Australian Energy Regulator

NSW Electricity Distribution Revenue Reset

Applications from Ausgrid, Endeavour Energy and Essential Energy

A response

by

The Energy Markets Reform Forum

July 2014

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

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

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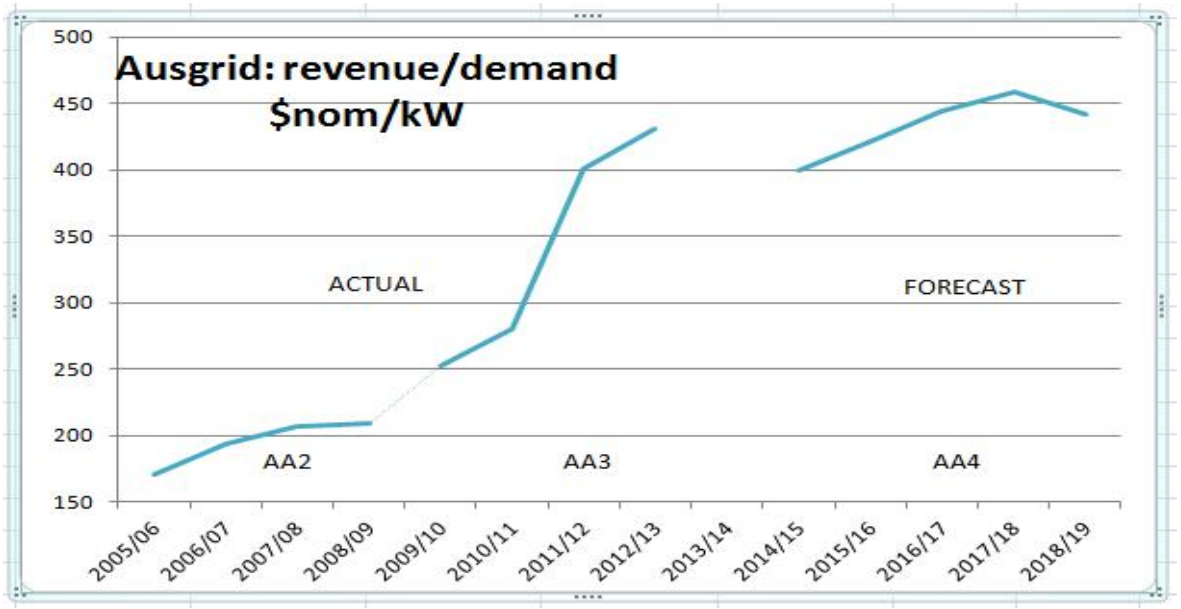
Executive Summary

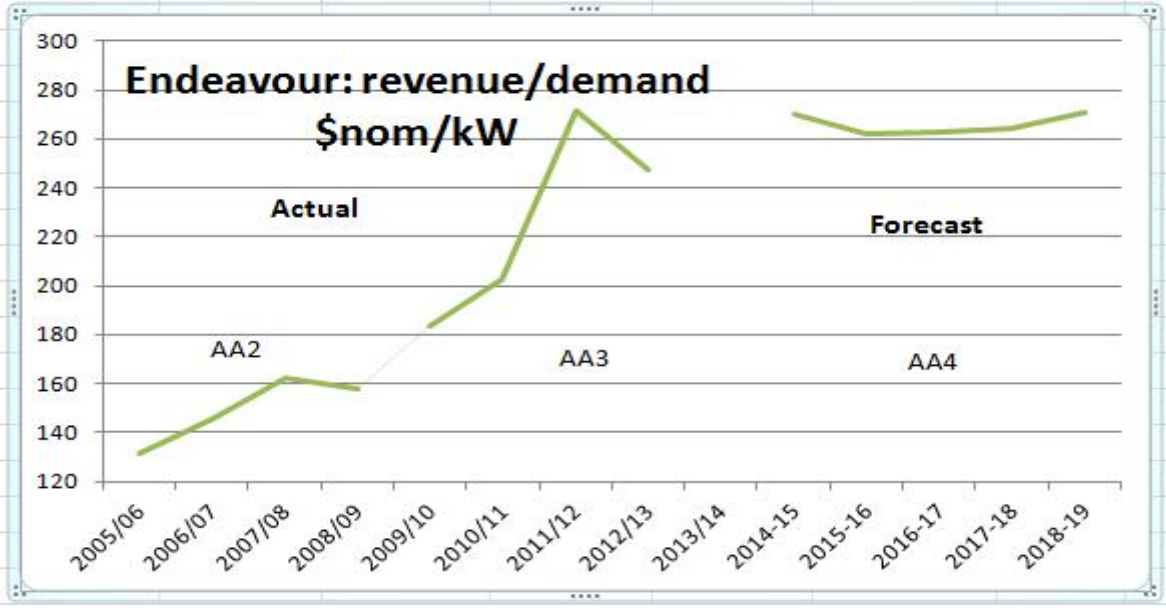
The Energy Markets Reform Forum (EMRF) welcomes the opportunity for presenting its views on the application from the NSW distribution networks (DBs) for a reset of the electricity distribution costs in NSW.

The EMRF notes that the proposals from the DBs generally result in an increase in allowed revenue from the current levels. The EMRF considers that DB revenues should fall from their current level, not increase. The EMRF notes that as demand is the main driver of a network's cost, when the DB revenues are assessed on the expected peak demands for the forecast period (AA4), then their costs per GW are increasing at an considerably, even higher than the similar costs in the current period (AA3), and at a massive premium to the costs assessed on this basis for AA2.

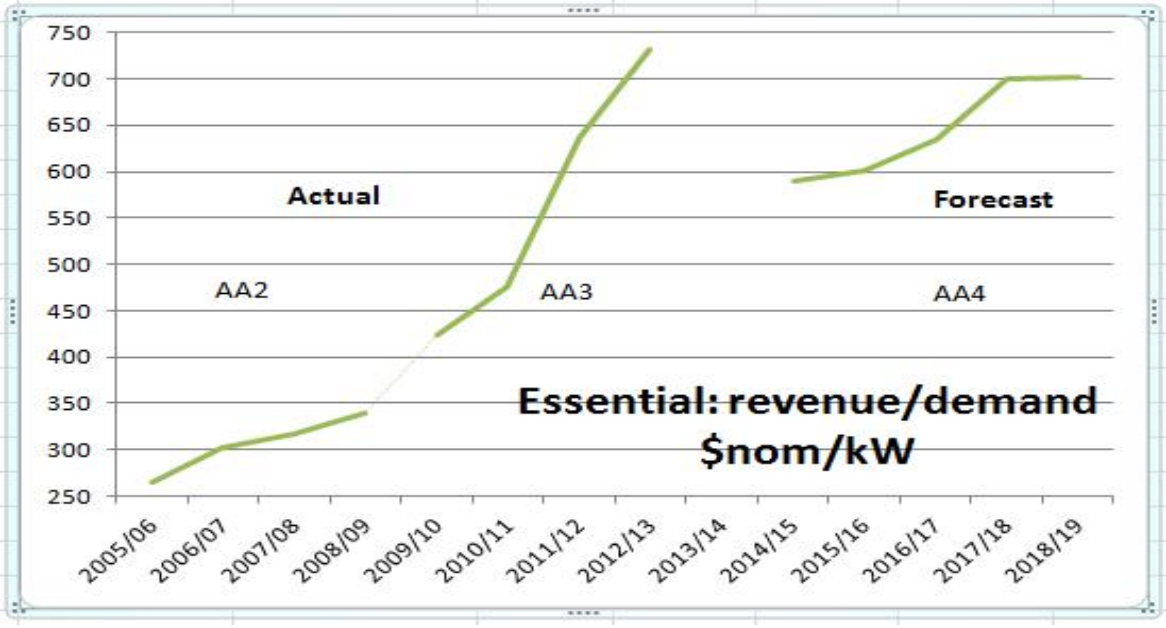
It is clear that on this comparative basis, the revenues claimed by the DBs are significantly overstated. Further, the massive increase in revenues in the current period (AA3) have caused significant harm to consumers and steps need to be taken to reverse the trend.



Source: Ausgrid economic expenditure RIN, Ausgrid application



Source: Endeavour economic expenditure RIN, Endeavour application



Source: Essential economic expenditure RIN, Essential application

The EMRF has investigated the reasons why the DB revenues show such an increase when falling demand and consumption would imply a need for less revenue. In its assessment the EMRF noted that:

- The DBs have grossly overstated their weighted average cost of capital and consider that the AER guideline on setting the rates of return on equity and debt are wrong and do not deliver the returns that they consider are

appropriate. That the claims of the DBs would deliver them a return on equity greater than many firms facing considerably more risk gain is ignored by the DBs in their assessments. Further, the DBs claims a much greater cost of debt than they actually incur is also disregarded. The EMRF finds these views totally inconsistent with reality and at odds with the DB assertions that they seek to reduce the imposts on consumers for providing network services.

- The EMRF has reviewed the DB claims for opex and considers that the DBs have significantly overstated their requirements. They have minimized what the efficiency benefit sharing scheme is supposed to achieve for consumers by limiting the impact of the revealed cost approach to opex. Its claimed step changes are overstated and overpriced.

- The DBs recognise that their needs for network augmentation had to reduce because of the falling demand and consumption of electricity in NSW yet they still seeks to augment parts of the network. The fall in forecast augmentation capex is offset by significant increases in replacement capex for which they seek considerable increases from the replacement capex considered adequate in the previous two periods (AA2 and AA3).

- The pricing methodology still is heavily biased and exhibits considerable cross subsidies. The DBs should be encouraged to immediately implement some of the sensible proposals currently being considered as part of the review of distribution pricing. The implementation of the Pricing Structure Statement (which is analogous to the transmission pricing methodology) would provide an immediate benefit.

Overall, the DB proposals are not considered to deliver outcomes for consumers that are expected when considering the extensive work that has been carried out over the past few years to address the ever burgeoning costs for the provision of electricity network services. The EMRF expected that the DB proposals would result in considerable reductions but what has been provided by them is more of the same increases that brought network services regulation into dispute since 2011.

In addition to the analysis of the DB proposals, the EMRF has provided responses to the questions raised in the AER Issues Paper prepared for this revenue reset of the NSW DBs.

1. Introduction

1.1 The EMRF

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

The EMRF welcomes the opportunity to provide comments on the application for a revenue reset for the NSW electricity distribution networks provided by Ausgrid, Endeavour Energy and Essential Energy.

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

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

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

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

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

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

The members of EMRF have identified that the distribution networks play a pivotal role in the electricity market. Consumers recognise that the cost of providing the distribution networks is probably the largest single cost element of the total cost of delivered electricity, and due consideration must be given to ensure there is a balance between the competing elements of cost versus reliability, quality and sustainability.

Although the EMRF had actively participated in previous Australian Energy Regulator (AER) and Australian Competition and Consumer Commission (ACCC)/Independent Pricing and Regulatory Tribunal (IPART) pricing and revenue reviews of the NSW transmission and distribution networks, it was not contacted by the distribution networks (DBs) to discuss the current applications despite EMRF representing a significant number of large energy users. The EMRF remains available for consultations with them.

1.2 The scope of this review

The EMRF notes that this review is being undertaken in a period where there is considerable stress on electricity consumers as the cost of electricity has risen dramatically in recent years.

The EMRF recognises that the AER is required to carry out its review in accordance with the new Electricity rules recently released. To assist in this the AER has developed a number of guidelines to provide the basis for electricity networks to prepare their applications for revenue resets. While consumers have devoted considerable effort to getting the rule changes made and in developing the new guidelines, it must be pointed out that consumers consider that the rules and the guidelines still do not provide approaches that will result in the achievement of the National Electricity Objective (NEO) and deliver the most efficient outcome in the long term interests of consumers. Despite this reservation, consumers accept that the new rules and the associated guidelines provide the basis for better outcomes in achieving the NEO.

The EMRF notes that the new rules provide the AER with increased ability to exercise discretion and it was with this in mind that the AER decided to develop the guidelines so that stakeholders could better understand how this discretion would be used. Over the past 12-15 months, consumers and other stakeholders have been extremely active in the process in the development of the new guidelines.

Despite the development of the guidelines, consumers have seen recent attempts by networks to re-argue their opposition to some elements of the guidelines and by doing so receive increased revenues. The EMRF considers that the AER should require the use of the guidelines as developed so that efficient outcomes result.

It is noted that the NSW distribution networks elected to accept some of the new guidelines but reject others. This is extremely concerning and the new guidelines were developed after wide consultation and with significant consumer input. Consumers have stated that they consider some of the guidelines do not address their concerns yet, despite this, they have accepted the guidelines as they stand. That the DBs insist on "raking over old ground" in an attempt to get a better outcome for themselves, is disappointing.

At the last revenue reset review, the EMRF was extremely critical of the DBs attempts to seek massive increases to their building block allowances. It was argued by the DBs that these increases were required in order to accommodate an increasing demand for electricity coupled to increasing consumption. The outcome of the last review was that prices for electricity distribution network services increased significantly and there was significant consumer and government concern about the increases seen. The EMRF considers that these were a major cause of the decision of the AER to seek changes to the rules to make them more balanced.

What was just as concerning was that soon after the final decision made by the AER was released, the DBs decided to appeal the AER decision and sought more revenue than costs they actually incurred.

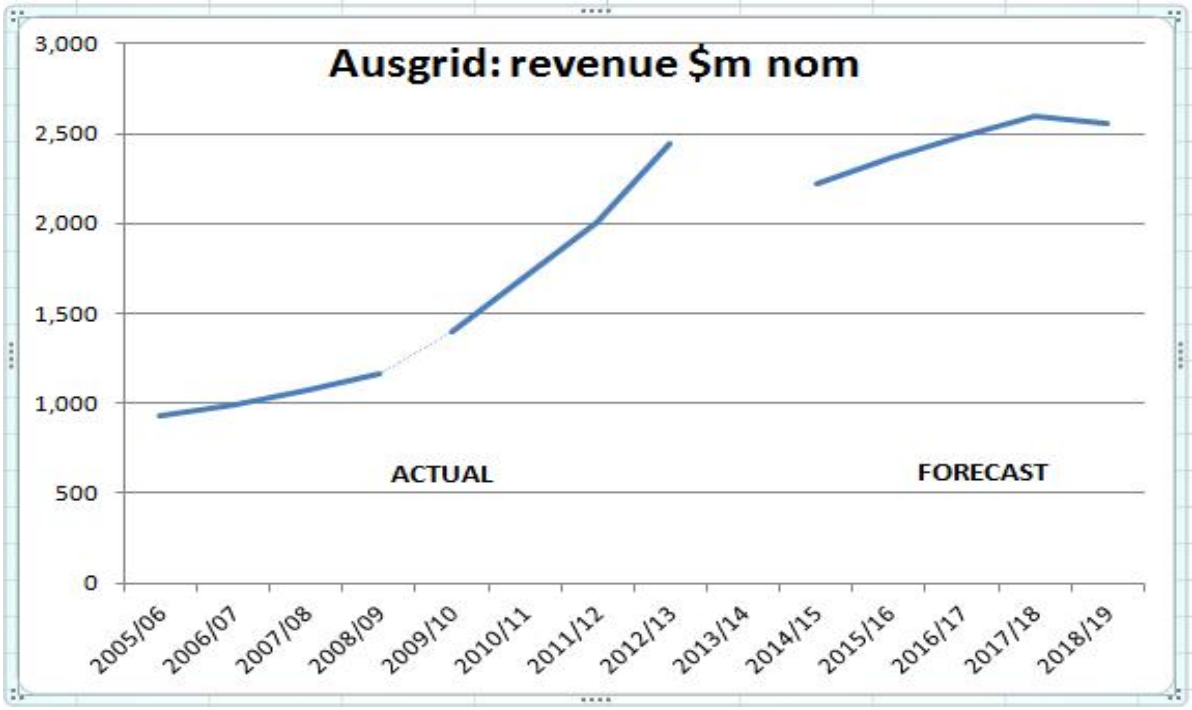
This appeal for increased revenue coincided with the electricity market seeing a major shift away from what were traditional views of electricity experiencing ever increasing demand and consumption to a market evidencing falling demand and consumption - an experience that is still evident and typified by regular reviews of forecasts seeing continual downward adjustments in demand and consumption. The outcomes of the appeal and falling demand and consumption led to higher prices than had been seen in the past.

Under the new rules, in addition to ensuring the funds provided are used efficiently, the AER has the responsibility to ensure that the funds are acquired in

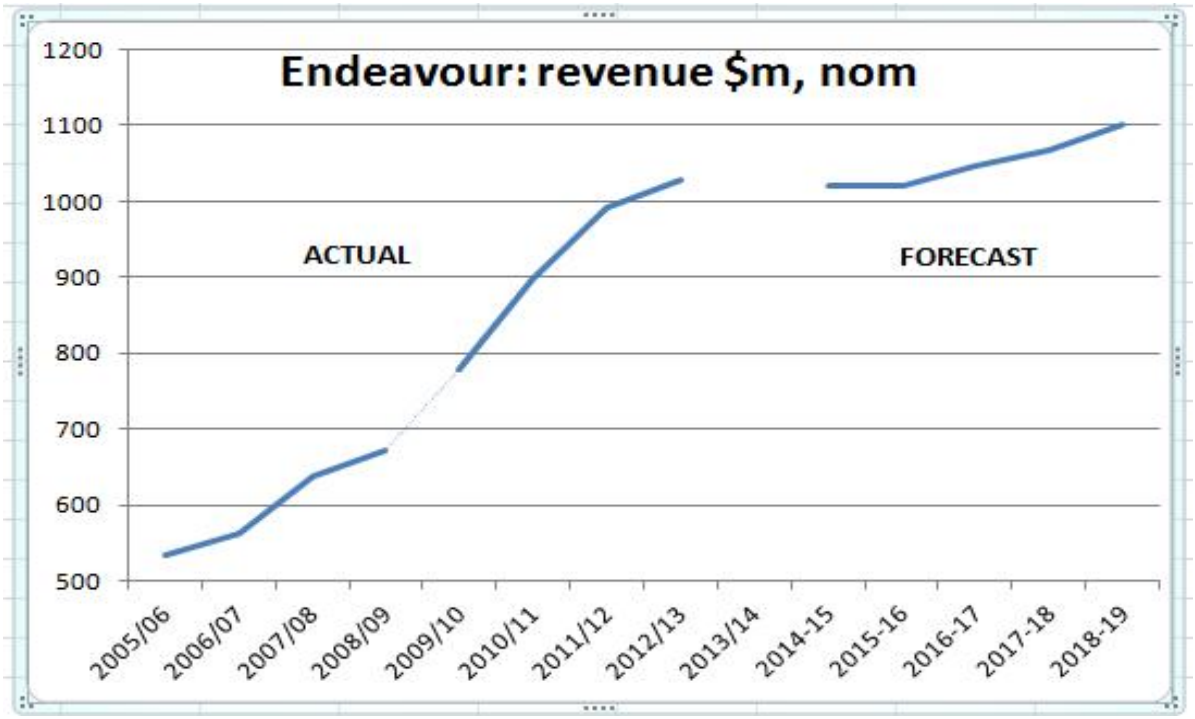
a way that provides clear signals to consumers to be able to modify their use of the services. This means that the AER must ensure that the pricing structures that are developed as part of the revenue reset review provide appropriate signals to consumers to incentivise consumers to take actions so that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

1.3 A summary view of the DB applications

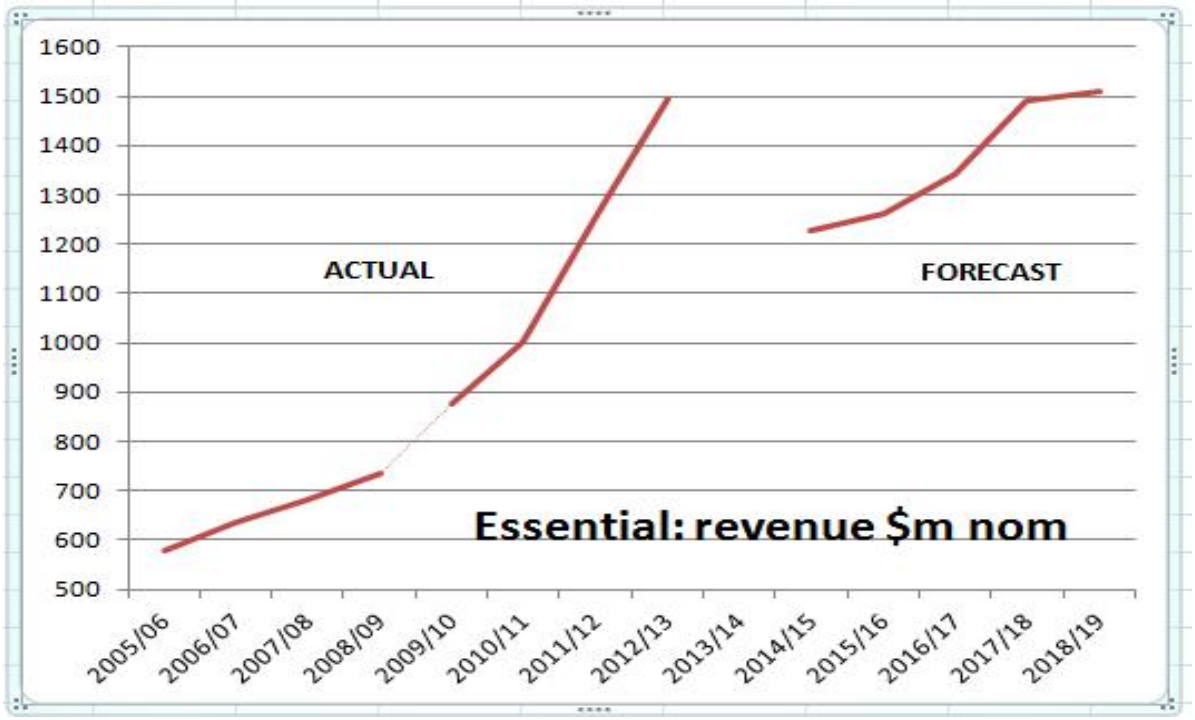
The DBs have all forecast a revenue requirement that reflects the massive increases seen during the current period AA3 and that the revenue forecast for AA4 are much the same as in the final years of AA3



Source: Ausgrid application, Ausgrid benchmarking RIN



Source: Endeavour application, Endeavour benchmarking RIN



Source: Essential application, Essential benchmarking RIN

The EMRF considers that the approach used by the DBs has "locked in" the excessive cost claims made by the DBs for AA3 and shows that the assertions

made by the DBs that they have addressed their cost structures to implement savings is so much hollow rhetoric.

To demonstrate that their network costs are efficient, the DBs have provided a view that their prices will grow at less than CPI. This assertion is beset with a very large assumption - that of the expected growth (or not) of the consumption of electricity and the expected growth in demand. If consumption continues its current downward trend, then the cost per unit of consumption (MWh) will continue to increase. The massive increase in prices during the current period (AA3) reflects the massive increase in revenue allowed at the last reset and the unanticipated (at the time) collapse of traditional increases in demand and consumption.

Implicit in the DB applications is a continuing trend of ever increasing revenues after a small initial reduction for the first year of AA4. This, when balanced by the declining trend in consumption and a static or modestly increasing demand would appear to be inconsistent and fails to recognise the fact that the cost structures are massively above (in proportional terms) what they were before the current reset period (ie AA3).

In fact, the only area where the DBs appear to be forecasting a reduction in its cost structure for the next period, is in the amount of actual capex forecast compared to actual capex in the current period. Further, the DBs have generally under-run in opex and capex compared to the regulatory allowances during the current period yet the costs still massively increased.

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

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

1.4 The helicopter view

The DBs indicate that their revenues will increase over the next period (AA4) after some reduction in the first year. The EMRF is unable to accept that the proposed maintenance of costs can be justified when assessed against a background and a foreground of falling consumption and demand. Equally, we note that the applicants have provided arguments in support of each element of their claimed cost increases. In a competitive world, senior management of a business must and

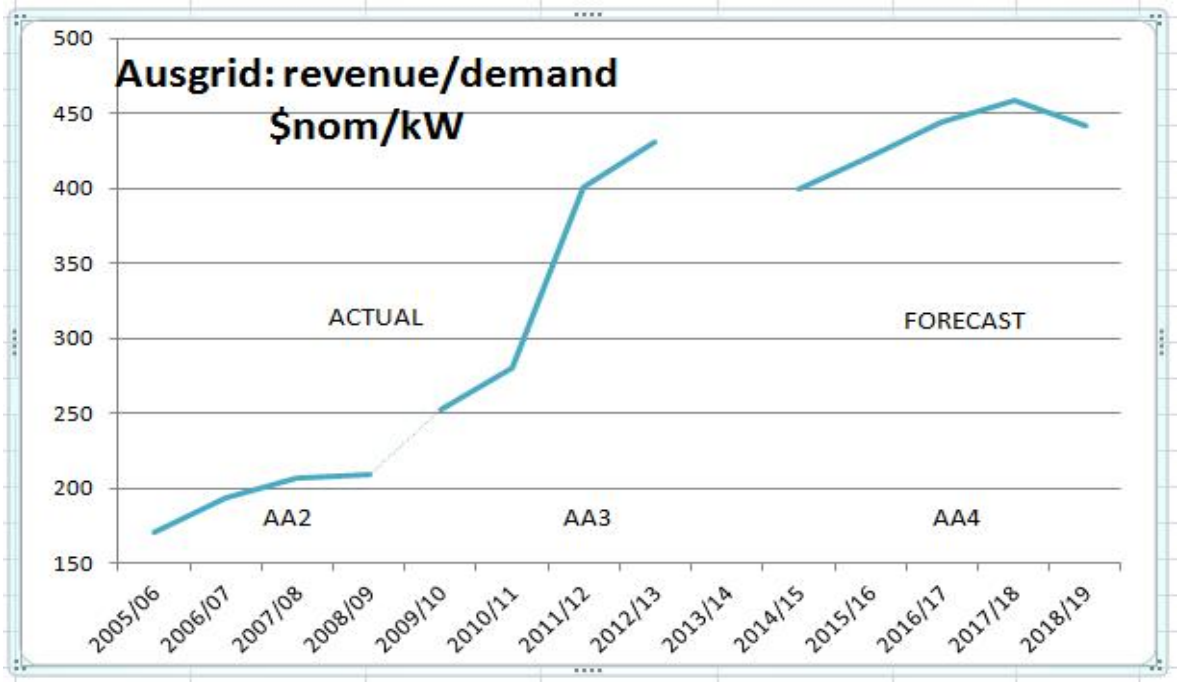
does take a view that any claimed increase in cost must be controlled in light of the potential implications for the firm's competitive position. In the regulated energy sector, however, legislation has provided the AER with the role of providing this discipline, and so it must ensure that the resultant outcomes are in keeping with what can be expected from the discipline of efficient drivers.

The EMRF recognizes that DB costs are driven by the peak demands that consumers impose on the network. To assess the DB application the EMRF has calculated actual and forecast DB revenues and divided these by the actual DB peak demands and the forecast (50% PoE) expected demands for the DB region[1]. This is shown in the following charts.

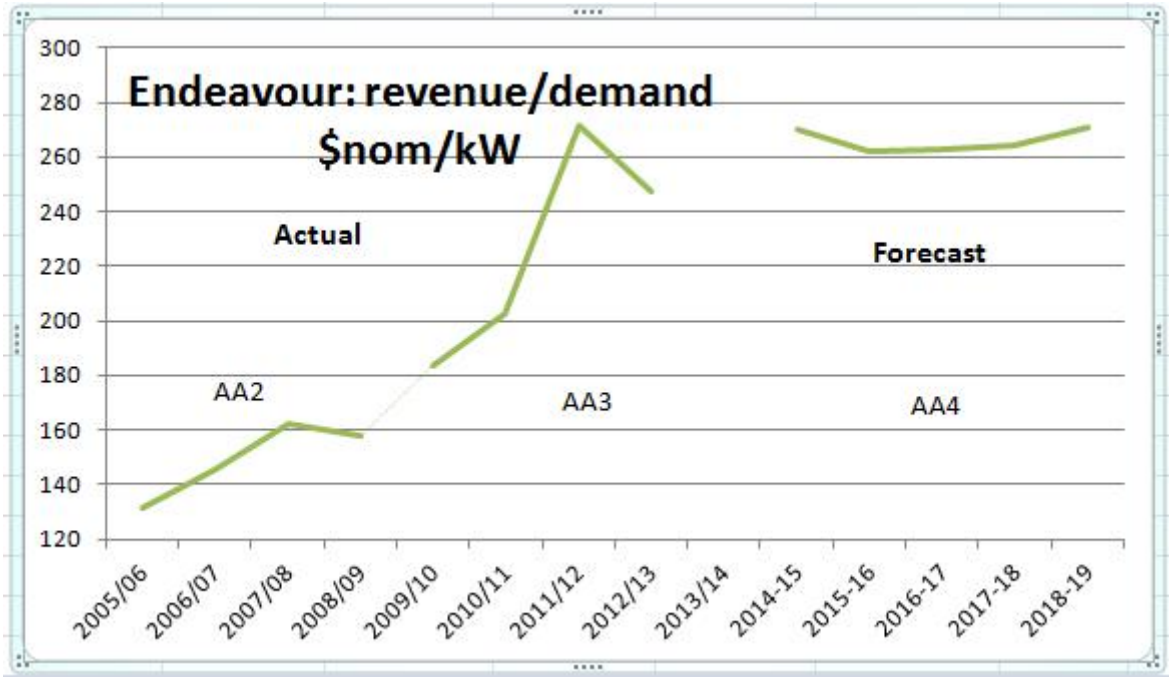
To develop these trends, the EMRF has accessed data from the expenditure RINs and combined this with the sought after revenue and the expected overall demand in each network deduced from the three proposals. Where the information was not readily available the EMRF had to make some assumptions[2].

[1] The DBs all discuss that there will be some demand growth in some areas of the networks even though the NSW growth in demand might be small (even relatively static) and consumption might continue to fall. The EMRF is aware that the size of a network is driven by the expected peak in demand in each element and therefore there may be pockets in each network where increased demand might well occur and this leads to a need for augmentation capex.

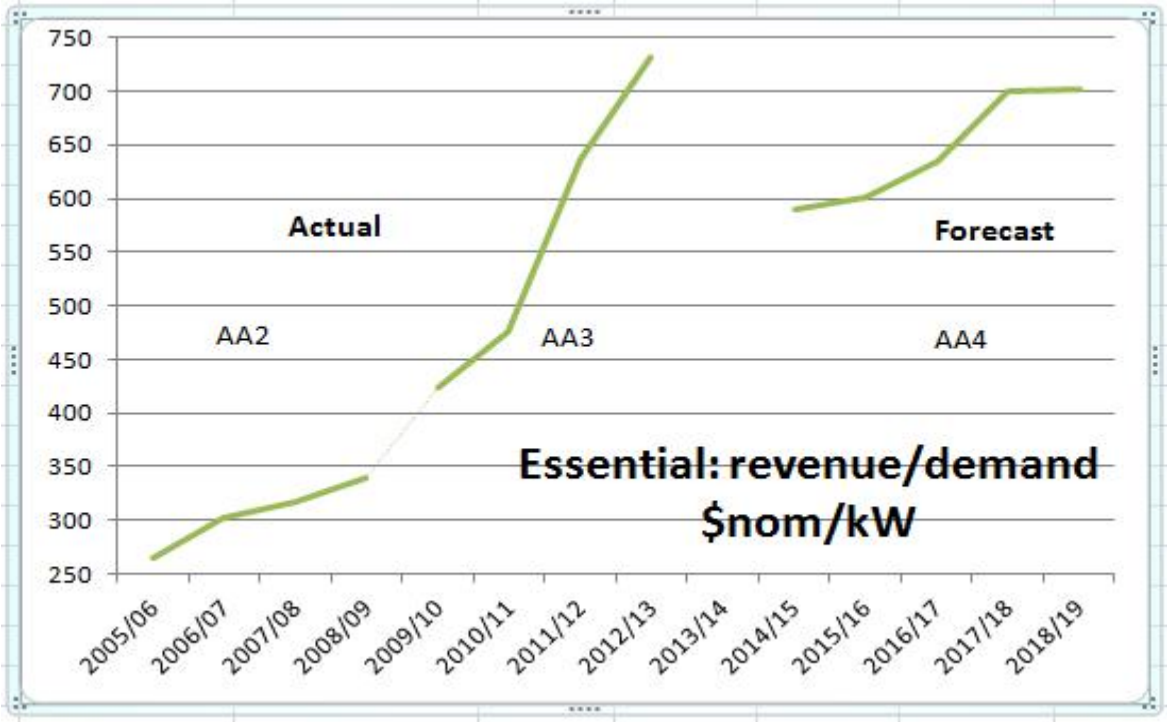
[2] In the case of Essential, its proposal does not provide expected increases in demand. Therefore the EMRF used the data from figure 5.7 of the proposal (growth rates of the 457 feeders where growth is expected) to generate an approximate increase in non-coincident peak and this provides a view that demand in the Essential network will grow by about 0.9% pa; this was used to extrapolate the actual peak demands from the RIN data. The 0.9% pa growth compares to an expected growth rate of demand in NSW forecast by AEMO (NEFR 2014) of about 1.5% pa



Source: Ausgrid economic expenditure RIN, Ausgrid application



Source: Endeavour economic expenditure RIN, Endeavour application



Source: Essential economic expenditure RIN, Essential application

What these charts show clearly is

- The impact of the falling demand since 2008/09 and the impacts of the low demands and the increased revenues sought by the DBs for the next period (AA4).
- That the assertions of the DBS that prices would reduce through the impacts of their savings programs implemented is unlikely to be realised.

Whilst there was some rationale for the increased costs for the current period (AA3) as there were forecast significantly increasing demands in each network when the DBs commenced AA3, there is no excuse for continuing this trend now that the forecasts of demand are much lower than those underpinning the AA3 revenue allowances. The EMRF notes that if similar charts had been prepared reflecting consumption rather than demand, the comparisons would be even more stark and the conclusions stronger.

The issue that faced the electricity industry as a result of the price changes for electricity transport during AA3 was seen as unsustainable and unnecessary by consumers and governments. But effectively, the proposals for AA4 lock in the massive price rises seen during AA3 and effectively result in consumers seeing a more than doubling of prices between AA2 and AA4 - a period of just over five years.

At its most fundamental level, an increase in selling prices of about 100% in a five year period between AA2 and AA4 could not be sustained by any competitive business in an environment of falling consumption. This clearly shows that the basic cost structure used by the DBs does not equate to the changes in the market and demonstrates the absolute monopoly which the DBs have in the NSW energy market, and their ability to adjust their pricing structures to reflect the interests of the organizations and their shareholder, to the detriment of consumers. It is clear that the DBs, despite their protestations about seeking to constrain costs see this revenue reset process as an opportunity to maximise their rewards as monopoly service providers.

For the DBs to consider that effectively a doubling of its selling prices between AA2 and AA4 should be accepted by consumers for another 5 years is unreal and must not be approved.

1.5 The move from a price cap to a revenue cap

Up to the present time, all of the DBs have operated under a price cap approach which provides an incentive for a network to manipulate the individual tariffs and prices to increase their revenues. As demand and consumption has fallen during AA3, the expectation is that under a price cap DB revenues would have fallen.

But this is not the case - Ausgrid and Essential both received higher revenues during AA2 and AA3 than what the AER had allowed for at the start of the periods. While Endeavour overall might have experienced a reduction in revenue in the final years of AA3 this was offset by an over-recovery in the latter years of AA2 and the early years of AA3[3].

The AER has decided that for AA4, a revenue cap should be applied to the DB revenues to prevent this over-recovery of revenue occurring in AA4. The EMRF supports this approach but also recognises that by implementing a revenue cap, the risk of a continuation of declining demand and consumption will transfer increased risk to consumers rather than this risk being managed by the DBs.

1.6 Consumer engagement and AER questions

The EMRF accepts that the formal process for consumer engagement (CE) is still very much in its formative phase. The introduction of formal consumer engagement has led to an improvement in network responsiveness to specific issues confronting consumers.

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[3] See AER Issues paper pages 8 and 9

All of the DBs have noted that they have increased their customer and consumer engagement and point to the meetings they have had explaining, amongst other things, their expenditure forecasts, revenue impacts and pricing methodologies. The DBs comment that such consultations have resulted in some changes to their views on how they developed their proposals for AA4.

The questions that underlie the entire consumer engagement (CE) programs by the DBs for this review are:

- The DBS all comment that the knowledge base of consumers is very low. With acceptance of this premise, it is easy for the DBs to influence the outcomes of the CE undertaken as initial CE will be more about informing consumers about the network and how it operates then about consumers providing considered input
- All DBs advise they have used a range of methods to interface with consumers, yet the input from the surveys, Facebook interfaces, letters, etc will have a natural selection inherently influencing the outcomes as they represent those consumers who have a reason to want to interface with their DB. A reason to want to interface does not necessarily require a good understanding of the network and what its drivers are. In a similar vein, complaints directly to the DB or via the Energy Ombudsman only address consumers that have a specific issue they want addressed rather than seeking to address the issues that drive the reset review process.
- All DBs comment that consumers do not want a reduction in reliability and consider that cost increases driven by a need for necessary investment are acceptable. It is clear that consumers do not want to pay more for the service[4]. From this view that a reduction in reliability is not acceptable and that costs should not increase, the DBs seem to be of the view that what they propose meets expressed consumer concerns. However, this does not address the many parts of a reset which do not impact any of the core requirements of the service provision and these are not addressed. For example, the weighted average cost of capital is a major driver of the cost of the service yet this aspect was not addressed in any of the consumer interfaces.
- The DBs reporting also highlights that consumers do not want lower reliability even if the price was lower. What is missing from this line of questioning is what level of reliability reduction would occur for what price reduction. For a consumer to make an informed decision on such a line of questioning requires a better understanding of what loss of reliability

[4] In fact most would want to see a reduction in the costs

would occur for what lesser cost[5]. As it stands, the DBs cannot make assertions about this aspect of consumer desires.

- To what extent has the outcome of the CE influenced the proposal. Essentially the timing of the CE so far would have been so late in the process of preparing the revenue proposals to do little more than support the decisions already made by the DBs
- Surveys are a part of the CE implemented by the DBs. The EMRF, its members and members of other MEU affiliates have completed surveys similar to those established by the DBs. The EMRF is concerned that such surveys tend to exhibit a high degree of "push polling" which is designed to support the interests of the DBs rather than ascertain the interests of consumers other than at a very high level. The ability of such surveys to fully inform consumers is restricted by the need keep such surveys short.

One particular area of consumer engagement that the EMRF has difficulty with, is the assertion that consumers seek stability in pricing. From this, the DBs draw a number of conclusions about the development of their revenue requirements and proposals for their implementation. The EMRF accepts that consumers do prefer to have stability in prices as this assists in their forward budgeting. Equally consumers would want to ensure that they are not paying more than they need to just to ensure stability of prices.

The EMRF has noted that, despite the assertions by the DBs that they have used the desire for price stability as a driver of their costings, the same DBs have ignored this issue when developing prices for each customer class. As is shown in section 9, whilst overall revenues and price caps might reflect a stability in pricing, prices for individual customer classes show a massive variation even though these prices are totally within the control of the DB. The EMRF therefore discounts DB assertions about price stability that lead to increase costs for consumers when the performance of the DBs in this aspect where they have total control is quite lacking.

While accepting that the consumer engagement program is better than what the DBs have done in the past, the EMRF considers that the amount of time needed to explain what they do and how costs are derived would have absorbed much of the time provided for each of the activities. Even if the full amount of time was dedicated to assessing substantive issues, the experience of the EMRF is that what has been done to date is well short of the time needed to fully understand what the DBs do, the costs they charge for, the service they provide and whether consumers are getting value for money.

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[5] The EMRF is of the view that considerable cost reductions could occur with no loss of reliability but the DB questioning does not address this quite fundamental aspect.

The EMRF considers that the DBs have made a start in their CE and at a high level, the processes put in place should provide the DBs with better information about consumers than they had at previous resets. But the outcomes of the CE work to date are not sufficiently researched and corroborated for the DBs to use the information to use the CE to inform the current reset review.

Further, the EMRF considers that timing of the acquisition of the information would have been often too late for the DBs to integrate the feedback into their deliberations in a meaningful way.

	AER question	EMRF response
1	Please provide your comments on the consumer engagement conducted by the distributors in preparing their regulatory proposals, particularly with respect to: • accessibility of information provided • clarity about your role and the objectives of the engagement activity or activities • how much time was provided between the engagement activity and submission to us of the distributors' regulatory proposal?	See comments above. The DBs advise that they have implemented a number of avenues to access consumer views, yet the majority of these (eg Facebook, websites, etc) all require the consumer to initiate the contact. The EMRF is concerned that the vast majority of consumers would not seek to inform themselves about the reset, even they knew that it was in process. The EMRF also has concerns that the majority of consumers do not even know a revenue reset is underway or that they might be able to influence outcomes The EMRF also considers that much of the CE has been implemented way too late for the outcomes to influence the revenue reset process
2	If you were part of the distributors' consumer engagement, were you given options for expenditure? If yes, for each option were you asked to give preferences? For each option were you given cost and price information? Did the options cover operating expenditure and capital expenditure?	The EMRF was not involved in any of the CE processes. EMRF members have such high demands, that they have regular contact with the DBs serving them and this tends to negate a need to get involved in detailed explanations on what a network does. However, such contact also tends not to examine the detail of the revenue reset process where the members tend to rely on the skills within the EMRF to present their views on the detailed elements of the revenue proposals

3	Please provide your comments on how effective you believe the consumer engagement conducted by the business was in responding to consumer concerns, with examples where possible.	See comments above

1.7 Inter-relationships between elements in the building block

In the three proposals, the EMRF has reviewed the amounts claimed by each of the DBs for the impact on opex of the growth of the networks. What is of concern, are the differences between the calculations of each of the DBs.

For example, in the opex claims for Endeavour (table 26) and Essential (table 6-4), in year 2018/19 Endeavour has claimed a growth allowance $46.6m on a total capex spend of $1.75 Bn over AA4. For the same year, Essential claims a growth adjustment of $11m on a total capex spend of $2.6 Bn. Even though both claim to have used the "approved AER" approach to adjusting opex for network growth, the variance between the two claims indicates that one or both have incorrectly calculated the cost of escalation.

With this in mind, the EMRF provides its views on what should constitute an allowance for an increase in opex to reflect growth in the network

1.7.1 Repair or replace assets

The EMRF recognises that there is a balance between incurring capex for replacements against continuing to repair assets. Competitive industry has a similar requirement but what drives competitive industry is that generally its access to new capital is constrained whereas energy networks (particularly government owned networks) have both easier access to capital and a WACC differential that incentivises the networks to use replacement in preference to repair. Further once an asset is replaced under the regulatory approach it receives a return both on and of the cost of the asset replaced imposing a considerable cost not only in the short term to consumers but over the long term.

Most firms in a competitive environment use a simple payback method to determine when replacement is preferable to repair. As a rough rule of thumb, unless the simple payback is less than four years (commonly 1.5 to 3 years), a firm in competition will not replace an asset and will continue to repair it. Even when the payback is less than four years, the amount of available capital will also influence a decision to replace in preference to repair and if capital is not available, the decision will continue to with repairing the asset.

1.7.2 Usage of the asset

The EMRF is aware that there is an incentive on a network to replace an asset that is fully depreciated as fully depreciated assets do not provide any revenue under the building block approach to setting revenues.

So, even when an asset is still used and useful, there is an incentive to replace it when fully depreciated. This issue is particularly important when consumption is falling. A lightly loaded asset is likely to have a longer useful life than an asset that is heavily loaded and therefore still be used and useful after its theoretical economic life is passed.

The EMRF strongly recommends that the AER address this issue in its assessment of the allowance for replacement capex.

1.7.3 More assets require more opex

In the Issues paper the AER makes the statement (page 49):

> "…additional investment may create need for more opex spending. This is because, in principle, a large asset base requires more maintenance than a small asset base."

The EMRF does not agree as the implicit view that a larger RAB automatically results in more opex is flawed, but it is an assumption that the networks are keen to perpetuate. The only aspect where opex will automatically increase is where additional assets are added to the network through extension of the network.

The RAB can also increase for other reasons which do not cause an increase in opex in proportion to the RAB. These are:

- Replacement of existing assets with new assets of the same size. Replacement of a depreciated asset with new will increase the RAB. When this occurs the opex should fall as the cost of maintaining the

replaced asset will no longer be needed and a new asset should require minimal maintenance.

- Replacement of an existing asset with a new but larger asset. This will augment the capacity of the network and will increase the RAB. However opex should either reduce or remain much the same as the replacing asset will be newer than the replaced asset requiring less opex). Further the increase in opex for a larger capacity asset does not increase in proportion to the asset value.

The EMRF considers that the assumption of increasing opex with the RAB is part of the reason for why there has been such a massive increase in network costs being passed onto consumers

1.7.4 Incentive schemes

The EMRF recognises the importance of the incentives for opex, capex and service standards and agrees that now there are a suite of competing incentives covering the three elements a better outcome for consumers should result.

However, the EMRF also points out that the actual setting of the allowances for each of the elements is critical so that for the NSP to benefit it has to work at improvements rather than see bonuses being made available just because it convinced the AER to provide more than is efficient.

1.7.5 AER Questions

	AER question	**EMRF response**
8	How should we balance the interrelationships between building block components when making our decision on the distributors' regulatory proposals?	The most critical aspect of the inter-relationships is to set the base levels for each element at the efficient level. If this occurs, then the incentives schemes should drive the most efficient outcomes. Setting the most efficient base levels must be from using those historic performances which have been incentivised Where there has been no incentive scheme, the AER must apply benchmarking to ensure that the allowance reflects efficient levels.

1.8 Shared assets

The EMRF notes that the DBs do provide services to others using the assets fully paid for by consumers and therefore consumers should receive a benefit for this additional use.

Unfortunately, the DBs advise that the rewards they get for providing services to others is less than 1% of the smoothed annual revenue - a benchmark set by the AER on the basis that such a small amount has little bearing on the costs consumers carry. This might well be so, but the benefit the DBs get to their profit lines is a much greater proportion of the profits made.

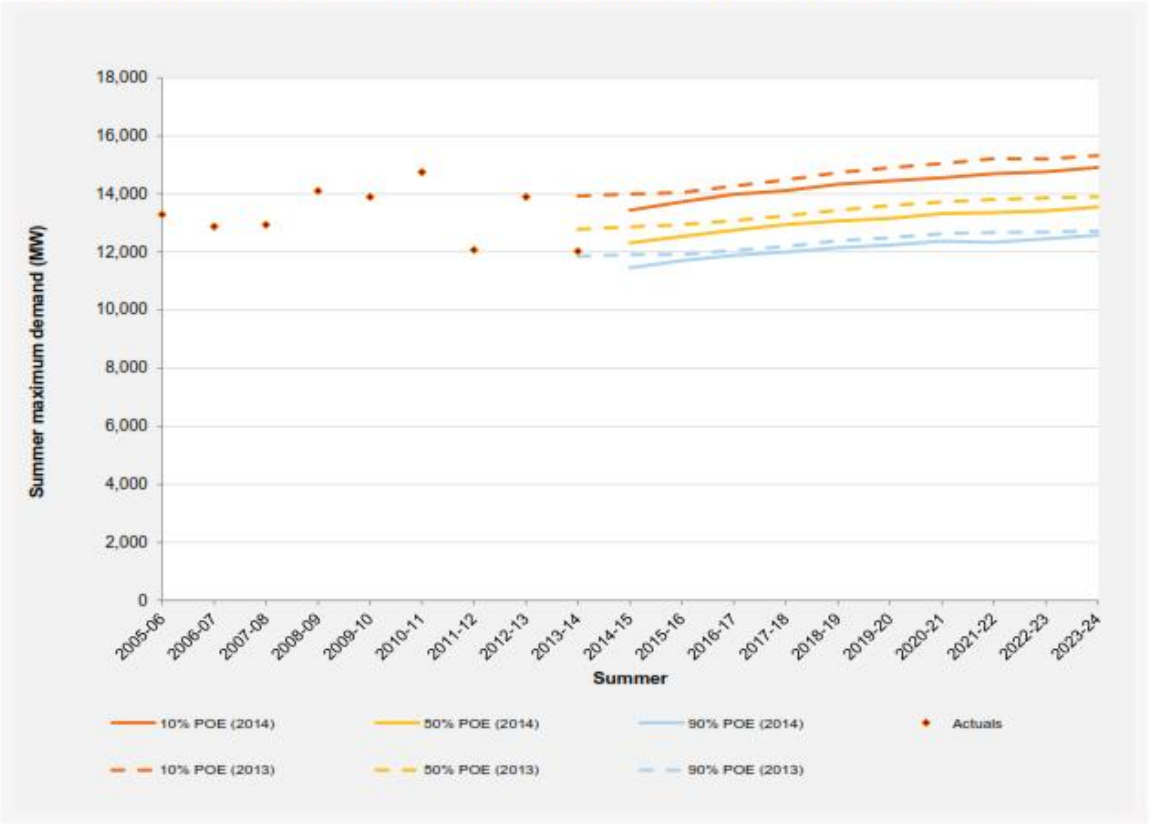
This highlights that the DBs benefit considerably from using assets paid for by consumers but do not have to share this benefit with consumers.

2. Forecasts of demand, consumption and input cost changes

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

The DBs are responsible for augmenting the NSW electricity distribution system to meet increases in demand. To provide a view on the needs for augmentation, the EMRF has used the Australian Energy Market Operator (AEMO) 2014 National Electricity Forecasting Report (NEFR) for NSW. The following chart demonstrates the expected changes in peak demand which is the main driver of network augmentation.

Figure 12 — Summer 90%, 50% and 10% POE maximum demand forecasts for New South Wales



The peak demand recorded in NSW was 14.58 GW on 1 February 2011. AEMO forecast is that even on a 10% PoE, this demand will not be exceeded until 2021/20. This provides a prima facie case that there is no need at all for any augmentation of the distribution networks during the coming period. Equally, the EMRF accepts that there may be some very few specific areas of the networks that may need augmenting to meet increases in growth in localized parts of the

networks. The EMRF notes that each of the DBs have identified some areas that will need to be augmented. The EMRF suggests that the AER carry out in-depth analysis to demonstrate the validity of the DB claims for augmentation,

On a consumption basis, NSW experienced a maximum consumption of 78.7 TWh in 2008/09 year, and AEMO (in the 2014 NEFR) is not forecasting this volume to be exceeded in NSW until beyond 2023/24 even under a high growth scenario as the following figure from the NEFR shows.

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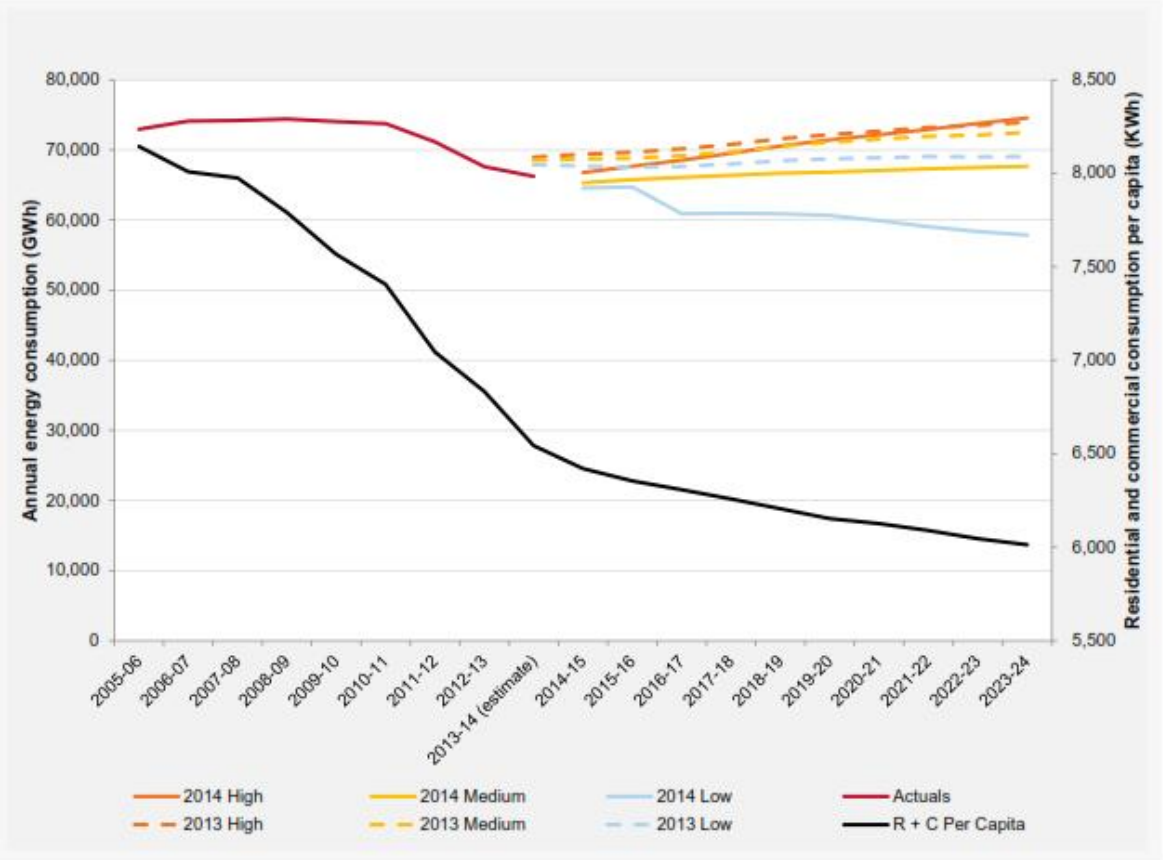
4.4.1 Annual energy forecast

Figure 10 — Annual energy forecasts for New South Wales



However, what is concerning is that with the reducing consumption and demand that is being experienced, the prices for distribution services will have to increase per unit to allow the DBs to recover the ever increasing revenues they are forecasting. The EMRF notes that the DBs are forecasting increases in prices which are less than CPI (ie a slightly declining average price path in constant dollar terms). With increasing revenue and falling consumption (2014 NEFR low growth forecast) or flat consumption (2014 NEFR medium growth forecast) the EMRF cannot see how the DBs can be forecasting a declining average price path.

This implies that is the DBs are dissembling in regard to the price impacts on consumers of its revenue ambit claim.

2.2 Escalation forecasts for labour and materials

In the three proposals, the EMRF has reviewed the amounts claimed by each of the DBs for escalation forecasts. What is of concern, are the differences between the calculations. For example in the opex claims for Endeavour (table 26) and Essential (table 6-4), in year 2018/19 Endeavour has claimed an escalation cost of $38.3m on a total opex cost of $280.2m. For the same year, Essential claims an escalation cost of $25m on a total opex cost of $472m. Even though both seem to have used similar input data, the variance between the two claims indicates that one or both have incorrectly calculated the cost of escalation.

2.2.1 Wages cost growth

The consultant for the DBs (Independent Economics) expresses a preference for using average weekly earnings (AWE) as the basis for general movements in labour. However, the DBs indicate that they will use a wages price index (or labour price index - LPI) as the basis for wage cost movements - this matches the AER previous approach to this issue

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

Despite its preference for AWE, Independent Economics prepares its own LPI assessments which are not productivity adjusted. In this regard, the EMRF notes that the AER has most recently used LPI calculations from Deloitte Access Economics (DAE) which were not productivity adjusted but the AER applied improvements in productivity as an explicit adjustment to forecast labour allowances. The EMRF supports such an approach.

A number of firms providing monopoly utilities services consider that the LPI should be adjusted to remove the Waste Services (WS) element from the EGWW sector, to better reflect the EGW sector that it considers it operates in. In previous applications to the AER, firms have used an argument provided by BIS to seek the elimination of the waste services element of the index. However, the EMRF notes that the DBs have accepted previous AER decisions and not sought the exclusion of the waste services element.

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

For internal labour cost escalation, the DBs have opted for this labour cost element to be escalated using their employee agreements. The EMRF considers this is inappropriate. The EMRF does not consider that a regulator should adjust costs to relate to future cost changes that have been negotiated by a single firm. This does not necessary reflect an efficient outcome and provides a bias towards higher labour costs than might occur under a more independent approach.

For example, if the AER allows the enterprise agreement to be used to set the future costs, this provides the negotiating team for employees with a clear signal that whatever labour cost movements are agreed will be rolled into the next regulatory decision. If this occurs, the NSP has no strong driver to negotiate the lowest possible price for labour. If the AER uses an independent assessment of expected labour price movements, then the NSP has a driver to negotiate a lower price for labour as this would provide a benefit to the firm. It does not lead to an efficient outcome where both parties to a negotiation are aware that whatever is agreed the cost will be borne by a third party.

The EMRF considers that:

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

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

2.2.2 Materials cost growth

The DBs provide a report from CEG providing a forecast of the movements in certain materials and of labour, and the movements in the CPI and $A-

$US which adjusts the materials prices to reflect local costs. CEG also provides its views on materials price movements with and without a price on carbon.

The EMRF is concerned that the CEG forecasts essentially imply that material costs will generally rise over the forecast period. This view appears to be at odds with views form others. For example, in appendix 1 the EMRF provides a report of the Bloomberg view that material used in the electricity industry are likely to fall rather than increase. This divergence of views needs to be closely assessed by the AER.

Further, what the DBs (and CEG) do not do is provide the weighting of each material element to its mix of materials and demonstrate that the weighting is reflective of the actual mix of the various elements that comprise the final adjustment to the cost of materials.

Further, the EMRF is concerned that forecasts of materials cost movements are based on assumptions that are inappropriate for the use to which they are put. For example,

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

The EMRF considers that forecasting error can be avoided and addresses this in section 2.2.4 below.

2.2.3 Property escalation

The DBs have assessed the movements in property prices and set escalation rates for the land it owns and for their easements. The EMRF has no problems with using this approach for the value of the land that they own or intend to purchase but it has considerable concern with applying this approach for the value of easements.

The value for easements does not reflect ownership of land. As the ACCC allowed in 2002 in its decision for the costs of easements in Victoria when assessing the value of easements held by and later the AER allowed in 2008 (and then adjusted by the Competition Tribunal later that year) when assessing the valuation of easements acquired by ElectraNet, the cost of easements are

not related to the cost of land but reflect the cost for landowner compensation and the transaction costs involved in the development of the easement.

This means that the cost of the easement is based on

1. The payment of a fixed sum to the land owner. A fixed payment made to a land owner for the easement would have been a "once off" amount and not necessarily related to the value of the land over which the easement was sought. In many cases, the land over which the easement is granted is still used by the land owner for the same purpose originally used. As a fixed dollar payment, this means that the carry forward of the cost in the RAB is more closely related to the cost of money rather than the cost of land. On this basis the compensation element of the easement carry forward value would be related to CPI rather than to the cost of land.

2. The costs of development of the easement. Easement acquisition or transaction costs are not related to real estate value but include the labour costs in detailing, surveying and negotiating the acquisition. This means that the carry forward of the cost in the RAB is more closely related to the cost of labour than to the cost of land

The EMRF has noted that in the past the AER has allowed for escalation of easements based on the value of the land over which the network has the easements rights. The EMRF considers that the AER has been wrong in this and should apply an approach more reflective of the basis on which the easement costs are made

The EMRF considers that the AER should rectify is earlier approach and in future apply an escalation methodology for easements based on the way the costs are incurred rather than continuing with a flawed methodology based on using land escalation as the basis for adjusting the value of easements.

2.2.4 Labour and material forecasting inaccuracies

As part of the analysis for the decision to use LPI in lieu of AWE (see section 2.2.1 above), the AER provided a table of the past performance of Deloitte Access Economics (DAE) and BIS Shrapnel (BIS) in forecasting actual labour movements (see for example table C2 in section 3 of the AER draft decision on the Multinet gas application).

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

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

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

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

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

The EMRF considers that the AER needs to find another approach to making adjustments to capex and opex allowances to reflect future movements in input costs. The current approach can cause considerable harm to consumers and could, in the future, cause harm to regulated firms through underestimating future price rises.

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

The decision of the AER to not use such an approach is strange. The argument put by the AER was that allowing for annual adjustments to allowed revenues by using the CPI provided some certainty for consumers and regulated firms and using an escalation factor different to CPI would introduce uncertainty. This issue of "certainty" for consumers and

regulated firms is becoming less important with the changes that are being made in the regulatory approach. For example

- For revenue cap decisions, (which currently will apply to nearly all regulated networks) there are frequently massive adjustments in tariffs because of large swings in current year revenues caused by under or over recovery of the allowed revenue in the previous year. In the case of transmission networks, these year-on-year swings to adjust for over/under recoveries are exaggerated by the inclusion of inter-regional settlement residues and the new inter-regional TUoS adjustments being introduced in July 2015. That MEU members report seeing transmission tariffs vary year on year by as much as 20%.exemplifies the lack of certainty introduced by these impacts.

- Even under price cap regulation where price movements are supposed to be limited, the EMRF has noted that individual prices vary considerably year-on-year (see section 9 below for actual examples). The EMRF has also seen prices under price cap regulation increase significantly due to the imposition of environmental charges such as state government solar incentive schemes.

- The AER is introducing a variable cost of debt into the WACC development and this will result in the actual WACC varying from the WACC used to develop the forecast revenues Whilst these variations in the WACC are expected to be relatively small, they will be significantly magnified by the application to the RAB, resulting in considerable changes in revenue allowed compared to that forecast.

- The AER already permits revenues to be adjusted to reflect variations in the actual CPI compared to that forecast. The annual movements of a network specific inflation adjustment are not expected to be significantly more volatile than those of the CPI

If swings of this magnitude can occur without using an input cost adjustment index, then the AER argument fails to be legitimate. The EMRF is of the view that using an industry specific escalation index would reduce the inaccuracies inherent in the current AER approach and should result in a more equitable outcome for both consumers and networks.

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

3. The DB WACC

3.1 About the weighted average cost of capital (WACC)

There was considerable disquiet about the regulatory framework which saw massive increases in the cost of providing network services. As a result, there were a number of rule changes proposed to address what was seen as a biased outcome favoring network service providers. Indeed, there were significant changes made to the rules and which provided the regulator with greater discretionary powers. Contemporaneous with the rule change process, the energy Laws were also changed to moderate the ability of network owners to appeal AER regulatory decisions.

It was during this period that the Chair of the AEMC, Mr John Pierce, is reported as stating[6]:

> "You've got to have the right rate of return. The first question is, what's the minimum rate of return necessary to attract funding so people will invest in the sector. Secondly, we want people to operate efficiently so what we need is an efficient benchmark rate of return… we want them to try and beat it so the shareholders get the benefit of it, so that next time around it can be shared with customers.
>
> ''But if they don't … then you also want the shareholders to suffer … if I'm inefficient, I want the shareholders to carry that risk, not customers."

The EMRF supports this view.

Over the period from late 2012 to the end of 2013, the AER devoted considerable resources to developing a rate of return (weighed average cost of capital - WACC) that reflected this view provided by Mr Pierce. As part of the process undertaken by the AER, consumers and network firms provided considerable input into the AER process. The outcome was not one which either consumers or network firms agreed meet the needs of each party. Despite this, the EMRF considers the outcome is better than the previous approach used by the AER, the ACCC and the jurisdictional regulators.

In particular,

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[6] "High power rates: it's a poles and wires story", SMH June 12, 2012

- The network firms considered that the approach to the development of the return on equity resulted in a lower outcome than they considered necessary[7]. Despite the concerns expressed, the network firms were not able to explain why, if they were getting a lower return on equity than was considered appropriate, why there was still a drive from potential acquirers of network assets to want to invest in the assets and even pay a premium to the regulated asset base.

- Consumers have noted that the market parameters (equity beta and market risk premium) have been set by the AER on the "high side" of what the market indicates are the realistic values for these, thereby providing a benefit to the networks.

- Consumers considered that the approach on return on debt did not reflect the actual costs of debt that the network firms were seen to achieve. Further, even when the networks do secure lower cost debt than allowed by the AER, this benefit is retained by the networks and is not passed onto consumers "next time around" as implied by the observation of Mr Pierce.

The amount of time and effort dedicated to getting a better approach to the WACC calculation by the AER, consumers and networks should have resulted in a large degree of acceptance of the outcome, but this is not the case. Consumers have consistently seen network firms argue that the AER decision on the WACC development is flawed and want an outcome that is more attractive to the network owners. This desire for acquisition of network assets **at a premium to the value of the assets**[8] reflects a view by investors that the rewards from ownership are greater than implied by the network firms even with the flaws identified in the regulatory framework by them.

The purpose of the AER in devoting considerable effort to getting stakeholder input was to reduce the uncertainty about how the AER would address the issue of setting a regulatory rate of return. What is now apparent is that the networks

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

[8] For example, the offer by CKI for the Envestra assets values Envestra at a premium of 50% over the regulated asset base (RAB) and the acquisition of a holding in DUET by Spark Infrastructure values DUET at over a 30% premium to the RAB. It is important to note that these acquisitions occurred after the fall in the demand for electricity and gas which in other markets might have implied a lower premium

consider that the AER guideline on rate of return is merely a starting point for seeking better outcomes for the networks.

As a general premise, the EMRF accepts that the AER rate of return guideline was developed as a package and sought to balance competing elements to provide an equitable outcome. On this basis, the EMRF accepts that the guideline should be implemented in its entirety and imposed on the DBs. Failing this, then all aspects should be opened for re-assessment.

3.2 The WACC for the DBs

In their applications, the DBs acknowledge that the AER undertook public consultation in the development of the Rate of Return Guideline, but it is clear that they all consider there are shortcomings in the approach that the AER has determined to setting both the cost of debt and the cost of equity for a benchmark efficient business. The DBs seem to consider that their revenue proposals are compliant with the Rules, even though they are not, in all aspects, consistent with the guideline.

The DBs then go on to accept certain parts of the AER guideline on rate of return but to challenge other parts. In doing so, the DBs have developed a higher value for the WACC than would occur under the AER guideline. This clearly shows that the DBS are seeking to enhance the returns that they provide to its shareholder.

This is concerning as the AER guideline was completed late in 2013 (and with it were published contemporaneous parameters) and it would be expected that the parameters the AER developed with its guideline would still be valid. The DBs do not accept that this is the case, especially with regard to the return on equity parameters. Analysis of the changes the DBs propose highlights the bias in the WACC outcome:

- **Gearing**. The DBs accept the AER guideline on gearing which considers that a network would have 60% debt and 40% equity. In fact the DBs all have about 75% debt and 25% equity. The acceptance of the AER guideline provides the DBs with a significant benefit

- **Credit rating**. The DBs accept the AER credit rating of BBB+ even though they acquire credit from their owner which acquires debt at AAA credit rating rates. This acceptance of the AER guideline provides the DBs with a significant benefit

- **Transition on debt cost methodology**. The DBs propose that there be no transition to the new methodology. The DBs provide considerable argument in favour of their preferred option but perhaps the most telling is

that the DBs note that imposing the transition approach will impose windfall losses by not applying the guideline without the transition period.

The EMRF affiliate MEU had provided a view to the AER during the Better Regulation process that there was merit in recognising that large energy networks would be able to transition directly to the trailing average approach to setting debt rates, but the AER elected not to follow this approach.

As noted in section 3.1, the EMRF accepts the rate of return guideline as a package. On this basis the EMRF considers the transition to a trailing average approach should be implemented as detailed in the guideline. In particular, the EMRF notes that applying the trailing average approach in full now would result in TG getting a much larger cost of debt than under the guideline. As the DBs pay considerably less for their debt than even that calculated by AER guideline, the EMRF considers that consumers will benefit considerably by using the guideline and the DBs will still more than recover their efficient costs.

3.2.1 Cost of equity modelling.

The DBs have rejected the AER approach to developing the cost of equity observing that the AER approach and current parameters would result in a cost of equity of well below that compared to the average of the five different approaches that could be used to estimate the cost of equity.

In rejecting the AER foundation model approach for setting the return on equity, the DBs provide extensive discussion on other modeling approaches which deliver higher estimates for the return on equity.

Despite the extensive discourse on other models, all the DBs propose a return on equity of 10.11%, which is based on a long term value for the risk free rate of 4.78% compared to the current rate of ~3.4%, a long term value for market risk premium (MRP) of 6.50% and an equity beta based on both local and overseas equity betas. This contrasts to the AER estimate of return on equity of some 8% using the current risk free rate coupled to the AER estimates for MRP of 6.5% and an equity beta of 0.7.

What occurs in the applications (and the associated consultant reports) is that there is a regurgitation of the arguments put by the networks during the extensive discussions on how to develop a model for setting the cost of equity. That the debate on the use of the other models has been had and conclusions drawn is effectively overlooked. The arguments provided to justify the use of the other models do not introduce new information which

might otherwise lead to a variation in the AER assessment made in the development of its guideline

In the TransGrid (TG) proposal for its revenue reset, TG refers to new information through the Grant Samuel assessment of the valuation of Envestra completed as part of the proposed purchase of Envestra, but the DBs do not seem to refer to this report[9].

3.2.2 Equity beta

The final decision by the AER on the rate of return guideline calculates an equity beta of 0.7 to be used based on evidence available to it at the time. The range of equity beta values assessed by the AER was that it lay between 0.4 and 0.7, so the decision of the AER sets a value at the very top of the credible range

The EMRF notes that the consultant to the DBs (Competition Economics Group - CEG) has assessed an equity beta of 0.82 based on weighting Australian networks equally with overseas equity betas for gas networks.

Subsequent to the final decision on the guideline, AER consultant Prof Henry provided his assessment of the value for equity beta. His advice was that the value lies between 0.3 and 0.8 with an average from the individual firms of 0.5223 and a median value of 0.3285. This work by Prof Henry is primarily focused on the actual equity betas of the network firms operating in Australia and therefore this provides a clear view of what the values are under Australian conditions. This is particularly important as the AER had elected to use the high end value for equity beta partly based on a view that equity betas from overseas gas transportation firms implies a higher value than occurs in Australia.

The EMRF notes that the MEU had previously provided a view that the average of the range for equity beta should be used - a view that the AER rejected. The new information from the AER consultant (Prof Henry) provides a view that the range of values for the equity beta is wider than that used by the AER in the guideline development, that there is a clear indication that the benchmark efficient entity would have its equity beta closer to the median value than the average value. A median value identifies the most common value for equity beta for Australian networks recognising the uniqueness of the Australian energy market and its regulatory

[9] The EMRF has provided its views on the Grant Samuel report and the conclusions drawn by TG and its consultants on the report in its response to the TG application

environment.

The EMRF considers that the work carried out by Prof Henry is more relevant and contemporaneous than the assessments provided by the DBs and CEG and should lead the AER to use a lower equity beta than 0.7.

3.2.3 Corporate bond rate

The DBs propose that the debt be acquired on a corporate bond series rated BBB and BBB+ from the RBA based on the 10 year trailing average without implementing the transition process that underpins the AER guideline. This approach provides the calculation with the full benefit of the GFC where bond rates exceeded 13% compared to the current value of less than 6%.

During the GFC (when bond rates soared) the DB annual reports show that they paid about 5.5- 6.0% for their borrowings and their current rates are not much higher. For the DBs to claim that they are entitled to claim an average trailing average cost of debt of 7.98% is clearly a gross overstatement of what the DBs actually incurred for their costs of debt over that time and it is achieved by the DBs deciding that they should avoid the transition approach in the AER guideline. In contrast, using the AER guideline, the DBs would have a cost of debt similar to what they currently pay, even based on them acquiring debt over a number of years which the trailing average approach is supposed to replicate. For the DBs to assert that using the guideline in lieu of an immediate transition to the trailing average approach will result in them incurring greater costs than they would be allowed (ie would incur losses) is therefore quite disingenuous when in fact the AER guideline would allow them a return on debt that still exceeds the costs they incur.

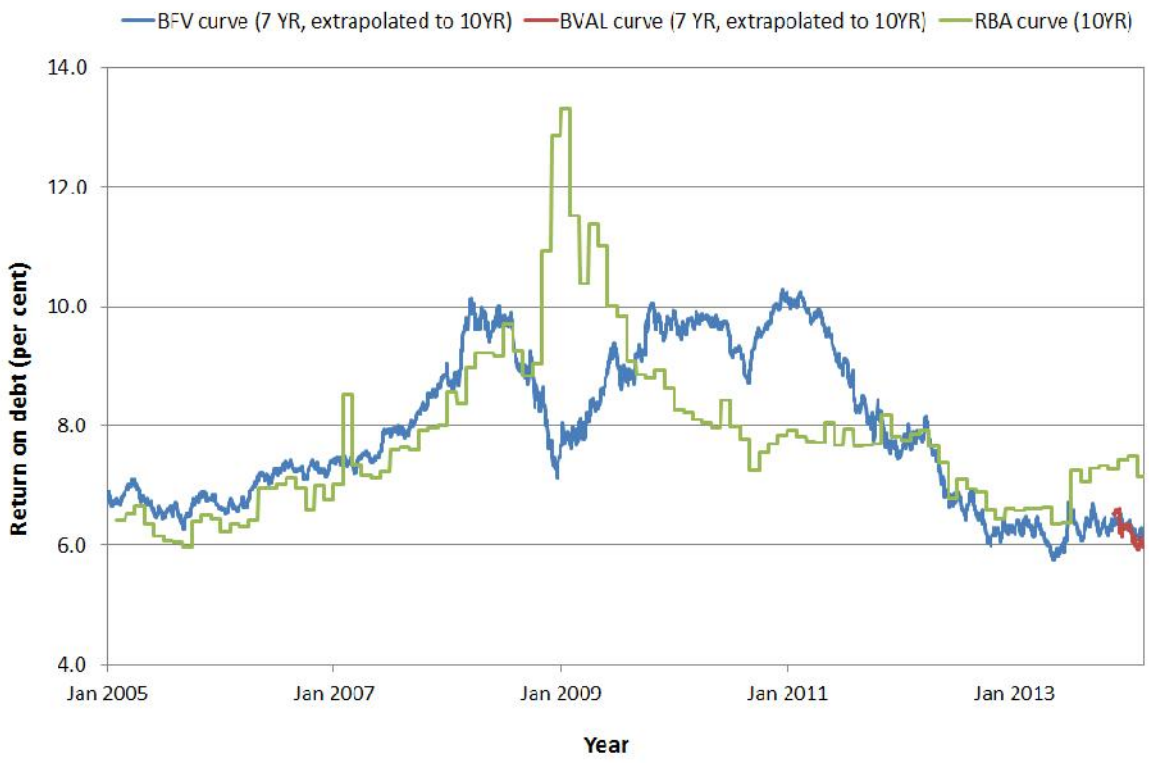
In April 2014, the AER sought stakeholder views on the best approach to assessing the source of data to be used for the development of the return on debt. The AER points out that both of the series under review (that of the RBA and of Bloomberg) both exhibit shortcomings to the criteria the AER has identified for assessing the cost of debt based on corporate bonds. Specifically, the RBA currently only publishes data from the last day of the month requiring interpolation to generate a daily series and Bloomberg only publishes data for 7 year bonds, requiring extrapolation. Both require interpolation to identify a data series for BBB+ rated bonds. Interpolation and extrapolation both introduce the likelihood for error.

It was this in mind that the MEU recommended that the AER/ACCC should develop its own series to replicate what the cost of debt is for a pure play energy network. An AER/ACCC series could be tailored so that one of the main criticisms of using corporate bonds to set the cost of debt - that even

for firms with the same credit rating, the cost of debt varies with the core business of the firm and that regulated energy networks can acquire debt at a lower cost than other firms with less secure cash flows.

It is not surprising that the DBs have settled on using the RBA data series combined with an immediate move to the trailing average approach. In the figure 1 provided by the AER in its Issues Paper discussing the different data series, there is no doubt that using the trailing average approach in its entirety will provide a clear benefit to the DBs. It is less clear whether the RBA data series provides a better outcome for the DBs than using the historical data from the Bloomberg Fair Value. Certainly an immediate move to the trailing average is not possible with the new Bloomberg data series BVAL.

Figure 1 Comparison of return on debt estimates



Source: AER analysis.

Note: The Bloomberg data has been extrapolated from an underlying seven-year curve to a ten-year term by adding a fixed term spread of 30 basis points. The addition of a fixed spread represents a simplification for illustrative purposes, but the magnitude of this spread reflects that applied in recent AER decisions.

Whilst there appears to be a clear differential of up to 100 bp between the RBA and Bloomberg series in the chart above, the EMRF notes that the RBA series has fallen dramatically in the months since the figure was developed and now shows a value below 6% - the EMRF does not know the equivalent values for the BFV and BVAL but assumes these have fallen also.

Accepting that the AER has not commenced developing its own data series, for this review, external data providers must be used and the data extrapolated/interpolated to derive the cost of debt. The MEU considers that both sets of data should be used and averaged as recommended by the Competition Tribunal.

3.2.4 Value of imputation credits

The DBs have sought for the value of imputation credits (gamma) to remain at the level set by the Competition Tribunal - ie at 0.25. In the Better Regulation program, the AER carried out further investigation and concluded that gamma should be set at 0.5 essentially reflecting a payout ratio of 0.7 (as previously used by the AER and the Competition Tribunal) and a utilisation rate of 0.7. In contrast a utilisation rate of notionally 0.35 was accepted by the Competition Tribunal as an appropriate estimate.

The EMRF considers that assessing each of the various parameters implicit in the rate of return in isolation has resulted in networks being granted much higher revenues than were needed to provide the service. The AER has assessed the various parameters associated with the WACC development and the value of imputation in a holistic manner and by doing so has provided a balanced view recognising that it is probable that errors could have been made in setting each individual parameter.

As each of the various parameters can impact other assessments made under the rate of return guideline, the EMRF supports using the guideline in its entirety rather than "cherry picking" aspects which favour one stakeholder over another. On this basis the EMRF considers that gamma should be 0.5 as assessed by the AER in its Better Regulation program.

3.3 AER questions on WACC

	AER questions	EMRF response
6	Do you consider that any departures from our rate of return guideline are justified?	No. As noted above, the EMRF considers that the rate of return guideline reflects a balance of competing aspects and should be taken as a

		holistic view of the entire approach to identifying a reasonable rate of return for regulated networks with a guaranteed income. To "cherry pick" elements out that do not provide the best possible outcome for networks and to institute new approaches to the setting of these specific elements defeats the purpose of having a holistic approach.
7	In particular, do you have any comments on the departures proposed by the businesses?	See comments above

3.4 Pass through events

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

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

In the current Rules there are defined elements where the “pass through” of actual costs is permitted. In particular the DBs consider that a terrorism event should be a pass through along with an insurance cap event and a natural disaster event. The AER has previously accepted these as legitimate bases for pass throughs and the EMRF accepts these should continue on the basis of previous AER acceptance.

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

compared to the likelihood of it occurring.

In addition to these previously accepted pass throughs, the DBs seek to add further pass through events including insurer's credit risk event and Essential seeks an aviation hazard event.

The reason for rejecting these additional pass throughs is that in a competitive environment these risks are carried by the firm. Whilst the three events noted as being acceptable to constitute pass throughs the other two have a high degree for a firm to mitigate the impacts of the risk through proper management. It is therefore inappropriate for consumers to take a risk where the DBs have the ability (and responsibility) to take action to mitigate the risk through good management. The resources are made available to the DBs through the opex and capex allowances to institute this good management and thereby precluding the need to transfer the risk to consumers.

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

4. Depreciation

4.1 Early retirement of assets

At various times the DBs have implied that some of their assets might need to be replaced earlier than their age might indicate (ie that the asset is not fully depreciated) as a result of condition monitoring, where early replacement is warranted to prevent the asset failing whilst in service. This is in addition to the increased asset replacement program indicated by the DBs in their capex proposals. Equally, with the reduced loading on many of the assets, there is an increased expectation that existing assets will be "used and useful" for a longer period than might be expected based the "engineering life" used to set the depreciation schedule

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

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

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

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

value of depreciation is incorporated into the building block, enhancing the costs to consumers.

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

In the past EMRF members and members of EMRF affiliates have seen electricity supply authorities continue to use assets long after the asset has been written off financially. Member experience is also that the technical life of many assets is quite longer than the average used to financially depreciate the assets in the building block approach. The applications from the DBs support this view in that the DBs have advised that some substations have continued to operate satisfactorily well beyond their assumed economic life. Physical life of an asset is related to many more aspects than just time. Assets lightly used and well maintained will generally be useful longer than the expected asset life. The care used in manufacturing and the basic design parameters also greatly impact on asset longevity.

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

4.2 When should assets be replaced?

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

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

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

4.3 Rates of depreciation

The EMRF notes that the DBs propose to retain the same rates of depreciation as that provided in the current period

5. Opex

An overall assessment of the opex programs sought by all three DBs for the current regulatory period (AA3) shows that consumers paid a considerable premium throughout AA3 for opex that was never needed. The DBs have all commented that this was a result of their efforts to reduce the costs of their networks to consumers although the EMRF has a view that the DBs were allowed more opex for AA3 than was efficient.

Embedded into the opex claims for AA4 is a view that the base year of 2012/13 was efficient and this was the starting point of the development of the opex for AA4. Despite this, the DBs, rather than using the base year opex for all costs have decided to use a variety of different methods to generate the forecasts.

Consumers are prepared to pay benefits under the EBSS but only when the revealed costs are used to the maximum extent to set the future cost allowances. The DBs have not used the revealed cost approach in many of the categories of costs and by doing so have effectively reduced the power of the incentive provided.

What is also notable was that, even using similar inputs, different outputs have occurred. For example, the costs in the build up of the total opex for different DBs appear to have conflicting outturns even for activities that might be considered to show some consistency. Specifically there appears to be a lack of consistency in the escalation of costs and the impacts of growth between the DBs even though apparently they use the same approach to calculating the costs. These are addressed in sections 2.2 and 1.7 above respectively.

Another feature is the way the DBs have implied that they have generated savings and reduced costs by the movement out of standard control services of ancillary network services (ANS) and metering to Alternative Control Services (ACS). This has been confusing when comparing historic performance with forecast costs and when there is a like for like assessment, the savings that are asserted seem to disappear.

A third aspect of the opex forecasts is the way the DBs have included a considerable premium in the opex for the introduction of the savings initiatives undertaken along with the integration of the three networks into Networks NSW. The EMRF considers that the very fact that the DBs reduced their opex to well below the allowed opex, shows that there were considerable savings to be achieved and as a result, the DBs have not only retained the savings they made during AA3 but continue these benefits into AA4 through the application of the EBSS. Yet to achieve these savings has apparently caused the DBs to incur considerable costs. It is bizarre that consumers should make further payments to

the networks so that they can recover the costs of amalgamation and to generate the savings that the DBs have already enjoyed.

Additionally, the EMRF notes that the approach to introducing efficiencies commenced in the middle of AA3 and therefore the costs of the base year would have included much of the increase in costs the DBs assert they need to develop and implement the new savings measures.

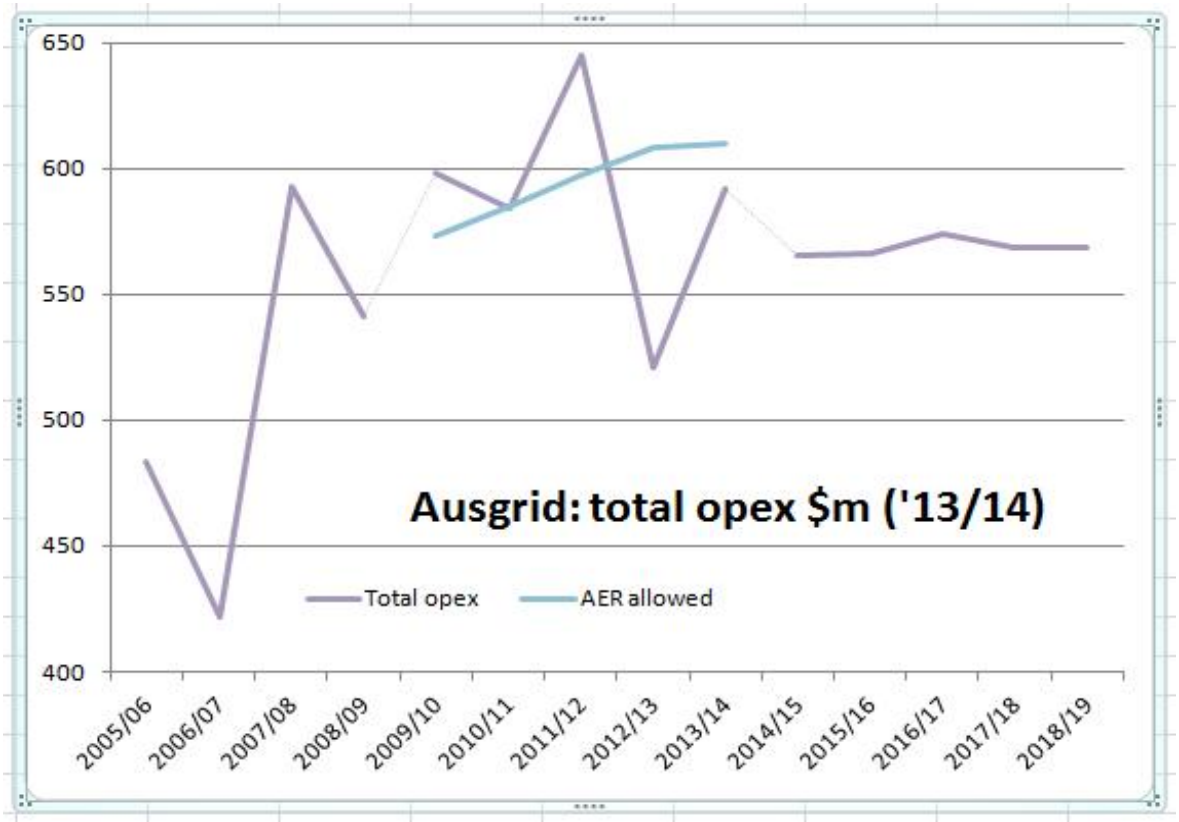
There is some benchmarking of performance provided by Ausgrid and Essential. It is intriguing to note that that both of the DBs cast doubt as the weight the AER should apply to this benchmarking data. Whilst some of the data indicates that the current performance of the DBs might be acceptable (and there are a number of benchmarks where the outcome shows there are significant inefficiencies) the EMRF is concerned that the benchmarking of the forecast costs for AA4 does not always indicate that the forecasts reflect efficient allowances. This is particularly concerning as all three DBs assert that the efficiency programs they have introduced are putting downward pressure on their future costs. Overall, the benchmarking provided by the DBs does not convince the EMRF that they have come close to the efficient frontier with their forecast costs for AA4.

The EMRF also notes that the AER needs to address the ever increasing revenue reset costs as it is quite apparent that NSPs are spending excessively on consultant reports to justify increasing the revenue that they are allowed. It is concerning that consumers are providing more funds than ever to the NSPs so that NSPs can not only pay for these consultants but also cause consumers to pay increasing costs for the services provided that result from these consultant reports and views.

The EMRF has provided views on each of the DBs in the following sections based on a top down assessment with deeper analysis for certain elements of the capex claimed.

5.1 Ausgrid

The following chart provides the view of actual and forecast opex as provided by Ausgrid, and this provides a view that Ausgrid has had increasing opex for the last two periods (AA2 and AA3) but considers that its opex needs for AA4 will be much the same as that incurred in the final two years of AA3. Ausgrid comments that it is able to contain costs at this level due to its cost reduction program



Source: Derived by EMRF from Ausgrid application and RIN data

Ausgrid states that it will use the base-step-trend approach to forecasting opex and cites that its opex for 2012/13 is the base year opex. The Ausgrid opex proposal seems to reflect a continuation of the level of opex forecast for the last year of AA3 and shows a marked increase from the actual opex seen in the base year of 2012/13.

Overall, it appears that Ausgrid has used its recent past performance and proposes to carry this into the next period (AA4).

Although Ausgrid considers that its base year costs are a good starting point for setting the opex forecast, it has not used the base-step-trend across the entire opex assessments but only for some of the proposed opex. Ausgrid provides a table 27 outlining the approach it has taken to generate its AA4 forecast opex.

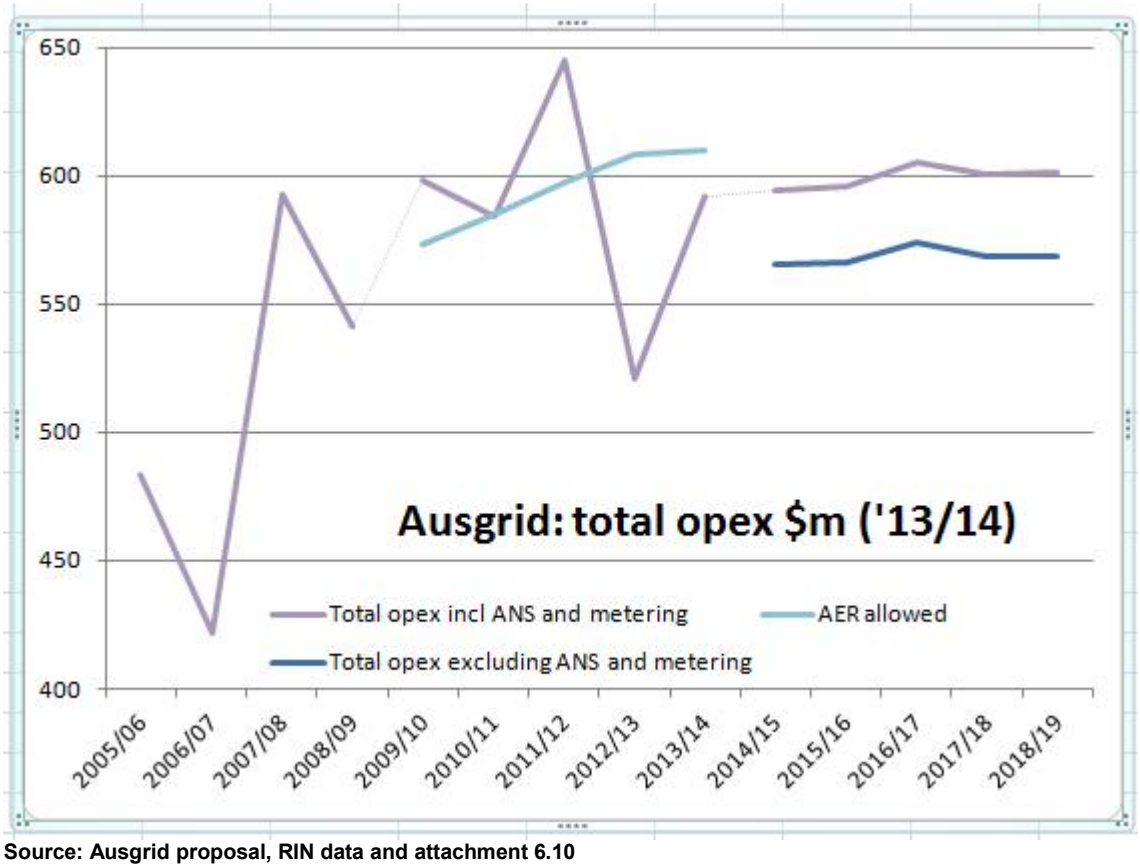
Table 27 – Summary of forecast methods

Group	Cost category	Base year	Base year variation by volume	Base year historical averaging	Bottom up	'Top down' approach	Other
Maintenance	Inspection – vegetation management	✓					
	Inspection – all other costs		✓				
	Corrective	✓					
	Breakdown	✓					
	Nature induced breakdown			✓			
	Non-direct maintenance	✓					
	Engineering support	✓					
Operation and support		Either base year or bottom up or combination thereof					
Other opex	Cost savings / productivity improvement					✓	
	Non network alternative programs				✓		
	Debt raising cost						✓ i.e. AER's method

The EMRF considers that, as Ausgrid has used the EBSS as the basis for generating future benefits and that its actual opex was overall less than that allowed, then the actual base year opex should be used for all elements of generating the forecast rather than just some elements.

Whilst table 27 shows that Ausgrid proposes to use the base year costs for a number of the cost elements, it fails to highlight one of the major impacts to its forecast opex which is the transfer of ANS and metering to alternative control services even though this cost was included in the opex in AA3 and is in the base year opex. When this is adjusted in the earlier chart[10], it makes a considerable change to the complexion of the forecast relative to the base year. This is shown in the following chart

[10] The EMRF had considerable difficulty in identifying the actual amounts transferred to ACS but used the amounts included in attachment 6.10 to generate the amounts transferred. The EMRF is concerned that it has underestimated the cost for these elements when it compared the adjustments cited by Endeavour and Essential with the assessment made by EMRF.



Source: Ausgrid proposal, RIN data and attachment 6.10

The inclusion of this adjustment makes it clear that the savings discussed at length by Ausgrid have not impacted on the underlying costs when compared on a like for like basis.

This chart highlights the opex costs for AA4 actually increase from the base year and the 2013/14 forecast when comparing like for like. The EMRF notes that Ausgrid has adjusted upwards the 2012/13 opex by a number of discrete steps including actuarial adjustments, that consumers should fund the implementation of the efficiency reform program and that opex should increase because the capex program has been reduced.

5.2.1 Dis-synergy (TSA) costs

The Ausgrid opex costs provided in table 32 shows that Ausgrid will incur about $15m pa cost as a result of the loss of synergy with their erstwhile retail function. Up to now, Ausgrid provides a service to EnergyAustralia but this might be terminated in 2014. It is not made clear whether EnergyAustralia pays for this service or receives it free. Either way Ausgrid is including in its opex for the combined function and is at least recovering the costs of its interface with its customers.

The EMRF notes that the transition from retailer/network to a pure network provider has been in place since 2011 so the opex costs included in the RIN data would have included the costs incurred for managing the consumer interface despite the loss of the retail function. On this basis the EMRF considers that the actual costs for consumer interfacing are in the base allowance and should not be included as an additional item.

This assumption is supported by the fact that whilst both Endeavour and Essential have highlighted a loss in scale due to the loss of the retail function, neither seems to have included additional costs to their base year allowance to adjust for the loss of scale.

5.2.2 Vegetation management

One of the more intriguing facets of the Ausgrid proposal is that whilst it notes that vegetation management costs are forecast on a revealed cost basis, it also notes (page 63) that it has renewed contracts with with external service providers for vegetation management with cost increases expected to be above CPI.

The EMRF is concerned that, despite asserting this element of opex was set using the base year data, Ausgrid has effectively used a zero base approach for forecasting the cost of this element. This point is highlighted in table 30 where Ausgrid observes that the cost escalation for contracted services reflects the cost of external contractors.

5.2.3 Lower capex increases opex

Ausgrid comments that as a result of the lower capex program this will cause an increase in opex.

Additionally, Ausgrid comments that the investment in the Information Technology undertaken will require opex increases to utilize the new assets acquired. Unless there is a real benefit generated by the introduction of information technology resources, the EMRF considers that the investment should not have been undertaken and certainly not result in increased opex.

The EMRF members comment that there has to be a definable benefit before any investment will be permitted.

As a general rule, unless costs reduce overall, then changes should not have been introduced. The EMRF considers that no increase in opex should be allowed as a result of lower capex or increased IT.

5.2 4 Private mains inspection

Ausgrid comments that it is at risk of breaching a compliance requirement because it has not complied with a 2008 regulation requiring it to inspect private electricity mains. This is not a step change as the work was required to be carried out during (or even before) AA3 and should be included in the base year opex.

The EMRF does not disagree that such inspections should be carried out but questions Ausgrid's view that they are entitled to an increased allowance to do something it was required to do for many years and it was assumed that they were already doing so.

5.2.5 Transitioning to a new cost allocation methodology

Ausgrid claims that its need to move to a new cost allocation methodology is a step change and must be added to the base year opex. The EMRF does not agree that this is a required step change, but one that Ausgrid has to carry out in order to comply with a requirement that its services be priced to deliver cost reflective outcomes.

The EMRF does not consider this is a step change that consumers should be required to fund as Ausgrid should have implemented such a process when it identified that its current practices were incorrect. Consumers should not be required to fund Ausgrid to correct errors that Ausgrid has made.

Debt raising costs

The EMRF understands that Ausgrid does not incur debt raising costs as all its debt is provided from Treasury Corp and notes that the RIN data includes no costs for this supposed expenditure. However, Ausgrid seeks an allowance of $45.4m ('13/14) to reimburse it for the costs it does not incur. To support its view, it goes to considerable effort to prove that this is a legitimate cost and employed a number of consultants (presumably an expense that consumers carry as part of the allowed regulatory costs) to argue that this should be an allowed cost.

The EMRF considers that there should be no allowance for a cost that is not incurred, as this is not efficient.

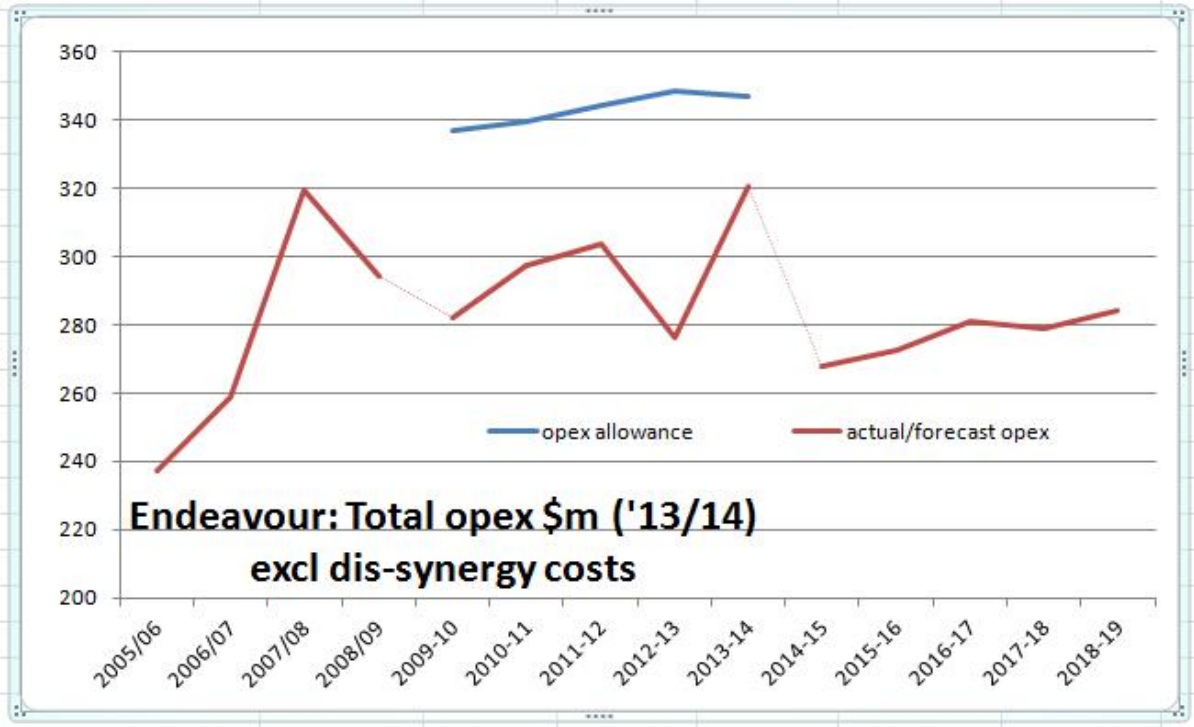
Overall, the EMRF considers that Ausgrid claimed opex should be much the same as it incurred in 2012/13 (the base year) and that the allowance for AA4 should

show a reduction to reflect the transfer of ANS and metering to alternative control services (ACS).

5.2 Endeavour Energy

The Endeavour opex proposal is extremely challenging to assess and is presented in a most complex form. Endeavour states that it will use the base-step-trend approach to forecasting opex and cites that its opex for 2012/13 is the base year opex.

The following chart provides the view of actual and forecast opex as presented by Endeavour, and this provides a view that Endeavour has reduced its opex considerably as a result of better management of its opex and shows a reduction of opex from the identified base year.



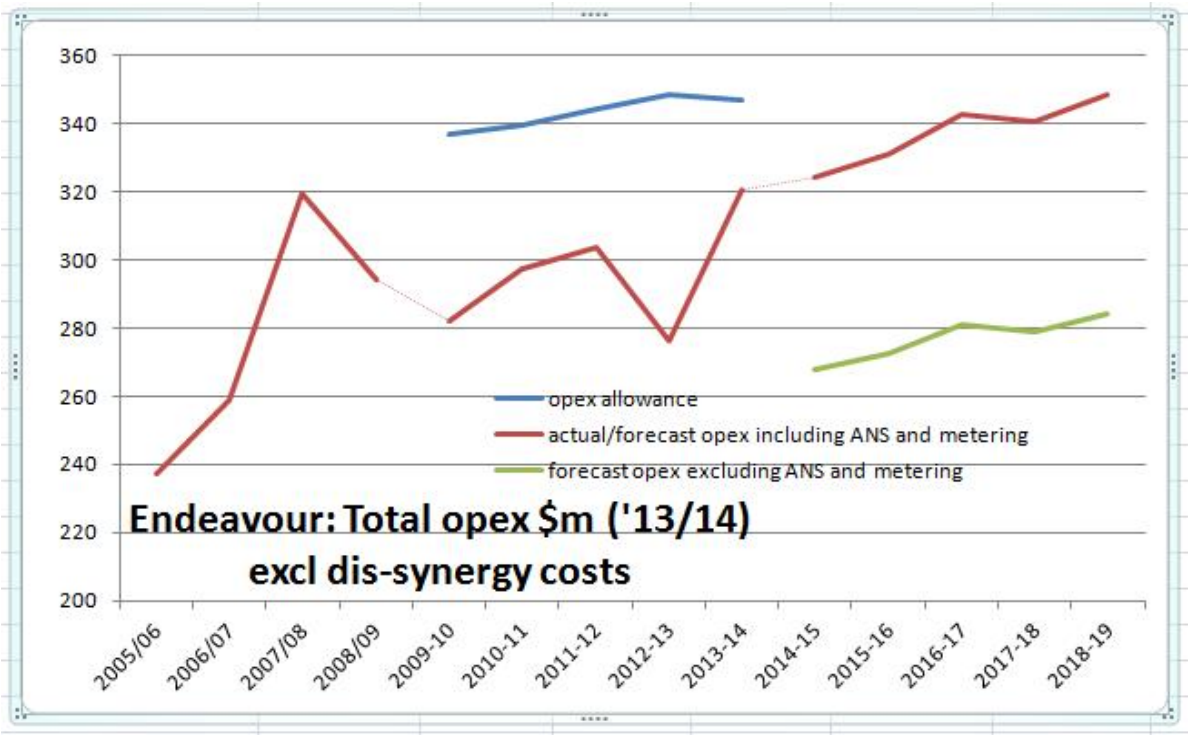
Source: Endeavour data from tables 20 and 21, RIN Data

What is not then clear is how Endeavour has adjusted this base year opex into the forecast to incorporate step changes and growth. Table 26 provides a little guidance but does not explain where the underlying opex (first line) is derived from.

Table 22 quantifies the net savings of $72.3m identified between the allowance and the actual opex less the retail pass through event (dis-synergy), DMIA and

debt raising costs yet table 21 which provides the same $72.3m net savings highlights that this includes cost reductions, vegetation management savings and savings from employee entitlements. What is does also include is retail dis-synergy costs and other costs (presumably debt raising and DMIA).

However, the biggest impact on forecast opex is the transfer of ANS and metering to alternative control services even though this cost was included in the opex in AA3 and is in the base year opex. When this is adjusted in the earlier chart, it makes a considerable change to the complexion of the forecast relative to the base year.



Source: Endeavour data from tables 20 and 21 and adjustment from line 2 of table 26, RIN data

The inclusion of this adjustment makes it clear that the savings discussed at length by Endeavour have not impacted on the underlying costs when compared on a like for like basis.

Table 26 highlights where the costs for AA4 actually increase from the base year. The opex forecast for the last year of AA3 shows a step increase of over $44m pa but where this cost increase comes from is not explained.

It appears that Endeavour has used the base-step-trend for developing the bulk of the forecast opex for most of the opex. Particularly it appears that Endeavour has used a zero base approach for development of its vegetation management

although there are some other elements where a zero base approach has also been used.

5.2.1 Dis-synergy costs

The Endeavour benchmarking RIN data states that opex in 2012/13 was $271.6m in nominal terms. The EMRF considers that the RIN data would have to include the costs incurred for managing the consumer interface despite the loss of the retail function so the EMRF considers that the actual costs are inclusive of all costs including dis-synergy costs. This view is supported by the fact that table 22 shows that the cost from the loss of the retail function (ie $12.5m in 2012/13) is a component of $72.3m that table 21 shows is the under-run in opex from the alloweds in 2012/13.

Endeavour states in table 21 that actual opex for 2012/13 was $276.4m ($'13/14) conforming with the RIN data. In note 58 Endeavour comments that the actual/forecast opex excludes the retail pass through, DMIA and debt raising costs. So there appears to be a mismatch between RIN data and note 58.

Either way, the EMRF considers that the dis-synergy costs are in the base allowance and should not be included as an additional item.

5.2.2 Vegetation management

One of the most intriguing aspects of the forecasting is that Endeavour obtained considerably lower costs for vegetation management during 2009/14 (a period when other DBs were seeking allowances for pass through increases due to wetter than average weather causing increased vegetation growth) yet for the 2014-2019 period Endeavour is seeking to increase the allowance by an amount similar to the savings generated.

As Endeavour has included the benefit of the lower vegetation management in its EBSS, the EMRF considers that this is not a step change and Endeavour should include for the vegetation management as included in its base year costs and not add it as a separate adjustment as shown in table 26. To do what Endeavour proposes is to remove vegetation management from being assessed on a base-step-trend approach to it being set on a zero base adjustment which is contrary to the concept underlying the EBSS.

The EMRF does not consider that Endeavour should be allowed an additional cost allowance for vegetation management above what in included in the base year

5.2.3 Output growth

The EMRF considers that the output growth forecast by Endeavour is excessive and refers to comments made in section 1.7 above. Endeavour appears to have assumed its growth in opex is based on the increase in the RAB. The EMRF considers that this is an inappropriate method especially when replacement capex is such a high share of the capex program. The EMRF considers that the AER needs to look at this aspect much more closely as the growth element of Endeavour opex reaches 20% of the total opex by the end of AA4. In a network that needs little augmentation capex, such a large increase in opex for "growth" is clearly unsupportable.

5.2.4 Escalation

The EMRF notes that escalation costs are also a large element of the Endeavour opex cost build up. The EMRF has made comment on escalation is section 2 above.

5.2.5 Reprioritisation

Endeavour comments that as a result of the lower capex program this will cause an increase in opex. The EMRF finds this extremely hard to accept especially as the replacement capex is such a large proportion of the capex programs in AA3 and AA4 and increased replacement capex should result in lower opex.

EMRF members comment that less capex does not lead to increased opex allowances in a competitive environment.

5.2.6 Other operating costs

Endeavour states that this element includes an allowance for DMIA, insurance, land tax and council rates. The EMRF has no comment on these other than to adjure the AER to ensure these are legitimate costs.

However the EMRF is concerned that Endeavour forecasts that an increase in its regulatory reset cost allowance for AA4 should be made, but that it is satisfied that the allowance included in the base year costs is sufficient. The EMRF notes that the extensive amount of information provided by Endeavour (particularly in relation to the massive amount of data provided to drive up the WACC) is more than is required and the AER should examine the current allowance to ensure that it is not over-providing consumer funds to Endeavour to then be used to the disadvantage of consumers.

5.2.7 Debt raising costs

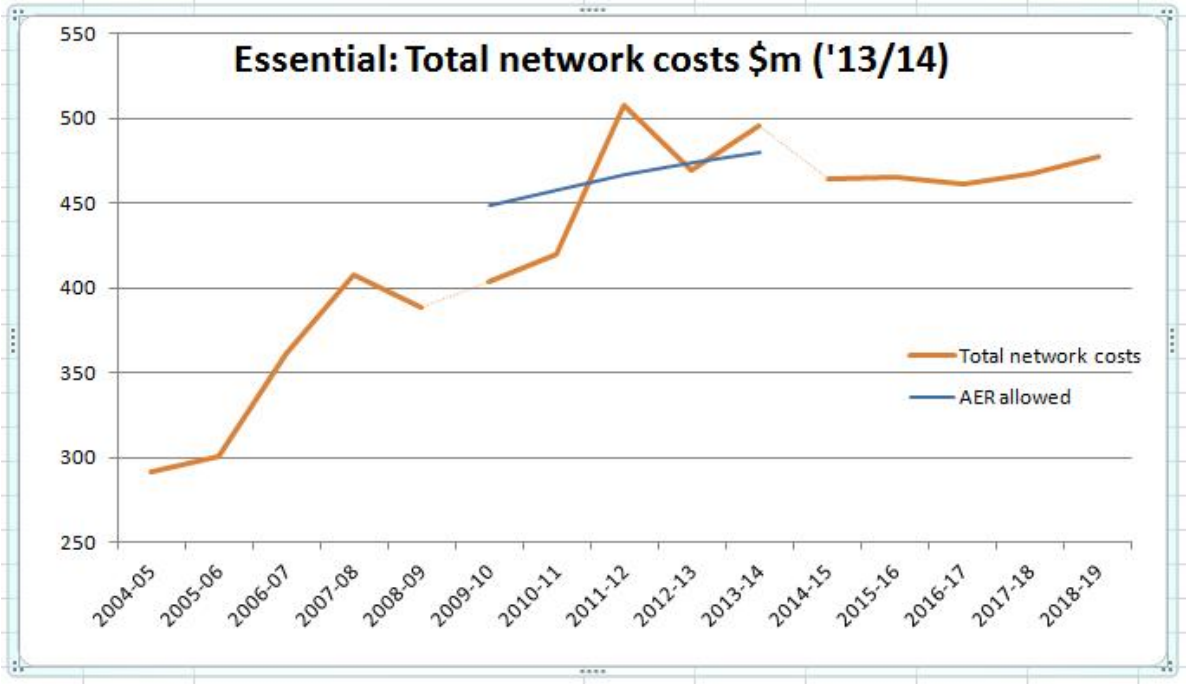
> The EMRF understands that Endeavour does not incur debt raising costs as all its debt is provided from Treasury Corp and notes that the RIN data includes no costs for this supposed expenditure. To support its view, Endeavour goes to considerable effort to prove that debt raising is a legitimate cost and employed a number of consultants (presumably an expense that consumers carry as part of the allowed regulatory costs) to argue that this should be an allowed cost.
>
> The EMRF considers that there should be no allowance for a cost that is not incurred, as this is not efficient.

Overall, the EMRF considers that Endeavour claimed opex should be much the same as it incurred in 2012/13 (the base year) and that the allowance for AA4 should show a reduction to reflect the transfer of ANS and metering to alternative control services (ACS).

5.3 Essential Energy

The Essential opex proposal reflects a continuation of the current level of opex used in the later years of AA3. Essential states that it will use the base-step-trend approach to forecasting opex and cites that its opex for 2012/13 is the base year opex.

The following chart provides the view of actual and forecast opex as provided by Essential, and this provides a view that Essential has had increasing opex for the last two periods (AA2 and AA3) but considers that its opex needs for AA4 will be much the same as that incurred in the base year. Essential comments that it is able to contain costs at this level due to its cost reduction program



Source: Essential proposal table 6.1, AER FD 2009

The chart seems to imply that Essential has reduced its costs for AA4

Although Essential considers that its base year costs are a good starting point for setting the opex forecast, it has not used the base-step-trend across the entire opex assessments but only for some of the proposed opex. Essential provides a table 6-3 outlining the approach it has taken to generate its AA4 forecast opex.

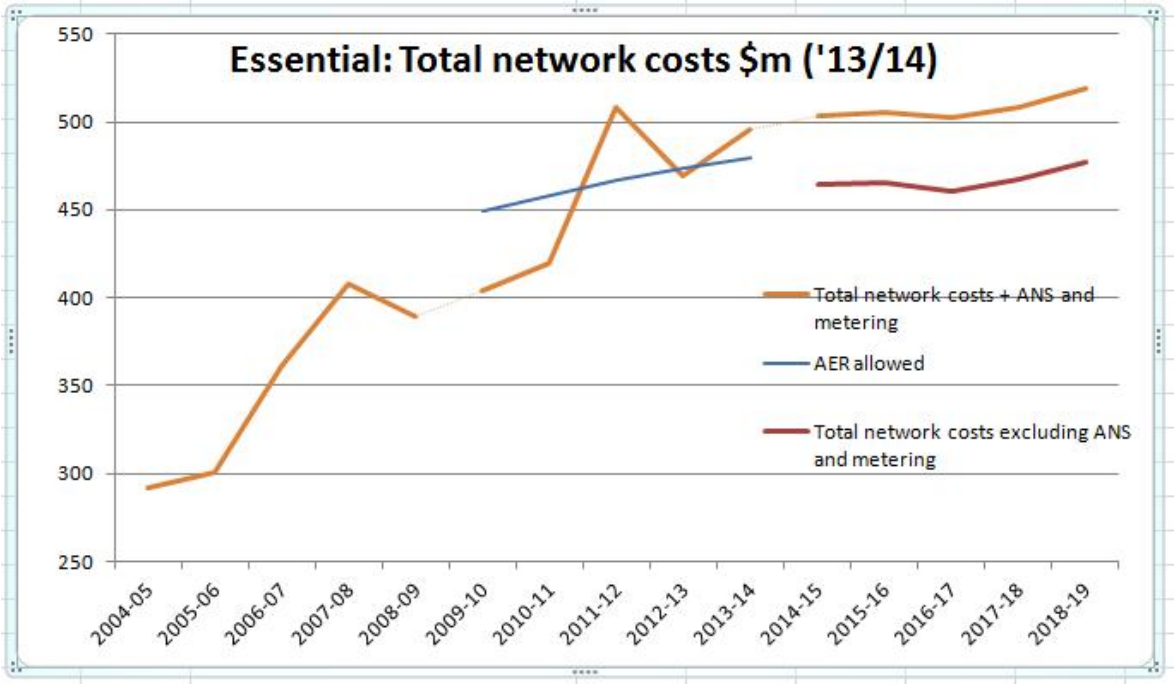
Table 6-3 – Summary of forecast methods

Cost Category	Activities	Base year	Base Year Variation by Volume	Base Year Historical Averaging	Bottom Up	'Top down' approach	Other
Inspection	Routine asset inspection		✓				
	Recloser and regulator Inspection	✓					
	Equipment earth testing	✓					
	Battery Exchange and injection testing	✓					
	Thermovision		✓				
Maintenance and repair			✓				

Vegetation management costs	Cyclic Maintenance				✓		
	Aerial patrol				✓		
	Immature tree clearing				✓		
	Hazard tree program				✓		
	Management and administration				✓		
Emergency response		✓		✓			
Other network cost		✓					
Other operating expenditure	Debt raising cost						✓ AER's method
	DMIA						✓ AER's method

The EMRF considers that, as Essential has used the EBSS as the basis for generating future benefits and that its actual opex was considerably less than that allowed, then the actual opex should be used for all elements of generating the forecast rather than just some elements.

Table 6-3 shows how the base year costs have been adjusted to show the movement from the base year cost to the opex forecast for AA4. The biggest impact on forecast opex is the transfer of ANS and metering to alternative control services even though this cost was included in the opex in AA3 and is in the base year opex. When this is adjusted in the earlier chart, it makes a considerable change to the complexion of the forecast relative to the base year.



Source: Essential proposal table 6.1, AER FD 2009

The inclusion of this adjustment makes it clear that the savings discussed at length by Essential have not had a major impact on the underlying costs when compared on a like for like basis.

Table 6-3 highlights where the costs for AA4 actually increase from the base year. The EMRF finds it amazing that Essential considers that an accounting treatment change is a step change, that consumers should fund the implementation of the reform program or that opex should increase because the capex program has been reduced.

5.2.1 Dis-synergy costs

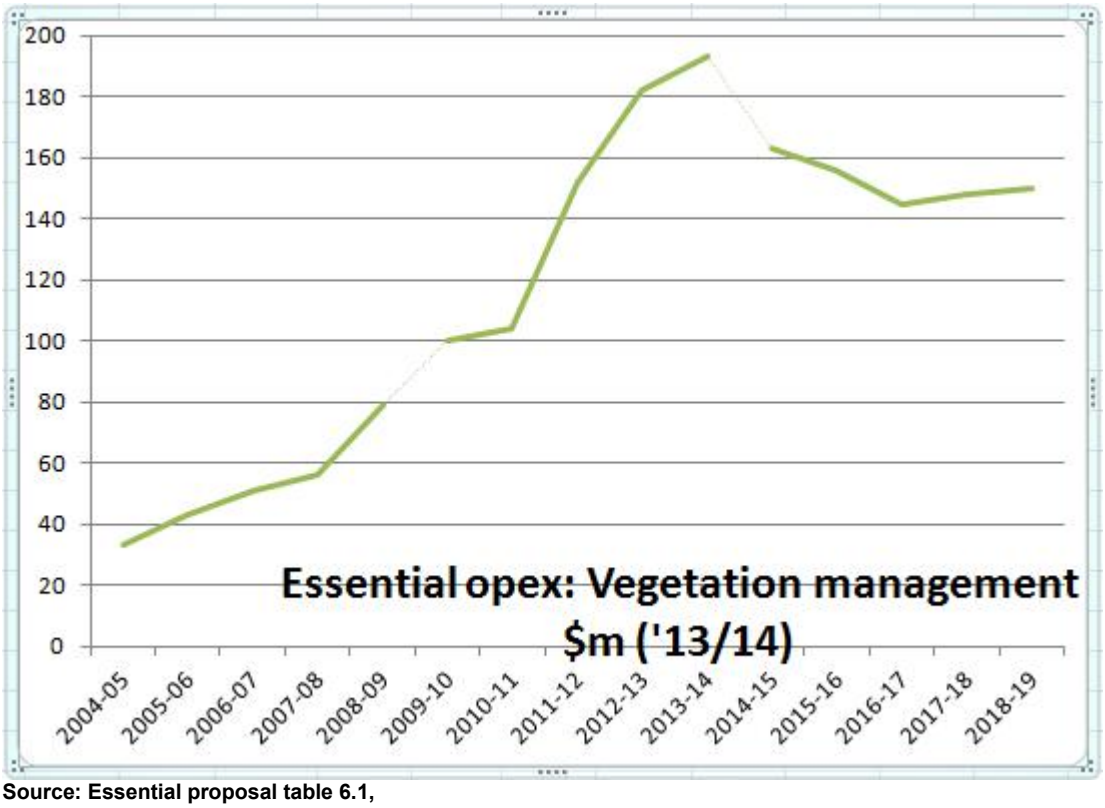
The Essential opex costs provided in table 6-1 are inclusive of all costs and this table is consistent with benchmarking RIN data. The EMRF considers that the RIN data would have to include the costs incurred for managing the consumer interface despite the loss of the retail function so the EMRF considers that the actual costs are inclusive of all costs including dis-synergy costs. This view is supported by the fact that table 6-4 shows that the cost from the loss of the retail function was not needed to be included to generate the forecast opex for AA4

Either way, the EMRF considers that the dis-synergy costs are in the base allowance and should not be included as an additional item

5.2.2 Vegetation management

One of the most intriguing aspects of the forecasting is that Essential seems to advise that its vegetation management costs in the latter years of AA3 are too high and that lower costs are appropriate for AA4. This is in stark contrast to the claims by Ausgrid and Endeavour where increased vegetation management costs are sought.

The actual movement of costs for this element of opex is shown in the following chart



Source: Essential proposal table 6.1,

This shows that the costs of vegetation management were considerably higher in AA3 than occurred in AA2. This is consistent with reports from other DBs which sought increased allowances for higher vegetation growth allowances in AA3 due to higher rainfalls.

That Essential has forecast a lesser need for vegetation management in AA4 is not consistent with the base-step-trend approach but is welcomed by the EMRF. Doing what Essential proposes is to remove vegetation management from being assessed on a base-step-trend approach to it being set on a zero base adjustment which is contrary to the concept underlying the EBSS.

5.2.3 Lower capex increases opex

Essential comments that as a result of the lower capex program this will cause an increase in opex. The EMRF finds this extremely hard to accept especially as the replacement capex is such a large proportion of the capex programs in AA3 and AA4 and increased replacement capex should result in lower opex.

EMRF members comment that less capex does not result in more opex in a competitive environment.

5.2.4 Accounting treatment changes

The EMRF is at a loss to see how a change in accounting treatments could result in a need to increase opex. If Essential considers that these costs were incurred in another part of the Essential cost structure then this should be made quite clear and resultant cost adjustments made in the other elements.

If the changes are a result of the requirements for accruing staff liabilities, then greater explanation is required and the derivation of the amounts added to the forecast provided. The fact that Essential has elected to ignore the AER decision to use cash payments in the opex rather than provisions as Essential has needs to be rationalised so that consumers can see what is driving the costs.

5.2.5 Debt raising costs

The EMRF understands that Essential does not incur debt raising costs as all its debt is provided from Treasury Corp and notes that the RIN data includes no costs for this supposed expenditure. To support its view, it goes to considerable effort to prove that this is a legitimate cost and employed a number of consultants (presumably an expense that consumers carry as part of the allowed regulatory costs) to argue that this should be an allowed cost.

The EMRF considers that there should be no allowance for a cost that is not incurred

Overall, the EMRF considers that Essential claimed opex should be much the same as it incurred in 2012/13 (the base year) and that the allowance for AA4 should show a reduction to reflect the transfer of ANS and metering to alternative control services (ACS).

5.4 Conclusions

The EMRF is concerned that all three DBs used less opex than was allowed in AA3 and by doing so reaped a considerable benefit from the under-run.

The EMRF considers that the DBs have considerably overstated their opex needs for the next regulatory period by many tens of millions of dollars each year. None of the DBs have used the revealed cost approach to the extent considered

appropriate yet each has benefited considerably by driving its opex cost down below the alloweds both directly and through the EBSS.

Consumers are prepared to pay benefits under the EBSS but only when the revealed costs are used to the maximum extent to set the future cost allowances. The DBs have not used the revealed cost approach in a number of the categories of costs and, by not doing so, they have effectively reduced the power of the incentive provided.

The EMRF noted that there were apparent reductions in overall opex but observed that when adjustments are made for the transfer of ANS and metering costs to alternative control services, the apparent reduction in opex is shown to be a significant increase in reality. This highlights that the supposed benefits of the cost reduction programs have not resulted in as much benefit as is asserted by the DBs.

Despite assertions that the DBs are seeking to reduce the costs of the network services, this is not reflected in the amounts of opex claimed. The EMRF considers that by the significant under-runs of opex in AA3 and the increased amount of replacement capex being sought, the opex allowances should have resulted in considerably lower amounts forecast for AA4.

Overall, the EMRF considers that the DBs are still playing the "game" that they did in the 2008/09 revenue reset process to argue for increased allowances that cannot be justified. Whilst some of the benchmarking carried out by the DBs might give some support to a view that they are efficient, the fact that they are still seeking real increases in opex (when assessed on a like for like basis) indicates that they have not provided to consumers the full benefit of the extensive efficiency program that all profess underlies their opex forecasts.

This means that the AER has to carry out extensive and deep investigations into the claims made by the DBs. Whilst the EMRF has carried out some high level assessments, it recognises that more in depth analysis is required to ensure that what is finally allowed to the DBs is efficient.

5.5 AER questions

#	AER question	EMRF response

5	Are the distributors' operating expenditure proposals appropriate?	No. See comments above

6. Capex

An overall assessment of the capex programs sought by all three DBs for the current regulatory period (AA3) shows that consumers paid a considerable premium throughout AA3 for work either never carried out or implemented but not needed as a result of the state wide fall in demand and even greater fall in consumption.

Also apparent from the proposals is that the DBs are seeking to increase the amount of replacement capex in the next period (AA4) compared to the actual replacement capex incurred in AA3.

The EMRF has assessed the capex programs proposed by the three DBs in terms of their historical actual and allowed capex. The EMRF is well aware that it has neither the resources nor the data to examine each of the capex claims in terms of a "bottom up" assessment and relies on a "top down" assessment by comparing past performance with forecast needs.

The EMRF has been advised by its members (which all have very capital intensive operations) on how their managements review internal claims for capex. The EMRF members advise that capex programs proposed are ranked in terms of the benefit to the firm as the firm's ability to access capex is limited by a number of constraints that are greater than those experienced by the three DBs which are all government owned and access funds from government treasury corporations.

In this regard, the EMRF considers that the AER could well implement a similar scheme for assessing a reasonable capex limit to that used by firms subject to capital raising constraints. As a general observation, firms are limited in their ability to source capital for "business as usual" needs[11] from retained earnings and additional debt that does not change their gearing[12]. Using this approach as a guide, the AER could set a limit on capex that is considered to be reasonable and require networks to justify in quite considerable detail why they consider they have a need for more capex than this. In this way the AER could apply the top down controls used by firms subject to competition and are currently lacking in regulatory assessments.

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[11] The EMRF notes that for large acquisitions a firm may well go to the market to fund part of an acquisition but generally a firm does not seek additional equity for its business as usual capital needs

[12] The EMRF has noted that most electricity network firms have accessed more debt in recent years for capex such that their gearing (debt to equity) has significantly increased over time indicating that the networks are not using the same constraints that firms in competition use

The EMRF has noted that capex projects by DBs tend to be less "lumpy" than capital projects required by transmission networks and therefore future capex is more consistent over time allowing it to be more readily forecast using past history to provide a better indication of future needs than are incurred by transmission firms. This makes a "top down" assessment more applicable to distribution than might be the case for transmission.

The EMRF is particularly concerned that the claims for capex by the three DBs can be influenced by the introduction of the capex incentive regime (CESS). Any incentive regime drives the DBs to seek a greater allowance than they really need. If the AER allows for AA4 (as it did for AA3) significantly more capex than was required, the CESS will deliver considerably more benefits to the DBs than they achieved in AA3. The introduction of the CESS requires the AER to be much more rigorous in setting the allowances for capex than in previous reviews. Under the EBSS, opex is set at the level seen as efficient from the previous period. In contrast, the DBs have all used zero base approaches to setting the capex for AA4. The EMRF considers that the implementation of the CESS requires the similar use of historical performance to set the future allowances rather than allowing bottom up assessments to be used as the basis for future capex. This approach requires greater use of "top down" controls.

The EMRF notes that the DBs are also incentivsed to increase capex as there is a major difference between the WACC that the AER will allow under the rate of return guidelines and what the DBs actually incur. The bulk of this difference lies with the cost of debt where the DBs are claiming a cost of debt at 200 bp (or more) above the cost they actually incur. This provides an incentive for the DBs to use more capex than they actually require to deliver the service.

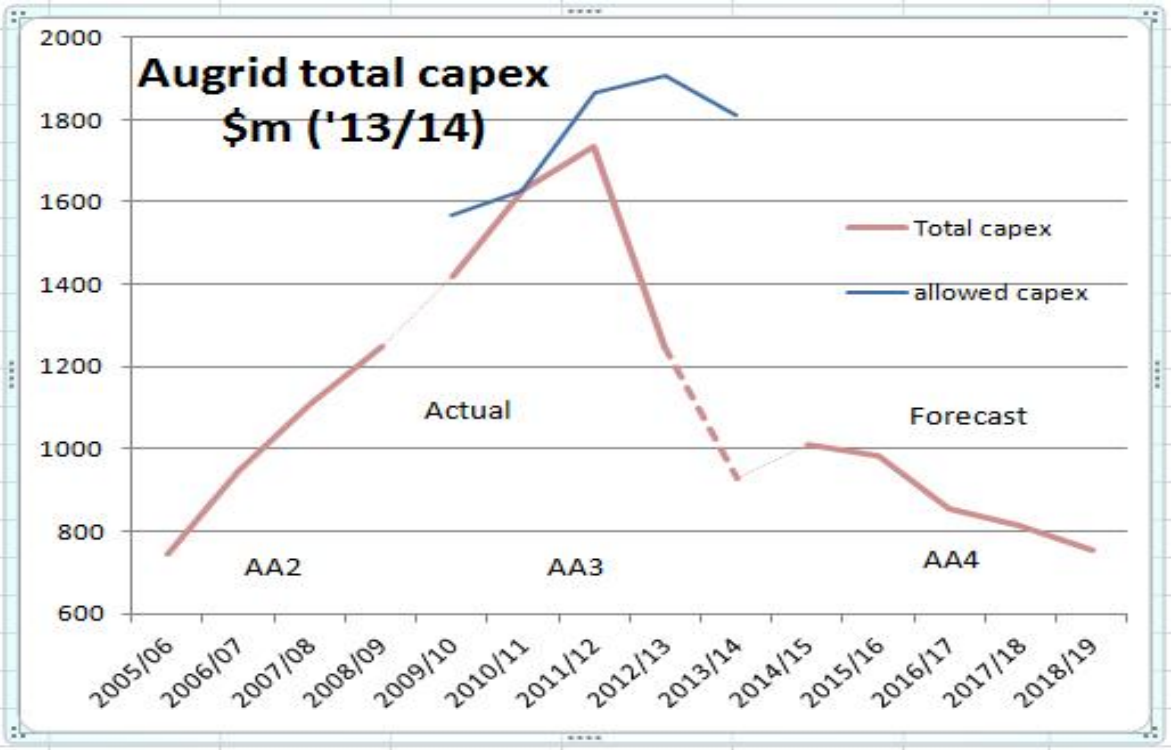
With capex incentive scheme and the WACC incentive, the EMRF considers that the AER needs to assess the capex claims in considerable detail with a view to minimizing the amount of capex allowed.

In the capex proposals, the DBs highlight that capex is to achieve two main outcomes - connecting new customers and to maintain reliability. The EMRF notes that each DB comments that their consumer engagement programs have shown that consumers do not want reduced reliability even though this might result in lower prices. This is a fair statement but what is not highlighted is whether the same reliability can be achieved with lower prices. The EMRF is of the view that reliability will not be affected by the reductions in capex that are proposed in the following assessments.

The EMRF has provided views on each of the DBs in the following sections based on a top down assessment with deeper analysis for certain elements of the capex claimed.

6.1 Ausgrid

Ausgrid capex for networks is presented in the following chart showing the actual capex in comparison to the forecast for the next period. The actual capex for each period is also shown as is the regulatory allowance for capex in the current (AA3) period.



Source: Derived by EMRF from Ausgrid application and RIN data

This highlights that the capex used for period AA3 is quite excessive when seen in context with the capex incurred in period AA2 and forecast for AA4. When capex in AA3 is compared to the allowed capex for AA3, there is a massive under-run, particularly in the later years. The gross over claim for capex in AA3 was driven by forecast increases in demand and a perceived need to replace many aged assets. The AER permitted much of the excessive capex claimed in 2008/09 to be incorporated into the allowed revenue for AA3.

It is quite apparent that the forecast need for augmentation in AA3 was not required as the forecast increases in demand did not eventuate and this should have led to a significant under-run in capex, but not to the extent seen. It is recognised that the actual capex in AA2 exceeded the allowance provided by IPART in its decision in 2004 by some $300-400m (with almost all of the over-run

occurring in the last two years of AA2).Because of this, Ausgrid provided considerable argument to the AER that its capex usage in AA2 reflected a need for implementing an even higher level of capex into AA3. The EMRF at the review in 2008 for the AA3 revenue was extremely critical of the amount of capex sought, and considered that the AER should not allow the amount claimed.

The forecast total capex for AA4 appears on the surface to reflect a marked change in capex needs resulting from the changes in the demand and consumption experienced to date and forecast to continue into the future. In fact, the AA4 capex is expected to be less than the AA2 capex. However, deeper examination of the capex forecast for AA4 shows that capex is still overstated.

Ausgrid provides a table 20 which summarises how it approached the development of its capex program

Table 20 – Forecasting methods and drivers for capital plans

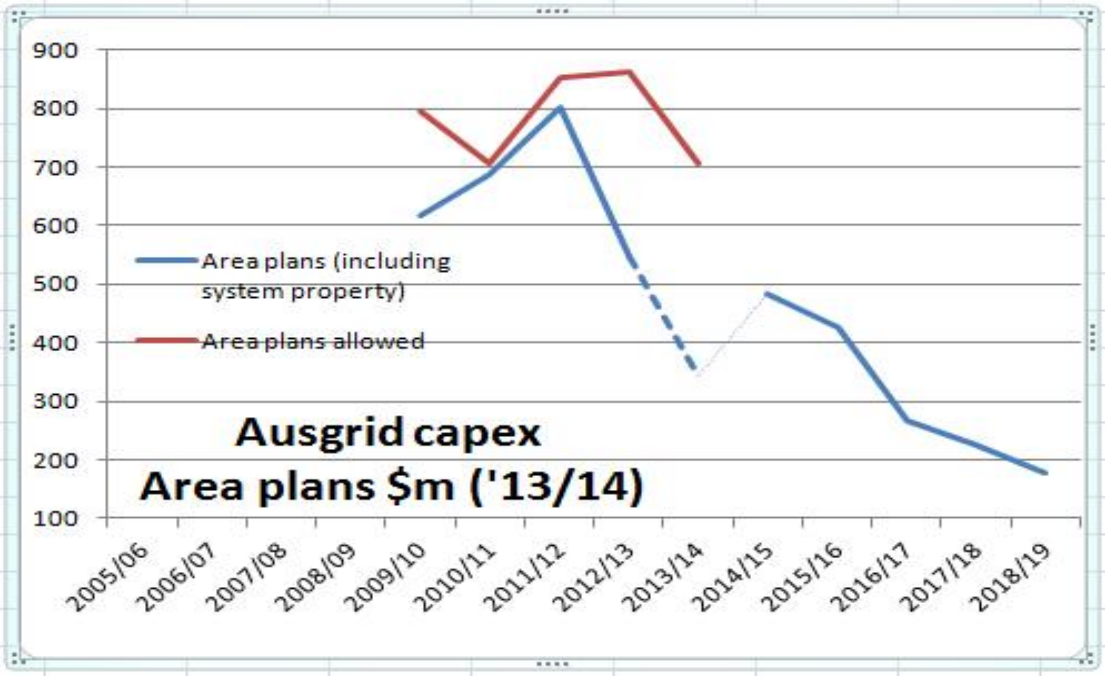
Capital plans	Key forecasting methods		Key plan drivers			
	Bottom up	Top down	Capacity	Asset condition & safety	Reliability compliance	Network support
Area plans	✓		✓	✓		
Replacement and duty of care plans	✓			✓		
Distribution capacity plan		✓	✓			
Reliability investment plan		✓	✓		✓	
Technology plan	✓		✓	✓		✓ [78]
Corporate property plan	✓					✓
Fleet plan	✓					✓ [79]
Other support plan	✓					✓

This shows that Ausgrid has predominantly used a zero base approach to setting its capex for AA4. As noted by the EMRF in the introduction to this section 6, the EMRF considers that DB capex, due to its nature, does not need to be zero based assessed but can use historical performance to inform the DB of future needs. The EMRF considers that zero base assessments can be unnecessarily inflated through the very nature of their development and a top down approach is needed to verify whether the bottom up approach has delivered efficient outcomes.

The EMRF considers that Ausgrid has continued to overstate its need for capex even though the total amount sought delivers a considerably lesser amount of capex than that sought for period AA3; the EMRF has provided its views on the larger two elements of capex sought.

6.1.1 Area plans

Ausgrid's area plans have consistently been the single largest element of capex required, although is forecast to be a little less than replacement and duty of care capex in AA4. Ausgrid advises that its area plans are essentially to augment the network due to growth in demand although it does include some replacement capex as well. The following chart shows the trends in area plan capex.



Source: Derived by EMRF from Ausgrid application and RIN data

As noted earlier in this submission, the EMRF accepts that there may be localised growth that has to be accommodated within the capex allowances. Ausgrid advises that its 11 kV and low voltage systems, and its customer connections (which are separately recorded and not in the area plans) appear to provide for the localised extensions that are needed. This means that the area plans are to increase the capacity of the subtransmission and transmission elements of the network. However, there has been significant "pre-expansion" of the network which was implemented before the decision to wind back the area plans program in AA3 as the forecast demand was seen to be too high for what was being seen. There is no doubt that Ausgrid, even though it had the capex allowances to continue with the planned area plan works during AA3, identified that this work was not required. This means that the decision to carry out area plan capex in AA4 to address augmentation is not necessary.

On page 43 of the proposal, Ausgrid comments:

> "We forecast capex [for area plans] of $1,582.8 million over the 2014-19 period. The majority of capex relates to replacement of large assets which is approximately 85% of the total forecast. The regions which account for the majority of our program are in the Sydney CBD, eastern suburbs, Canterbury-Bankstown area and in Sydney's Inner West. The key programs of work include the replacement of oil filled and gas filled sub-transmission cables, and 11kV switchgear replacement and retirement."

The regions identified by Ausgrid as requiring area plan capex had some $1.8Bn ($'13/14) of capex used for them in AA3[13] and this constituted about half of the total capex claimed for the area plan capex requirement for AA3. The under-run in area plan capex in AA3 was ~$900m or about half of the area plan capex originally sought by Ausgrid, so at least half of the capex forecast for these regions must have been used.

The EMRF can conclude from this that either:

- Ausgrid excluded from the actual AA3 capital works at least half of the capex dedicated for these regions, or
- Ausgrid has deliberately deferred these works[14] and by doing so, accrued considerable financial benefit by reintroducing the same works after claiming they were essential for the previous period.

Either way, the under-run in area plan capex in AA3 of ~$900m is nearly two thirds of the total area plan capex sought for AA4. The EMRF finds this disturbing and notes that the AER, during its Better Regulation program had identified this practice as being unacceptable.

Further, the EMRF notes that the area plans for AA4 are primarily for replacement capex but in its proposal for AA3 does not identify the amount of the capex that is to be used for replacement. The EMRF questions the logic of having multiple line items for the same task as Ausgrid has another line item for replacement capex. By separating replacement capex into more than one line item distorts the ability for the regulator and stakeholders to better acquaint themselves where the capex is really being used and whether there is justification for the expenditure.

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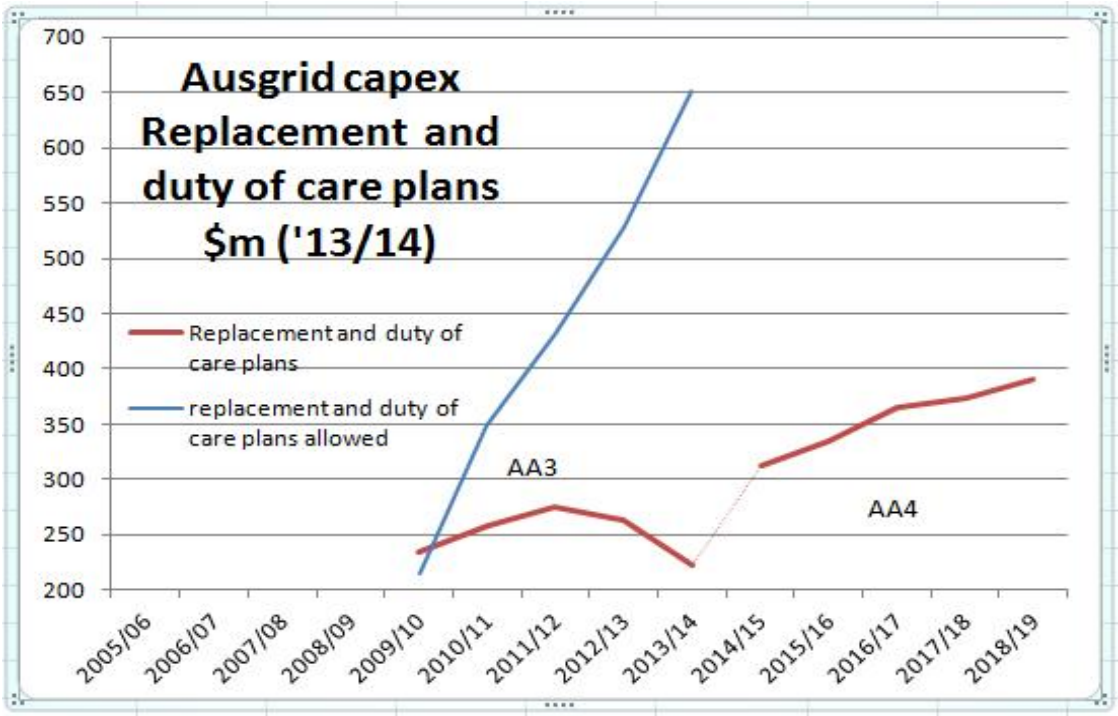
[13] See EnergyAustralia proposal June 2008 tables 5.3 and 5.4

[14] In EnergyAustralia's proposal June 2008, it advised that the work would replace 132 kV oil filled cables, 33 kV gas filled cables and 11 kV switchgear in AA3 and which it proposes to do again in AA4

Overall, the Ausgrid proposal and the EMRF analysis highlights that the amount of area plan capex is still significantly overstated, especially accepting that there was already augmentation implemented that was probably not required and that replacement that was allowed to have occurred in AA3 is now rescheduled for AA4.

6.1.2 Replacement and duty of care plans

Ausgrid's replacement and duty of care plans was the second largest capex element in AA3 but is the largest capex element for AA4. Distinct from the area plan capex, this element is forecast to increase by over 40% from the AA3 actual capex to about 80% of what was allowed in AA3 for this element of capex



Source: Derived by EMRF from Ausgrid application and RIN data

The chart highlights that although Ausgrid was provided with an allowance of nearly $2.2 Bn for replacement capex in AA3, it elected to only use $1.25 Bn - just over half the allowance provided. If replacement capex is so needed in AA4 where Ausgrid seeks an increase of 40%, why was it not used in AA3 when there was adequate provision in the capex budget?

What is also important to note is that despite the significant under-run in replacement capex, the service performance of Ausgrid improved, indicating

that even the smaller amount of replacement capex actually used delivered considerable benefit to Ausgrid through the STPIS (if it had applied) and to consumers as well.

On page 3 of attachment 5.24, Ausgrid comments

> "In the last period [AA3], we deferred a significant portion of forecast capex on Replacement and Duty of Care plans due to a range of delivery issues associated with our total capex program. In light of these difficulties we focused on our immediate obligation to meet compliance, reliability and performance licence conditions, and sought ways to defer the forecast program of works in our Replacement and Duty of Care plans by applying risk trade-off methodologies."

In its responses to the AER regarding the capex program proposed for AA3, the EMRF and others raised the delivery of the massive capex program as an issue. Ausgrid assured stakeholders that they were able to implement the capex program proposed and the AER accepted this. Ausgrid is now stating that even though it has had the benefit from consumers for the capex program it proposed, in practice it was not able to implement it.

Ausgrid goes on to state

> "Consequently, the age and condition of the assets in these areas of the network has progressively worsened during the 2009-14 period despite investments to remove the most risky assets. This has lead to an increased risk profile for the deferred work. Distribution assets, as a whole, have continued to deteriorate leading to increased risk and increased failures. If unaddressed, these issues may lead to an increase in safety and environmental harm, and will prevent us from meeting our obligations as an essential service provider."

To a large degree, replacement capex is associated with the age of the assets in place and, combined with other capex, a well balanced capex program should result in the average age of the network remaining reasonably constant. To this end, in appendix 5.01 Ausgrid's consultant Arup, provides a figure 25 which indicates that the capex program in AA3 basically retained the same age at the end of AA3 as at the commencement of the period. This figure does not seem to correlate with the RIN data (economic benchmarking) table 4.4.2 which implies that, except for the asset class of meters, all other asset classes increased their remaining lives by up to 4.5 years. This increase in average expected life would be an outcome of the very large capex program implemented by Ausgrid in AA3.

However, Ausgrid's statement is very much at odds with both what Arup and table 4.2.2 show - that contrary to the Ausgrid view that assets are deteriorating, the average life of the network assets has increased rather than the reduced life expectancy that deteriorating assets would imply.

One of the key aspects of replacement is to ensure that reliability of supply is not impacted. Despite the fact that Ausgrid used less replacement capex than it forecast for AA3, reliability improved as Ausgrid states in its proposal on page 7:

> "Network reliability has improved over the most recent regulatory period [AA3]. Our asset management plans now aims to leverage past investments and focus investments to maintain reliability at existing levels. We expect to achieve this while reducing capital expenditure by 41%."

This statement highlights that despite using considerably less replacement capex in AA3, reliability improved and significantly exceeds the benchmark performance[15]. Further, Ausgrid in its STPIS proposal indicates that reliability will continue to improve with forecasts of declining SAIDI and SAIFI. Ausgrid has not explained whether the higher capex is justified against the improved service performance.

Considering that 85% of the area plan capex is for replacement, the EMRF finds it difficult to accept that the element of replacement capex should need to increase by over 40% when the average life expectancy of the network has increased throughout AA3 as has service performance.

6.1.3 Other capex

The balance of actual capex used in AA3 for all elements other than area plans, replacement and duty of care reflects the allowed total capex for the other elements of the capex program although there are significant year on year variations on both at the element basis and year on year basis.

The capex forecast for these other elements of capex is a significant reduction by about 60% from the total actual capex seen in AA3 for these other elements

Both of these observations are shown in the following chart.

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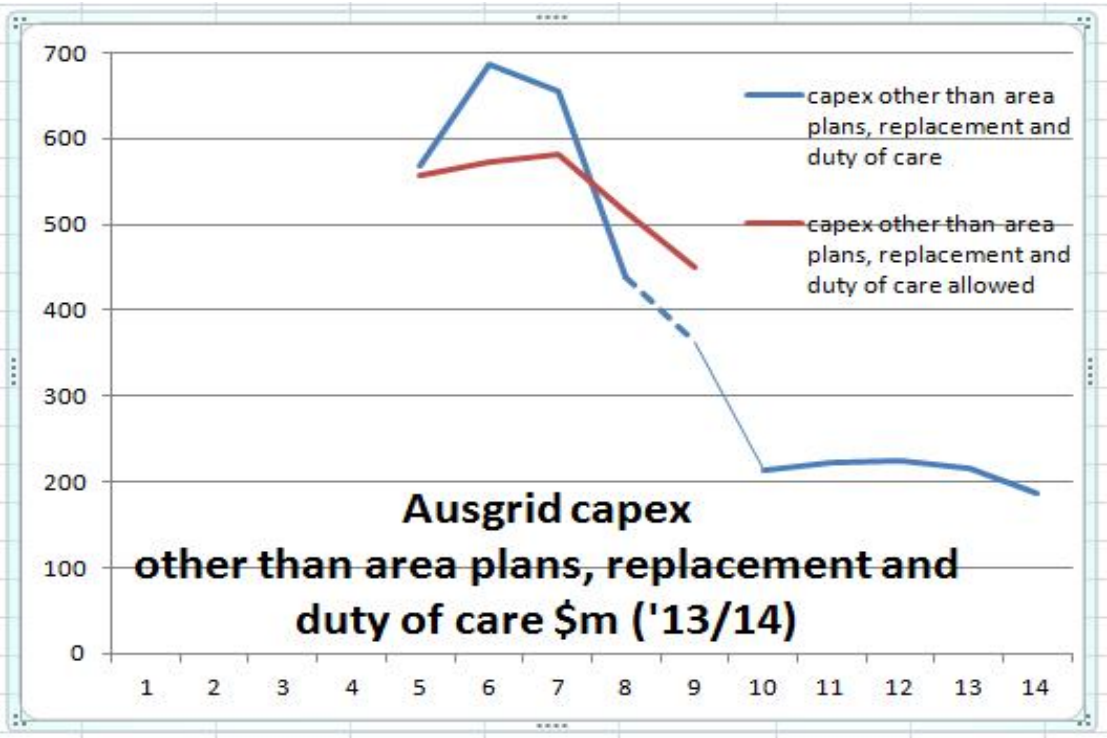
[15] AER Issues Paper page 33



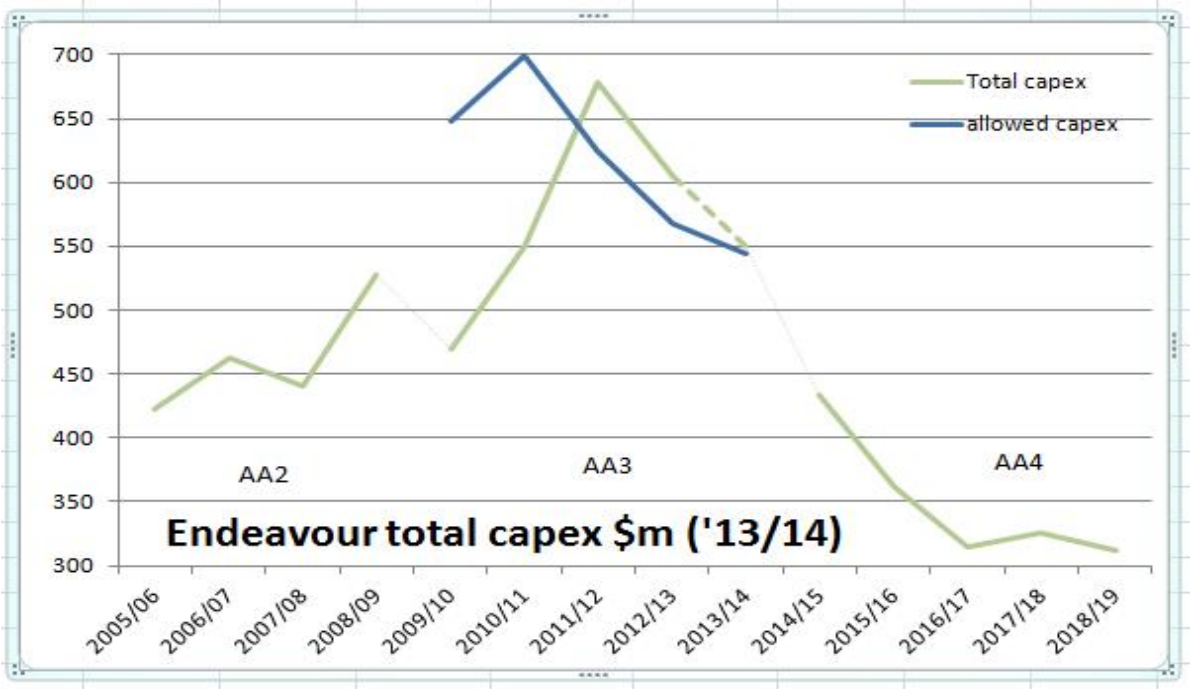
Source: Derived by EMRF from Ausgrid application and RIN data

The EMRF has not analysed in detail the individual elements of the capex claimed but considers that there should be some investigation by the AER into the acceptability of capex claimed for each element

Overall, the EMRF considers that Ausgrid claimed capex should show an even greater reduction in area plans capex on the basis that there is no need for augmentation of the network. Further, the amount of replacement capex should be pared back considerably on the basis that using the amount of replacement capex in AA3 resulted in increased life expectancy and improved service performance.

6.2 Endeavour Energy

Endeavour capex for networks is graphically shown in the following chart which shows the actual capex in comparison to the forecast for the next period. The actual capex for each period is also shown as is the regulatory allowance for capex in the current (AA3) period.



Source: Derived by EMRF from Endeavour application and RIN data, AER FD 2009

This highlights that the capex claimed for period AA3 is quite excessive when seen in context with the capex incurred in period AA2 and forecast for AA4. When actual capex in AA3 is compared to the allowed capex for AA3, there is a massive under-run, particularly in the early years. The gross over claim for capex in AA3 was driven by forecast increases in demand and a perceived need to replace many aged assets. The AER permitted much of the excessive capex claim to be incorporated into the allowed revenue for AA3.

It is quite apparent that the forecast need for augmentation in AA3 was not required as the forecast increases in demand did not eventuate and this should have led to a significant under-run in capex, yet the Endeavour capex in the later years reasonably matches the allowed capex, implying that Endeavour used growth capex for other purposes, but not to across all years, especially in the early years.

It is recognised that the actual capex in AA2 reasonably matched the allowed capex and Endeavour provided considerable argument to the AER that its capex usage in AA2 reflected a need for implementing an even higher level of capex into AA3 when considering the expected growth in demand. The EMRF at the review in 2008 for the AA3 revenue was extremely critical of the amount of capex sought, and considered that the AER should not allow the amount claimed.

The forecast total capex for AA4 appears on the surface to reflect a marked change in capex needs resulting from the changes in the demand and

consumption experienced to date and forecast to continue into the future. In fact, the AA4 capex is expected to be less than the AA2 capex.

Unfortunately, despite providing a massive number of supplementary documents, Endeavour does not provide a breakdown of historic capex under the same headings as that it forecasts the next period (AA4) capex. In order to identify trends in capex, the EMRF has had to use the revised capex claimed by Endeavour for period AA3[16] - this approach provides some guidance for the last three years but as Endeavour significantly under-ran its capex in the first two year of AA3, the EMRF accepts that this approach does not apply to the first two years.

The forecasting approach used by Endeavour implies that it has predominantly used a zero base (bottom up) approach to setting its capex. As noted by the EMRF in the introduction to this section 6, the EMRF considers that DB capex, due to its nature, does not need to be zero based assessed but can use historical performance to inform the DB of future needs. The EMRF considers that zero base assessments can be unnecessarily inflated by the very nature of their development and a top down approach is needed to verify whether the bottom up approach has delivered efficient outcomes.

The EMRF considers that Endeavour has continued to overstate its need for capex even though the total amount sought delivers a considerably lesser amount of capex than that sought for period AA3 (and even used in AA2) and has provided its views on the larger two elements of capex sought.

6.2.1 Growth capex

In its application, Endeavour seeks an average of $85m pa for growth capex for the AA4 period. In comparison, Endeavour sought and was allowed an average of $250m pa for growth capex for AA3 which the AER allowed.

Prima facie, the reduction in growth capex claimed for AA4 appears reasonable under this comparison considering that during AA4 Endeavour forecasts that demand will only grow to about 4060 MW in the final year (see Table 16, page 55).

[16] The EMRF notes that the RIN data is not set out in the same format as that used for the forecast capex allowance

Figure 15 (page 49) shows that Endeavour actually experienced a peak demand in 2010/11 of about 4050 MW and had expected a peak demand in that year of about 4250 MW. This implies that the network is already sized for the expected peak demand during AA4 and that the network therefore does not have to be increased in size at all.

Endeavour makes the point that it expects there to be some growth arising out of investment in the NW and SW corridors of Sydney that will require an increase in supply capacity in those regions. If this occurs, there will be a need to extend the networks to these additional customers, and therefore some growth capex will be needed to support these new users.

However, the EMRF is concerned that Endeavour may be seeking to augment the existing network to provide this additional supply but provides no indication as to whether the existing network providing supply to these growth corridors is sized to carry the additional load that the new customers will impose on the network, particularly as Endeavour did augment the network during AA3.

The EMRF is concerned that the expectation of industrial growth in these corridors is realistic. Currently industrial growth is being significantly impacted by a high $A and increasing electricity costs which have resulted in a reduction in expected demand over the past 4-5 years. In particular the expectation of increased gas prices is having a severe chilling effect on manufacturing[17] and will impact on new industrial activity.

Whilst Endeavour may experience an increased demand resulting from increased residential growth, it is quite feasible that industrial demand might continue to fall if the $A does not fall and the increasing gas prices start to impact industrial users. If this occurs, the loss of industrial demand will counteract any increased residential growth.

The EMRF has reviewed the benchmarking RIN data table 4.4.2 (residual life expectancy) and notes that residual life expectancy increased during AA2 by 4-5 years but fell slightly in AA3 despite greater capex being used. This seems to imply that much of the AA2 capex was for asset replacement but during AA3 for growth assets. But this seems counter-intuitive in that demand fell during AA3 and growth assets were less required.

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[17] See for instance Deloitte Access Economics report "Gas market transformations - economic consequences for the manufacturing sector" July 2014

The conclusion that can be drawn from the data that is available, is that Endeavour added considerably to the assets for growth during AA3 despite falling demand. The clear implication is that Endeavour now has a network oversized for its forecast demand in AA4, that Endeavour overprovided for growth in AA3 and that little capex for growth in AA4 is required.

On balance, the EMRF considers that the forecast growth capex is overstated and should be lower.

6.2.2 Replacement capex

In its application for AA3, Endeavour forecast that it would need about $180m pa in replacement capex and is forecasting that a similar amount will be needed in AA4. Prima facie, the replacement capex for AA4 appears to be consistent with that used in AA3 and provides some support for this amount of capex

What is also important to note is that despite the significant under-run in overall capex, the service performance of Endeavour improved, indicating that even the lesser amount of capex actually used delivered considerable benefit to Endeavour through the STPIS (if it had applied) and to consumers as well.

Unfortunately, Endeavour does not provide a breakdown of actual capex in AA3 and as the RIN data is aggregated in a different way this does not provide guidance either. However, as Endeavour did not need to use its capex allowed by the AER for growth, it is probable that the actual capex used for replacement was significantly higher than originally sought - this is quite feasible as this is what occurred with many other networks.

Certainly the average remaining lives for Endeavour assets has decreased over AA3 but by much less than the 5 year time elapsed (see RIN benchmarking data table 4.4.2). As noted above, residual life expectancy increased significantly during AA2, and fell slightly in AA3. Yet Endeavour notes (page 58)

> "…we have undertaken a substantial replacement program throughout the current regulatory control period [AA3], with the main thrust of the program directed at transmission and zone substation equipment, much of which was impacted by mechanical issues, poor electricial [sic] integrity, corroded structures, oil leaks etc."

This observation seems to be at odds with other statements by Endeavour and contrary to the evidence of RIN data[18]. If less capex in AA2 achieved an increase in expected residual life, then the larger amount of capex in AA3 should have had a similar outcome, but didn't. The EMRF is very concerned at the amount of inconsistent data provided by Endeavour to support its increase in capex for replacement capex

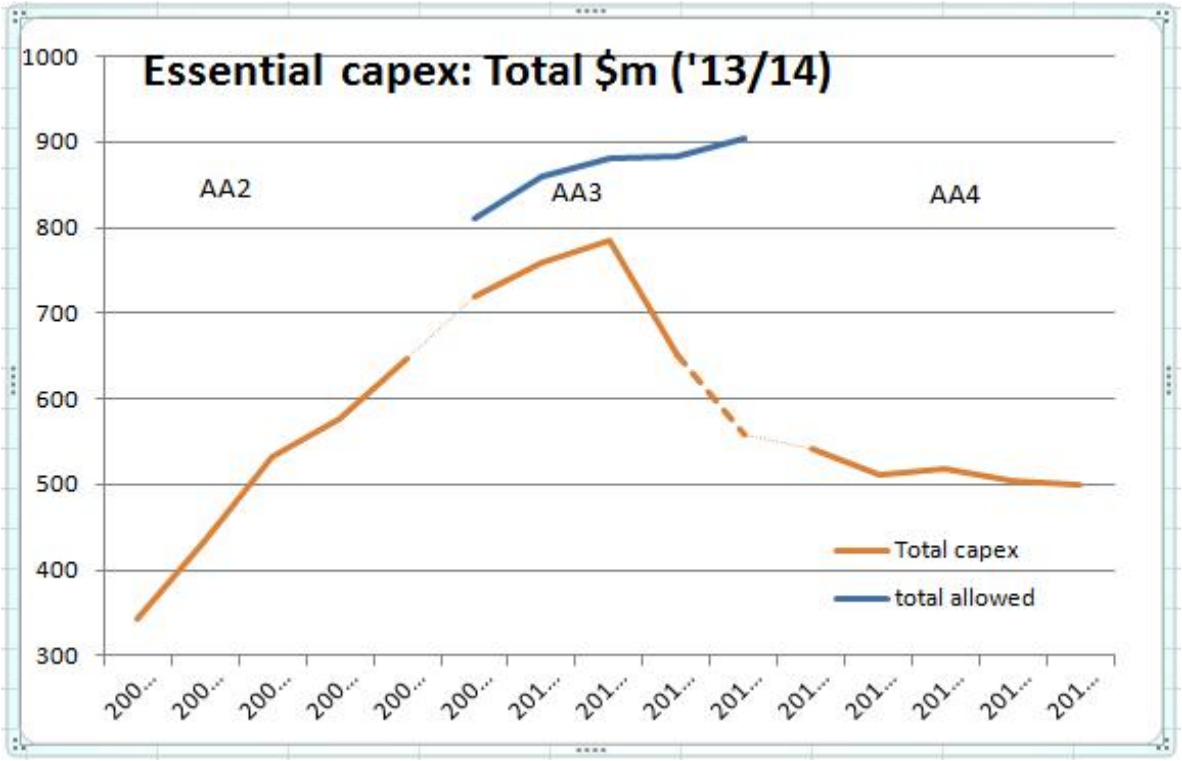
The EMRF considers that the replacement capex proposed for AA4 may well be overstated and could be lower.

Overall, the EMRF considers that Endeavour claimed capex should show an even greater reduction in augmentation capex on the basis that there is no need for augmentation of the network. Further, the amount of replacement capex should be pared back considerably on the basis that using the amount of replacement capex in AA3 resulted in an improved service performance even though the residual life did reduce a little in AA3.

6.3 Essential Energy

Essential capex for networks is presented in the following chart showing the actual capex in comparison to the forecast for the next period. The actual capex for each period is also shown as is the regulatory allowance for capex in the current (AA3) period.

[18] The RIN data in table 4.4.2 showing an increase in residual lives during AA2 is at odds with the Endeavour figure 18 which shows a continual reduction in residual lives over AA2



Source: Derived by EMRF from Essential applications and RIN data, AER FD 2009

This highlights that the capex used for period AA3 is quite excessive when seen in context with the capex incurred in period AA2 and forecast for AA4. When capex in AA3 is compared to the allowed capex for AA3, there is a massive under-run, particularly in the later years. The gross over claim for capex in AA3 was driven by forecast increases in demand and a perceived need to replace many aged assets. The AER permitted much of the excessive capex claim to be incorporated into the allowed revenue for AA3.

It is recognised that the actual capex in AA2 exceeded the allowance provided to Essential by IPART in its decision in 2004 by some $300m (with almost all of the over-run occurring in the last three years of AA2) and Essential provided considerable argument to the AER that its capex usage in AA2 reflected a need for implementing an even higher level of capex into AA3. The EMRF at the review in 2008 for the AA3 revenue was extremely critical of the amount of capex sought, and considered that the AER should not allow the amount claimed.

It is quite apparent that the forecast need for augmentation in AA3 was not required as the forecast increases in demand did not eventuate and this should have led to a significant under-run in capex, but not to the extent seen. Essential also comments (page 43)

> "The substantial investment program in the 2009-14 regulatory control period placed delivery pressures on Essential Energy in the early years of the period. We responded to these programs through various delivery models, but in some cases our ability to plan and deliver the program fell behind schedule."

The EMRF at the 2009 revenue reset expressed considerable concern about Essential's ability to execute such an expanded capital program but Essential assured the AER they has the ability to manage and the AER accepted these assurances. Essential then goes on t0 state (age 43):

> "We consider these delivery issues will not arise in the 2014-19 regulatory control period due to developing better processes, and the reduced workload from a smaller capital expenditure program."

The EMRF accepts this assurance to a limited extent, but this raises concerns that the capex for AA3 could well have been less than efficient due to the pressures Essential refers to and the AER should examine whether inefficiency did occur.

The forecast total capex for AA4 appears on the surface to reflect a marked change in capex needs resulting from the changes in the demand and consumption experienced to date and forecast to continue into the future. In fact, the AA4 capex would appear to be similar to the AA2 capex. However, deeper examination of the capex forecast for AA4 shows that capex is still overstated.

On page 52 of its proposal, Essential comments:

> "Capital expenditure is lumpy in nature, therefore previous expenditure levels cannot be used as a precise guide for forecasting, as is the case for operating expenditure. For this reason, each of the capital plans relies on a methodology which provides a zero base approach to deriving expenditure, which draws on historical data in addition to other factors driving capital expenditure."

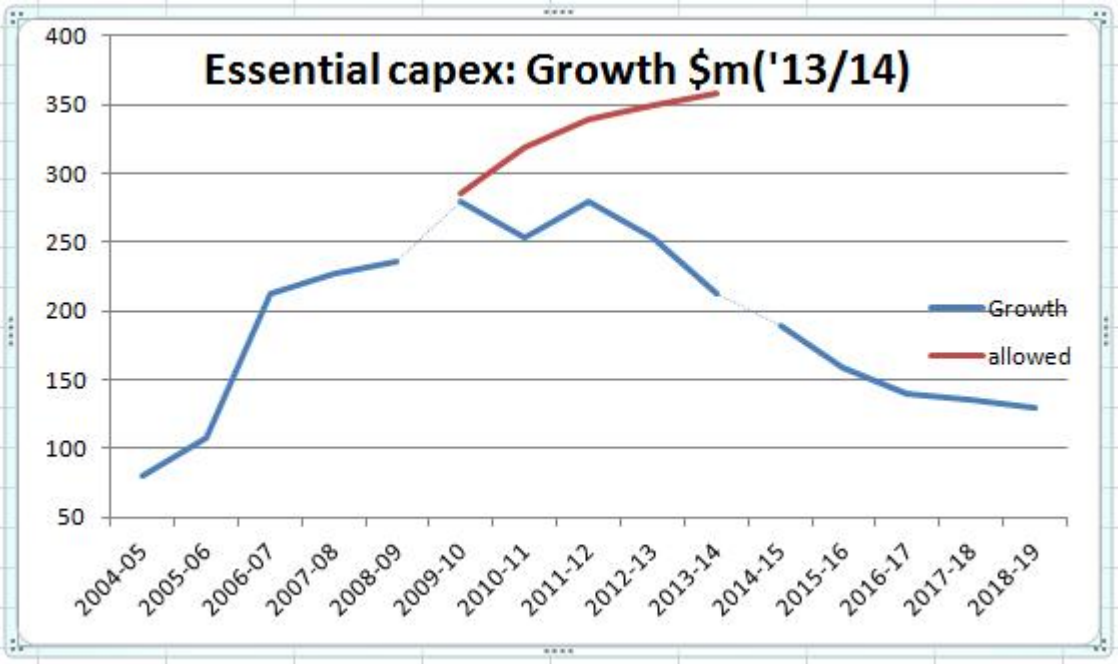
This implies that Essential has predominantly used a zero base approach to setting its capex. As noted by the EMRF in the introduction to this section 6, the EMRF considers that DB capex, due to its nature, does not need to be zero based assessed but can use historical performance to inform the DB of future needs. The EMRF considers that zero base assessments can be unnecessarily inflated through the very nature of their development and a top down approach is needed to verify whether the bottom up approach has delivered efficient outcomes.

The EMRF considers that Essential has continued to overstate its need for capex even though the total amount sought delivers a considerably lesser amount of capex than that sought for period AA3.

Of its $500m pa capex that Essential is claiming for capex in AA4, the two main costs are for augmentation and for replacement and so the EMRF provides its views on these larger two elements of capex sought.

6.3.1 Augmentation (growth)

Augmentation capex was the single largest cost element in the AA3 allowance and despite the fall in demand and consumption, this category was still that largest actual capital expenditure item in AA3. The actual expenditure in AA2 and AA3 and allowance for AA3 along with the forecast expenditure is shown on the following chart



Source: Essential application, 2009 revised application and AER FD 2009

This chart shows that Essential used considerably less growth capex in AA3 than had been forecast and allowed. This would reflect that the forecast increases in demand and consumption did not eventuate and sensibly, Essential did not build assets that were not needed although it still did augment the network considerably by about $250m pa despite falling demand and consumption. This implies that the reinforcement of the network was sized to manage the expected growth in demand and therefore is more than adequate for the expected growth in AA4.

The chart also shows that the augmentation capex forecast for AA4 is of a similar magnitude to that actually incurred in AA2 when demand and consumption was increasing.

These two observations make the EMRF consider that the AA4 augmentation capex is too high because:

1. If the network was still being augmented in AA3 despite a falling demand and consumption, then Essential would have provided assets that reflected the need for growth forecast but were not needed due to the changed circumstance and are therefore likely to be oversized for the demand expected during AA4. Whilst there is likely some need for localised extensions to the network, it is unlikely that significant reinforcement of the network will be required due to the modest growth forecast.

2. During period AA2 there was significant growth in demand and consumption, yet the augmentation capex forecast for AA4 is of a similar magnitude to that incurred in AA2. If the capex for AA2 was sufficient to manage the widespread growth seen at the time, then it would be expected that the capex needed for a period of relative static growth (AA4) would need considerably less augmentation capex, especially after the over-building seen in AA3.

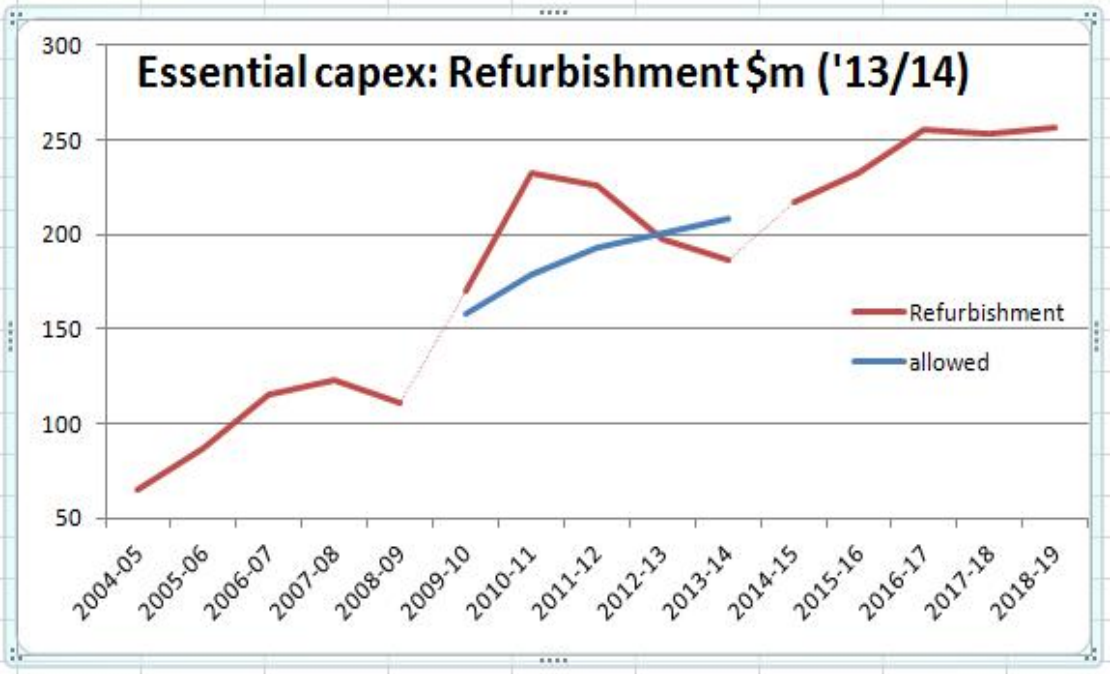
Many of the comments made in sections 6.1.1 and 6.2.1 on Ausgrid and Endeavour augmentation capex also apply to the assessment of the Essential augmentation capex.

Overall, the EMRF considers that the forecast augmentation capex is overstated and should be significantly less than sought by Essential

6.3.2 Replacement capex

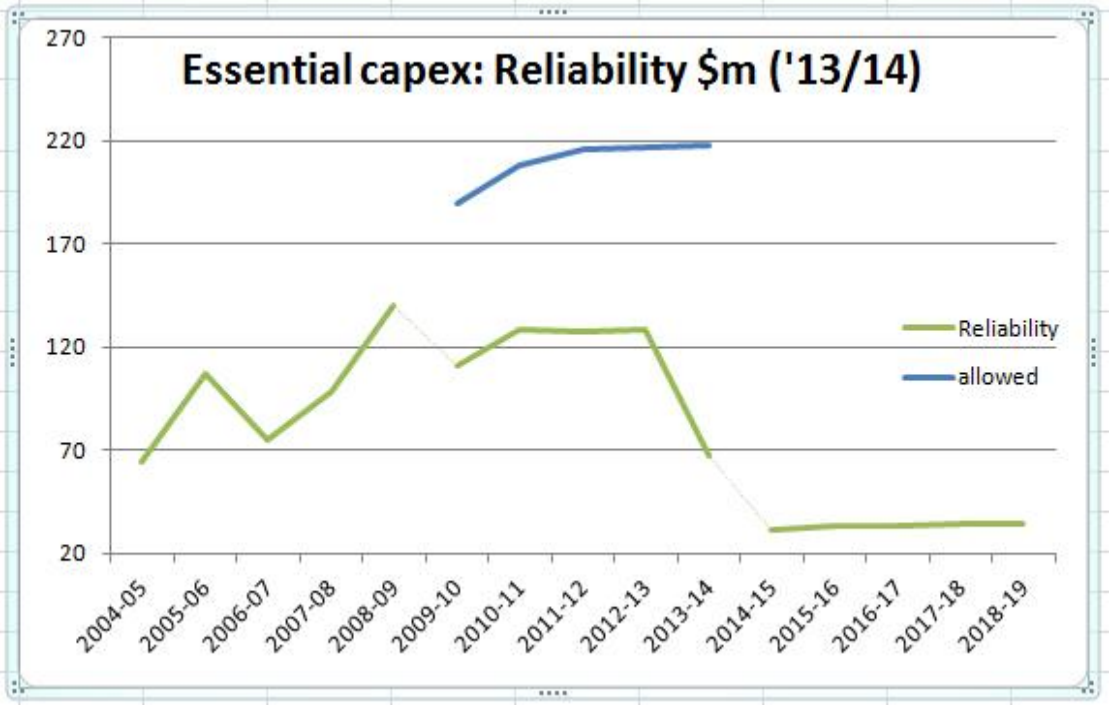
Essential's replacement capex was the second largest capex element in AA3 but is the largest capex element for AA4. Distinct from the growth capex, this element is forecast to increase by some 25-30% from the AA3 actual capex.

This is shown in the following chart



Source: Essential application, 2009 revised application and AER FD 2009

However, in this regard it is important to note that Essential under spent considerably on its reliability capex as the following chart shows.



Source: Essential application, 2009 revised application and AER FD 2009

This shows that the replacement capex (whilst showing some overspend) was significantly offset by an even greater under-run in reliability capex during AA3. In fact the under-run of the combined refurbishment and reliability capex averaged over $80m pa

What is important to note is that despite the net under-run in refurbishment and reliability capex, the service performance of Essential improved significantly through AA3 (and AA2) indicating that the capex actually used in the refurbishment capex program delivered considerable benefit to Essential through the STPIS (if it had applied) and to consumers as well.

Essential specifically refers to a need to replace over 40,000 wood poles in AA4. The EMRF is concerned that if this is seen as a key aspect for replacement, why was this not addressed in the current period AA3?

However it is not clear what has been achieved with the greater than allowed expenditure on replacement during AA3 other than improving service performance. In fact, a review of the remaining asset lives in table 4.4.2 of the benchmarking RIN seems to imply that the average asset age increased during AA2 and AA3 despite the greater than expected injection of replacement capex during AA3.

The EMRF considers that the replacement program undertaken in AA2 and AA3 shows that this level of capex in this area is more than adequate and that a further increase for AA4 as proposed is not warranted.

The EMRF considers that the proposed replacement program for AA4 does not need to be at the level sought by Essential.

Overall, the EMRF considers that Essential claimed capex should show an even greater reduction in augmentation capex on the basis that there is no need for augmentation of the network. Further, the amount of replacement capex should be pared back considerably on the basis that using the amount of replacement capex in AA3 resulted in an improved service performance even though the residual life did reduce a little in AA3.

6.4 Conclusions

The EMRF is concerned that all three DBs used less capex than was allowed in AA3 and by doing so reaped a considerable benefit from the under-run. By not using the allowances so actively sought and then not using the allowances, the DBs are seeking more capex for AA4 than would otherwise be the case.

The fact that less augmentation was needed than forecast due to lower demands occurring, allowed the DBs to spend more on replacement than had been allowed, although Ausgrid still used less replacement capex than was allowed. This should have resulted in a lower need for replacement capex in AA$ yet Ausgrid and Essential have forecast increased replacement capex than expended in AA3 and it appears that Endeavour is also planning an expanded replacement capex program. The EMRF considers that replacement capex for AA4 should not exceed that used in AA3 as this appears to have provided considerable benefit to consumers.

Whilst all DBs seem to indicate that augmentation capex will be less in AA4 than in AA3, the EMRF considers that the over-spend in AA3 should have resulted in less augmentation and replacement capex in AA4 than has been forecast.

6.5 AER questions

#	AER question	EMRF response
4	Do you think that the distributors' capital expenditure proposals are appropriate?	No. See comments above.

7. Efficiency gain

The EMRF is totally supportive of an opex incentive scheme to encourage regulated businesses to reduce their costs. The benefit of this is that the DBs can reduce the costs of providing the service, and by sharing the savings with the DBs, consumers will be better off in the long term. However, in this proposal the DBs have not applied the principles underpinning the incentive scheme, choosing to limit the amount of the forecast opex that is set using the revealed cost approach.

There are two caveats to this in-principle support

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

As well as getting a bonus for underspending their opex in AA3, all of the three DBs get a bonus through the Efficiency Benefit Sharing Scheme (EBSS) pass through in their AA4 revenue for achieving this goal.

The EMRF is concerned that the opex savings being made are not so much an outturn of continuous improvement (which is the intention of the EBSS) but an indication that the DBs were able to convince the regulator of the need for higher allowances for opex, allowing them to earn both the immediate benefit of opex under run but an additional benefit into the following period

The fact that the actual opex for all three DBs in the last year of AA2 shows that the actual opex was lower than the opex in the base year (2007/08) used for forecasting opex for AA3 indicates that the DBs "gamed" the regulator into setting higher opex allowances for AA3 than were needed and this has been demonsta0rated as all DBs used less opex in AA3 than was allowed. This means that, to a significant degree, the rewards the DBs have obtained from under-running the opex allowance in AA3 and which will be addedinto the AA4 revenue through the EBSS were not entirely due to actions by the DBs.

The EMRF does not support providing the DBs with a benefit which is unjustifiable and contributes to an incentive to overstate opex claims by excessive amounts.

With this real concern in mind, (as demonstrated empirically above) it is suggested that the AER seeks detailed advice from the DBs supporting that savings really have been achieved by their direct operational actions.

8. Service standards

The AER proposes that a Service Target performance Incentive Scheme (STPIS) will apply to AA4 except for the transition year.

The three DBs all accept that a STPIS should apply to their operations but all have sought for the STPIS to be limited to 2.5% of their allowed revenue rather than the 5% proposed by the AER. Further, unplanned SAIDI and unplanned SAIFI only would be measured as part of the STPIS.

The EMRF considers that all SAIDI and SAIFI as actually experienced should be applied to the STPIS as this is the unreliability that consumers actually incur. Further, the EMRF accepts that the AER included in its Framework and Approach that unplanned outages be normalised to exclude the impacts of Major Event Days would be that all would be required at this stage.

In the 2009 review, the EMRF considered that a STPIS should have been implemented at that time but the AER decided that a lack of experience by the DBs would be used to exclude a STPIS applying for AA3 but that the DBs would develop data on a consistent basis to inform what the service levels for AA4 would be set at.

The EMRF considers that the AER missed an opportunity for earlier implementation an incentive to improve service performance for consumers and sees that its introduction now is supported.

At the time, the EMRF is unable to comment on what the service standard target and collars/caps should be, but expects that the AER will apply the STPIS as is intended.

9. Pricing methodology

The EMRF is extremely interested in the outcomes of the DB pricing methodologies. In a submission made recently to the AEMC the MEU provided the following longitudinal assessment of DB pricing throughout the NEM

"**2.2 Distribution pricing observations and analysis**

In its Position Paper in March 2005 in relation to the Electricity Distribution Price Review 2006-10 (EPDR), the Essential Services Commission (ESC) observed that the five distribution businesses in Victoria had recovered more revenue than the ESC had expected, even after adjusting for the increased volume of electricity usage..

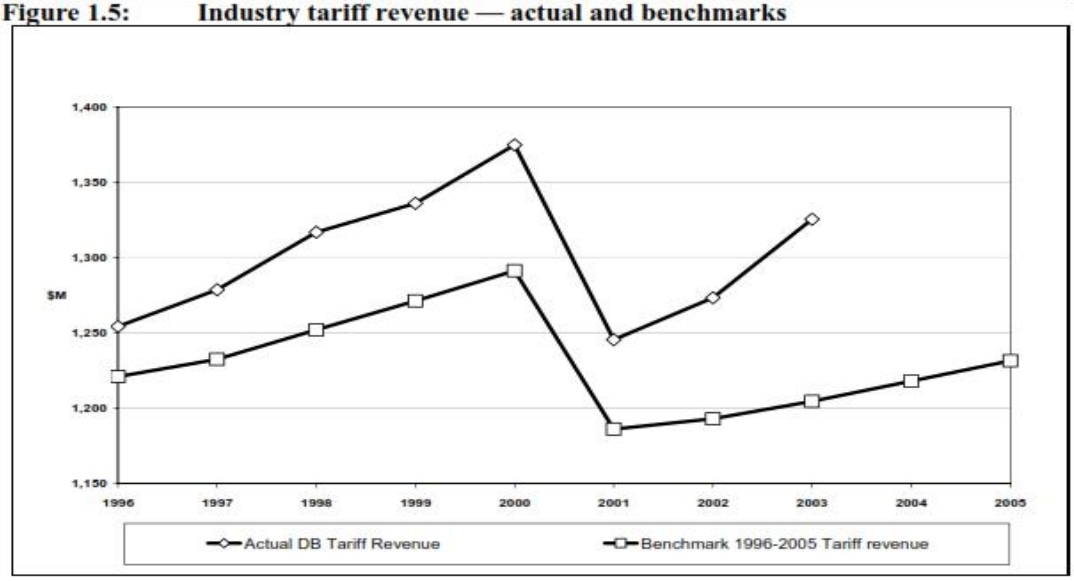
On page 11 of the Position Paper, the ESC noted:

> *"tariff revenue* for the 2001-03 period exceeded the benchmark level by 7.3 per cent, due to a combination of distributed energy being higher than forecast and the restructuring of tariffs in a manner that caused revenue to be higher than forecast for any given volume growth, for example, by increasing the variable component of charges by a greater amount than the fixed component. **The Commission's preliminary analysis suggests the latter had the more important effect;** (emphasis added)

The clear import of the ESC observation was that the five distribution networks had recovered more revenue that the ESC expected even after adjusting for the increases in demand.

The ESC provided the following chart showing that the excess in revenue recovery was significant, and showed a trend of the over-recovery increasing with time.

Figure 1.5: Industry tariff revenue — actual and benchmarks



Source: ESCV Position Paper for 2006/10 EDPR, March 2005

The ESC went on to state in its Position Paper (page 181):

> "As noted above, the Commission is not responsible for the individual tariffs and tariff structures that the distributors choose to introduce. The Commission sets an overarching price control that applies to the average price of a basket of tariffs and a set of side-constraints that attempt to place some economic discipline upon the distributors to develop tariffs that reflect the true cost of a customer's use of the network. Distributors are free to introduce, abolish or change the structure of their tariffs provided they comply with the overarching price control.
>
> However, as noted above, the Commission has concluded that there would be benefit in developing a structured framework and process for increasing the transparency of the distributors' tariffs and the basis for changes to their tariffs over time (see Section 11.1). Such transparency would include clear articulation of the cost allocation methodology used in developing individual tariffs."

Further, on page 175 of its Position Paper the ESC noted

> Despite the Commission's framework and approach and the focus that tariff strategies have had … the distributors' discussion on their tariffs for the 2006-10 regulatory period in their price-service proposals was limited largely to specific issues concerning the price controls, such as the future of the distribution re-balancing constraint. There was little discussion of

> how their proposals for removing or increasing the distribution re-balancing constraint for example, **linked to any overarching strategy of achieving more cost reflective tariffs or responding to customer demands** and which tariffs would be affected and by how much to achieve these objectives. (emphasis added)

The ESC then added (page 176)

> "In addition, some distributors have made marked changes in the component structure of their tariffs. For example, in their 2005 tariff proposals, Citipower and Powercor have removed the standing charge for their large, high voltage and subtransmission tariffs and reapportioned these charges across energy consumption components of these tariffs. Meyrick and Associates[19] (2005, p. 8) noted that:
>
> > *… the prices charged for the various output dimensions in Australia reflect historical precedent, distributor convenience and a range of cross subsidies that have proven hard to eliminate rather than cost reflectivity. The progression of prices towards cost reflectivity for each of the output dimensions is at best slow.*
>
> While some volatility in tariffs and tariff structure is likely given the operation of the price control mechanism, continual change in tariffs and tariff structure is likely to confuse and frustrate customers where the objectives and rationale underlying these changes is not clearly set out."

This articulation of the need to more closely control setting and movements of tariffs (prices) has never been implemented in any region, despite continuous commentary from consumers that the freedoms allowed distribution networks resulted in higher than expected revenues coupled with considerable and unnecessary volatility in prices and inequitable distribution of costs.

2.2.1 Tracking the changes

Whilst the MEU is aware of price changes that have occurred with specific MEU members and other consumers, issues of confidentiality prevent the use of such

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[19] Meyrick and Associates 2005, *Review of Pacific Economics Group Report "TFP Research for Victoria's Power Distribution Industry: Report prepared for AGLE, CitiPower, Powercor, TXU Networks and United Energy"* January.

data. To overcome this constraint, the MEU uses notional consumer classes to identify the impacts of movements in tariffs over time.

The MEU analysis looked at the change in network costs over time for four classes of user:

- residential with 20 MWh pa consumption reflecting refrigerative airconditioning and other high energy use equipment
- Small business (typically a shop with refrigeration) with 100 MWh pa consumption
- Medium sized business operating on a one or two shift basis on weekdays with 1000 MWh pa consumption and 500 kW peak demand
- Large business operating continuously with 70,000 MWh pa consumption and 10 MW demand

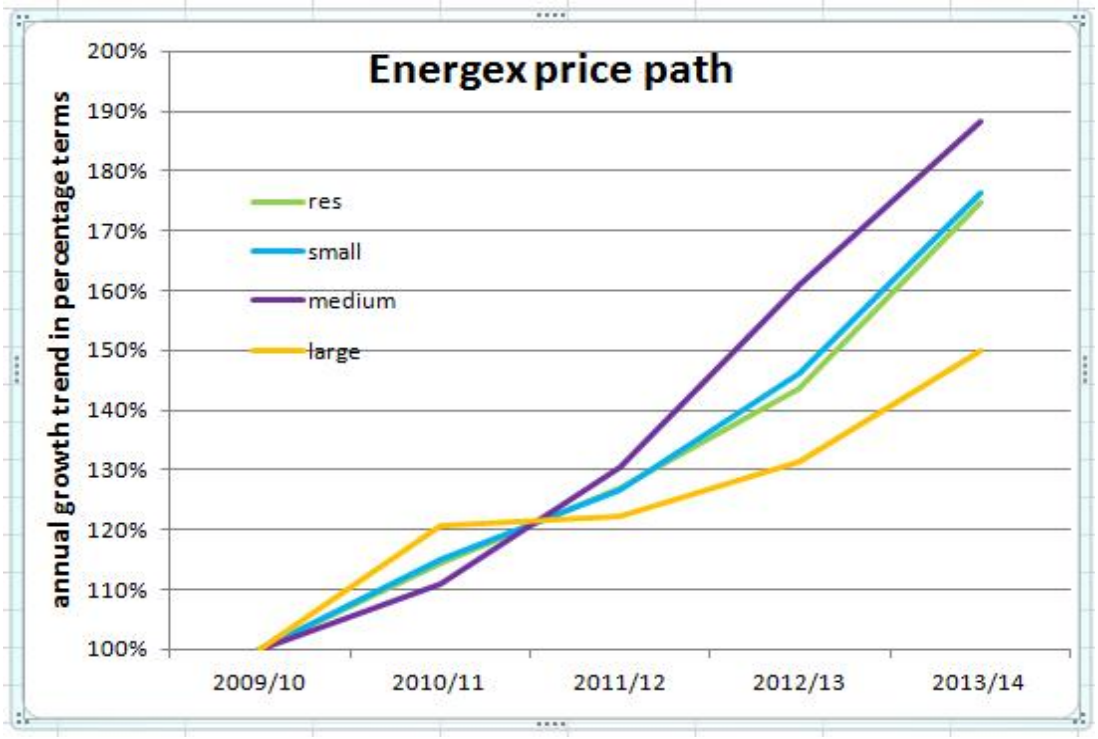
The MEU has analyzed the network price changes[20] for each class of user in four distribution networks - Energex in Queensland, Ausgrid in NSW, United Energy in Victoria and SA power Networks in SA.

2.2.2 Energex

The MEU has tracked the Energex network prices over the past five years[21]. The distribution costs for the four different load profiles were tracked and the following chart shows the costs each class of consumer would pay in each of the past five years.

[20] It should also be noted that as retail prices were further constrained under retail price regulatory arrangements for small and residential users, the actual retail price changes may vary from the changes in the network tariffs.

[21] This was constrained by the non-availability of more historical data on the Energex website.



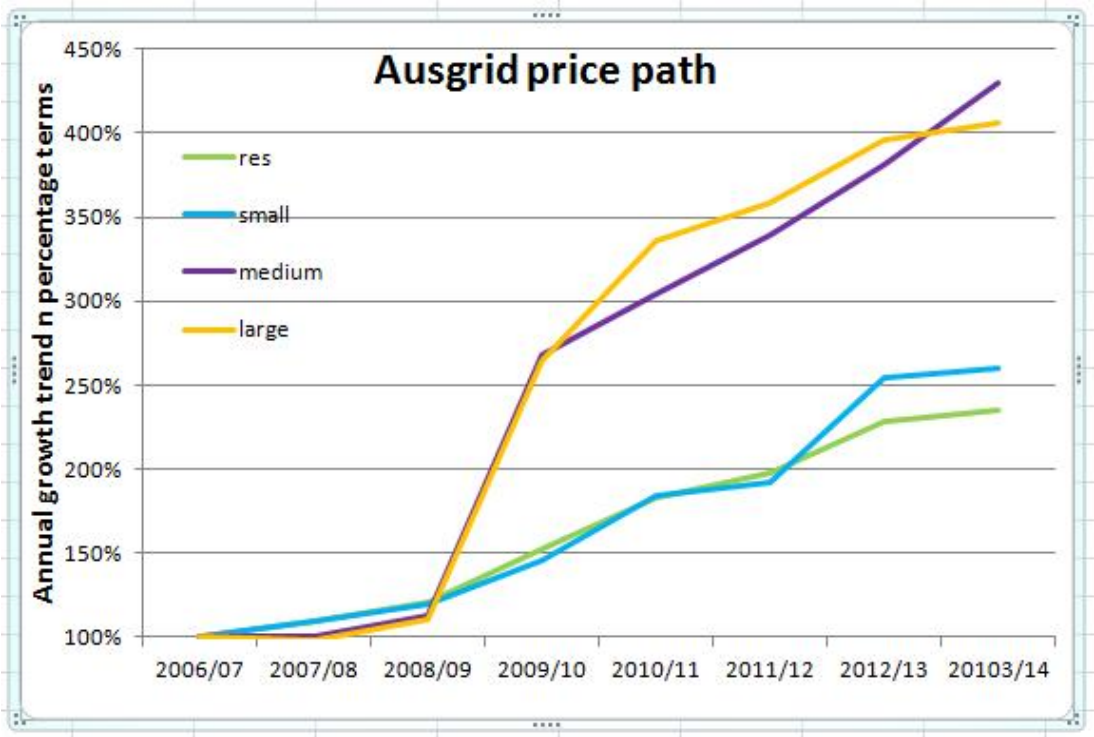
Source: Energex tariff lists, MEU calculation

This shows that the there has been some variability between customer classes but inherent in the trends are some quite significant year on year changes. For example, the costs for a medium business increased by over 23% for year 2012/13 compared to the previous year and in 2013/14, residential and small business saw over a 20% price hike.

This variability was not forecast in the AER decision on allowed revenue, where after a significant step increase for 2010/11, prices would increase by a little over 10% pa in nominal terms.

2.2.3 Ausgrid

The MEU has tracked the Ausgrid network prices over the past eight years. The distribution costs for the four different load profiles were tracked and the following chart shows the costs each consumer would pay in each of the past five years.



Source: Ausgrid tariff lists, MEU calculation

The massive increase in prices from 2008/09 to 2009/10 for large and medium businesses was reported by MEU members as was the rise again from 2009/10 t0 2010/11.

An explanation given by Ausgrid to MEU members for the large increase in medium and large user tariffs was a large price increase in TransGrid charges, and the analysis in section 2.1.1 does not support the assertion as rises in TransGrid prices between 2008/09 and 2009/10 were relatively modest[22]; the price changes by TransGrid do not explain the magnitude of the Ausgrid price increase seen just by medium/large users. In practice, any increase in TransGrid charges should have impacted residential and small users to a similar extent seen by other users.

The fact that, overall, Ausgrid prices for residential and small users show little change from the general trend seen in the three years prior to the large step increase in revenue Ausgrid was awarded by the AER and the Competition Tribunal in 2009 indicates a clear bias by Ausgrid in where revenue increases were to be levied. It would appear that a decision was made by Ausgrid that medium

[22] The spike in TransGrid prices seems to occur the following year

and large users would carry the bulk of the large increase in revenue awarded in 2009.

One explanation for this might be that there had been under-recovery in revenue by these sectors in previous years. To a large degree this argument is spurious as Ausgrid could have made some adjustments to these tariffs prior to the revenue adjustment in 2009, or even at the 2004 revenue decision, but did not see a reason for doing so. In fact, prices for residential and small business users merely reflect the trend in price changes over the previous 3 years.

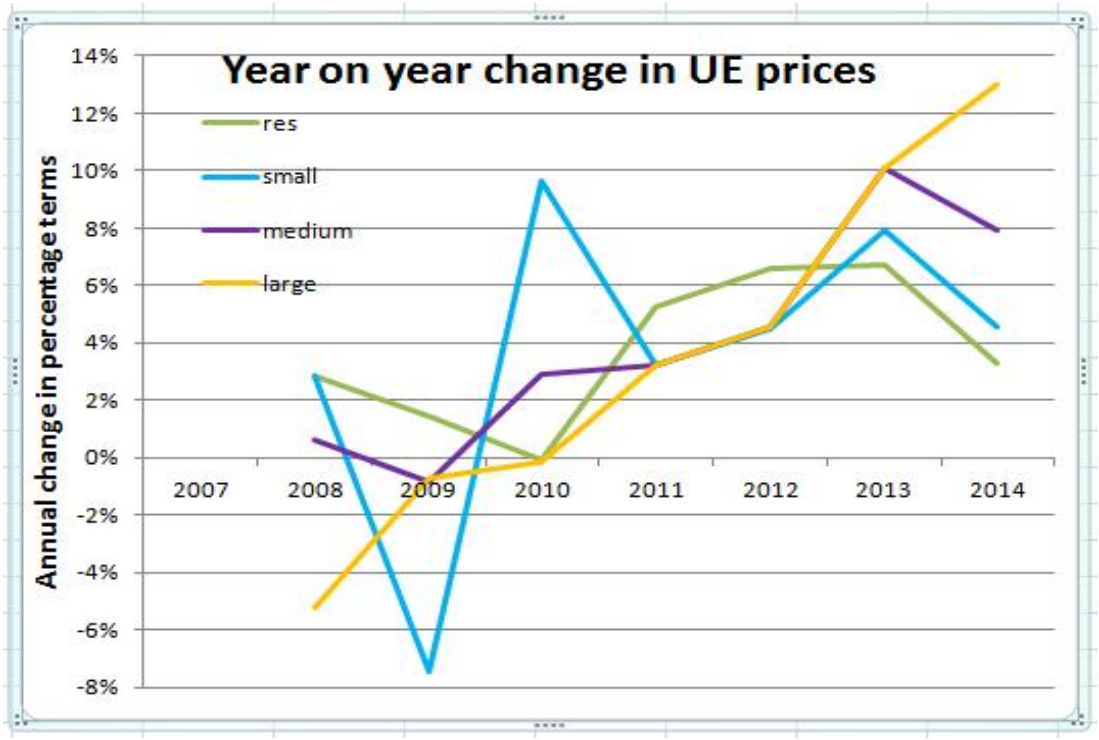
A major concern of medium and large consumers was the massive price hike about which they had no knowledge and therefore no ability to plan for the cost increases. The AER decision had indicated a step increase of some 15% would occur to the average tariff in 2009, yet an increase many times this actually occurred for the medium and large sector. That such an increase could occur demonstrates the clear ability a distribution network has to set prices to suit itself.

The fact that Ausgrid was able to so massively increase costs to larger electricity users yet allow residential and small business prices to remain at the same small annual price increase trend as previously applied **without formal explanation or independent verification** highlights consumer concerns that networks have little control placed on them as to how their revenue is to be recovered through pricing approaches.

2.2.4 United Energy

The MEU has tracked the United Energy network prices[23] over the past eight years. The distribution costs for the same four different load profiles were tracked and the following chart shows the year on year changes in costs each consumer would pay entering a new year above the previous year.

[23] This assessment of network tariffs excludes the impact of the mandated roll out of interval metering



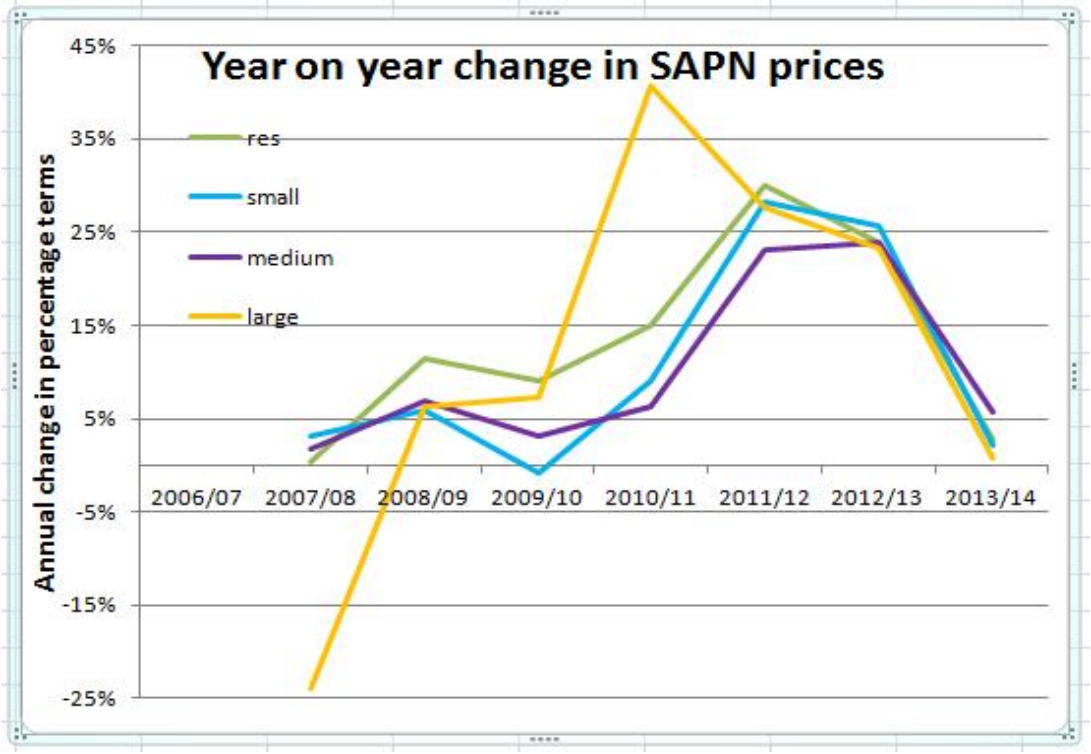
Source: UED tariff lists, MEU calculation

This shows that although there was been some variability between customer classes, there is a pattern where cost changes in some years reflect some consistency and which reflect the allowed changes in revenue. Despite this there are some massive swings as well.

For example, small business saw a large reduction in 2007/08 compared to the previous year, but only a year later saw an slightly lager step increase. Prices for 2014 see falls for three customer classes yet large business sees a 13% increase.

2.2.5 SA Power Networks (SAPN)

The MEU has tracked the SAPN network prices over the past eight years. The distribution costs for the same four different load profiles were tracked and the following chart shows the year on year changes in costs each consumer would pay entering a new year above the previous year.



Source: SAPN tariff lists, MEU calculation

This shows that although there was been some variability between customer classes, there is a pattern where cost changes in some years reflect some consistency between customer classes. Despite this there are some massive swings as well. For example, large business saw a large reduction in 2007/08 compared to the previous year, but two years later saw an even larger step increase.

The MEU is aware that some of the increases in tariffs resulted from the addition to network charges of the SA Government decision to include the solar feed-in tariff premium costs, and this resulted in the tariffs increasing at a rate greater than those implied by the AER determination and increased after the appeal to the ACT. However, it would be expected that the inclusion of these costs would have been equally reflected in the price movements for all classes of consumer.

2.2.6 Summary of distribution pricing observations

Whilst there is an expectation that there will be some year on year changes above and below the AER allowed X factors to accommodate changes in circumstance and exogenous impacts (such as government edicts) there is an expectation that the trends for changes in prices will be reasonably consistent between customer

classes. This is not borne out in any of the pricing set by the four distribution networks. In fact, there is more than sufficient evidence to indicate that the networks do not attempt to deliver consistency in pricing over time, or to replicate the pricing trends based on the revenues allowed by the AER.

It might be asserted that the extent of the changes from trend reflects the changing mix of consumer classes. The MEU finds this difficult to accept as, whilst there might be some changes in mix, the changes year on year would be very modest and certainly not to the extent shown by the variations seen in the above examples.

As the commentary provided by the Victorian Essential Services Commission in its review of revenue allowances in 2005 seems to imply, this variability in prices does not support a view that prices are cost reflective, and that the issue of non-cost reflectivity of prices is one of long standing.

The MEU would go further. This variability in prices has demonstrated that networks regulated under a price cap approach have the ready ability to increase their revenues in excess of the allowances provided by the regulator, even after making adjustment for any variability between forecast consumption (on which the weighted average price cap basket of tariffs is predicated) and actual consumption. Price cap regulation and the freedom to set tariffs as desired, provides a strong incentive on networks to manipulate tariffs to increase revenue above that allowed[24].

In addition, there is an expectation that price trends for different customer classes would replicate the general trend for changes in the allowed revenue. This allows greater certainty in year on year changes for the costs of distribution; as a general observation, consumers would expect that prices would closely follow the AER assessed X factors allowed for each network.

The fact that there is considerable variability year on year of prices for different customer classes implies that the main aim of the distribution networks is not cost reflectivity (as the Rules state as being an aim for distribution pricing) but for other reasons more in the interests of the networks.

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[24] The MEU has seen examples where price capped networks (especially gas networks) achieve and even exceed the allowed revenue despite consumption being less than that forecast, supporting the view of price manipulation.

Another issue (also referred to in section 2.1.3 above) is how distribution networks incorporate the transmission charges into the distribution prices. The locational signals provided by transmission are lost in the translation as are the pricing signals to manage changes in demand.

This review of distribution tariffs highlights there is considerable variation between the networks in the approach they take to tariff development. Distribution tariff structures vary widely. For example:

- There is considerable variation between regions as to what periods are peak, shoulder and off peak times, although peak and shoulder periods tend to be during the daylight times and early evening on week days.
- Despite the regional variation between peak/shoulder/off peak times, there is poor correlation between the networks determination of peak/shoulder/off peak with the actual variation of usage seen in the electricity market.
- The tariff structures vary considerably between regions:
    - Energex in Queensland has an access fee and a single consumption charge for all users with medium and large users also paying a demand charge.
    - Ausgrid in NSW has an access fee for all users, peak, shoulder and off peak consumption rates for smaller users and for larger users peak, shoulder and off peak consumption as well as demand charges
    - United Energy in Victoria has charges for summer peak, other peak times and off peak consumption. Small consumers pay an access fee but large users do not. Large users pay on a different basis with summer demand and other time demand as well as consumption rates for summer peak, other peak times and off peak usage.
    - SAPN in SA has an access fee and up to 4 blocks of consumption rates for smaller users, larger users have no access fee but up to 4 blocks of demand costs for with rates for consumption for peak and off peak usage

The MEU noted that in addition to the tariffs used for the analysis, each distribution network had many more tariffs with multiple tariffs being able to be applied to the same class of consumer, adding further to the confusion. This proliferation of tariffs does not necessarily lead to greater cost reflectivity, but an approach by consumers to seek the tariff which results in the lowest cost they are likely to incur.

> The MEU considers that great care is needed to address the issue of pricing structures to achieve the aim of improving cost reflectivity of network pricing. The observations and comments resulting from direct interaction MEU members have had and reported to the MEU, will provide useful in the further investigations by the AEMC in relation to the rule change proposal."

The EMRF is extremely concerned that the DB pricing does not accurately reflect the costs for the service provided to each customer. Further, the analysis shows that distribution network pricing exhibits:

- considerable variation year on year
- price paths for individual customer classes which indicate considerable variation between customer classes
- price paths for individual customer classes do not follow the overall price path set by the AER in its revenue decision

The fact that the AER in its approval process for the annual tariff setting has not recognised that tariffs are changing so significantly draws attention to the issue that the DBs all assert is of greatest importance to consumers - that of stability in pricing. It is clear that the DBs are using this argument in support of setting their revenue allowances yet fail to implement such a requirement in an area where they have total control. This highlights the opportunism underpinning the assertions made by the DBs.

The AER has an obligation to ensure there are no anomalies in network pricing through the annual pricing review process but it is clear that the AER assessments have not identified the anomalies identified above; this appears to be a major shortcoming of the current AER processes in approving the annual tariffs.

The EMRF notes with pleasure the AEMC is currently investigating developing stronger requirements for network pricing and that the NSW DBs are active in the process.

The EMRF considers that the new approach being contemplated arising out of the AEMC process is a major step forward in ensuring network costs are shared equitably between all users of the services provided. Therefore the EMRF supports the new approach and encourages the use of the concepts already being contemplated in the AEMC process. Although such aspects are not currently in the electricity rules, the EMRF considers the AER should encourage the DBs to implement the more straight forward elements being proposed such as the Pricing Structure Statement which is analogous to the transmission pricing methodology requirement.

The EMRF also considers that the AER needs to be much more involved in the assessment of annual tariffs submitted to ensure that the anomalies that have been identified by the MEU longitudinal review do not recur.

Appendix 1

Five-year drop for commodities' prices

Australian Financial Review: : PUBLISHED: 16 Jul 2014 18:15:24 | UPDATED: 17 Jul 2014 03:07:08PRINT EDITION: 16 Jul 2014

Commodities from iron ore to copper and Brent crude will drop over the next five years as global supplies climb, according to Goldman Sachs Group, which highlighted oil's recent losses as a sign of increased output.

There will be substantial declines in some metals, energy and bulk commodities, analysts including chief currency strategist Robin Brooks wrote in a report. The period of continued year-on-year price rises for most commodities is over, they said in the report, which was dated yesterday.

Banks from Citigroup to Deutsche Bank have called an end to the commodities super-cycle, when China's surging demand combined with supply constraints led to a doubling of prices in the 12 years through 2010.
Raw materials rallied this year from three annual losses as a lack of rain in Brazil lifted coffee and a ban of ore exports from Indonesia spurred a rally in nickel. The drop in energy prices since last month showed the impact of higher global output, Goldman said in its report.

"A prolonged period of elevated commodity prices has catalysed a supply response," the analysts wrote. "We do not expect a collapse in global commodity prices. But we do anticipate substantial declines."

Copper was forecast to drop to $US6600 a metric tonne over five years, while iron ore was seen at $US80 a tonne and Brent may be $US100 a barrel, according to Goldman. The steel-making raw material was at $US98 a dry tonne in China, Tuesday, and copper traded at $US7122 on the London Metal Exchange on Wednesday. Brent was US34¢ higher at $US106.36 on the ICE Futures Europe.

'Looser supply'

The Bloomberg Commodity Index of 22 raw materials climbed 3.2 per cent this year. That compares with a 1 per cent drop in the Bloomberg Dollar Spot Index and 5.1 per cent advance in the MSCI All-Country World Index of equities.

"Against a looser supply backdrop, commodity prices should be much less sensitive to fluctuations in global growth than they were," Goldman said in the report, entitled *Emerging Market Forex and the End of the Commodity Market Super-Cycle*.

Goldman said in a January report the cycle that spurred higher commodities prices is reversing as increased US shale oil output keeps energy prices low, and that would eventually drive raw materials into a bear market. The new cycle is the opposite of the super-cycle, it said then.

"We remain bearish on iron ore, and expect a surplus market to drive the longer-term price down," the Goldman analysts wrote in Tuesday's report. "We see limited upside for agricultural commodities over the longer run."

Ore output

Rio Tinto Group, the world's second-largest mining company, said today that iron ore production in the three months to June increased 11 per cent, while Fortescue Metals Group said its shipments were 57 per cent higher on year. Iron ore entered a bear market in March on prospects for a glut as supplies surged.

Brent crude rallied to as much as $US115.71 a barrel last month as military gains in Iraq by an al-Qaeda breakaway group stoked concern that oil supplies may be disrupted. Prices posted a third weekly loss in the period to July 11, with Iraqi shipments unaffected and Libya moving to boost exports.

"Less than a month has passed since geopolitical risks in Iraq pushed up oil prices on concerns over a potential oil supply shock, and the market seems to have absorbed the related risks reasonably well," Goldman analysts wrote. "The expansion in oil supply over the past few years -- primarily from the expansion of US shale production – has minimised the consequences from past disruptions in Libya and Iraq."

Record volumes

US production of crude, along with liquids separated from natural gas, surpassed all other countries this year with daily output exceeding 11 million barrels in the first quarter, Bank of America Corp said in a report July 4. Output has climbed as hydraulic fracturing and horizontal drilling help producers pull record volumes of crude out of shale formations.
Deutsche Bank said last month commodity prices will remain subdued for years as many of the factors and fears that drove the super-cycle have dissipated. Citigroup said in April 2013 that death bells would ring for the commodity super-cycle.

"Our long-term commodity forecasts suggest that fundamentals for commodity currencies will deteriorate," the Goldman analysts wrote. "Relative shifts in terms of trade between commodity importers and exporters will be a key input to currency determination over the coming years."

Bloomberg

See
http://www.afr.com/p/markets/five_year_drop_for_commodities_prices_uK3AfUNPMB08PMXD2arAoJ