derived from the category analysis data provided by the DNSPs. In theory, the cost of each activity for each DNSP is benchmarked to ensure that the rates are comparable across all DNSPs.

However, CCP3 identifies that the inputs show significant anomalies. For example:

- A 22 kV wood pole in United's area costs \$5400, yet in CitiPower's area it costs \$3200, and in Jemena's area it costs \$4400. There is a high degree of commonality in the environments in which these DNSPs operate. They all have significant amounts of urban customers, yet there is significant variation between the costs for the same activity.
- The cost for wood poles also varies when the voltage of the conductor changes. In United's repex, the cost for a wood pole carrying an 11 kV conductor is \$4100, yet for a pole with a 22 kV conductor the cost is \$5400 and for 66 kV conductor \$6300. CCP3 points out that the wood pole for carrying each of the different voltage conductors is physically much the same for each voltage (except maybe for length of the pole and increased insulation) and CCP3 questions why there are such different prices for each. Similar differences apply for concrete and steel poles when carrying conductors of different voltages.
- An 11 kV wood pole is replaced every 69.8 years yet a 22kV wood pole is replaced every 64.7 years and a 66 kV wood pole every 63.5 years. As each pole is physically much the same, CCP3 questions why there are different replacement durations dependent on the voltage carried by the conductors supported by the poles. Even more striking is the replacement durations for steel poles for different voltage conductors. More detail is provided in the table below extracted from the AER repex models.

POLES	Replacement life
> 1 KV & <= 11 KV; WOOD	69.8
> 11 KV & <= 22 KV; WOOD	64.7
> 22 KV & <= 66 KV; WOOD	63.5
> 1 KV & <= 11 KV; CONCRETE	47.7
> 11 KV & <= 22 KV; CONCRETE	43.2
> 22 KV & <= 66 KV; CONCRETE	45.1
> 1 KV & <= 11 KV; STEEL	44.8
> 11 KV & <= 22 KV; STEEL	15.4

Source: AER repex models

- As seen in the table, 22kV wood pole is replaced every 64.7 years yet a 22 kV concrete pole replaced every 43.2 years and a 22kV steel pole every 15.4 years. The cost for concrete and steel poles is significantly more than for wood poles. CCP3 would expect that the materials of the concrete and steel poles would give a longer life than wood poles. Further, if concrete and steel poles are replaced more frequently than wood poles then it is inefficient to use higher cost options which have shorter lives.
- Similar variations in replacement lives depending on the service voltage apply for switchgear and transformers, as shown in the following extract from the repex model.

ASSET	TYPE	Replacement life
SWITCHGEAR	< = 11 KV ; SWITCH	64.3
	> 11 KV & < = 22 KV ; SWITCH	68.3
	> 22 KV & < = 33 KV ; SWITCH	57.2
	> 33 KV & < = 66 KV ; SWITCH	65.5
	> 66 KV & < = 132 KV ; SWITCH	40.3
TRANSFORMERS <=22kV, multiphase	POLE MOUNTED ; < = 60 KVA	56.4
	POLE MOUNTED ; > 60 KVA AND < = 600 KVA	53.1
	POLE MOUNTED ; > 600 KVA	40.4

Source: AER Repex models

These examples show that there is considerable concern about the inputs to the repex model, and these could lead to the repex model delivering much higher allowances than would be expected if more accurate and appropriate data was used.

In its earlier report, CCP3 commented that it was

"...very concerned that the diversity in expected asset lives between the five Victorian DNSPs (and with those across the NEM) and considers that the AER needs to establish asset lives appropriate to the notional efficient DNSP."

The further investigation by CCP3 into the inputs into the AER modelling reinforced this view and that there is a need for consistency between the cost for asset replacement and for the duration of asset lives before replacement; such a change should apply to all DNSPs across the NEM on a common basis.

Overall, CCP3 considers the AER has erred in increasing the amount of repex to each of the DNSPs from historical levels as it appears that lower levels of repex would deliver the same levels of reliability as now and as sought by consumers. The basis for this CCP3 view is that the AER models have used input data that is suspect and the AER has not considered trend data over a sufficiently long period and compared this to the outputs achieved for reliability.

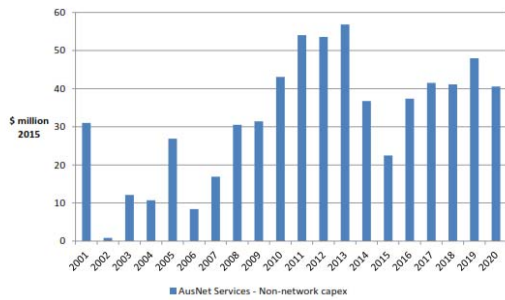
6.5 Non-network capex (IT)

In its earlier advice, CCP3 commented that it saw the need for non-network capex (especially IT) to reduce from previous levels, and cited the AusNet proposal as an example where a forecast reduction was seen. CCP3 is still concerned about the amounts of non-network capex being sought across all the DNSPs and accepted in the AER's Preliminary Decisions. CCP3 considers that the continued (even increasing) high levels of non-network capex are contributing to the overall trend of increasing RAB levels but are not delivering benefits to consumers.

While AusNet has forecast less non-network capex than in the 2011-15 period, the forecast levels for 2016-20 are still very high compared to the long term levels seen in the 2001-10 periods.

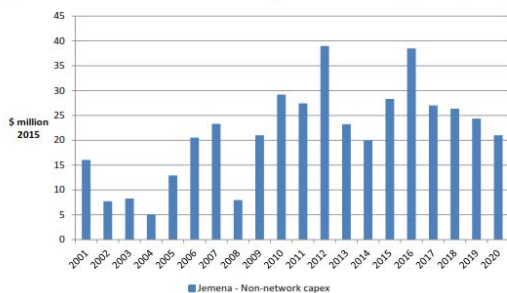
In contrast, all the other DNSPs are forecasting considerably more non-network capex for the 2016-20 period than was incurred in the 2011-15 period, but all DNSPs including AusNet are forecasting non-network capex well above the long term averages of the 2001-10 periods. This is seen in the following charts from the AER Preliminary Decisions.

Figure 6.18 AusNet Services' non-network capex 2001 to 2020 (\$million, 2015)



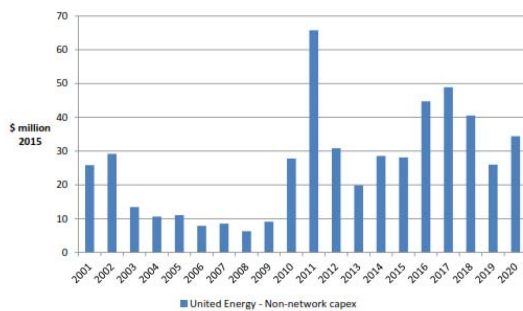
Source: AusNet Services, Regulatory information notice, template 2.6; AusNet Services, Category Analysis RIN 2014, template 2.6; AusNet Services, RIN response for 2011-2015 regulatory control period, template 2.1.1; AER analysis.

Figure 6.17 Jemena's non-network capex 2001 to 2020 (\$million, 2015)



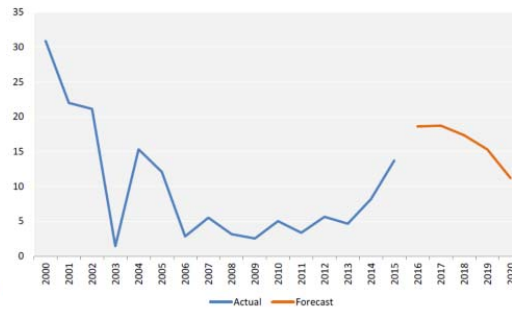
Source: Jemena, Regulatory information notice, template 2.6; Jemena, Category Analysis RIN 2014, template 2.6; Jemena, RIN response for 2010-2015 regulatory control period, template 2.1.1; AER analysis.

Figure 6.17 United Energy's non-network capex 2001 to 2020 (\$million, 2015)



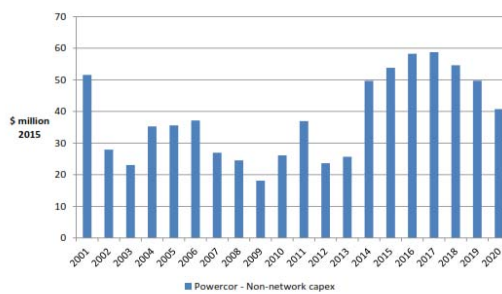
Source: United Energy, Regulatory information notice, template 2.6; United Energy, Category Analysis RIN 2014, template 2.6; United Energy, RIN response for 2011-2015 regulatory control period, template 2.1.1; AER analysis.

Figure 6.20 CitiPower's non-network capital expenditure (\$ million, 2015)



Source: CitiPower, 2016-20 Price Reset Appendix E Capital Expenditure, April 2015, p. 134.

Figure 6.19 Powercor's non-network capex 2000-01 to 2019-20 (\$million, 2015)



Source: Powercor, Regulatory information notice, template 2.6; Powercor, Category Analysis RIN 2014, template 2.6; Powercor, RIN response for 2010-2015 regulatory control period, template 2.1.1; AER analysis.

It is telling from the more detailed analysis carried out by the AER that of the four components that comprise non-network capex (IT, fleet, property and equipment) the three of fleet, property and equipment all exhibit a reasonably consistent pattern which reflects long term consistency over time: the forecast capex for these three categories is consistent with the historic capex for these categories. In contrast, the IT capex elements are significantly higher than the historic IT capex. As noted earlier, excessive capex has resulted in the ever increasing sizes of the RABs.

All the DNSPs have proposed increases in their IT capex to accommodate the Power of Choice (PoC) initiatives⁴⁴ added to the Rules with the bulk of the PoC increased IT capex based on metering competition, although there are other elements of the PoC rule changes also included in the costs.

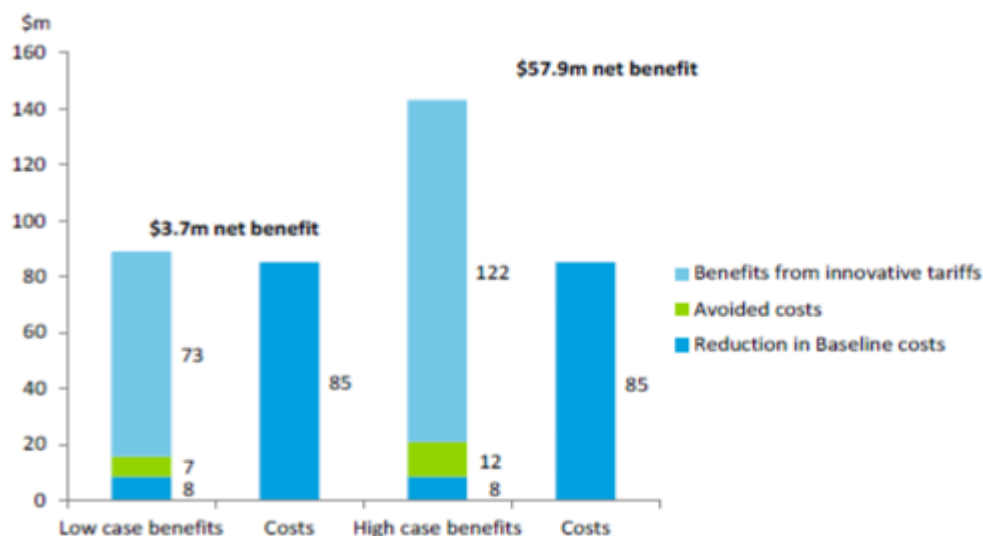
The vast difference in the costs proposed by each of the DNSPs to accommodate the rule changes is concerning. For example, AusNet considers that it needs an additional \$47m to accommodate the PoC changes. Powercor has reduced its compliance IT in its revised proposal from that sought in the initial proposal, yet included the cost of PoC IT in this capex element, thus implying that the IT costs relating to PoC are included at no additional cost (or even as a negative amount). CCP3 is not convinced that there is a need to increase IT costs to accommodate the PoC changes. A review of the AEMC final determination for the rule changes (especially the increase in metering contestability) does not identify that it expects costs to be incurred as a result of the changes.

It is telling to CCP3 that the increases in IT capex have not resulted in benefits to consumers. As consumers are under-writing the cost of the IT capex, it is reasonable to expect that consumers see a benefit from this ever increasing spend. In practice, consumers have not seen any increase in reliability or reduction of costs as a result of this very expensive element of capex. The AER has a responsibility to ensure that the expenditure is efficient and that the costs are more than offset by the benefits to consumers. At a fundamental level, CCP3 points out that the IT systems in place in 2015 adequately meet the needs of consumers for reliability of supply yet all the DNSPs are seeking to replace existing assets with more expensive (and presumably with more ability than the existing equipment), yet the outcomes for consumers are only increased costs when cost reductions would be expected from more expensive and versatile IT systems.

CCP3 also notes the AER observations on the IT costs for the CitiPower and Powercor IT program for the customer relationship management and billing systems and Smarter Grid projects. In its earlier report, CCP3 commented that it was not convinced that the proposed program delivered a net customer benefit, despite the assessment made by Deloitte Access Economics (DAE) that there was a positive NPV for the work. The following chart shows that the assessment by DAE considers that the low case benefits yield a positive 4% NPV benefit and the high case a positive 67% NPV benefit, with the bulk of the benefits coming from "innovative tariffs". This is shown in the following chart included in the CitiPower and Powercor proposals.

⁴⁴ UE already had included for the impacts of the Power of Choice amendments proactively based on the AEMC draft decision.

Figure 7.13 Net economic from investing in a new CRM and billing system



Source: DAE, *Investing in a new billing and customer relationship management system*, 16 December 2014, p. 4.

CCP3 commented in its earlier advice that it was concerned that the benefits to consumers might not warrant the cost of the project, and that the benefits were not seen in the forecast opex and capex. Additionally, the bulk of the benefits comes from "innovative tariffs", but the Tariff Structure Statements (TSS) do not indicate that these are to be implemented, and further, the Victorian Government has decided that the change in the tariffs to incorporate demand based tariffs must be on an "opt in" basis. This indicates that the bulk of the savings might well not eventuate for many years.

In its assessment approving the project, the AER commented that the future savings in future capex and opex savings are not seen in the forecast costs because:

"...such benefits may not emerge within this regulatory control period."⁴⁵

CCP3 points out that using the AER proposed rate of return as a discount rate, the NPV of the project reduces by about 15%⁴⁶ if there are no benefits included in the first year of the project, and by similar amounts each subsequent year. If it takes five years to start delivering benefits (i.e. deferred for an entire regulatory period as noted by the AER), then the NPV is 85% less than the NPV that would be delivered if the benefits started being delivered immediately. Such a delay eliminates any of the benefits arising from the project. CCP3 finds the AER acceptance of this program with potential delays in delivering benefits to consumers quite disturbing.

⁴⁵ For example see page 6-134 of the Powercor Preliminary Decision attachment 6

⁴⁶ This percentage reduction increases dramatically if the DNSP proposed rate of return are used for the discount rate.

Overall, CCP3 considers that the proposed IT programs are still excessive and add to the overall concern that the DNSPs, with the support of the AER, has allowed the RABs to increase to excessive levels

6.6 Victorian Bushfires Royal Commission (VBRC) capex

CCP3 recognises that the capex related to the Victorian Government's decision to implement the Victorian Bushfire Royal Commission (VBRC) recommendations will increase costs to consumers.

CCP3 considers that the AER decision to move a large proportion of the VBRC capex (especially that for recommendation 27) to be a contingent project is sensible and is supported, as it is still unclear as to what the costs will be to implement the recommendation.⁴⁷

There appears to be some confusion as to the implementation of the Rapid Earth Fault Current Limiting (REFCL) devices which have been identified as providing a relatively low cost solution to achieving recommendation 27. CCP3 understands that the REFCL device can be operated in two modes – one where supply continues after triggering the REFCL, and another where supply stops until the powerline is repaired. To implement the first option requires the replacement of all surge diverters on the feeder with a REFCL fitted; such replacement of all surge diverters will be at significant expense. The upside of this is that supply is maintained. This would be a benefit to consumers through increased reliability, and would deliver a reward to the DNSP under the STPIS. With the second option, there is no requirement to replace all the surge diverters, and reliability would be maintained at current levels.⁴⁸

Consumer engagement has identified clearly that consumers do not want to pay more for improved reliability. On this basis, it is clear that the first option would not be seen by consumers to provide a benefit that is valued by consumers through increasing reliability, when coupled to the higher costs for replacing all the surge diverters. The second option must be seen as preferable, based on consumer engagement outcomes.

CCP3 can see that maintaining supply could be an advantage during a bushfire, as many homes use electric powered pumps and these would be still available during a bushfire. Recognising that many residences have already purchased their own generators to provide power for their pumps when the electricity supply fails there is a question as to whether the cost of the surge diverter replacement program is efficient. Such an assessment would also have to recognise that powerline failures happen at times other than when bushfires occur when the loss of supply might not be as critical as during a bushfire.

⁴⁷ CCP3 understands that the Victorian government has decided that the REFCL technology meets the requirements of recommendation 27, and this program can now be implemented.

⁴⁸ CCP3 is not aware of the extent to which surge diverters will need to be replaced under the second option, or if any need to be replaced.

Further, the loss of supply on a feeder that has failed might have no bearing on where the bushfire might travel. For example, it has been asserted that one of the Black Saturday bushfires was triggered by a fallen powerline feeding north near Kilmore. The bushfire travelled south east from the apparent trigger point, so those impacted by the Kilmore bushfire would not necessarily be the beneficiaries of continued supply on the feeder where the fault occurred.

DNSPs have been clear that the savings that might occur from providing lower reliability are quite modest and on this basis their consumer engagement has identified the savings are not worth the penalties from lower reliability. On the same basis, the value of the reliability improvement would be modest (should consumer engagement have supported the increased reliability), and would not reflect the high cost associated with surge diverter replacement program.

On this basis, CCP3 considers that the improved reliability from maintaining supply through replacing surge diverters on feeders having REFCL devices is not efficient, nor would be sought by consumers.

6.7 Regulatory depreciation

The DNSPs have proposed a change in approach to regulatory depreciation. Historically, the AER and the DNSPs have used the weighted average remaining life (WARL) approach to setting the regulatory depreciation allowance and used actual capex to calculate the depreciation allowance when rolling forward the RAB to the start of the next regulatory period.

In its Better Regulation program, the AER determined that generally in future, it would use the forecast depreciation set at the start of a regulatory period to depreciate the assets as this provided an incentive to limit capex. This means that it is important that the forecast depreciation is as accurate as possible.

DNSPs are now seeking to change from the WARL approach to what the AER has termed a year-by-year approach to calculate depreciation. The year-by-year approach requires much more intensive calculation for the current reset process, and this intensity will increase in the future as the complexity increases. CCP3 considers that consumers should not be required to pay any increased costs (i.e. in opex and IT) for the networks to implement this new depreciation approach as there are lower cost and just as acceptable methods for calculating depreciation (e.g. the WARL approach). The recovery of the future costs from this ever increasing complexity to depreciation will be naturally recovered under the base step trend approach to setting opex. CCP3 seeks assurance that the AER will not permit this increasing cost to be recovered from consumers in the future.

In the regulatory reset for South Australian Power Networks (SAPN), the AER provides significant detail of this new approach to regulatory depreciation – a year-by-year approach where each asset class in the capex in each year is depreciated separately from that year. In theory, this approach reflects more accurately the return of the investment as it is based on the actual asset mix as invested in each year. The AER discussion in the

SAPN final decision points out that the year-by-year approach does not provide a counter to the potential future impact of technological change which the WARL approach does to a greater extent. CCP3 is also concerned whether the use of forecast depreciation in the roll forward model might provide an incentive actually to implement different asset lives than forecast, as the use of forecast depreciation is intended to enhance the incentive to limit capex.

Despite these concerns, the actual allowance for depreciation allowed SAPN for the period 2015/20 using the year-by-year approach resulted in a massive increase in the return of assets allowance compared to the WARL approach. This raises considerable concern of current users about the approach as it significantly increased the revenue that current consumers must provide, presumably with a benefit for future consumers.

The over-arching requirement of the AER is to ensure that the NEO is achieved. CCP3 does not consider that a transfer of wealth from current consumers to future consumers (i.e. an intergenerational transfer) complies with the NEO. If SAPN's current consumers are paying considerable more for the return of assets this implies that future consumers using SAPN assets will benefit at the expense of current customers.

CCP3 has investigated why this massive increase in return of assets in the SAPN decision has occurred. In theory, the year-by-year approach is effectively a refinement of what occurs under the WARL approach, as it reflects the actual asset mix in each year's capex. CCP3 considers that the error made by the AER in the SAPN decision is from back dating the start of the new approach to the beginning of the 2010-15 period. The depreciation allowance for the 2015-20 period is much greater than that calculated under the WARL approach. This indicates that the year-by-year approach reflects an under recovery in another regulatory period. CCP3 questions whether there may have been an under-recovery in the 2010-15 period which has been transferred to the 2015-20 period, as the allowance in the revenue for the depreciation in the earlier period was based on using the WARL approach to build up the allowed revenue.

CCP3 questions the AER decision in the SAPN final decision to back date the calculation using the year-by-year approach to the start of the 2010-15 period. CCP3 considers that if there was a decision that the year-by-year approach is compliant with the rules, then the transition should have applied from the start of the 2015-20 period, and not be back dated. The AER does not explain why it decided to back date the approach, yet such an explanation is essential as it resulted in such a massive increase in revenue allowance for the 2015/20 period.

Some of the DNSPs had initially proposed to use the WARL approach, while others proposed the year-by-year approach. With the release of the revised proposals, all the Victorian DNSPs have signalled a change to the year-by-year approach, and have indicated a desire to have this commence from the start of the 2011-15 period. CCP3 considers that, where a DNSP requests a change to a year-by-year approach to depreciation, this should only be implemented for future capex (i.e. for the 2016-20 period associated with this review and thereafter), with all existing assets being

depreciated as currently using the WARL approach. This maintains consistency of the approach to depreciation over time. As existing assets are depreciated out of the RAB, the year-by-year approach will become more influential in the setting of the forecast depreciation at future resets.

CCP3 also considers that once a change is made, there should be no ability to change back to the WARL approach in the future, as this will distort the way costs are shared between generations.

6.8 Accelerated depreciation

The AER has accepted accelerated depreciation for certain bushfire related assets that have been replaced, or are to be replaced in the next five years as a result of recommendations of the VBRC. CCP3 agrees with this approach.

6.9 Asset lives

The AER uses a range of different tools to assess the reasonableness (or otherwise) of claims made by the DNSPs for depreciation of assets and for asset replacement. However, CCP3 is concerned that there is no consistency in the inputs used in the models by the AER (and DNSPs) when assessing the estimates for repex and regulatory depreciation.

For example:

- The economic RIN data which provides a view of the expected lives of the assets and their expected remaining lives is not used at all.
- As noted in section 6.4, the repex model uses the actual replacement periods used by each of the DNSPs for each type of asset provided by the category analysis. Implicitly this means that the actual observed rates of replacement of assets are used in the repex model to assess when assets are likely to be replaced. Interestingly, as noted in section 6.4, there are strange values used for the expected replacement lives of different assets.
- The depreciation schedule used for developing the allowance for return of capital uses a third set of data inputs based on what was used previously by each DNSP for depreciation when calculating the regulatory depreciation allowance. This means that there is considerable variation for the inputs used by each of the DNSPs for assessing return of capital. This variation is noted below.

In its earlier advice, CCP3 drew attention to the wide variety of asset lives proposed by the DNSPs for the purpose of depreciation. In its Preliminary Decisions, the AER has accepted that there should be some variation as:

"...we must allow for some variation in standard asset lives ... reflecting the specific nature of each distribution network"⁴⁹

CCP identifies that the variation between the DNSPs is much more significant than alluded to by the AER. The following table⁵⁰ details the actual standard asset lives for depreciation purposes by the AER (generally reflecting those initially proposed by the DNSPs, although there are some changes proposed in the revised proposals).⁵¹

Asset class	Standard asset life					% variation highest/lowest
	Ausnet	Citipower	Jemena	Powercor	UE	
Subtransmission	45	50	45.8	50	60	33%
Distribution system assets	50	49	48	51	35.6	41%
Metering	n/a	n/a	n/a	n/a	n/a	
Public lighting	n/a	n/a	n/a	n/a	n/a	
SCADA	10	13	10	13	10	30%
Non network - IT	5	6	5.3	6	5	20%
Non network - other	5	10	24.2	15	7.5	384%
SCADA (5-year asset)					5	
Land	n/a	n/a	n/a		n/a	
VBRC		49		51		4%
Equity raising costs	47.9			42.7	40.4	19%

Source: AER Preliminary Decisions, DNSP proposals

This shows that the variation of lives for asset classes between each of the DNSPs for calculating depreciation exhibits significant variation. CCP3 considers that this variation is much greater than needed to reflect "the specific nature of each network". It is also apparent from the proposals that generally the DNSPs have merely continued using the same depreciation rates over several regulatory periods, and there has been no attempt to identify why there are differences and if the differences are appropriate.

CCP3 commented in its earlier advice that using shorter than appropriate asset lives results in assets being depreciated much faster for some DNSPs, with a resultant premium being paid for the return of assets by consumers who are currently using that DNSP's network. CCP3 does not consider that there is a need for such significant diversity in standard asset lives between the DNSPs "to reflect the specific nature of each distribution network", as the physical nature of much of the DNSPs' environments (except perhaps for

⁴⁹ See for example note 30 page 5-13 Attachment 5 CitiPower Preliminary Decision

⁵⁰ The table excludes certain items, as they are not used by all DNSPs, and have no standard asset life assigned, such as neutral screen services, distribution transformer upgrades, accelerated depreciation items, and old SWER cables, all of which have a standard asset life assigned of "n/a".

⁵¹ For example, Powercor proposes to reduce the VBRC standard asset life to 25.6 years rather than use the standard asset life used for other assets of the same type.

CitiPower which has no rural customers)⁵² are similar in most aspects. Further, there are elements of the assets that are not impacted by any different environments at all (such as office costs, IT and SCADA, vehicles, etc.), and therefore are not exposed to different environments.

CCP3 reiterates its earlier advice that there is a need for consistency, recognising that the AER has established a fundamental approach that its regulation is based on a notional efficient standalone energy network. This implies there should be much more consistency in the inputs used in developing the efficient revenue allowance.

6.10 Cost escalation

In its earlier advice, CCP3 commented that it considered that AER should not use Enterprise Agreements (EBAs) as the basis of its escalation of costs and this point is more fully explained in section 4 above.

CCP3 is also concerned that in previous years the AER has allowed escalation of materials to be greater than CPI on the basis that materials used by networks are reflective of a mix of materials that is not the same as those used in the build-up of CPI. Since the dramatic fall of the price of input materials used in the materials escalation build-up in earlier resets, CPI has been used as the surrogate for material price escalation. This process has been biased in favour of the networks, as consumers paid a premium when materials escalation exceeded CPI, but when materials escalation might be lower than CPI, CPI has been used. To avoid this "heads networks win, tails consumers lose" approach, CCP3 considers that the AER should settle on using CPI as the acceptable surrogate for materials price escalation for future resets.

6.11 Preparation of regulatory accounts

CCP3 is concerned that there appears to be different practices between the DNSPs for a range of inputs used in the development of the regulatory accounts. This issue was highlighted in CCP3's previous advice to the AER, and this CCP3 concern was not reflected in the AER Preliminary Decisions.

Different approaches result in making the use of benchmarking across all DNSPs more challenging, and also in comparing past capex of a DNSP with its forecast capex.

Throughout the Better Regulation program the AER, quite rightly in the view of CCP3, determined that the revenue needs of the DNSPs should be assessed on a single common basis. The AER decided that this basis would be for a standalone Australian owned energy network and from this there would be various benchmarks to compare efficiencies. A direct consequence of this decision is that the regulatory accounts should reflect those of such an entity. At the moment there is an extreme variety of approaches used in the preparation of the regulatory accounts for each DNSP.

⁵² Despite this, the standard asset lives for CitiPower (a CBD and urban network) and Powercor (a regional and rural network) are the same for the same asset classes.

Such variations occur in:

- Capitalisation of overheads
- Depreciation of the same asset types
- Asset life expectancy of assets of the same type

CCP3 is of the view that the AER should establish a guideline for standardisation for such elements of the regulatory accounts so that as far as regulatory accounts are concerned all DNSPs report on the same basis. This would not prevent each DNSP reporting in its own accounts its preferred method for implementing such activities.

One major detriment occurs with the current approach allowing each DNSP its own method of setting regulatory accounts is that benchmarking between DNSPs become quite problematical and reduces the ability to benchmark between DNSPs accurately. For example, as noted in section 4 above, opex between different DNSPs is heavily impacted by the extent of capitalisation of overheads used by each.

6.12 Conclusions

Neither the DNSPs nor the AER has explained why there has been a need to increase the RAB (in relative terms), while the reliability and quality of supply has and will remain essentially constant. The massive increase in RAB is a direct result of the major increases in capex used by DNSPs in the past 5-7 years and allowed by the regulator at each regulatory reset but most importantly at the 2010 reset.

Of concern is that the DNSPs are still seeking to increase the RABs in relative terms, but at the same time looking to find ways to decrease the RAB though significant increases in depreciation due to the fear DNSPs (and TNSPs) have of being required at some time in the future to accept that the RABs they have generated are just too great for consumers to fund. The potential for such a write down of asset values at their shareholders' expense⁵³ rather than at consumers' expense is increasing in this time of disruptive innovation which is driving consumers to seek solutions for themselves that are more cost effective to them personally, rather than continuing to use the traditional electricity supply structure. This is unlikely to be the most efficient outcome.

It is even more concerning that increases in capex coupled with accelerated depreciation is imposing on consumers considerable increased costs for no discernible benefit, and significant hardship to many consumers of electricity services.

⁵³ In a competitive industry, shareholders carry the risk of assets being made redundant not consumers.

Recommendations:

6.1 *The amount of augex allowed in the Preliminary Decisions is too high based on long term trends and connection point data. Alternative methods (such as incentive tariffs) need to be investigated to avoid the need for augex.*

6.2 *The amount of repex allowed in the Preliminary Decisions and claimed in the revised proposals are too high and do not reflect the longer term trends which provided acceptable levels of reliability.*

6.3 *The claims for IT capex need to be examined more closely, as they too are contributing to the increasing RAB, and they do not impact on the reliability consumers see. CCP3 considers that a long term view on IT capex needs to be implemented to see what the increasing capex allowances have delivered to consumers in regard to the cost of the service and the benefits received by consumers.*

6.4 *The proposed REFCL implementation program should be implemented replacing only those surge diverters necessary to maintain existing levels of reliability.*

6.5 *The AER should implement the year-by-year depreciation approach from 2016 and not backdate it. Further, the additional costs to implement the change should not be passed onto consumers as there is a more efficient approach available at lower cost.*

6.6 *Greater consistency in asset lives across DNSPs is necessary and so is there a need for greater consistency in other aspects such as capitalisation of overheads and depreciation.*

6.7 *The AER needs to bring the capex and the depreciation process into a single analysis of efficient investment.*

7. Incentive schemes

In its earlier advice to the AER regarding the DNSP proposals, CCP3 commented that

"...the incentive schemes especially those applying to the reliability (service target performance incentive scheme – STPIS), opex (efficiency Benefit sharing scheme – EBSS) and capex (capital expenditure sharing scheme – CESS) provide an inter-related suite of incentives. This means that a change to any one of them has the potential to cause a change in the power of the incentive and change the inherent relationship that is a core element of the schemes."

CCP3 maintains this view but notes that the balance of the incentive schemes is impacted by the allowance made for opex (specifically maintenance) and capex (specifically replacement capex - repex).

However, in the AER Preliminary Decisions, the AER has granted considerably more repex than the DNSPs have used in the past and has not imposed a productivity improvement requirement in relation to opex. These decisions change the balance of the incentives as the STPIS targets are based on performance achieved historically over the past five years, when repex was significantly lower and opex was less in relative terms because productivity was higher. CCP3 is concerned that this oversight is a result of the "silo effect" mentioned earlier within the AER decision making process and which CCP3 considers needs to be addressed.

CCP3 notes that the AER concurs with the CCP3 view that the changes to the value of customer reliability (VCR) should not result in changes to the STPIS settings. CCP3 welcomes and supports this position.

CCP3 provided a view that the EBSS should have no exclusions in its calculation but also noted that the AER had moved to limit exclusions. The decision by the AER to exclude DMIA, GSL payments and losses on scrapping of assets from the EBSS is supported but CCP3 is less supportive of the decision to exclude debt raising costs. CCP3 considers that there needs to be an incentive on DNSPs to limit the costs of debt-raising. Inclusion of this in the EBSS would provide an appropriate incentive.

CCP3 is also concerned that the incentive programs are not sufficiently high powered enough to drive expenditure to the efficient frontiers. The fact that there is a continuing decline in productivity (especially in opex) does not reflect the actuality that firms operating in the competitive sector are seeing increased productivity. While CCP3 recognises that DNSPs have incurred some additional regulatory requirements that would have impacted their productivity, it is important to note that productivity has dropped much more than can be attributed to these regulatory impositions.

For example, CitiPower's opex productivity has fallen by 50% (from 2.4 to 1.6 as measured by Economic Insights) since 2006. A loss of productivity of that magnitude if seen in a competitive environment would be addressed in very robust terms regardless of the apparent cause, yet the AER has accepted that CitiPower's opex is efficient. There is a significant difference in approach to productivity between a firm being assessed for its

productivity and a firm which faces extinction if it doesn't improve its productivity. Examples of actions taken by firms in competitive markets are readily seen in the base materials (e.g. iron ore) and energy (e.g. oil) industries, yet the DNSPs are not faced by such imperatives, and their management teams act accordingly.

As a minimum, CCP3 considers that an incentive such as a productivity improvement requirement should be applied as recommended in section 4 above.

The AER has determined that the current levels of the Demand Management Incentive Allowance (DMIA) will continue for the next five years, although there have been requests to increase the allowance. Effectively, the AER has permitted some \$10m of consumers' funds to be used by the five DNSPs – \$3m for AusNet and PC, \$2m for UE and \$1m each for CP and Jemena – to expend on demand management projects. While some DNSPs accepted the AER Preliminary Decisions on the amount of the DMIA, others have sought an increase in the DMIA from that allowed in the Preliminary Decisions.

In its earlier advice, CCP3 noted that there is concern among consumers that there must be a positive outcome for consumers from these funds. A review of the projects undertaken so far, along with the AER compliance reports, does not clearly detail what were the actual outcomes of the projects undertaken, and if there is potential for extrapolation of the projects more widely. Generally the allowance for each DMIA project has provided a template for extrapolation of the project to other DNSPs.

CCP3 considers that its earlier advice is still applicable, especially as the reporting by the AER and DNSPs does not address the issues raised by CCP3, but is more focused on compliance rather than the outcomes of the projects.

CCP3 recognises that the DMIA can provide a valuable service to consumers, and considers that it needs to be much more carefully managed. With this in mind, CCP3 continues to support the continuation of the program using the same allowances that were included in the last regulatory period, consistent with the AER Preliminary Decisions.

Recommendations:

- 7.1 The AER should address more carefully the allowances for opex and capex.*
- 7.2 The power of the incentives should be increased, such as by applying a productivity improvement requirement.*
- 7.3 The AER should generate reports on the use of the DMIA which demonstrate the value of the DMIA funding to consumers.*
- 7.4 CCP3 supports the position held by the AER in its Preliminary Decisions that the current levels of the DMIA should not be increased.*

8. Rate of return

8.1 Background and Overview

CCP3 submitted an extensive attachment paper to the AER providing advice on CCP3's views the rate of return issues.⁵⁴ The focus of this initial rate of return paper from CCP3 was on addressing the initial regulatory proposals for 2016-20 that were submitted to the AER by the Victorian DNSPs' ("initial proposals").

CCP3's main concern was the extent to which the DNSPs' initial proposals varied from the approach to return on equity (RoE) and return on debt (RoD) set out in the AER's Rate of Return Guideline and the accompanying Explanatory Statement (collectively referred to herein as the RoR Guideline).

In the initial proposals, the major departures from the RoR Guideline related to the RoE. Although there were also some departures from the RoR Guideline in the DNSPs' approach to the RoD, the outcome of these differences was relatively small. Thus, the major part of CCP3's response to the initial proposals concerned the DNSPs' modelling approach and their assessment of some of the RoE parameters, particularly the equity beta.

For instance, CCP3's advice highlighted the limitations of the DNSPs' proposed "multi-model" approach to assessing the return on equity (RoE). CCP3 noted the significant increase in complexity, the uncertainties around the optimal form of the various models, the multiple assumptions that are required with respect to the inputs and the weighting of the models to determine a "point estimate" of the RoE.

CCP3 also noted the lack of precedence at this time for the type of approach to the RoE that was proposed by the DNSPs. CCP3 emphasised to the AER that electricity consumers should not be "guinea pigs" in a test of various econometric theories. Given the nature of equity models, it was essential that the AER adopted a conservative approach using well-established, mature methodologies.

In line with this, CCP3 stated that the AER had a responsibility to require the DNSPs to provide very strong evidence that any new approaches would lead to more efficient investment and better long-term outcomes for consumers within the context of the Australian regulated utilities. Such evidence was not, and could not be provided simply by further theoretical elaborations of the various cost of capital models.

⁵⁴ Consumer Challenge Panel, Sub Panel CCP3, *Submission to the Australian Energy Regulator, Response to proposals from Victorian electricity distribution network service providers for a revenue reset for 2016-20 regulatory period*, 5 August 2015. The Attachment 1 to the advice paper provided a detailed assessment of the DNSPs' regulatory proposals for the rate of return.

In addition, CCP3 carefully considered the advice provided by each of the expert consultants engaged by the AER. The advice provided particularly by Associate Professor Graham Partington (et al), Associate Professor JC Handley, Dr Lally and Professor Olan Henry clearly outlined the problems with various aspects of the DNSPs' modelling approaches. Their conclusions suggest that these difficulties were sufficient that the AER should not consider departing from the framework set out in the AER's Rate of Return Guideline.

After reviewing the more recent material, CCP3 considers that its original advice is still highly relevant to the AER in assessing the DNSPs' revised regulatory proposals ("revised proposals") for the RoR of the benchmark regulated Australian energy utility.

In its current advice to the AER, therefore, CCP3 will not restate all the material provided in the previous advice. However, CCP3 considers that earlier advice as relevant material and it therefore forms part of CCP3's response to the AER's Preliminary Decision and the DNSPs' revised proposals.

CCP3's current advice on the efficient RoR will therefore focus on two areas.

- **The AER's assessment of the equity beta as a component of the assessment of the RoE for the regulated network businesses.**

CCP3 considers that the AER has not paid sufficient regard to the evidence available to it on the appropriate equity beta for a benchmark efficient regulated electricity network in Australia.

- **The application of a transition period** in the assessment of the cost of debt.

The AER's RoR Guideline sets out a 10 year transition process for moving from an "on the day" approach to assessing the RoD to a 10-year trailing average with annual updates. In their revised proposals, the DNSPs propose to move directly to the 10-year trailing average approach without a transition period. CCP3 vigorously rejects the DNSPs' revised proposal on the transition period; a direct move to the 10-year trailing average approach will violate important regulatory principles and result in a RoD for 2016-20 higher than the efficient cost of debt to the Victorian DNSPs.

While the focus of the current advice is on the two areas listed above, CCP3 reiterates its previous advice that, in general, the AER is correct to apply the approach and parameters that were set out in the AER's 2013 Rate of Return Guideline (RoR Guideline).

However, CCP3 also restates its view that the AER's principle task is to set an overall rate of return that promotes efficient investment and allows the DNSPs to recover their efficient costs over the life-time of the regulated assets.

This does not mean that in each and every year of the regulatory regime, the DNSPs must recover “at least the efficient costs of capital” as specified by the revenue and pricing principles (RPP) in the National Electricity Law (NEL).⁵⁵ Such a task is beyond the 5-year regulatory process given the fluctuations in money, labour and commodity prices and the capital investment cycle.

In any case, over time it would result in a consistent bias towards regulatory outcomes that exceed the efficient costs. Such an outcome is not in the long-term interests of consumers and such a “guarantee” of recovering costs in each year for each component undermines incentive regulation principles.

However, it does mean that regulatory decision-making must be consistent, predictable and transparent and provide a balanced and unbiased response to the long-term interests of both shareholders and consumers.

This outcome was a priority for the AEMC. It was also a priority of the investment community. Moody’s, one of the leading credit/investment agencies, stated following the AER’s draft revenue determinations for the South Australian and Queensland DNSPs:⁵⁶

[t]he revenue determinations are consistent with the AER’s approach to setting the weighted average cost of capital as published in December 2013.

*Moody’s therefore consider the AER’s actions to be reflective of a stable regulatory environment... **the consistent application of the regulatory guidelines reaffirms the track record of Australia’s transparent and predictable regulatory regime.** [emphasis added]*

Like Moody’s, CCP3 considers that a “transparent and predictable regulatory regime” underpins the expectations of investors and debt providers and, overall, is likely to best meet the long-term interests of consumers.

That is why, despite its reservations about some aspects of the RoR Guideline, CCP3 continues to recommend to the AER that it rejects the revised proposals of the DNSPs and continues, in the main, to apply the RoR Guideline.

The following sections provide a brief summary of the AER’s RoR Guideline approach and parameters, the DNSPs’ initial proposals, and CCP3’s response to these proposals. This

⁵⁵ NEL, Schedule 1, Part 1, 7A

⁵⁶ Moody’s Investors Service, *Regulator’s final guideline improves revenue visibility for Australian regulated networks but uncertainty remains*, 19 December 2013.

https://www.moodys.com/research/Moodys-Regulators-final-guideline-improves-revenue-visibility-for-Australian-regulated--PR_28946. The research states that: “Because of the non-binding nature of the guideline, the regulator’s commitment to its framework and the consistency in which it is applied, will be a key factor in the predictability of the regulatory environment”. The report did not anticipate that it would be the NSPs that would promote such departure and thereby raise the level of uncertainty.

summary will provide a context for the later sections that consider the AER's Preliminary Decisions and the DNSPs' revised proposals.

8.2 Summary of the AER RoR Guideline, the DNSP's initial proposals & CCP3's response

8.2.1 The AER's RoR Guideline

The AER's final RoR Guideline (December 2013) included the following:⁵⁷

- The RoR would be determined on the basis of the efficient financing costs of an efficient benchmark entity facing similar risks to the network service providers;
- The use of the Sharpe-Lintner Capital Asset Pricing Model (SL-CAPM) as a foundation model for the RoE, with reference to other modelling and data sources as assessed in the RoR Guideline; and
- The adoption of a 10-trailing average RoD calculation, with a transition period of 10 years.

The AER's RoR Guideline also included express parameters that were developed as a result of the extensive consultation process as follows:

- Gearing level of 60% debt, 40% equity;
- Credit rating of benchmark entity of BBB+;
- A point estimate of the market risk premium (MRP) of 6.5%;
- A point estimate of the equity beta of 0.7;⁵⁸
- Yield on 10-year Commonwealth government securities (CGS) and 10-year (average) commercial bonds for the purposes of assessing the risk free rate and the RoD respectively;
- Averaging of the 10-year BBB commercial bond yields as calculated from third party data, namely the Bloomberg 7-year fair value curve (extrapolated to 10 years) and the Reserve Bank of Australia (RBA) monthly 10-year bond yields (interpolated);⁵⁹ and
- Value of imputation credits (gamma) of 0.5.⁶⁰

⁵⁷ For details see: <http://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-guideline/final-decision>

⁵⁸ Due to delays in the receipt of the AER's expert's report on equity beta, the AER continued to consult on this in the first half of 2014.

⁵⁹ The AER clarified this final approach to the use of third party data after the RoR Guideline was produced, following further consultation in the first half of 2014.

Since 2014, the AER has made multiple regulatory determinations. In the main, the AER has applied the approaches and parameters to the RoE and RoD that were set out in the RoR Guideline. As such the AER has adequately met the criteria of predictability, consistency and transparency.

Therefore, CCP3 considers the AER’s approach was consistent with the AEMC’s intentions, the expectations of the ratings agencies and good regulatory practice.

8.2.2 The initial rate of return proposals by the Victorian DNSPs

In April 2015, the five Victorian DNSPs submitted their initial proposals for the rate of return (RoR) to apply for the period 2016-20. All the DNSPs provided similar proposals for the assessment of the two RoR components, the return on equity (RoE) and return on debt (RoD) as illustrated in Table 1 below.

Table 1: Summary of the Victorian DNSPs’ initial RoR proposals

	AusNet Services	CitiPower	Jemena	Powercor	United Energy
Overall WACC (per cent)	7.19	7.20	7.18	7.20	7.38
Return on equity (post-tax nominal) (per cent)	9.90	9.90	9.87	9.90	9.95
Return on debt (pre-tax nominal) (per cent)	5.39	5.39	5.39	5.39	5.67

Source: AER, *Issues paper, Victorian electricity distribution pricing review 2016 to 2020*, 9 June 2015, Table 6.1, p 46

The Victorian DNSPs’ initial RoR proposals departed in significant ways from the AER’s RoR Guideline. The most significant departures occurred in the approaches adopted by the DNSPs to the assessment of the RoE. This resulted in a RoE that was some 250 basis points higher than would be expected under the AER’s RoR Guideline approach.

The DNSPs’ initial proposals also included some variations on the RoD compared to the RoR Guideline. However, the impact of these variations was relatively small, generally less than 50 basis points.

In large part, the DNSPs’ proposals for the RoE and RoD reflected the positions that they had put to the AER during the development of the AER’s RoR Guideline over the course of 2013.

⁶⁰ The AER subsequently revised gamma to 0.4 on the basis of further evidence provided by its consultants.

That is, the initial proposals included, inter alia, the following key elements:

- The multi-model approach to the assessment of the RoE using a weighted average⁶¹ of the SL-CAPM,⁶² Black CAPM, Fama-French Factor Model,⁶³ Dividend Growth Model (DGM);
- The adoption of a relatively high equity beta and market risk premium;
- The adoption of a “hybrid” approach to the transition from the “on-the-day” to the 10-year trailing average assessment of the RoD. The hybrid approach involved a 10 year transition to the 10 year-trailing average for the risk free rate and a direct change (no transition) to the debt risk premium (DRP);⁶⁴ and
- Value of imputation credits (gamma) of 0.25.

8.2.3 CCP3’s response to the Victorian DNSPs’ initial proposals

In September 2015, CCP3 provided an extensive response to these initial RoR proposals by the Victorian DNSPs.

CCP3 carefully considered the arguments submitted by the DNSPs in their proposals. It also considered:

- The extensive stakeholder consultation process that the AER undertook in the development of the Rate of Return Guideline (the “RoR Guideline”);⁶⁵
- The many reports by a range of expert consultants referred to by the DNSPs and by the AER;
- The AER’s final determinations for the NSW electricity distribution businesses and Jemena Gas Networks (NSW) as made in 2015;
- Annual reports, media releases and other public information provided by the owners of the Victorian DNSPs to their shareholders, the ASX and the like;
- Submissions by consumer representatives and other stakeholders on the DNSPs’ proposals; and

⁶¹ The DNSPs varied in the weights they attached to the different models.

⁶² The MRP and equity beta however differed from the AER’s RoR Guideline’s estimates.

⁶³ There were different specifications of the Fama-French model.

⁶⁴ The AER’s transition approach included a 10-year transition to the trailing average for both the risk-free rate and the DRP.

⁶⁵ See AER, *Better Regulation - Rate of Return Guideline*, December 2013 [RoR Guideline] and the associated document, AER, *Better Regulation - Explanatory Statement - Rate of Return Guideline*, December 2013.

- The previous advice papers and presentations prepared by CCP members for the AER and community representatives.

Having considered all this material, CCP3 advised the AER in its August 2015 paper to reject the DNSPs' proposed approach to the assessment of both the RoE and the RoD. CCP3 was particularly concerned with the continued efforts by the DNSPs to promote the untested "multi-model" approach.

CCP3 therefore advised the AER to replace the DNSPs' proposals with a RoR based in large part on the approach set out in the AER's RoR Guideline. CCP3 emphasised that in developing the revised rules in 2012, the AEMC had specifically stated that the AER was not bound by the DNSPs' proposals for the RoR, and should use its discretion consistent with the RoR Guideline and the rate of return objectives.

The reasons for the CCP3's advice to reject the DNSPs' approach to the RoR were set out in detail in the attachment to the CCP3's overall advice to the AER in August 2015.⁶⁶

In brief, the DNSPs are required to provide reasons for any proposed departure from the AER's RoR Guideline. Despite many thousands of pages on RoR issues in the DNSPs' initial proposals, CCP3 considered that they did not sufficiently demonstrate that their RoR proposals better met the requirements of the allowed rate of return objective in the NEL or were in the long-term interests of consumers.

CCP3 also considered that the DNSPs' proposed approaches and, in particular, their approach to the RoE, failed to accord with good regulatory principles and practice. That is, relative to the AER's Guideline approach, the DNSPs' proposals lacked predictability, consistency and transparency and introduced a significant risk of biased outcomes over time. For instance, the proposed approach to the RoE involved multiple input assumptions (e.g. dividend growth forecasts) and model specifications (how many stages, how many factors, etc.) that simply added to the opportunity for contention, error and bias.

Similarly, the DNSPs' RoD approach risked failing to satisfy the important regulatory principle set out by Dr Lally, the principle of NPV = 0 and the avoidance of bias, over the life of the regulated asset.

The DNSPs made little or no attempt to explain their proposed deviations from the AER's RoR Guideline or highlight the risks to consumers of their approach to the RoR.

Nor did the DNSPs demonstrate that they would not be able to recover their efficient financing costs under the AER's RoR Guideline approach as required by the revenue and pricing principles in the NEL.

⁶⁶ See, CCP3, Attachment 1, *The regulated rate of return for an efficiently financed benchmark efficient entity of similar risk to a distribution service provider*, August 2015.

In practice, it could be argued that the AER's RoR Guideline approach was more accommodative of the financial risks facing the networks than its previous approach to the RoR.

If, for instance, the AER had continued its previous regulatory approach (which delivered more than satisfactory returns to the networks over the course of 2011-16), it is likely that AER's determination on the RoD would have been lower than under the current RoR Guideline approach to the RoD.

That is, the previous approach would have "locked in" current low interest rates for the five year period where the AER's new approach, including the transition approach, allows for more responsiveness to interest rate changes.⁶⁷

The DNSPs' opposition to the AER's Guideline approach is therefore hard to understand when they will be better off than if the AER's approach had not changed.

Certainly, after an extensive search, CCP3 could find no evidence that the DNSPs reported such a specific threat⁶⁸ to the ASX under continuous reporting requirements or in their reports to shareholders, rating agencies and debt providers, even after the AER's decisions on the NSW electricity transmission and distribution businesses were finalised.⁶⁹

Indeed, CCP3 noted in its August 2015 advice to the AER that prospective buyers of the NSW network businesses indicated a willingness to pay RAB multiples of over 1.4 – an outcome that was singularly unlikely if the viability of the businesses was under real threat from the AER's regulatory approach.⁷⁰

For this reason, CCP3 encouraged the AER to develop its own internal "data base" on company profits, borrowing and equity raising policies, interest payments and tax arrangements. This would provide a useful check to the claims by the DNSPs and an ex-post assessment of the AER's own regulatory decisions.

⁶⁷ For example, the annual updating of the cost of debt provides greater protection – the networks will be better able to improve allowed revenues to reflect any increase in the commercial debt costs during the regulatory period. As well, the AER considers a broader range of information on the market than previously, including consideration of the DGM outcomes for the MRP and the Black CAPM for the equity beta.

⁶⁸ That is, a threat that they could not recover their efficient capital costs for the 2016-20 period.

⁶⁹ Most annual reports identify a general "regulatory risk" (just as the identify interest rate changes as a general risk), but these comments are not specific to the current change in the AER's approach or the precedence set by the AER's determinations in NSW/ACT.

⁷⁰ As discussed further in section 3, the lease on Transgrid was eventually sold for a RAB multiple around 1.6. Transgrid did not challenge the AER's final determination. The winning bid included CKI (15% equity stake) and Hastings Diversified Funds (25%). Both parties have considerable experience in the Australian electricity business and the Australian regulatory framework.

CCP3's assessment of the DNSPs' proposals to vary from the AER's RoR Guideline was also influenced by its observation that the AER's Guideline approach is essentially conservative in that it is built on a compounding series of conservative inputs. These included the allowed MRP, equity beta, gearing level, bond tenor (10 years), and sources of capital (Australian equity and debt markets only).

Nor does the RoR Guideline adequately reflect the transfer of risk from the businesses to consumers through changes to the regulatory regime that have occurred as a consequence of the changes to the NER. These included:

- The move from average price to revenue control;
- The transition to a 10-year trailing average for RoD;
- Annual updating of debt costs; and
- Greater flexibility in tariff design.

CCP3 considers that all these issues remain relevant to the assessment of the DNSPs' revised proposals.

Section 8.3 below provides further background on the AER's Preliminary Decisions on the RoR and CCP3's response to that. Section 8.4 considers the DNSPs' revised proposals.

Having reviewed the DNSPs' revised proposals, CCP3 has not changed its position on the importance of the AER continuing to apply the RoR Guideline approaches to the RoE and to the RoD including the transition process.

CCP3's concern with the AER's process continues to relate to the selection of a series of conservative parameters for the AER's RoE foundation model.

CCP3 argues that the AER can address this issue by revisiting its approach to the equity beta. In advising the AER in this way, CCP3 is also cognisant of the AEMC's instructions to focus on the overall allowed rate of return objective in the National Electricity Rules.^{71 72}

It is particularly important to note that the final position rule places a requirement on the regulator to determine a rate of return that meets the overall allowed rate of return objective. This requirement can only be fully satisfied if the regulator considers its overall estimate against that objective.

⁷¹ See NEL 6.5.2 (n)(1). Similar objectives apply to the assessment of the two components of the RoR, the return on equity and the return on debt.

⁷² AEMC (2012), *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Final Position Paper*, 15 November 2012, Sydney, p. 69

The AEMC's directive to focus on the overall objective means that the AER must be careful not to "fall into the trap" of setting conservative estimates on each of the RoE parameters.

It also follows that whether the RRP requirement in the NEL, that the DNSPs must be able to recover at least their efficient costs, can only be assessed at the aggregate level. It is not appropriate to assess this at each component level as also stated by the AEMC:⁷³

The Commission does not consider that the regulator could be satisfied it had met the overall objective if it made estimates about components or parameters that form part of the rate of return estimate in isolation and without considering the overall estimate against the overall objective.

CCP3 agrees with the AEMC, and this has had a strong influence on its response to the AER's RoE approach, and to the DNSPs' revised proposals for assessing the RoD.

8.3 The AER's Preliminary Decisions on the RoR for Victorian DNSPs

8.3.1 The AER's assessment of the DNSPs' initial proposals

Essentially, the AER's Preliminary Decisions rejected the approaches proposed by the Victorian DNSPs for the rate of return. The AER made its Preliminary Decisions based on the approach set out in its RoR Guideline.

That is, the AER saw no substantive reason to vary from the Guideline's approach to calculating either the RoE or the RoD.

Table 8.2 sets out the AER's Preliminary Decision for 2016 and for the period up to 2020 (using the AER's decision for Powercor as an example), based on a risk free rate of 2.76%. Note: the RoD will be updated each year via a predetermined process set out in the RoR Guideline.

The main differences between the DNSPs' initial proposals and the AER's preliminary decision are concern the respective assessment of the RoE. The difference of some 250-260 basis points in the RoE⁷⁴ contributes to over 100 basis points in the overall rate of return, assuming a gearing level of 60%.

⁷³ Ibid

⁷⁴ There are small differences between the DNSPs.

Table 8.2: AER’s Preliminary Decision on rate of return (nominal) – Powercor

	AER previous decision (2011–15)	Powercor proposal (2016) ^(a)	AER preliminary decision (2016)	Return over 2016–20 regulatory control period
Return on equity (nominal post-tax)	10.28%	9.9%	7.3%	Remains constant (7.3%)
Return on debt (nominal pre-tax)	8.97%	5.39%	5.16%	Updated annually
Gearing	60%	60%	60%	Remains constant (60%)
Nominal vanilla WACC	9.49%	7.20%	6.02%	Updated annually as return on debt is updated
Forecast inflation	2.57%	2.60%	2.50%	Remains constant (2.50%)

Source: AER – *Preliminary Decision Powercor – Overview*, October 2015, Table 6, p 29.

Table 8.3 below sets out the components of the DNSPs’ proposed RoE and the AER’s Preliminary Decisions on the RoE.

It is clear that the DNSPs’ proposals exceed the AER’s Preliminary Decisions in regard to the market risk premium, the equity beta and the equity risk premium.

Importantly, however, the AER’s approach still allowed for an equity risk premium of 4.55%, an outcome that is more than reasonable for a regulated utility with a high degree of certainty in their future revenues (due to the revenue cap control mechanism).

Table 8.3: AER’s Preliminary Decision on return on equity (nominal) – Powercor

	AER previous decision (2011–15)	Powercor proposal (2016) ^(a)	AER preliminary decision (2016)
Nominal risk free rate (return on equity only)	5.08%	2.64%	2.76%
Equity risk premium	5.20%	7.26%	4.55%
MRP	6.50%	8.17%	6.50%
Equity beta	0.8	0.89	0.7
Nominal post–tax return on equity	10.28%	9.90%	7.3%
Source: AER analysis; Powercor, <i>Regulatory proposal</i> , April 2015; AER, <i>Final decision: Victorian electricity distribution network service providers, Distribution determination 2011–15</i> , October 2010. The Australian Competition Tribunal, in <i>Application by United Energy Distribution Pte Ltd (No 2) [2012] ACompT 8 (5 April 2012)</i> . (a) Powercor used a multi-model approach to estimate return on equity. In applying this approach, Powercor use the same market return in all four models. The MRP shown in this table is the market return less the risk free rate used in Powercor estimated SLCAPM. The equity beta is an 'implied beta' calculated as the proposed equity risk premium divided by MRP. Powercor, <i>Regulatory proposal</i> , April 2015.			

Source: AER – Preliminary Decision Powercor – Attachment 3 – Rate of Return, October 2015, Table 3-2, p 3-12.

Table 8.2 also demonstrates a small difference in the RoD for 2016. This is largely the result of the DNSPs adopting a “hybrid” approach to the transition to the 10-year trailing average RoD compared to the transition approach in the AER’s RoR Guideline.

The AER’s transition approach to the RoD, which was based on a proposal by the Queensland Treasury Corporation (QTC), received broad support from most non-DNSP stakeholders during the RoR Guideline development process.⁷⁵

The AER’s transition approach also provided some certainty in outcomes and reflected a reasonable balancing of risk between the DNSPs and consumers as it limited the chance of future wind-fall gains by either parties (given that future trends in interest rates were unknown) as a result of changes in methodology.

CCP3 considered that minimising actual and perceived regulatory risk for both DNSPs and consumers was an important regulatory obligation on the AER, particularly in the context of changes to the methodology. Minimising these risks, along with reducing opportunities for windfall losses or gains and for regulatory gaming represented good regulatory practice.

⁷⁵ However, several stakeholders recommended a five-year transition period consistent with the regulatory period.

Overall, the 10-year trailing average approach to the RoD reduced the debt mismatch and cash flow risks for DNSPs relative to the previous “on-the-day” methodology, a fact that has important implications for the cost of debt and equity. Similarly, the AER’s transition approach provided regulatory certainty for all stakeholders.

Section 3 includes a detailed discussion of additional issues around the DNSPs’ proposed approach to the RoD transition. These issues have largely arisen as a result of the change in methodology proposed by the DNSPs in their revised proposals.

8.3.2 The AER’s response to the concerns of CCP3 other stakeholders

While the AER did not accept the key elements of the DNSPs’ proposed RoR approach, the AER also rejected the issues raised by consumers and other stakeholders with various aspects of the AER’s RoR Guideline and its application in the regulatory context.

More particularly, the AER did not address all the issues raised by the CCP3 in its advice on the DNSPs’ initial proposal relating to the RoE. CCP3 summarises two of these issues below, while others will form part of later sections of this advice to the AER. CCP3 is particularly concerned with these two items as they have been raised several times by CCP3 and by other CCP sub-panels, and CCP3 does not believe that the AER has adequately addressed these issues.

However, CCP3 does not dispute the AER’s RoD assessment and transition process other than to note that the AER’s decisions here add to the overall conservative approach in the AER’s assessment of the RoR. For instance, the impact of the RoE methodology on further reducing risk to the DNSPs should be captured in either the RoE (e.g. in the equity beta) or in the RoD (e.g. in the effective credit rating).

Compounding conservative estimates by the AER

CCP3 has highlighted in its initial response and elsewhere that when selecting point estimates within a range established in the RoR Guideline, the AER should consider the cumulative impact of its decisions. In particular, CCP3 noted that the AER tended to adopt a point estimate at or near the top of the range for each of the relevant parameters.

Such an approach would most likely lead to an overestimation of the overall RoR. CCP3 highlighted that the AER’s focus must be on the reasonableness of the overall outcomes and the AER should therefore seek to avoid the impact of compounding conservative assumptions on the overall RoR. As discussed previously in this advice, CCP3 believes this is consistent with the AEMC’s emphasis on the overall rate of return rather than the constituent decisions.

Issues with the Equity Beta Assessment

CCP3 was particularly critical of the AER’s decision to select an equity beta at the top of the observed range of betas. CCP3 provided considerable evidence that the most recent (2014) empirical study on the equity beta of Australian utilities by Professor O Henry did not support such a decision.

The AER did not directly address either the issue of cumulative conservative assumptions or the particular analysis of Henry's 2014 study. The AER's preliminary decision continued to justify the decision to select a higher equity beta based, it seems, on the theory of the Black CAPM.

As a result, CCP3 considers that the AER's Preliminary Decisions on the RoE overstates the cost of equity to the regulated businesses.

CCP3's views on the AER's Preliminary Decisions are explained further below.

8.3.3 CCP3's advice to the AER on the AER's Preliminary Decisions

CCP3 agrees with most aspects of the AER's Preliminary Decisions

In summary, CCP3 agrees with the AER's rejection of the DNSPs' initial RoR proposals and the AER's reasons for this rejection.

CCP3 also agrees that the AER should, in general, apply the approach set out in the RoR Guideline for both the RoE and RoD assessments (including the 10-year transition period to the trailing average RoD).

The approach set out in the RoR Guideline is more likely to achieve the rate of return objectives and promote efficient levels of investment in the networks than the DNSPs' proposed RoR.

However, as discussed further below, there are some areas where additional information has emerged since 2013 and which should lead the AER to reconsider whether the RoR Guideline provides the best estimate of the efficient rate of return.

More generally, however, CCP3 supports the AER's regulatory principles, namely:

- The determination of the RoR parameters should be forward looking and based on unbiased estimates – the opportunity for windfall gains and losses should be minimised;
- The approach must be consistent with the incentive regulatory framework, i.e. provide effective incentives for efficient investment⁷⁶ – ensuring that DNSPs incur the financial consequences of their capital management decisions (whether positive or negative);
- The AER's approach should be consistent across DNSPs;
- Greater complexity should only be preferred if it demonstrably leads to a better achievement of the RoR objective;
- Where increasing complexity increases the number of assumptions required, the risk of bias increases and this in itself is a reason for avoiding greater complexity;

⁷⁶ See NEL, s 7A(3)(a).

- Where there is a change in regulatory approach (e.g. change in the way the RoD is calculated), there must be a reasonable expectation that only efficient costs can be recovered over the life of the regulated assets; and
- Regulatory decisions should be based on well-established regulatory practice and principles – the outcomes are too important for all parties for “novel” and untested approaches.

Areas for review of the AER’s Preliminary Decisions

While CCP3 has indicated its general support for the AER’s approach to the determination of an efficient RoR, CCP3 has also highlighted areas where additional data suggests a need for further consideration by the AER.

In particular, CCP3 considers that the AER should revisit its case for applying an equity beta of 0.7 from a range of 0.4 to 0.7. The reasons for the CCP3’s view are discussed below. In particular, CCP3 highlights additional information not provided in its previous advice to the AER on the equity beta. CCP3 believes that this additional information provides strong support for its preferred equity beta of between 0.5 and 0.6.

Assessment of the equity beta

As noted above, Professor Henry’s 2014 equity beta study provided empirical support for a lower equity beta than the AER’s point estimate of 0.7. The fact that the new regulatory environment further reduces the DNSPs’ cash flow and volume risks (compared to Henry’s historical analysis period) further reinforces the need for the AER to review its conclusions on the equity beta.

CCP3 also considered that the information from the AER’s own expert consultants, published after 2013, did not provide unconditional support to the AER for the use of the theory of the Black CAPM to select a higher point estimate in the equity beta range observed in Henry’s 2014 study.

Instead, the AER’s expert consultants highlighted significant weaknesses in the Black CAPM and its practical application in the regulatory setting. For example, the consultants emphasised the relatively arbitrary and/or inconsistent nature of the many assumptions such as the value of the “zero equity beta” in the Black CAPM.

As McKenzie and Partington state:⁷⁷

While we do not think such an adjustment is appropriate [to the SL-CAPM beta], if one were to consider making an adjustment it is not clear what adjustment you should make to the CAPM return estimate.

Partington concludes in a later supplementary report:⁷⁸

⁷⁷ McKenzie M & Partington G, *Report to the AER, Return on Equity*, October 2014, p.p. 23-24.

⁷⁸ Partington, G., *Report to the AER Return on Equity (updated)*, April 2015, p. 44.

In our view, the theory underpinning the Black CAPM does not necessarily support an uplift to the estimate of beta to be used in the SL-CAPM for low beta stocks.

Partington and Satchell also note that the estimates of the zero beta return in the Black CAPM can take on almost any value:⁷⁹

The point has been previously made that the range of choice for zero beta portfolios can be infinite and we have repeatedly made the point that what you get for the zero beta returns depends very much on what you choose to do in your estimation process.

In their revised proposals, the DNSPs give credence to the zero beta calculation of SFG of 3.34% above the risk free rate (a total of 5.98%). This implies that the investors in an asset with no systematic risk (orthogonal to the market risk line) seek a return that is much the same as providers of debt to a BBB rated corporate (around 5.39- 5.67%). CCP3 does not find that a credible outcome.

Similarly, there were substantial critiques of the other RoE models by McKenzie and Partington, Partington, and Partington and Satchell, which cast further doubt on the use of these models, such as the DGM, to define the ranges and point estimates for the RoE parameters and overall RoE.

Given these factors, CCP3 considers it is more than likely that the AER's RoE estimate will overstate the required RoE and, therefore, the total RoR for Victorian DNSPs.

Additional evidence on the equity beta

Since its previous advice, CCP3 has become aware of a further empirical study of the equity beta of Australian listed utility companies by Vo, Mero and Gellard⁸⁰ (Vo et al) of the WA Economic Regulation Authority (ERA).

The authors note the claims of Australian regulated utilities that their "default" equity beta should be equal to 1.0 in recognition of their higher leverage and financial risk (the current DNSPs' proposals are in the order of 0.9 – 0.94 for the equity beta). The purpose of the study was to empirically assess these claims and to derive an equity beta range and estimate. Vo et al state:

We have employed different econometric techniques, from the conventional OLS to LAD; Robust MM and Theil-Sen estimates to derive an appropriate estimate for equity beta on a sample of Australian electricity and gas businesses for an extended period of time. In addition, bootstrapping is also used to test the robustness of the estimates.

In similar vein to the Henry study, Vo et al estimated both individual and equal-weighted and value-weighted portfolio returns for APA, DUET, Envestra, Hastings Diversified Funds (HDF), Spark Infrastructure (SKI) and SP AusNet (now AusNet Services) for the five year

⁷⁹ Partington & Satchell, *Report to the AER – return on equity and response to the submissions on JGN*, May 2015, p. 10.

⁸⁰ Vo D, Mero S, Gellard B, *Equity beta for the Australian Utilities is well below 1.0*, March 2014.

period to 2013. Three networks included in the original Henry study namely; AGL, Alinta and GasNet, were excluded from the ERA study as they have ceased trading during the five-year period.

Vo et al used weekly sampling and were therefore able to include a significant number of observations for each network business (240 – 261 observations per network). Thus, they were able to obtain statistically significant results and reduce the variance for all methods on the individual company analyses and for the two portfolio analyses.⁸¹ The results were also tested for factors that might bias the results such as thin trading (not significant), and day of week sampling (significant, but managed by sampling from same week day over the period).

Finally, Vo et al undertook a bootstrap analysis to estimate the sampling distribution of the relevant statistics by repeated re-sampling the available data.

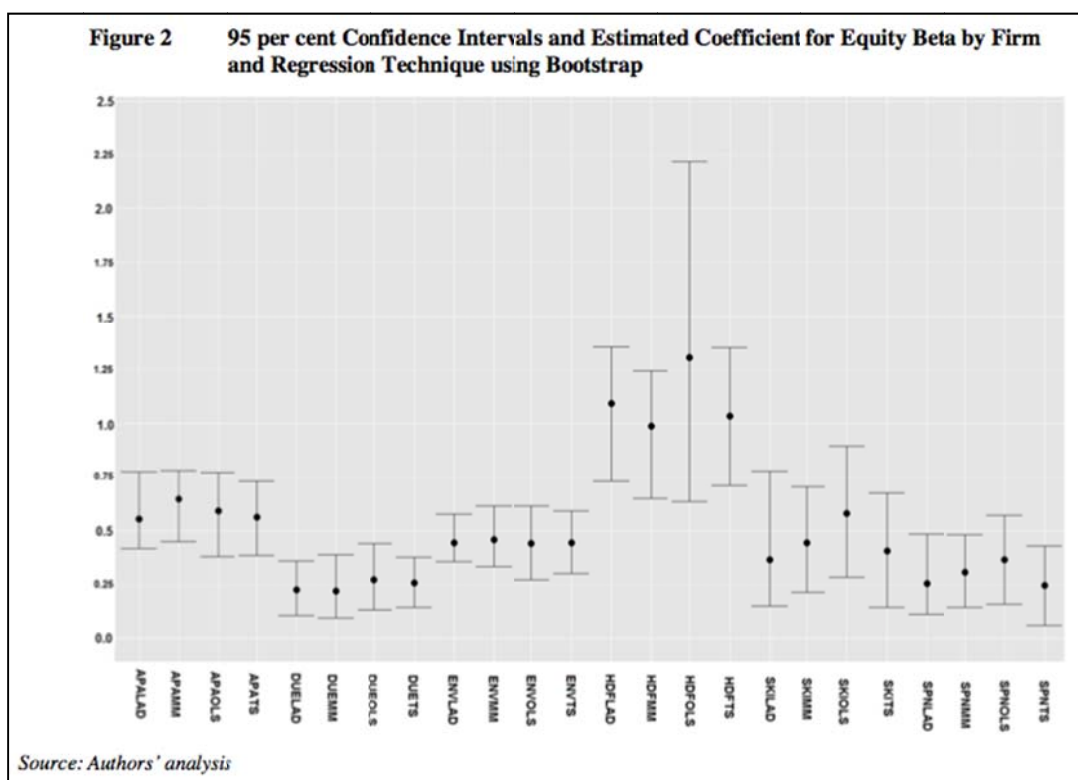
They note that this analysis has the advantage over traditional statistical analysis in that “no parametric assumptions are made regarding the sampling distribution of a statistic” and “confidence intervals calculated using this bootstrap approach are more accurate than the traditional approach which assume a parametric form regarding the regression coefficients”.⁸²

Figure 8.1 below illustrates the estimated coefficient and confidence intervals using the Bootstrap technique for each of the individual six firms.

⁸¹ Vo et al state that for the OLS method, statistically significant results (at 5% level) were obtained for all individual networks except DUET and SP AusNet. Statistically significant results were obtained for all individual firms using the LAD, Robust MM and Theil-Sen analyses. See *ibid*, p12 – 13, Table 8. Tables 9 and 10 illustrate similar results for the equal weighted and value weighted portfolio approaches.

⁸² *Ibid* p.18. Vo et al note that 10,000 bootstrap replications were calculated in order to estimate each sampling distribution.

Figure 8.1: 95 per cent confidence intervals & estimated coefficient for Equity Beta by Firm & Regression Technique using Bootstrap



Source: Vo D, Mero S & Gellard B, Economic Regulation Authority, "Equity Beta for the Australian Utilities is well below 1.0", March 2014. Figure 2, p 22.

It is apparent that for five of the six individual firms, the 95% confidence intervals cover a relatively narrow range of outcomes. HDF is clearly an anomaly and may reflect the relatively turbulent company history prior to delisting in December 2012.⁸³ In addition:

- The average equity beta for the five firms (excluding HDF) is 0.41 and including HDF is 0.52;
- Only five out of 24 beta values exceed 0.6 and four of these are for HDF; and
- The bootstrapped average standard error (SE) is 0.09 for the five firms, and 0.1 for the six firms including HDF.

Given the AER is setting the equity beta **for the benchmark efficient firm**, CCP3 believes it is reasonable to exclude the impact of HDF on the empirical results. However, even when HDF is included, the average beta coefficients are less than 0.6.

⁸³ HDF was delisted from the ASX in December 2012 prior to becoming part of the APA group of companies. See for instance, <http://www.apa.com.au/investor-centre/securityholding-information/information-for-hdf-securityholders.aspx>

There are similarities between the findings of the study by Vo et al, the outcomes of the Henry 2014 study, and the SFG 2013 regression analysis of equity betas for Australian firms (0.6).⁸⁴

Importantly, Henry's 2014 study was discounted by some DNSPs because, inter alia, they claimed there was a wide range in his recommended equity betas (0.3 to 0.8 in the 2014 study). However, Vo et al, employing a somewhat different non-parametric statistical test, are able to narrow this range to 0.5 to 0.7. They conclude:

Based on our estimates, we conclude that equity beta for Australian regulated businesses is well below 1.0. We also concluded that their argument [i.e. the regulated networks] for the equity beta of 1.0 is not on a reasonable and strong ground. Our estimates indicate that, on average, equity beta for Australian regulated businesses fall within a close range of 0.5 to 0.7.

CCP3 contends that after excluding the impact of HDF (which clearly did not represent a benchmark efficient network firm), the range of the remaining firms is more likely to be in the order of 0.3 to 0.6 with a mean of 0.41.⁸⁵ Inclusion of HDF increases the mean equity beta to 0.52.

This consistency provides CCP3 with some additional confidence that its initial advice to the AER to adopt an equity beta in a range of 0.5 to 0.6 with a point estimate of 0.55 has considerable merit. The average reported gearing level for the regulated firms included in the study is 0.57.⁸⁶ This is very close to the AER's benchmark 60% gearing.

As noted above, Vo et al also developed equity beta and equity beta ranges based on various portfolios of firms in a similar fashion to Henry (2009) and Henry (2014). The Henry (2014) study observed average equity betas across 5 different portfolios of 0.4986 (equal weighted) and 0.4646 (value weighted).

At least one DNSP has queried the reasons behind assessing a portfolio equity beta. The key purpose of the portfolio analysis is to allow a single portfolio to be created and, as such, a single corresponding equity beta can be estimated as an equity beta of the

⁸⁴ See SFG Consulting, *Regression based estimates of the risk parameters of the benchmark firm*, June 2013, Table 4, p. 16

⁸⁵ CCP3 acknowledges that this assumption requires further statistical assessment. However, CCP3 would argue that its recommendation of a point estimate beta, without uplift of 0.55 is reasonable given the data.

⁸⁶ Vo D et al, *Equity beta for the Australian Utilities is well below 1.0*, March 2014, Table 4, p. 9

industry as a whole.⁸⁷ Again, HDF has a disproportionate impact on the overall portfolio equity beta.⁸⁸

To conclude, CCP3's recommendation to adopt an equity beta of between 0.5 and 0.6 (CCP3 suggests 0.55) is based on consistent empirical observations by different experts employing a variety of assessment techniques, both before and after the AER's publication of its RoR Guideline.

It is also based on the performance of Australian utilities and is therefore consistent with the AER's definition of the benchmark entity – it does not rely on the questionable amalgamation of Australian data with US utility industry data; nor does it require further “uplifts” or de-levering/re-levering for different gearing levels. The data is what it is and is remarkably consistent.

Notwithstanding CCP3's focus on the empirical findings, the empirical results are more than consistent with the conceptual analysis of systematic risk for these businesses.

Although the benchmark business is assumed to have a relatively high level of gearing (60%) compared to the market as a whole, this is more than offset by the very significant benefits to the stability of the DNSPs' cash flow (assuming it is an efficient DNSP). Thus networks such as AusNet Services (AusNet) are able to sustain a gearing ratio of 70% while maintaining an investment grade rating of A- (see below).

This stability of future cash flow arises from the nature of the regulated industry, the pass through mechanisms and very low counterparty credit risk.⁸⁹ The annual indexation of the regulatory asset base further protects shareholder value in the company in a way that few other industries can match.

More recently, the move to a revenue cap protects the DNSP from volume risk – a point that is highlighted by the DNSPs in their statements to shareholders. For instance, AusNet states in its 2016 Half Year (HY) Presentation to Shareholders:

- Approximately 90% of HY 2016 revenues are regulated and inflation protected;⁹⁰
- A revenue cap regime determines revenues independently of volumes;⁹¹
- Predictable cash flows supportive of growing dividend profile;⁹²

⁸⁷ See for instance, Vo D, Mero S, Gellard B, *Equity beta for the Australian Utilities is well below 1.0*, March 2014, p 10.

⁸⁸ For example, adding HDF to the portfolio of APA, DUET and Envestra increases the equal weighted portfolio beta from 0.4 to 0.56.

⁸⁹ For example, the “retailer-of-last resort” arrangements and settlement timetables provide a very significant protection to the network from financial failure of a retailer.

⁹⁰ AusNet Services, *Half Year 2016 Results, for the financial period ended 30 September 2015*, 17 November 2015, p. 40

⁹¹ *Ibid*, p. 41

- Diversified debt portfolio with access to a variety of markets ensuring a low cost of capital;⁹³
- Investment grade credit rating, currently rated A- by S&P and A3 by Moody's;⁹⁴
- Significant after tax growth in dividends;⁹⁵ and
- Dividends fully covered by strong operating cash flows.⁹⁶

The 2016 Half Year Performance Report was produced after the AER's Preliminary Decision for AusNet and its final determination for the South Australian and Queensland DNSPs.

Real world evidence on the impact of the AER's Preliminary Decision

The discussion above highlights the disconnect between the claims of the DNSPs in their regulatory proposals and their other public statements.

CCP3 also provided the AER with an extensive range of "real world" information in its advice to the AER on the DNSPs' initial proposals in August 2015. This real world information included evidence that:

- Under the previous regulatory rate of return regime, DNSPs were making returns in excess of the expected returns;
- The new regulatory regime was even more accommodating to the DNSPs, by further reducing regulatory risks and cash flow volatility (through reduced temporal mismatch between costs and revenues and the revenue cap);
- Public utility share prices did not negatively respond to the AER's decisions based on the RoR Guideline;
- Public utilities continued to make positive pronouncements to their shareholders about stable future cash flows, dividend payouts and regulatory certainty; and
- The willingness of buyers of the regulated assets to pay RAB multiples well in excess of 1, even after the AER's RoR Guideline was published and after the AER's initial decisions on the RoR for NSW, ACT, Queensland and South Australian distribution businesses.

⁹² Ibid, p. 5

⁹³ Ibid

⁹⁴ Ibid. Note, gearing ratio is approximately 70% but AusNet retains an A- credit rating, demonstrating the disconnect between gearing and credit rating when it relates to businesses with long-life inflation protected assets and stable cash flows.

⁹⁵ Ibid, p. 10

⁹⁶ Ibid, p. 16

It also appears that in its Preliminary Decisions, the AER has not fully considered CCP3's advice to use the AER's extensive information gathering powers to continuously collect information on the DNSPs' profits, capital management strategies, investment plans, statements to shareholders, etc.⁹⁷

The AER's principle criticism of CCP3's recommendation that the AER make more use of this type of data appears to be based on its view that the data on profits and RAB multiples (etc.) is overly influenced by exogenous factors, not just the regulatory processes.⁹⁸ The AER concludes that as a result of this, the impact of this data on the regulatory decision making process cannot be readily quantified.

CCP3 considers that the AER's view is too limited. Any individual piece of market information should be treated with caution as suggested by the AER. But when there is a persistent pattern of excess profits (not explained by efficiency improvements relative to the AER's cost benchmarks) or RAB multiples that are consistently and significantly greater than 1, then the AER should acknowledge the regulatory arrangements are not achieving the RoR objective and are delivering outcomes in excess of efficient returns for the risks in the business.

For example, this additional information would allow the AER to benchmark its own decisions over time, and to also "test" the claims of the networks about the adverse impacts of the AER's decisions.

There is no doubt that a lower RoR than that claimed by the DNSPs might reduce the level of existing profits. However, if these profits are higher than efficient levels relative to the level of risk, then such a reduction should be regarded as an appropriate regulatory outcome consistent with the objectives of regulation.

Importantly, gathering such information does not go against the regulatory philosophy of assessing costs for the "benchmark efficient firm". It simply provides further guidance on how this abstract concept might be defined and put into regulatory practice.

Further to CCP3's "real world" data provided in its response to the initial regulatory proposals and in the previous sections above, CCP3 also provides the AER with the following supporting charts (Figures 8.2 to 8.5) that compare monthly average equity

⁹⁷ However, the AER states that it has sought information on the actual costs of debt and financing practices from the private sector providers and has engaged Chairmont to aggregate these responses. The AER then states that: "...we have not relied on this analysis in reaching our conclusions in this decision. We will consult more broadly with stakeholders on any future use of this information." (See for instance, AER, *Preliminary Decision Powercor* – Attachment 3, Rate of Return, October 2015, p 3-160). CCP3 considers this consultation must include all stakeholders.

⁹⁸ See for instance, AER, *Preliminary Decision Powercor* – Attachment 3 – Rate of Return, October 2015, pp 3-102-105, including Table 3-18.

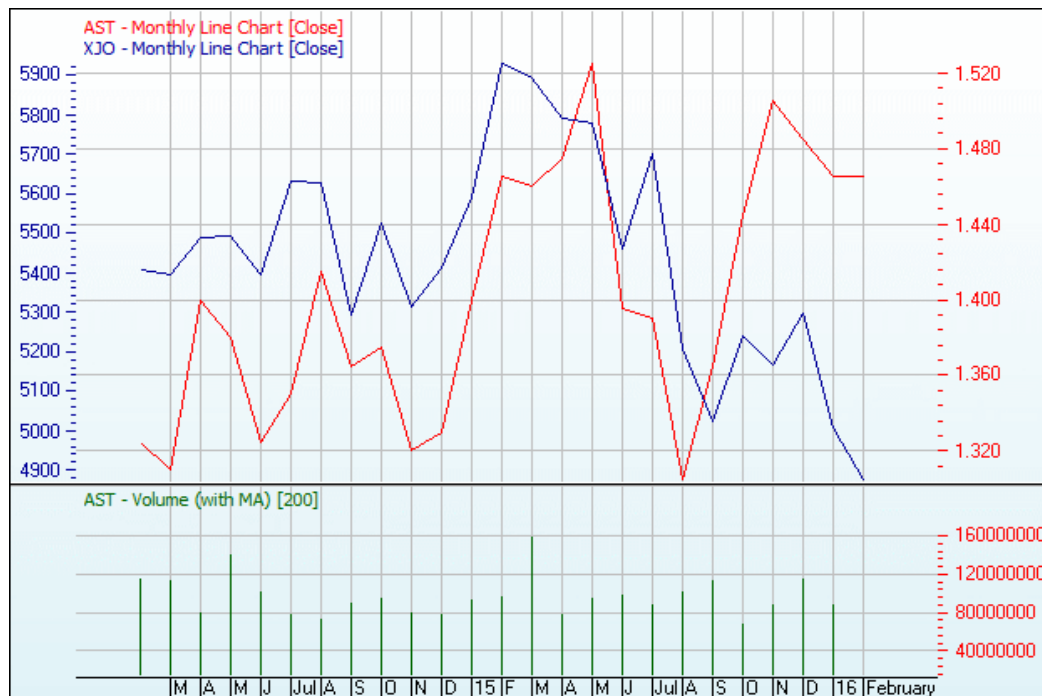
prices of the listed regulated network businesses with the recent trends in the ASX 200 (up to 3 February 2016).

The four charts very clearly demonstrate three important factors:

- The share prices of publically listed Victorian networks have not been downgraded by investors as a result of the AER’s RoR Guideline and Preliminary Decisions;
- During relatively stable/increasing equity price periods, the utility equity prices have closely tracked the ASX 200; and
- The utility equity prices in the last few months have proved resistant to the rapid changes in the share prices of the ASX 200 as a whole. It is apparent that the electricity networks are regarded as ‘safe haven’ investments during what is otherwise a period of share market volatility.

CCP3 concludes that, irrespective of all the additional claims made by the DNSPs in their revised proposals, the real world outcomes suggest they will have no difficulty in raising adequate funds for efficient investments in the businesses. Further proof of this point is the response to DUET’s capital raising for its \$1.4 billion investment in Energy Developments Ltd. DUET’s institutional offer was oversubscribed with security holders taking up 94% of their entitlements.⁹⁹

Figure 8.2: AusNet Services & ASX 200 (monthly average - last 2 years)



⁹⁹ See Angela Macdonald-Smith, *Spark Infrastructure to participate in DUET Group equity raising*, Sydney Morning Herald, 22 July 2015.

Figure 8.3: SKI & ASX 200 (monthly average – last 2 years)

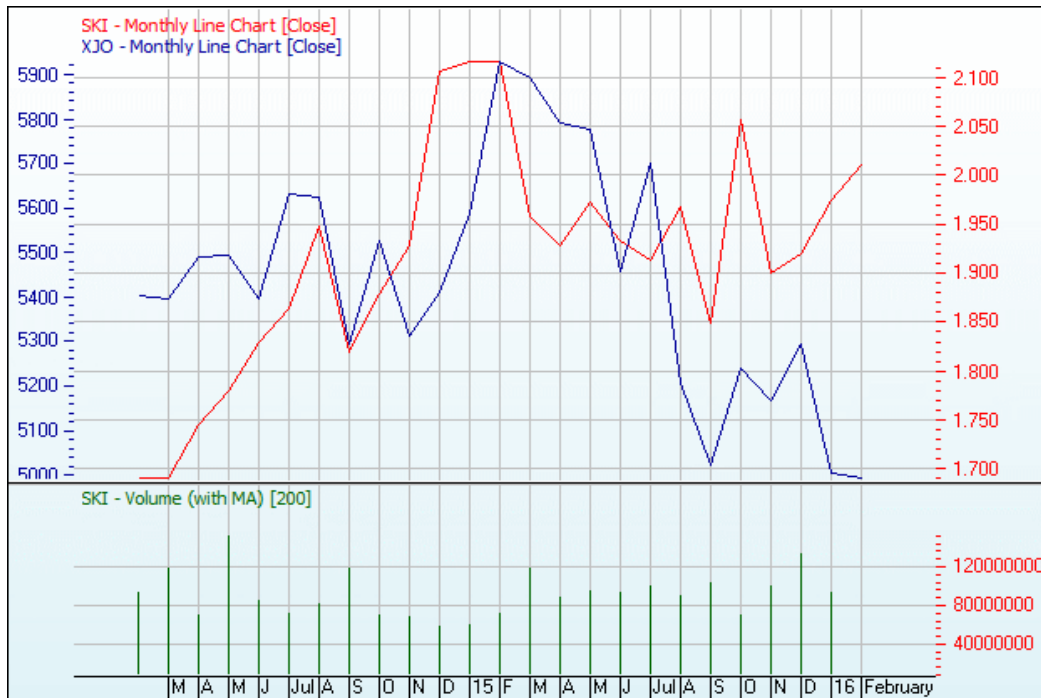


Figure 8.4: APA & ASX 200 (monthly average – last 2 years)

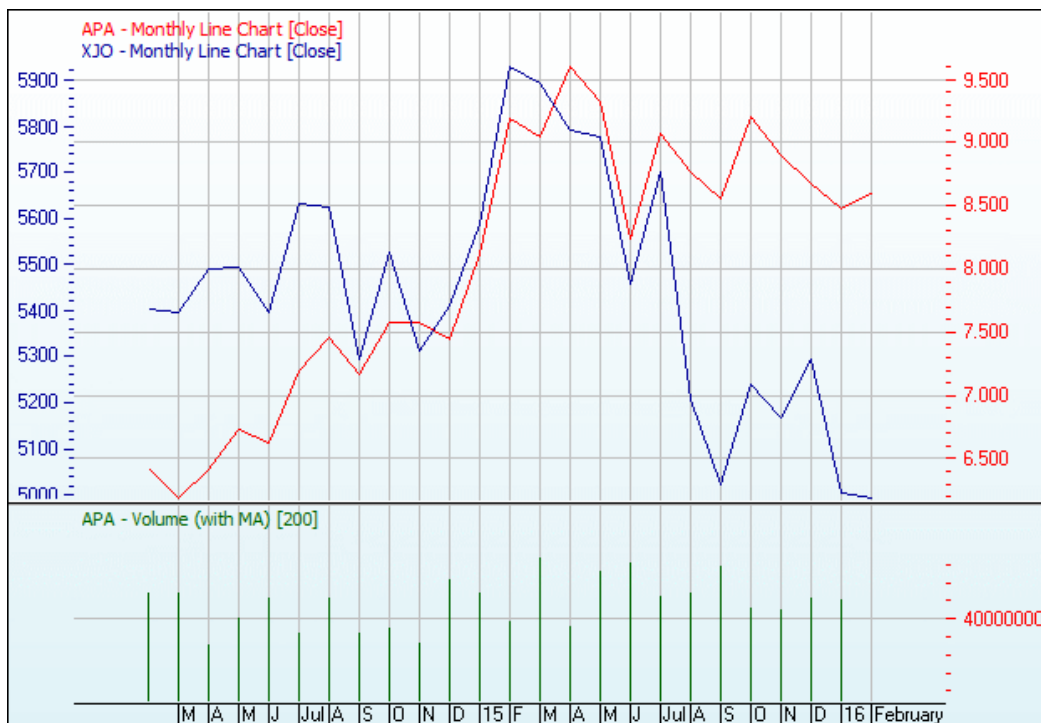
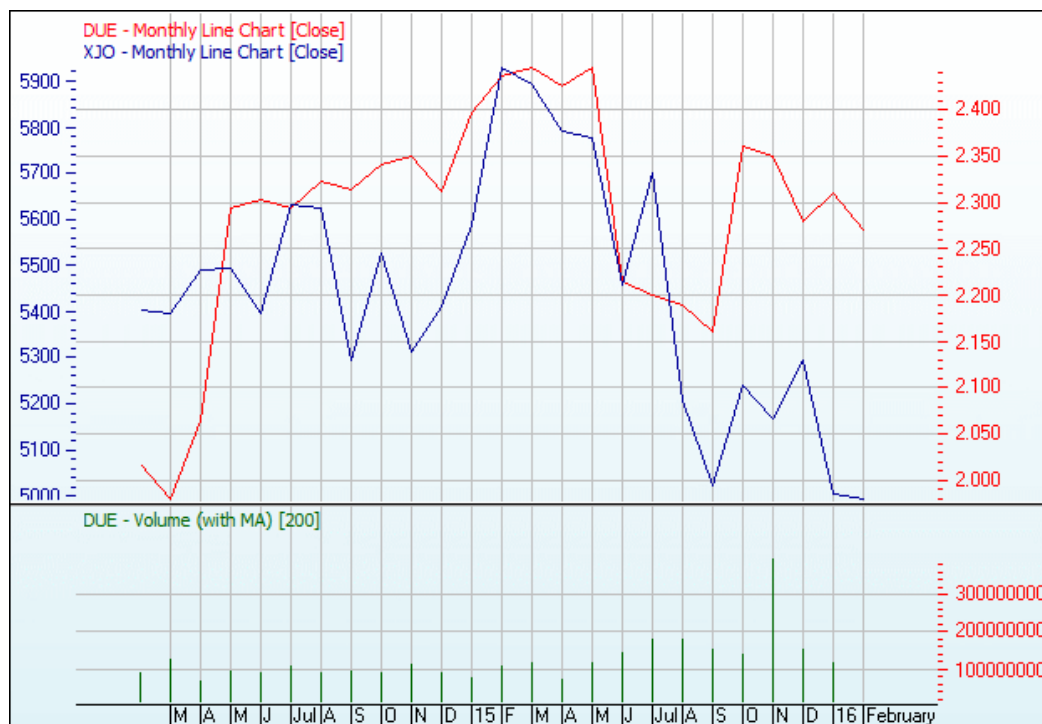


Figure 8.5: DUET & ASX 200 (monthly average – last 2 years)



8.4 The Victorian DNSPs revised RoR proposals

8.4.1 Overview of the DNSPs’ revised RoR proposals

The Victorian DNSPs submitted their revised RoR proposals in January 2015. The DNSPs rejected the AER’s Preliminary Decisions on the RoR, and increased their proposed RoR by about 140-150 basis points compared to their initial proposal.

The DNSPs’ revised RoR proposals sit 250-260 basis points above the AER’s Preliminary Decisions despite using the same risk free rate as the AER. Table 8.4 below summarises the initial proposals, the AER’s Preliminary Decisions and the revised proposals of the Victorian DNSPs.

Table 8.4: Summary of Rate of Return for Victorian DNSPs*

		AusNet	CP & PC	Jemena	United	Comment
Cost of Equity	Initial Proposal	9.90	9.90	9.87	9.95	Multi-model approach
	AER Preliminary	7.30	7.30	7.30	7.30	S-LCAPM foundation model
	Revised Proposal	9.8	9.89	9.89	10.05	Multi-model approach
Cost of Debt	Initial Proposal	5.39	5.39	5.39	5.67	Hybrid transition
	AER Preliminary	5.30	5.16	5.16	5.33	10-year staggered transition
	Revised Proposal	7.83	7.76	7.77	7.8	Immediate transition
Overall WACC	Initial Proposal	7.19	7.20	7.18	7.38	
	AER Preliminary	6.10	6.02	6.02	6.12	
	Revised Proposal	8.66	8.61	8.62	8.70	
Previous WACC		9.75	9.49	10.33	9.49	

* Based on the risk free rate of 2.76% as used in the AER’s Preliminary Decision, using 10-year CGS yields and the placeholder averaging period of 20 business days to 30 September 2015.

8.4.2 Reasons for the increase in the DNSPs' revised Rate of Return.

The revised proposals for the RoE are largely consistent with the DNSPs' initial proposals reflecting the continued assessment of the RoE using the "multi-model approach. That is, the DNSPs continue to claim that the regulated network businesses equity beta should be around 0.9 (plus/minus). They also re-state that the combination of the DGM, Fama-French factor model and the Black CAPM, together with their version of the SL-CAPM model is preferable to the AER's foundation SL CAPM model approach.

The DNSPs have also provided additional reports purported to support their proposed modelling approach, along with higher market risk premium (MRP) and a higher equity beta than the RoR Guidelines.

However, the most important change from their initial proposal is in the assessment of the RoD as illustrated in Table 8.4 above. More particularly, the DNSPs' have completely changed their views on the transition process to move from the "on-the-day" to the 10-year trailing average approach (with annual updates) to the return on debt.

In the past, the Victorian DNSPs were advocates of a "hybrid transition approach"¹⁰⁰ and claimed that this best reduced financial risks arising from a change in the regulatory approach. However, they are now advocates of an immediate move to the 10-year trailing average.

This change in the transition approach is the main factor behind the increase of around 210 basis points in the RoD compared to the DNSPs' initial proposals. The gap between the AER's Preliminary Decisions on the RoD and the DNSPs' revised proposal is now even larger – at 250-260 basis points.

As a result, the overall RoR in the DNSPs' revised proposals have increased compared to the initial proposals by over 1.4%, from a range of 7.18-7.38% to a range of 8.61-8.70%. The overall RoR increase compared to the AER's Preliminary Decisions is in the order of 2.6% (i.e. 260 basis points).

What could possibly justify such a change in position? Has the debt market "exploded"? Are the businesses teetering on the edge of financial collapse? Have their creditors defaulted? No.

CCP3 does, however, observe that the NSW DNSPs have appealed to the Australian Competition Tribunal the AER's decision with respect to the transition approach, consistent with their arguments back in 2013 that a 10-year transition process was not aligned with their actual debt practices. The Victorian DNSPs had made no such historical claim as noted above.

¹⁰⁰ That is, applying a transition process to the risk-free rate and an immediate transition to the Debt Risk Premium calculated on a 10-year trailing average basis.

It appears therefore, that the Victorian DNSPs' arguments for "no transition" do not come from a point of principle or an increase in the costs of debt so much as an opportunity provided by the legalistic processes of a Tribunal appeal to receive higher revenues.

Of course, this "change of mind" on the RoD transition comes at considerable expense to the DNSPs' customers.

The task facing the DNSPs is to establish in their revised proposal that it is in the long-term interests of consumers for the DNSPs to depart from the AER's RoR Guideline and for consumers to fund the resulting additional revenue claims.

8.4.3 CCP3's advice to the AER on the DNSPs' revised RoD transition proposals

Overview of CCP3's advice to the AER on the RoD transition

CCP3 advises the AER to reject the DNSPs' revised proposal to move directly to the 10-year trailing average approach, without any transition.

The AER's Final Decisions should be based on the RoD transition process set out in RoR Guideline as this process was designed to be transparent and to provide regulatory stability, minimise gaming opportunities and prevent windfall gains or losses by the networks and by consumers.

More specifically, the transition process adopted in the Final Decisions must align with the rate of return objective. That is, the outcome of the process should be consistent with the efficient cost of debt for an efficient benchmark business of similar risks.

The DNSPs' proposed approach to transition would not provide regulatory stability, and would allow windfall gains to the networks over the 2016-20 regulatory period. The outcome of the revised proposal, a RoD of circa 7.8% for 2016, is not consistent with efficient funding costs.

These issues should be central elements of the AER's decision making and must have priority over the arcane arguments set out in the DNSPs revised proposals.

The following sections provide further explanation of CCP3's position.

The AER should focus on the outcomes of the transition process

One of the fundamental bases for the 2012 reform of the NEL and NER was the recognition that the RoR assessment process had lost sight of the overall outcomes and was too focused on theoretical debates about particular inputs and processes. This enabled the DNSPs to cherry pick the issues resulting in outcomes that favoured the DNSPs at the expense of an efficient RoR.

As discussed in section 1 of this advice, it was the AEMC's express direction to the AER to consider the overall RoR outcome in making its decision.

The Victorian DNSPs' revised proposal with respect to the RoD is another prime example of reducing the RoD debate to detailed legalistic arguments about the nature of an efficient debt portfolio.

The DNSPs' arguments seem to generally follow a theme along the lines of (a) the AER's move to a 10-year trailing average indicates that the AER considers this (and this approach alone) is the efficient portfolio; and (b) therefore, the AER should adopt this approach immediately without a transition period.

However, the 2012-13 debate about the change to a 10-year trailing average was not about whether it was the MOST efficient debt portfolio – it was recognised by all parties that there were many different “efficient” portfolios of debt depending on individual business circumstances. It was also recognised that over a sufficient period of time, the “on-the-day”, 10-year trailing average and hybrid approaches (properly implemented) should deliver the same return on long-life network assets.

Instead, the 2012-13 debate was about the outcome of the process – which approach over time would deliver more predictable outcomes, within the general rate of return objective and in the long-term interests of consumers.

These same considerations come into force when considering the transition process. The likely need for a transition process was recognised by SFG in their concluding advice to the AEMC in 2012 on the debt component of the regulated RoR:¹⁰¹

Many businesses would only consider a switch to a different method if appropriate transition arrangements could be put in place. ... Moreover, an appropriate transition arrangement effectively destroys any incentive or ability for a business to seek to “game” the regulatory allowance by proposing whichever method might result in the highest allowance.

This issue is incorporated into one of the four factors that the AER must have regard to under the NER when determining the best approach to estimating the RoD. The 2012 amended NER states, with respect to estimating the return on debt, that regard must be had to four factors including the following factor that is specific to the transition process issue:¹⁰²

(4) Any impacts (including in relation to the costs of servicing debt across regulatory periods) on a benchmark efficient entity referred to in the allowed rate of return objective that should arise as a result of changing the methodology that is used to estimate the return on debt from one regulatory period to the next.

The AEMC provided a further explanation of the purpose and intent of this new clause in the NER. The AEMC stated in its final position paper as follows:¹⁰³

¹⁰¹ SFG Consulting, *Rule change proposals relating to the debt component of the regulated rate of return*, report for AEMC, 21 August 2012, p 7

¹⁰² NER, cl 6.5.2 (k)(4)

¹⁰³ AEMC (2012), *Economic Regulation of Network Service Providers and Price and Revenue Regulation of Gas Services, Final Position Paper*, 15 November 2012, Sydney, p. 65

The purpose of the fourth factor is for the regulator to have regard to impacts of changes in the methodology for estimating the return on debt from one regulatory control period to another. Consideration should be given to the potential for consumers and service providers to face a significant and unexpected change in costs or prices that may have negative effects on confidence in the predictability of the regulatory arrangements.

CCP3 agrees with both SFG and the AEMC on the key issues that must frame the AER's decision on the methodology to transition from one approach to RoD to another.

For example, the Victorian DNSPs proposed a RoD of circa 5.4% in their initial proposals. The hybrid approach to transition proposed by the DNSPs in this initial proposal was also reasonably consistent with the approach proposed by the DNSPs during the development of the RoR Guideline. For example, in response to the AER's Draft Rate of Return Guideline, SP AusNet (now AusNet Services) stated:¹⁰⁴

*Provided the benchmark term returns to 10 years [which it did in the Final RoR Guideline] SP AusNet considers that the transition path presented in the draft Guideline is **appropriate to allow businesses and customers to transition to the new cost of debt approach with no windfall gains and losses to either party.** [emphasis added]*

Given the Victorian DNSPs' position during the development of the RoR Guideline (as quoted above) and their initial proposals it is hard to understand the DNSPs' new position in the revised proposal.

That is, a mere eight months after the initial proposals, and despite continued low interest rates and conservative forecasts of future interest rates, the DNSPs are now proposing a RoD of around 7.8% (an increase of some 240 basis points) and a debt risk premium (DRP) of some 5.1%. There is no objective basis for this degree of change in the RoD and the DRP for risk of a benchmark efficient regulated network business.

It is the proposed transition methodology that has changed, not the market fundamentals.

As a result, the DNSPs' risk that their revised proposals for the RoD are perceived as merely opportunistic and "gaming" the regulatory system rather than based on fundamental expectations about the cost of debt for the 2016-20 regulatory period.

Fortunately for consumers, the AER's task is clearly to consider proposals in regard to the overall outcome of the process, rather than engage in legalistic debates about efficient financing structures.

CCP3 has noted in previous submissions that the AEMC has emphasised the necessity of focusing on the overall rate of return objective. The AEMC's view is important to both the AER and the Australian Competition Tribunal if it is reviewing the AER's RoR decision.

¹⁰⁴ SP AusNet, *Draft Rate of Return Guideline*, 11 October 2012, p. 3

The AEMC stated (in reference to the Expert Panel Stage 2 Final Report¹⁰⁵):¹⁰⁶

The LMR Panel has proposed in its final stage two report, that the NER and the NGR could be amended to clarify that decisions under those rules should be more holistic and broader, focussing on overall outcomes than component elements.

The recommendations in the final stage two report that seek to encourage a greater focus on objectives and overall outcomes are consistent with the final position in this rule change and are supported by the Commission.

CCP3 does not consider that the DNSPs' revised RoD proposals for 2016-20 reflect a reasonable expectation of their current overall efficient debt portfolio costs; nor do the RoD proposals reflect expected future debt costs. The DNSPs' revised proposals are therefore not consistent with the overall rate of return objectives.

In coming to this conclusion, CCP3 starts from the agreed position that there are many ways for a network business to manage its debt funding, and many of these could be regarded as "efficient", depending on individual circumstances.

But it is not the task of the AER to second-guess how each individual business could or should manage their debt portfolio. That is why the AER's role is to focus on the overall outcome of the process and how it contributes to the rate of return objective for 2016-20.

This means that the AER should assess the overall return on debt percentage that each approach provides and whether this outcome represents the efficient cost of debt for an efficient Australian regulated network business in the future regulatory period while adequately managing risk.

Overall, therefore, CCP3 considers that the DNSPs' revised proposal to move directly to a 10-year trailing average fails the tests of regulatory stability, and avoidance of windfall (unearned) gains and losses. To this CCP3 would add the practical value of an approach that uses data that is not contentious (discussed below).

Most importantly, the DNSPs' revised proposals for the RoD fail the test of delivering an efficient cost of debt for the 2016-20 regulatory control period consistent with the rate of return objectives.

Further discussion on the CCP's reasons for this are set out in the section below.

The DNSPs' proposed RoD is in excess of the efficient cost of debt

The DNSPs have not established why lenders should require a DRP of 5.1% over the risk free rate for providing funds to the regulated DNSPs. Nor is there evidence of credit

¹⁰⁵ LMR Panel, *Review of the Limited Merits Review Regime, Stage Two Report, Report for SCER*, 30 September 2012

¹⁰⁶ AEMC 2012, *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services*, Final Position Paper, 15 November 2012, Sydney, p 7

agencies rerating the DNSPs downwards, as might be expected if there had been such a rapid expansion of their risk consistent with an increase in the DRP to 5.1%.

Corporate 10-year bond yield rates are at, or near, historical lows for all investment rated bonds, (BBB- to AAA), and for a range of tenors. There is also ample liquidity in the bond market.

There is no evidence that the Victorian DNSPs have had difficulty raising funds. At least two of the buyers of the NSW Transgrid business also have part ownership of network businesses in Victoria¹⁰⁷. Despite paying some 1.6 times the RAB for the Transgrid assets¹⁰⁸ there is no evidence that the two businesses could not raise the funds for the purchase through equity and debt arrangements.

Why then, do they claim that they require a DRP that is higher than the DRP during the GFC in order to fund capital investment in Victoria?

Adding to the problematic nature of the Victorian DNSPs' claims is data from Ausgrid Network's own consultant, Competition Economics Group (CEG).

In a report to AusNet Services in advance of AusNet's initial RoD proposal, CEG provided the following summary of their "best estimate" of the DRP in each calendar year from 2006 to 2014 using estimates of the **trailing average** DRP. The "best estimate" combines historical, and controversial, data series on the yield on BBB commercial bonds, in order to derive a best estimate of the DRP for each year and for 10 years.¹⁰⁹

The average over the period was 2.35%. CEG also contrasted this with the short term DRP calculated from 2 January to 30 January 2015 of 1.816%. The CEG results are presented below in Table 8.5.

¹⁰⁷ The successful bid consortium included Hastings Fund Managers (20.02%) and Spark Infrastructure (15.01%). See for example: <http://www.abc.net.au/news/2015-11-25/transgrid-nsw-government-reveals-buyer-of-poles-and-wires-lease/6963420>

¹⁰⁸ The NSW Government announced on 25 November 2015 that the Transgrid lease sold for A\$10.258 billion which was higher than previous expectations.

¹⁰⁹ CEG uses a mix of Bloomberg curves (BBB, extrapolated 10yrs), Reserve Bank of Australia (BBB, extrapolated 10yrs), CBASpectrum (BBB@10yrs) and CEG's own assessments.

Table 8.5: CEG “Best Estimate” of Trailing Average DRP

Financial year	DRP
2005/06	0.628
2006/07	0.793
2007/08	1.719
2008/09	4.359
2009/10	2.810
2010/11	2.737
2011/12	3.025
2012/13	2.886
2013/14	2.746
2 January 2015 to 30 January 2015	1.816
Average (10 years)	2.35

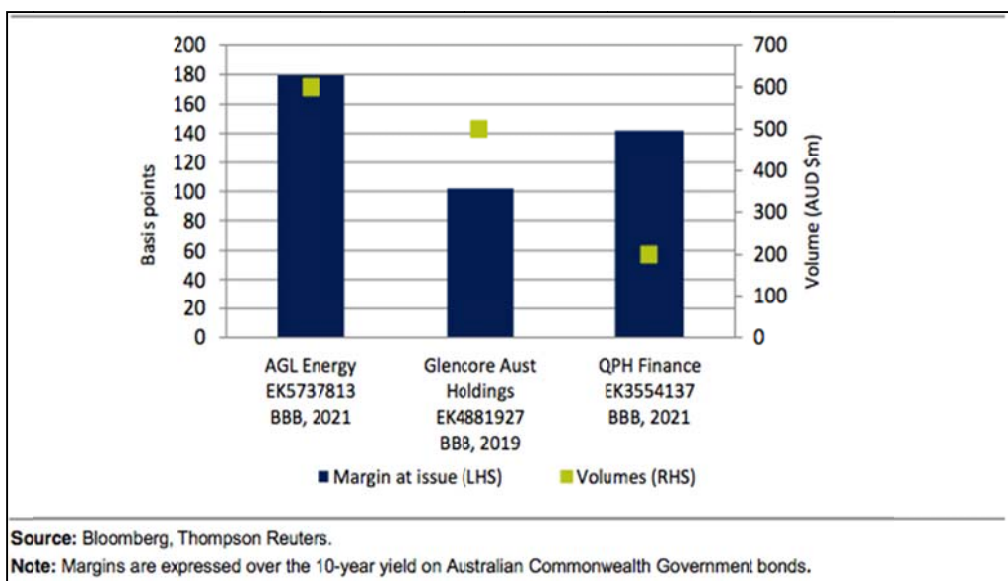
Source: Bloomberg, RBA, CBASpectrum, CEG analysis

Source: CEG, “Critique of the AER’s JGN Draft Decision on the Cost of Debt, report prepared for AusNet” 2015, Table 12, p.75.

Note: CCP3 does not necessarily accept the CEG analysis of the “best estimate”. It is provided herein to illustrate the extent to which the DRP implied in the current proposal exceeds historical DRP even using the networks own consultant, CEG.

IPART has undertaken a separate analysis of debt risk premiums revealed in 2014-15 bond issues for BBB companies as part of its biannual update of the regulatory WACC, as illustrated in Figure 8.6. Each of these companies does not have the benefit of the regulatory shelter on revenues and asset base yet the observed premiums are 180 basis points or less.

Figure 8.6: Debt Margins over 10 Year CGS Yields (BBB)



Source: IPART, "Fact Sheet WACC Biannual Update Feb 2015", Figure 5, p. 6.
http://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/fact_sheet_-_wacc_biannual_update_-_february_2015.pdf

CCP3, therefore, can find no support for the revised proposals by the Victorian DNSPs that imply a DRP of some of 5.1% over the risk free rate. The fact that the benchmark efficient DNSP is operating a very low risk businesses (particularly given the use of BBB 10-year bond yields to assess the commercial cost of debt), with reliable cash flows, further casts doubt on the value of the DNSPs' current proposals.

Moreover, the very fundamental fact that the revenue streams and asset values of the DNSPs are protected under the regulatory arrangements makes the Australian DNSPs unique among the firms in the commercial BBB bond sector that is used to determine the benchmark yield.

The issues around data quality for historical analysis

There has been a long history of controversy over the appropriate way to measure the RoD for the benchmark efficient network business. There is not one series of third party service providers that provide a continuous and consistent series of yields for BBB+ 10-year commercial bonds. Compromises have been made at every juncture and not surprisingly it has been a regular source of appeals to the Australian Competition Tribunal.¹¹⁰

The AER's RoR Guideline (and subsequent papers) has put a "stake in the ground" about what series would be used by the AER and how they would be "massaged" to meet the BBB+ 10-year bond for the benchmark entity.

Going forward therefore, there should be some greater consistency in the yield data.

Importantly, the AER's proposed transition approach means that the controversies over the state of the historical data should not be an issue in the current determinations. In contrast, the immediate transition to the 10-year historical averaging approach would require many more assumptions about the optimal treatment of the historical bond yield data. As Lally states:¹¹¹

Furthermore, within the historical period [for the calculation of the 10 year average], much of the data from mid 2008 to the end of 2013 is highly contentious, as judged from CEG (2015c, Figure 14, 15)¹¹². So, if a trailing average were adopted immediately, much of the data used would be highly contention. Furthermore, all of this contentious data would continue to afflict the trailing average for several years. By contrast, the

¹¹⁰ The debates have frequently ended up as appeals in the Australian Competition Tribunal and concern data sources, weighting of data, extrapolation of data and so on.

¹¹¹ Lally M., Capital Financial Consultants Ltd, *Review of Submissions on Transition Issues for the Cost of Debt*, 21 October 2015, p.p. 10-11.

¹¹² CEG, *Critique of the AER's JGN Draft Decision on the Cost of Debt*, report prepared for AusNet, April 2015.

data are not highly contentious from the end of 2013, as judged from CEG (2015c, Figure 14 and 15).

CCP3 agrees that the historical data on the cost of debt is contentious and this fact is reflected in the extensive debates about which data series should be used to determine the RoD and therefore, the DRP.

CCP3 considers this provides an additional and important reason to adopt the AER's transition approach that will not require the use of this contentious data. The DNSPs' approach, however, may merely "kick the can down the road" to a dispute about historical data (as has occurred in the past).

The AER must have regard to the impact of their decision on capex incentives

A decision to move directly to the 10-year trailing average would not promote efficient levels of new capital investment by the DNSPs. This is because the return on this investment would significantly exceed the expected efficient RoD for the DNSPs.

A critical objective of the incentive regulation process is that it should promote efficient investment by (inter alia) reflecting the efficient costs of capital to the network business over the regulatory control period.

The AEMC has captured this intent in the amended NER by including this as one of the four factors that the AER must have regard to in estimating the return on debt. The AEMC explains this as follows:¹¹³

The impact on the incentives for efficient capex is also an important consideration. The incentives for efficient capex are stronger when the difference between the return on debt and debt servicing costs of the service provider is minimised.

This objective of capex efficiency is not only relevant to the final RoD arrangements (the 10-year trailing average in this instance). It is also most relevant to the process by which the RoD is set at the time of the change in regulatory approach (including during any transition period).

SFG explained this issue as follows in their 2012 report to the AEMC @ 12 (c):¹¹⁴

12 (c) The historical average return can be more than 3% higher or lower than the prevailing rate at a particular point in time. If new capital expenditure earns a return that is materially different from the prevailing rate, there are obvious problems.

SFG (2012) goes on to explain that, other things being equal, the incentive effects (which may persist for more than one regulatory period) could result in more capital expenditure

¹¹³ AEMC 2012, *Economic Regulation of Network Service Providers and Price and Revenue Regulation of Gas Services, Final Position Paper*, 15 November 2012, Sydney p. 58. See also NER, 6.5.2 (k)(3).

¹¹⁴ SFG Consulting, *Rule change proposals relating to the debt component of the regulated rate of return, Report for AEMC*, 21 August 2012, p. 7

being proposed when interest rates decline, and less being proposed after increases in interest rates.¹¹⁵

CCP3 therefore concludes that the DNSPs' revised approach would not achieve this capex efficiency objective as the outcome of the revised approach would provide excess returns on the cost of debt servicing for new capital investment.

The impact of this would, in turn, extend beyond the 2016-20 regulatory period via the excessive growth in the regulated asset base (RAB) even if by that time the annual updating process had "more equalised" the RoD outcomes between a transition and non-transition approach.

This is clearly not in the long-term interests of consumers.

The AER must have regard to the impact on consumer and investor confidence

A decision in favour of the DNSPs' revised RoD proposal would significantly undermine the confidence consumers and investors have in the AER's regulatory processes.

In the first instance, CCP3 recognises that regulatory processes must evolve. The move to a 10-year trailing average is just such an important regulatory evolution.

After extensive consultation most stakeholders accepted that the 10-year trailing average with annual updates would have some overall net benefits.

However, consumer acceptance for the 10-year trailing average cost of debt (rather than continuation of the "on-the-day" or a 5-year trailing average aligned with the regulatory period)¹¹⁶ during the Better Regulation process was, arguably, contingent on the AER having an effective transition process that would prevent windfall gains or losses by either consumers or the businesses.

The DNSPs' revised proposals for transition violate this implicit understanding that has underpinned the consumers' support of the 10-year rolling average approach.

The DNSPs' revised proposals would also violate the NPV=0 principles espoused by Lally as being essential to good economic regulatory practice and investor confidence.

Bottom line: - The DNSPs' revised approach means that consumers will pay for the impact of the GFC twice, once in regulatory period 2011-2015 (under the "on the day" approach) and once in the current regulatory period (under the 10-year trailing average/no transition period).

In the meantime, the Victorian DNSPs have had ample opportunity to unwind their high interest rate swap positions on which the 2011-2016 return on debt was based using the

¹¹⁵ Ibid, p. 48.

¹¹⁶ As recommended for instance by Lally and some consumer groups

“on the day approach”. Thus, they have been able to improve their average debt costs relative to the regulatory allowance each year of the 2011-16 regulatory period.¹¹⁷

Consumers have no such opportunity to manage the debt costs transferred to them by the networks. The interest rate risks are inevitably asymmetrical as the DNSPs’ have access to risk management tools; consumers do not.

However, the AER’s transition process (as set out in the RoR Guideline) provides a methodology that somewhat reduces this risk while progressing to a more stable position for the benefit of both consumers and investors over the longer term.

Is the AER attempting to “claw-back” the excess cost of debt allowance from 2011-2015?

As illustrated in Tables 8.2 and 8.3, for the regulatory period 2011-2015, the DNSPs were allowed a cost of debt of 8.97%, including a risk-free rate of 5.08% and a DRP of around 3.9%. This 8.97% was constant for the whole five-year regulatory period.

Since that time, interest rates and commercial debt costs have continued to fall quite rapidly and the forecasts are that this will be maintained for some time. This has allowed the DNSPs to progressively adjust their initial debt portfolio to a much lower cost base.

It has been argued by some DNSPs that the AER, in its consideration of the RoD for 2016-20 and the transition to the new debt cost assessment, is attempting to “claw back” some of this previous benefit to the DNSPs. These DNSPs further claim that the AER cannot take the issue of “double dipping” into its consideration with respect to either the overall return on debt or the transition to a new debt assessment process.

In its previous submission to the AER, CCP3 argued that the AER was doing no such thing and was not motivated by a “claw back” approach. CCP3 highlighted that the AER developed its RoR Guideline in 2013 when it did not and could not know which direction interest rates and the economy would go.

The AER’s critical regulatory task was therefore to minimise the risk of windfall gains or losses in the transition process and to provide all stakeholders with transparency about this process by setting it out in detail in the RoR Guideline.

CCP3 concluded in response to the DNSPs’ initial proposal for a “hybrid” approach to the return on debt and transition, as follows:¹¹⁸

¹¹⁷ The Victorian DNSPs indicated during the Better Regulation process, and subsequently their debt management process involved extensive use of interest rate swaps and other hedging instruments to cover their interest rate exposure over the regulatory control period.

¹¹⁸ Consumer Challenge Panel – Sub panel 3, *Response to proposals from Victorian electricity distribution network service providers*, Attachment 1, August 2015, p. 83

CCP3 therefore considers that the AER's approach as set out in the Guideline is reasonable under the circumstances and best satisfies the NPV=0 principle that we regard as fundamental to good regulation.

Abiding by the principle of NPV=0 during a change in a regulatory process also provides assurance to investors of the integrity of the AER's process. Allowing a windfall gain to one party or the other, however, would undermine the confidence of all stakeholders in the regulatory process.

As a result of this analysis, in its original response CCP3 rejected the DNSPs' "claw back" allegation and recommended that the AER had no reason to depart from the transition process set out in the AER's RoR Guideline in advance of any determinations.

Since then, as noted above, the DNSPs have submitted their revised proposals and these revised proposals significantly increase the RoD. CCP3 therefore holds that its previous concerns are even more relevant to the AER's assessment of the DNSPs' revised proposals.

CCP3 also adds to its previous comments, the following comments:

- The very agreement to adopt a 10-year trailing average (which the DNSPs generally supported) rather than the 5-year period preferred by some stakeholders, means that the RoD is now focused on the long term costs of capital across regulatory periods.
- In any case, the AER's approach to transition is not a statement about its permanent approach to the RoD assessment. Nor is it a signal of some general regulatory policy that the AER will attempt to "claw back" losses or gains in previous determinations.
- Rather, in designing the transition approach, the AER has attempted to balance financial risks for the DNSPs and consumers while ensuring that the DNSPs can recover at least their efficient costs of debt given the most likely funding arrangements under the previous regulatory regime.¹¹⁹

Concluding comments on the cost of debt

In order to retain the confidence of both consumers and stakeholders in the integrity of the AER's process, the AER should not change the transition approach set out in the RoR Guideline.

CCP3 considers that the AER's transition approach reduces risk while enabling DNSPs to recover at least their efficient costs of debt for delivering the network services.

¹¹⁹ Specifically, the AER recognised that the Victorian DNSPs' managed their portfolio through use of different tenor debt, raised at different periods but using interest rate swaps to manage interest rate risks – it would take each DNSP some time to unwind positions to match the new regime. Each DNSP will have a different arrangement within that broad approach, but the AER's task is not to reflect every individual arrangement but to establish a conceptual and reasonable benchmark.

If it were to change its Guideline approach, the AER would need to establish to consumers that the outcome will better satisfy the rate of return objective and be preferable in the long-term interests of consumers. The AER would also need to demonstrate that such a change represented good regulatory practice, particularly given that the DNSPs' revised proposals were prepared with the knowledge of the direction of relevant 2015 interest and commercial bond rates.

The Victorian DNSPs have not established that their revised approach is in the interests of consumers. Indeed, the revised proposals suggest a concerning change in direction that is not motivated by fundamental changes in the real cost of debt to these businesses, and instead reflects the benefit of hindsight through the selection of a different transition approach.

To wit, CCP3 concludes with an extract from one of the Victorian DNSP's submissions (Jemena) on the transition to the AER's trailing average approach in response to the AER's 2013 Draft RoR Guideline:¹²⁰

Jemena also has particularly strong views on what benchmark the AER should use to set the cost of debt. As set out in our submission on the consultation paper, Jemena:

- ...
- *If the trailing average approach is used, favours a transition mechanism from the current cost of debt benchmark to the new benchmark because this ensures that the assumed efficient debt management practices are fairly transitioned between the two.*

CCP3 concludes that, in advance of the current regulatory control period, the Victorian networks favoured a transition process (albeit with some differences to the AER's preferred model).

It is only since the direction of interest rates and bond rates became known that the DNSPs' have sought what is effectively a retrospective change (as it impacts on 2016 year as well as 2017-2020) to a "no transition" approach. On this "hindsight" basis alone, the AER should reject the revised approach from the DNSPs.

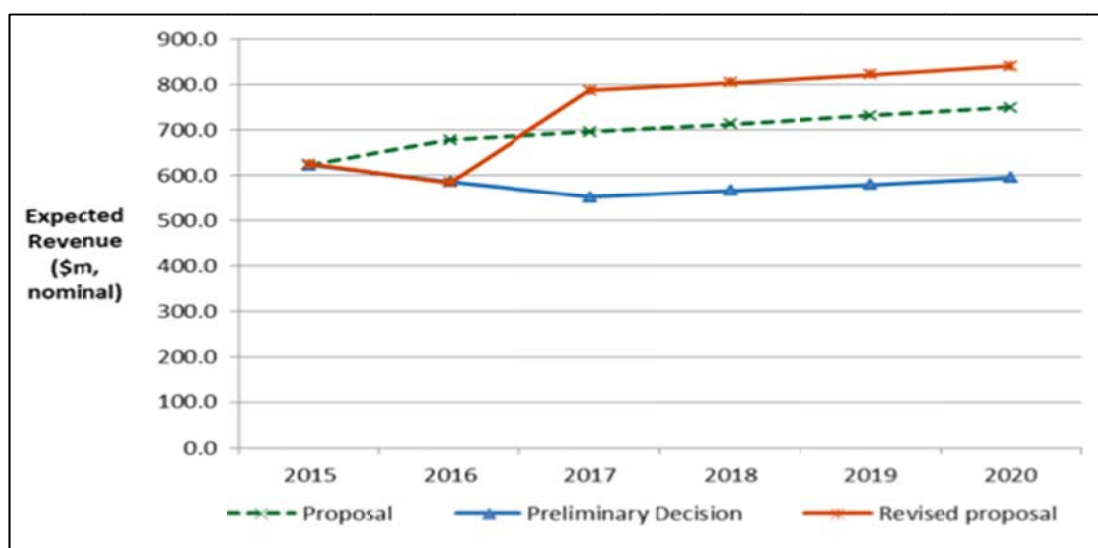
CCP3 has not found any evidence that the DNSPs consulted with their customers on this change of approach to the RoD transition compared to their initial proposals. Nor have the DNSPs demonstrated why it is in their customers' long-term interests for the DNSPs to over-recover their cost of debt and drive network prices up.

CCP3's understanding is that the DNSPs undertook consultations with their customers prior to the initial proposals. This would include projections by each DNSP of the likely price path over the five years (around CPI increases), much of which was driven by the fall in the DNSPs' assessment of the rate of return based largely on the much lower RoD.

¹²⁰ Jemena Limited, *Rate of Return Guideline – Jemena submission on the draft guideline*, 11 October 2013, p. 1

In the revised proposals, the substantial increases in the RoD (as assessed under the revised transition approach), along with the changes to depreciation, have resulted in very significant price increases particularly in 2017; price increases that include a “claw back” of “lost revenues” in the 2016 year. This “lost revenue” is, in turn, created very largely, by retrospectively applying the revised RoD transition approach and the revised depreciation methodology. Figure 8.7 illustrates the overall impact on AusNet’s revenues with the RoD and depreciation changes being the major factors. A similar profile of revenue changes can be seen for each of the other four DNSPs. The average price path follows a similar profile to the revenue charts.

Figure 8.7: AusNet Services – forecast revenue 2015-2020



Source: AER analysis; AusNet PTRM Revised Proposal.

Given the drastic impact on prices, CCP3 would have expected the DNSPs to undertake extensive consultation with their customers so that, at the very least, these customers were fully informed of the changes in approaches and could advise the DNSPs whether they were appropriate and in the consumers’ long-term interests.

Further, even if the DNSPs were to claim that the changes were NPV neutral over time (which is not demonstrably the case for the RoD), the changes from their initial proposals require a demonstration of good faith with the consumers. The changes also require some form of independent consumer testing to assess if consumers prefer to pay significantly higher prices now for some long-term savings (should they be demonstrated to occur), at some point of time in the future.

Absent those discussions with consumers and their positive support for the revised proposals, CCP3 considers that consumers may well agree with the Victorian Government when it stated that it was “extremely disappointed with the opportunism demonstrated

by the DNSPs".¹²¹ CCP3 would add to this its concluding view that the changes in the revised proposals are excessive, the impact on prices extremely adverse to the Victorian community and these pricing outcomes are likely to distort efficient investment by the networks and by consumers well into the future.

Recommendations include the following:

8.1 *The AER should review the additional material on the equity beta provided to it by its own expert consultants, CCP3 and others since the publication of the Rate of Return Guideline to assess whether the Guideline's equity beta estimate of 0.7 remains appropriate. The AER should do so taking into account the risk that applying a series of conservative assumptions will lead to an overestimation of the RoE.*

8.2 *The AER should also consider the extent to which the changes in the regulatory regime, such as the revenue cap form of control and the annual updating of the cost of debt improve the risk profile of the DNSPs relative to their historical exposures and the market as a whole.*

8.3 *The AER should continue to build up its knowledge base concerning the actual financial performance and representations of the regulated networks to their investors and debt providers with the aim of testing whether these financial outcomes are consistent with the expectations under the regulatory regime. This provides an opportunity for the AER to benchmark its own decisions.*

8.4 *With specific reference to the revised proposals from the DNSPs, CCP recommends that the overall rate of return objective is best satisfied as follows:*

- *The AER should not accept the DNSPs' proposed methodology for assessing the RoE. The AER should continue to apply its foundation model as set out in the AER's RoR Guideline.*
- *The AER should not accept the DNSPs' revised proposals for transitioning to the new RoD 10-year trailing average. The AER should continue to apply the RoD transition model set out in the RoR Guideline.*

¹²¹ Victorian Government, *Submission on the Victorian electricity distribution network service providers' revised regulatory proposals for 2016-20*, 12 February 2016, p. 1

9. Pricing

NER cl 6.18.1A(a) requires the DNSPs to propose their tariff structures as part of their Tariff Structure Statement (TSS). NER cl 11.76.2 requires the DNSPs to submit their first TSS by 25 September 2015.

Each of the DNSPs provided a TSS, and these were published by the AER. The AER published an Issues Paper on the TSS proposals on 3 December 2015. The AER also held a public forum to discuss the TSS on 14 December 2015, which CCP3 members attended.

Jemena had chosen to submit a TSS earlier, with its 2016 regulatory proposal. A key element of Jemena's earlier TSS was to introduce maximum demand-based prices to the existing tariff structure for residential and small business customers. Each DNSP has since proposed maximum demand-based prices in its TSS published in September 2015.

CCP3 commented previously that Jemena's stated rationale for its proposal to update its network tariff structures is to encourage more informed customer decision making and to put downward pressure on its costs and average prices over the long term. The new 'maximum demand charge' for all residential and small business customers is to signal more clearly the higher costs of using the network during periods of peak demand, and thus encourage these customers to reduce or spread out consumption. The impact on individual customers' bills will depend on how and when they use the network, and how they respond to the new price signals. This comment now applies to each of the Victorian DNSPs' TSS.

In its earlier advice, CCP3 stated that it was concerned that if there is a move to peak demand based tariffs, that the peak demand for each consumer should be related to the times of expected peak network demand as this is the driver for augmentation. If the new demand tariff is an "anytime" peak demand tariff, this will do little to drive change. If the peak demand tariff is based on usage at peak times in the network (e.g. between 3 pm and 7 pm on summer work days or similar to that used by AEMO for transmission pricing), then this will result in a more equitable arrangement for allocation of costs.

Now that all the TSS have been published, and CCP3 has had time to review the TSS in more detail, this advice now gives further views of CCP3 on the TSS.

The first step is to establish what the right fundamentals are. Then the individual Victorian TSS and those from other jurisdictions can be compared to see what constitutes best practice, in order to achieve the intent of setting cost reflective tariffs.

The whole change comes out of the AEMC's Power of Choice report. If consumers do not get the benefits identified in the Power of Choice report, then it is an opportunity lost. Quoting the AER's Issues Paper (page 10):

"Achieving improved tariff cost reflectivity is not an end in itself. Rather it is a means to achieve efficient usage of and investment on the network and in electricity services to power appliances (e.g. solar panels, electric vehicles, battery storage etc), in the long term interests of consumers as guided by the NEO."

Compliance with pricing rules

The AEMC made a series of changes to the pricing rules in November 2014. These originated in recommendations from their earlier Power of Choice review that were then actioned into rule change proposals from governments. Broadly, these new rules aim to achieve three objectives:

- Better signals of the cost drivers of distribution networks.
- The explicit consideration of the impact of changing tariffs, as part of a stakeholder dialogue based approach to their design and implementation.
- Transparency and greater certainty as to the tariff strategies that will be employed during a regulatory period.

The AER is required under these new rules to review how distributors complied with the new pricing rules in deciding whether to approve the proposed TSS.

Promoting efficient investment and consumption decisions

CCP3 advises that the setting of tariff structures should be with a view not just to cost-reflectivity and equity, but rather to promote efficient investment and consumption decisions. Setting tariff structures and prices simply to be cost-reflective may be appropriate where consumers are just price takers. However, consumers have choice, and can react to tariff structures and prices not just by changing usage levels and times, but also through investment in on-site technology including on-site generation, storage systems and home / business smart energy management systems. The main objective really should be about efficient investment and consumption decisions. It is about meeting the objectives of the Power of Choice review. It is about being consumer centric and about consumer investment and consumption decisions. It is not just about cost reflective pricing and equity.

Put another way, the objective of tariff structures should be to give consumers incentives so that the consumers' investment and consumption decisions limit network investment requirements, and thus provide better and more efficient outcomes to the ultimate benefit of the consumers themselves. TSS proposals should be assessed against this objective to see how well they perform.

Signals of cost drivers

The AER must address the following:

How well do the proposed tariff structures reflect network cost drivers? How well will they reflect them in the future? To what extent do TSS proposals reflect effective and equitable recovery of network costs?

How will storage that may be deployed on the network affect cost drivers?

As the cost of storage decreases, is differentiated pricing signalling to customers that they should invest in their own on-customer-site storage when it might be more cost effective for network deployment at scale?

Quoting from the AER's Issues Paper (page 8):

"If we don't improve price signals to guide investment and use of new and emerging technologies such as electric vehicles, batteries and solar panels, we may face excessive network investment or customer expenditure when there are lower cost alternatives to meet customers' needs."

Consideration of the impact of changing tariff structures

Pragmatically, consumers are not going to be influenced by different electricity tariff charges between the DNSPs. Consumers will not generally select a location or relocate based on network costs. However, user behaviours may be influenced by tariffs.

To what extent will consumers understand the tariffs and react to them? Consumers have varying capability and willingness to engage to invest in appliances / devices / insulation to help them manage their electricity usage, based on the price signals that they receive.

How will consumers be affected? How will vulnerable consumers be affected?

How will new tariff structures affect choice of fuel (electricity vs gas), and how will changes in gas vs electricity consumption affect network cost drivers?

Transparency and greater certainty as to the tariff strategies that will be employed during a regulatory period

How will rebalancing be made during a regulatory period? Given a revenue cap, how will under and over recovery be reflected in tariff adjustments?

Impacts of TSS on AER's main regulatory decision making on the DBs' regulatory proposals for resets

Revised tariff structures are intended to address peak demands and the DBs' cost drivers. To the extent that they are implemented successfully and users act on the price signals, they will lower the DBs' costs and revenue requirements. The AER should be taking this into account in its main regulatory decision making.

There will be costs to implement new tariff structures, borne by networks, retailers and consumers. Ultimately, all the costs are borne by consumers. It is essential that consumers see a net benefit. Under a revenue cap, a customer's network bill reduction from behavioural change or from already having a profile that lowers their network bill when new tariff structures are implemented is compensated through other customers paying more. Customers as a class will only benefit if the network's revenue requirement is lowered through the new tariff structures being implemented. Otherwise customers as a class overall will bear increased costs with no compensating benefit.

Consistency across DNSPs

Lack of consistency across DNSPs (nationally; not just in Victoria) increases retailers' costs and makes it more difficult and costly to design and implement demand side programs, because they have to be designed and tailored to fit each DNSP. With so much variation between DNSPs, this risks the realisation of the benefits of meeting the objectives for the tariffs. The AER should consider rejecting the tariffs if it believes that the disparity between the tariffs could realistically lead to jeopardising the realisation of benefits from better signalling of costs to consumers and giving consumers realistic opportunities to react to those signals.

Alternatively, a Rule change may be required to focus the DNSPs on producing consistent TSS. Perhaps that might be achieved through a AER Guideline?

Use of LRMC

What is the value of setting tariffs based on LRMC when the signals to consumers could be significantly moderated by retailers?

While DNSPs are required to set tariffs based on LRMC, it is the allocation of the residual costs (which are the greatest contributors to the final tariffs) which will have the greatest impact on the tariffs finally developed. Therefore the TSS have to explain how the residual costs have been allocated.

The focus on LRMC rather than on residual costs may be a major failure of the Rules.

Addressing network constraints

CCP3 considers that standard tariff mechanisms may not be the most effective or efficient way to address specific network constraint issues, where more localised signals are required, rather than standard tariffs that affect all customers on the network, most of which are not located where there is a constraint. Targeting peaks may be regarded as a proxy for targeting constraints, but they are not the same thing.

Individualised reward or rebate schemes might be implemented in constrained areas, alongside consistent tariffs across DNSPs.

Design of demand based tariffs

Peak demand is the driver of capex, but there is a need to recognise that it is the time that the peak demand is recorded that is most important. What drives the capex is the coincident peak demand on the network, i.e. the peak demand of each specific user at the time of peak network demand at the particular part of the network relevant to the customer.

There is relevant discussion in the AER's Issues Paper (page 8): "...it is not necessarily the maximum demand on the entire network that matters ..."

The AER's Issues Paper (page 17) also notes: "The proposed tariff statements contain insufficient information to definitively examine how closely the proposed charging windows correlate to periods of highest demand for each network ..."

CCP3 shares the AER's concern in this regard.

AEMO picks this up in transmission where it measures peak demand that is incurred in the times of 11 am to 7 pm on the ten system peak demand days in the year.

Thus if a consumer has a greater peak demand in the middle of the night, this should not be the peak demand for which they are charged.

There is also need for tariffs that recognise that some users (probably industrial loads) can and will shed load at call. This has a significant benefit to the network, and all networks should have discounted tariffs available as standard tariffs to encourage such activity.

Fixed charges

Increased fixed charges as against variable charges impact on low usage customers, and reduce the drivers for demand side response.

While there are some fixed costs associated with each connection point, fixed charges should be only those costs that are actually incurred rather than, as has occurred in some jurisdictions, just ramped up to a level that destroys any benefits from network costs of any DNSP proposal.

Capacity charge

Is a capacity charge worth considering? It may have merit in a future tariff structure to meet cost-reflectivity requirements, particularly as storage becomes more prevalent, as the network has to be sized to meet demands that may be forecast, whether or not those demands actually eventuate in any given charging period.

Recommendations:

9.1 The first step is to establish what the right fundamentals are. Then the individual Victorian TSS and those from other jurisdictions can be compared to see what constitutes best practice, in order to achieve the intent of setting cost reflective tariffs.

9.2 The whole change comes out of the AEMC's Power of Choice report. If consumers do not get the benefits identified in the Power of Choice report, then it is an opportunity lost. The objective of tariff structures should be to give consumers incentives so that the consumers' investment and consumption decisions limit network investment requirements, and thus provide better and more efficient outcomes to the ultimate benefit of the consumers themselves. TSS proposals should be assessed against this objective to see how well they perform.

9.3 *Lack of consistency across DNSPs (nationally; not just in Victoria) increases retailers' costs and makes it more difficult and costly to design and implement demand side programs, because they have to be designed and tailored to fit each DNSP. The AER should consider rejecting the tariffs if it believes that the disparity between the tariffs could realistically lead to jeopardising the realisation of benefits from better signalling of costs to consumers and giving consumers realistic opportunities to react to those signals.*

9.4 *While DNSPs are required to set tariffs based on LRMC, it is the allocation of the residual costs (which are the greatest contributors to the final tariffs) which will have the greatest impact on the tariffs finally developed. Therefore the TSS have to explain how the residual costs have been allocated. The focus on LRMC rather than on residual costs may be a major failure of the Rules.*

9.5 *While there are some fixed costs associated with each connection point, fixed charges should be only those costs that are actually incurred rather than, as has occurred in some jurisdictions, just ramped up to a level that destroys any benefits from network costs of any DNSP proposal.*

10. Pass through events

In its earlier report to the AER, CCP3 identified that it was concerned that the pass through of costs for some events was permitted under the rules and that the AER had previously permitted the pass through of certain other additional risks, viz.:

- An insurance cap event
- A natural disaster event
- A terrorism event

The AER has added to the list of "approved" pass through events an insurer credit risk event but only to those DNSPs that sought this.¹²² CCP3 is not convinced that the AER is correct in including this pass through event as the DNSPs have total freedom to select which insurers they will use and to pass the impacts of a poor selection by DNSPs onto consumers appears to be most unreasonable. This would especially apply where the EBSS incentive scheme would provide the DNSP with a bonus by the DNSP selecting a less credit worthy insurer (payment of this bonus is a cost to consumers) yet consumers are expected on this pass through event to bear the cost if the insurer fails. This is effectively a "heads DNSP wins, tails consumer loses" outcome for consumers. On this basis, CCP3 considers the AER has erred in allowing this pass through.

10.1 Retailer insolvency event

The AER also notes that a retailer insolvency event is also included within NECF and that although the Victorian Government had not accepted NECF, the AER considered that the same DNSP protection should be provided to the Victorian DNSPs that was allowed to other DNSPs in the NEM. On this basis, the AER has accepted there should be permitted the pass through of costs for these high impact but low probability occurrences. On this basis, CCP3 considers that the AER is correct to allow retailer insolvency as a pass through event.

As a matter of principle, CCP3 does not agree that there should be any ability to pass through costs to consumers for impacts on providers that are not available to providers in competitive markets. On this basis none of the pass through claimed events should be allowed in the AER decision.

Equally, CCP3 has seen that the AER has previously permitted this pass through events in other regulatory decisions. To deny the same benefits to the Victorian DNSPs would be inconsistent, and CCP3 recognises that consistency is a core element of the regulatory process.

¹²² AusNet did not seek this pass through, and the AER has not included this in the "approved" pass through events for AusNet.

10.2 Summary

The arguments provided for the inclusion of the pass through events are based on the assumption that the return on investment provided the DNSPs reflects the lesser risk profile DNSPs have relative to the market in general.

On balance, CCP3 accepts (other than for the insurer insolvency event) the AER Preliminary Decisions regarding pass through events.

11. Metering

11.1 Classification of smart metering as standard control services or alternative control services

In its earlier advice, CCP3 noted that the DNSPs had reclassified at least some ongoing costs associated with the Advanced Metering Infrastructure (AMI) 'smart meter' program under standard control services, although the AER's Framework and Approach paper classified AMI as an alternative control service.

The AER's proposed approach in its Framework & Approach to classify type 5 and 6 and smart meter regulated services as alternative control was because these services are charged for separately, and provision of these services is likely to become open to more competition in future. The increasing range of metering services customers may wish to use (for example, smart meters) also suggested that the AER should unbundle these services from standard control. Solar PV and small generator pre-approval fees and type 7 metering will also be classified as alternative control.

The Framework & Approach also noted that the AEMC, in its consultations on introducing metering competition to Victoria, has stated that:

The NER mandates that smart metering in Victoria be classified as an alternative control service in the 2016-2020 regulatory control period...¹²³

Clause 11.17.6(a) of the NER requires the AER to regulate smart meters and their associated equipment in the first year of the next regulatory control period under the form of regulation which applies under the AMI Cost Recovery Order In Council (CROIC). The AMI CROIC includes provision for exit and restoration fees. The AMI CROIC also establishes a framework for regulating AMI metering which includes an individual price for meters serving customers in the same customer class. This characteristic is closest to an alternative control service. The AMI CROIC also regulates the price of the service on the basis of a cap on the maximum revenue a distributor may earn for the service. This is implemented through a 'building block' approach. It is subject to a 'true-up' mechanism, whereby variations in actual costs from forecast costs are adjusted in the following two years. The building block approach with an 'unders and overs' adjustment describes the form of control that operates under a revenue cap. In classifying a service the AER must, where there is no previous classification of the service, have regard to the previously applicable service classification.¹²⁴

As a consequence of these considerations, the AER decided to classify this service as an alternative control service and to apply a revenue cap as the form of control. The AER

¹²³ AEMC, *Competition in metering and related services - rule change, Stakeholder workshop 5*, 9 October 2014, p.30

¹²⁴ NER, clause 6.2.2(d)(2).

considered this classification will minimise any disruption to the existing approach to regulating this service.

CCP3 stated that it seemed that the DNSPs had not justified in their regulatory proposals why they had departed from the Framework & Approach. CCP3 would have expected to have seen the justification so that stakeholders could comment appropriately.

In its Preliminary Decisions, the AER decided to retain the proposed classification and reasons set out in its Framework & Approach in regard to metering services, for all the Victorian DNSPs. CCP3 supports this decision.

In revised proposals, DNSPs are further proposing departures from the Framework & Approach. CCP3 continues to support the AER's decision to retain the proposed classification and reasons set out in its Framework & Approach in regard to metering services, for all the Victorian DNSPs.

11.2 AusNet Services costs

CCP3 separately advised the AER in regard to a decision by AusNet to transition from WiMAX to mesh radio as the communications network to support its AMI rollout.

CCP3 set out the background to the AusNet decision. CCP3's main advice to the AER was that the AER should stand by its finding in 2013 that a reasonable business in the circumstances would have switched communications technology in early 2011, and that the allowance it originally approved for 2011 would have been more than sufficient to cover the costs of switching to the alternative technology in that year. Customers should not pay more for cost overruns because of AusNet's choice of communications technology.

All these additional costs should be removed from the AusNet regulatory proposal. They should not be recovered from customers who have already paid sufficiently for a full roll-out as would be implemented by a reasonable business.

In its Preliminary Decision on AusNet's regulatory proposal, the AER found that the efficient forecast for the 2016-20 period should be based on expenditure for business-as-usual metering services only, and not provide for an additional \$100.7 million in switching costs that had been proposed by AusNet.

CCP3 supports this position.

In its revised proposal, AusNet noted that the major cut to metering capex comprises expenditure which was characterised by the AER as communication technology switching costs.

AusNet states its view that that the cost of the staged replacement of the existing communication technology is not a switching cost. Rather, AusNet proposes to replace the communication technology because it is reaching the end of its life and is becoming obsolete.

The view of CCP3 is that AusNet was proposing to transition from WiMAX to mesh radio as the communications network to support its AMI rollout. CCP3 previously gave the background for why AusNet was now making this proposal, and gave its view that customers should not pay more for cost overruns because of AusNet's choice of communications technology. CCP3 retains this view.

The AER found in its Preliminary Decision that by deciding to switch to mesh radio in the forecast period (2016-20), AusNet will incur higher switching costs than it would have incurred, had it made the switch earlier. To allow AusNet to recover these costs from consumers is inconsistent with the incentive-based nature of the NER regulatory framework. CCP3 supports this view, whether the costs are characterised as switching costs or transition costs or replacement costs.

A key to the AER's Preliminary Decision and CCP3's support is the finding by the AER that an operator acting prudently and in accordance with commercial standards would have switched from WiMAX to mesh radio by 28 February 2011 at the latest. This finding was upheld by the Australian Competition Tribunal and later the Federal Court of Australia. CCP3 supports that view that the costs in question would not have been incurred had AusNet previously operated prudently and in accordance with commercial standards, and therefore they should not be recoverable from consumers however they are characterised.

AusNet now states in its Revised Proposal:¹²⁵

AusNet Services has revised its metering case to be consistent with the Preliminary Decision's benchmark capex assumptions. As the Preliminary Decision does not fund the original capex replacement program, the revised proposal assumes the existing communication technology solution will be used throughout the 2016-20 regulatory period.

However, should any element of the communication technology fail during the regulatory period, AusNet Services will need to replace the communication technology. Consistent with AusNet Services' approved CAM, new communication infrastructure costs will be incurred as standard control services costs by the DNSP.

Continuing to use the existing communication technology throughout the regulatory period heightens the risk of failure and instability. As the communication modules have a design life of seven years, AusNet Services forecasts that the fault rates will progressively increase during the 2016-20 regulatory period. Consequently, AusNet Services is expecting it will be required to purchase more replacement communication modules.

¹²⁵ Revised Regulatory Proposal 2016-20, AusNet Services, January 2016, pages 11-9 to 11-10

The assumptions underpinning the Preliminary Decision also have implications for opex which are explained in the following section.

AusNet's revised proposal seems to contradict the statements of the AER that it has recognised the need for AusNet to switch from WiMax to mesh radio. The issue is not whether the switch or transition should occur, but who should fund the costs. Given that the key reason for not approving the costs is because they were incurred due to AusNet not acting prudently in the past, re-categorising the costs now should not change the AER's decision not to approve them.

CCP3 is also concerned that AusNet's revised proposal indicates that it now intends further not to act prudently, by not replacing WiMax and waiting instead for fully anticipated faults, failures, and stability. Not only might this incur even more costs (which should not be borne by customers), but it might also impact negatively on AusNet's levels of service to customers, and thwart the capturing of benefits from AMI by customers.

CCP3 suggests that the AER should consider carefully not just the cost implications of AusNet's revised proposal but also any possible negative impacts on customers in service provision, and should take appropriate steps to prevent customers being disadvantaged.

Recommendations:

11.1 The AER should retain the proposed classification and reasons set out in its Framework & Approach in regard to metering services, for all the Victorian DNSPs.

11.2 Additional AusNet AMI rollout costs should not be recovered from customers who have already paid sufficiently for a full roll-out as would be implemented by a reasonable business.

11.3 The AER should consider carefully not just the cost implications of AusNet's revised proposal but also any possible negative impacts on customers in service provision, and should take appropriate steps to prevent customers being disadvantaged.

12. Public lighting and alternative control services (ACS)

In its Framework and Approach, the AER considered that public lighting should be a negotiated service rather than an Alternative Control Service (ACS). In its Preliminary Decisions, the AER has recognised that public lighting should revert to be an ACS. CCP3 agrees with this AER decision.

However, CCP3 remains concerned that there is no evidence that the rates proposed by the DNSPs reflect the actual costs of the services provided under ACS. The DNSPs have used current rates for providing the ACS and adjusted these to reflect changes in costs. The assumption is that this still reflects an assumption that the outturn costs are reflective of the costs to perform the service.

CCP3 comments that there are several assumptions that this approach reflects. Specifically, these assumptions are:

- The historic costs were accurate.
- The escalation of the costs still delivers an outcome that reflects the actual costs.
- There has been no productivity improvement achieved over the period since the rates were first set.

CCP3 commented in its earlier report about its concerns on the rates that were being applied to public lighting (and other ACS deliverables) without any assessment that they are still reflective of the costs involved with provision of the service. The AER Preliminary Decisions accept that the current rates be escalated in a specific manner, elements of which the AER clearly identifies are conservative. If such conservative escalations have been applied over several years and there has been no recognition for improvement in productivity, it is clear that the forecast rates will be significantly in excess of the actual costs to deliver the service.

CCP3 observes that comparing ACS rates between the DNSPs is not efficient comparative benchmarking as when rates were set initially they would have been consistent and as the same approach to escalating the rates has been used for all DNSPs then comparing rates between the five DNSPs would not identify whether the current rates are efficient.

Recommendations:

12.1 DNSPs should be required to demonstrate that the rates for ACS are reflective of the costs that are incurred in providing the service rather than just be benchmarked against the other four DNSPs.