

13 February 2015

Ms Paula Conboy
Chair
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Dear Ms Conboy

NSW DNSPs' submission on the AER's draft determinations

The NSW Distribution Network Service Providers, Ausgrid, Endeavour Energy and Essential Energy (the NSW DNSPs) are pleased to provide this supplementary submission on discrete aspects of the Australian Energy Regulator's (AER) draft determinations in relation to the NSW DNSPs.

The NSW DNSPs provide this submission in the context of the AER's public consultation on its draft distribution determinations released on 27 November 2014. This submission should be read in conjunction with the revised proposals of the NSW DNSPs, submitted on 20 January 2015.

The allowed return on equity

In its draft determinations for the NSW DNSPs, the AER has applied no weight on estimates of return on equity for the benchmark efficient energy network firm from the following models:

- The Fama-French 3 Factor Model (**FFM**);
- The Dividend growth model (**DGM**); and
- The Black CAPM.

The NSW DNSPs submit that the failure to give weight to estimates of the return on equity derived using these models, was inconsistent with Rule 6.5.2(e) of the National Electricity Rules (**Rules**) which requires that the AER take into account all relevant information and financial models. In this submission we have incorporated the latest updated estimates of the allowed return on equity for the benchmark efficient energy network firm as estimated from these models.

In its draft determinations for the NSW DNSPs, the AER also applied internally inconsistent estimates of the risk free rate and the market risk premium (MRP). The AER's draft decisions combined a short term estimate of the risk free rate with a long term estimate of the market risk premium (calculated based on historical realised returns on the market and historical estimates of the risk free rate). As outlined in the NSW DNSPs' initial and revised proposals, if the AER applies a short term estimate of the risk free rate, then it should apply an estimate of the market risk premium estimated over the same period.

The NSW DNSPs submit that the attached expert reports provide the relevant information for the proper application of Rule 6.5.2(e) and thereby demonstrate the errors upon which the AER's draft determinations are based.

Fama French Three Factor Model

The NSW DNSPs submit that, contrary to the reasoning of the AER in its draft determinations, the FFM provides a relevant and useful source of information for the allowed return on equity for the benchmark efficient energy network firm. SFG's Initial Review of the required return on equity (attached with the NSW DNSP's revised proposals) outlined key reasons why this is the case. The report from SFG titled "Using the Fama-French model to estimate the required return on equity" (FFM Report), provided as Attachment 1, expands on the reasons raised in SFG's Initial Review report. The attached FFM report also provides recent estimates of the required return on equity using the FFM.

As outlined in the NSW DNSPs' revised proposals, the allowed return on equity should be estimated using data prior to the start of the 2014-19 period. The estimated return on equity using the FFM is 10.8% based on data prior to the start of the 2014-19 period and consistent with the observation period used by the AER to set the allowed return on debt (February to June 2014).

We note that the updated FFM based estimates of the required return on equity using recent data illustrate the variability of the allowed return on equity using short term data alone (estimates having dropped from 10.8% to 10.0% from the Feb-June 2014 period). The use of short term estimates of the return on equity is particularly problematic given the recent, significant decline in 10 year government bond rates (generally used as a proxy for the risk free rate within both the CAPM and the FFM). The NSW DNSPs submit that estimates considering all available data, particularly internally consistent long term estimates of the return on equity are most likely to contribute to stability and efficient investment in the long term interests of consumers. This supports the adoption of the proposed return on equity in the NSW DNSPs revised proposals of 10.15%.

We also note that, even using significantly depressed short term data for the risk free rate the estimated return on equity using the FFM is 10.0%, which is significantly higher than the estimated return on equity using the AER's approach. The AER's approach would produce an allowed return on equity of approximately 7.11% as explained further below.

The Dividend Growth Model

The NSW DNSPs submit that, contrary to the reasoning of the AER in its draft determination, the DGM based estimates of the return on equity for a benchmark efficient energy network firm are a relevant and useful source of information on the allowed return on equity. SFG's Initial Review of the required return on equity (attached with the NSW DNSPs' revised proposals) outlined key reasons why this is the case. The attached report from SFG titled "Share prices, the dividend discount model and the cost of equity for the market and a benchmark energy network", provided as Attachment 2, expands on the reasons raised in SFG's Initial Review report. The attached DGM report also concludes that based on data for the two months to December 2014, the best estimate of the expected return on equity for the market was 11.37%. The risk free rate proxy was estimated to be 3.13% over the same

period. Using the DGM-based approach outlined in the NSW DNSPs' initial and revised proposals¹ the combination of these estimates provides a required return on equity of 10.88% for the benchmark efficient energy network firm.² This estimate is significantly higher than the estimated return on equity using the AER's approach over the same period, 7.68%. As outlined further below, based on more recent estimates of the risk free rate from January/February 2015, the AER's approach produces an even lower required return on equity of 7.11%.

The Black CAPM

The NSW DNSPs submit that, contrary to the reasoning of the AER in its draft determination, the Black CAPM based estimates of the return on equity for a benchmark efficient energy network firm are a relevant and useful source of information for setting the allowed return on equity. SFG's Initial Review of the required return on equity (attached with the NSW DNSPs revised proposals) outlined key reasons why this is the case.

Consistency of the risk free rate and the MRP

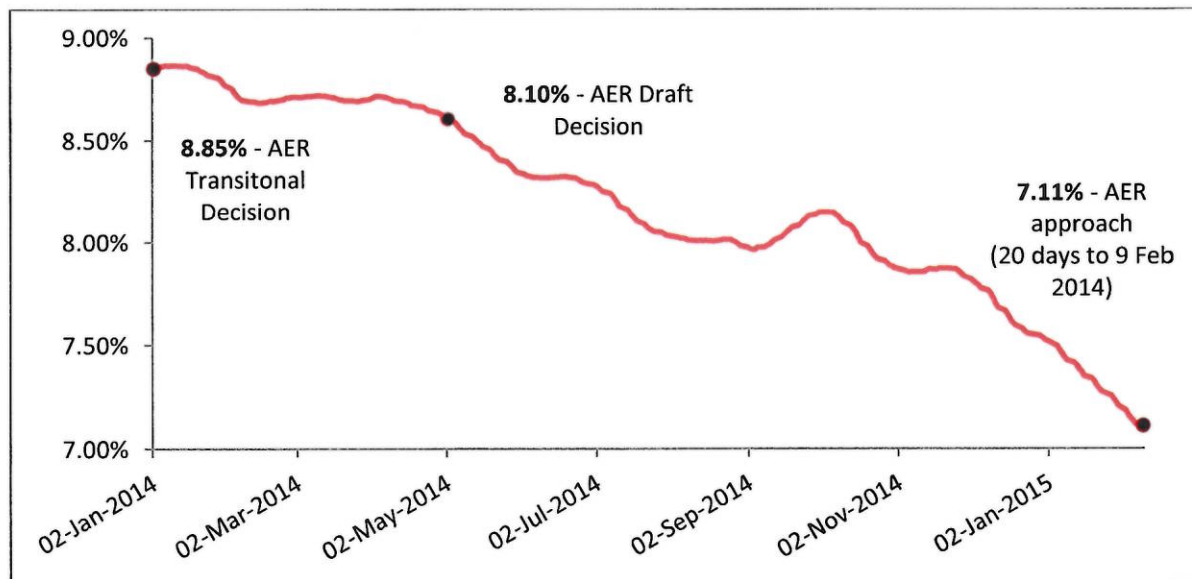
The NSW DNSPs submit that, contrary to the approach of the AER in its draft determinations, the risk free rate and the MRP should be estimated over a consistent time period when using the Sharpe Lintner (SL) CAPM to estimate required return on equity for a benchmark efficient energy network firm. Attachment 2 from SFG also estimates that the expected return on the market for November to December 2014 was 11.37% and the risk free rate proxy was estimated to be 3.13% over the same time period, which implies an MRP of approximately 8.24%. Using the SL CAPM framework with this risk free rate and MRP combined with an equity beta estimate of 0.82 produces a return on equity of 9.88%. This estimate is significantly higher than the estimated return on equity using the AER's approach over the same period, 7.68%.

Applying the AER's preferred approach would result in an allowed return on equity of 7.68% over the period November to December 2014. Furthermore, for the 20 business days to 10 February 2015, the estimated risk free rate was 2.56%. Using the AER's approach would result in an allowed return on equity of 7.11%. This is almost 100 basis points below the allowed return on equity applied in the AER's draft decisions for the NSW DNSPs (8.10%), which was based on risk free rate estimates only 4 months prior, in October 2014. The high variability in estimates of the required return on equity under the AER's approach clearly demonstrates the need to ensure consistency between estimates of the risk free rate and the MRP.

¹ That is, using the estimated risk premium for regulated utilities versus the market as a whole of 0.94, as estimated by SFG in its report titled "Share prices, the dividend discount model and the cost of equity for the market and a benchmark energy network".

² We note that SFG have combined their expected return on the market estimates

Figure 1 – High variability under the AER’s cost of equity approach



Source: Based on annualised daily rates on 10 year Commonwealth Government bonds as published by the RBA for the risk free rate and assuming a constant MRP of 6.5% and an equity beta of 0.7, as per the AER’s draft decision approach.

We consider the issues raised above provide further support for the NSW DNSPs proposed return on equity of 10.15%, which takes into account all relevant evidence and financial models, as required by the NER. This estimate is based on a long term estimate of the required return on equity using the CAPM framework and falls within the range of reasonable estimates produced by relevant financial models and other evidence.

As outlined in the NSW DNSPs revised proposals, we note that only data prior to the start of the 2014-19 period should be used to set the allowed return on equity for that period. It is inappropriate to estimate a prospective required return on equity for the 5 year 2014-19 period based on rates 7 months after the period has commenced as the AER has suggested in correspondence to the NSW DNSPs.

The value of imputation credits - Gamma

The AER’s draft decision on gamma also concluded that the value of gamma should be 0.4 based on its “conceptual goal-posts”, equity ownership, and redemption rate based approaches. The attached report from SFG titled “Estimating Gamma for Regulatory Purposes” provided as Attachment 3 demonstrates why the AER’s approach was incorrect and why the AER should apply a value for gamma of 0.25 in its final determinations.

Independent Expert Reports

The AER concluded that the only independent expert reports that are relevant are those relating to regulated infrastructure. We have attached and expert report titled “Further update on the required return on equity from Independent expert reports” by Incenta (Attachment 4). Incenta find that while reports related to regulated infrastructure provide a particular insight into the practices of independent experts in relation to regulated infrastructure specifically, in their view an examination of the broader spectrum of expert reports provides insights into

how independent experts adapt to changing market conditions, in particular, how they assess the required market rate of return, which is important for assessing the cost of equity for a particular asset. Incenta note that there are very few reports in relation to regulated infrastructure in the period since the global financial crisis when government bond rates have been at historically very low levels.

Incenta further note that the AER has compared the risk premium over the “spot” risk free rate that independent experts have applied to the risk premium over the spot risk free rate that it applies, and so implicitly assumed the risk premium that experts apply has remained (and will remain) constant in the face of large changes in the risk free rate. However, this masks the actual behaviour of independent experts, with almost 90 per cent having adjusted the risk free rate and / or the market risk premium in response to changes in the risk free rate.

Incenta find that the AER has misunderstood Grant Samuel’s report on Envestra and that the AER’s premium would fall short of Grant Samuel’s assessment.

Market Risk Premium

The attached report from NERA titled ‘Historical Estimates of the Market Risk Premium, provided at Attachment 5, provides updated historical estimates of the mean real return to the market and the market risk premium, and responds to matters raised by the AER in recent AER decisions relating to market risk premium.

The allowed return on debt

The AER has (correctly) identified the trailing average methodology as the best methodology for measuring the cost of debt. Each of the NSW DNSPs have a long term staggered debt portfolio without substantial derivative hedges seeking to align their debt costs to an “on-the-day” return on debt calculation. The NSW DNSPs have thus already adopted an approach to financing their debt consistent with the trailing average approach, and the immediate imposition of a trailing average approach would best calculate the NSW DNSPs’ efficient financing costs for the forthcoming regulatory period. In these circumstances, there is simply no proper basis for the imposition of a different methodology on the NSW DNSPs through the use of a ten year transition to the trailing average approach. Such an approach would result in a calculation that necessarily will be an inferior assessment of the NSW DNSPs’ efficient financing costs.

The AER’s draft decision to impose a 10 year transition period is based on a series of errors, as follows:

- a) a misunderstanding as to the proper application of the hypothetical benchmark efficient entity, including the inappropriateness of imposing a transition to deal with a problem or issue that is purely hypothetical and does not exist in reality;
- b) in any event, significant errors of fact in relation to the identification of the appropriate benchmark efficient entity and the position of that entity;

- c) errors as to what is required or permitted under the NER in connection with the imposition of a transition to deal with an alleged over-recovery in a previous period;
- d) factual errors as to the existence of the alleged over-recovery;
- e) errors as to whether a transition is required for NPV neutrality or to avoid sudden changes impacting on consumers;
- f) an overall misapplication of the NER in light of errors (a) to (e).

Each of these errors is detailed in the legal opinion on the allowed return on debt is provided as Attachment 6 to this submission.

Benchmarking

The operating expenditure forecasts for the Network NSW businesses are formulated based on actual expenditure in the base year (2012-13), adjusting for future changes to requirements and building in some further gains in efficiency and for any relevant step changes – expenditure required in order to maintain the safety, quality, reliability and security of the distribution systems for the benefit of New South Wales consumers.

The magnitude of the reductions proposed by the AER will provide insufficient revenue to permit the proper maintenance and operation of the New South Wales distribution networks. In formulating the draft decision, the AER has taken no steps to consider the practical impact of the proposed revenue reductions, or whether the reductions satisfy the national electricity objective.

The AER has not considered at any appropriate level of detail (or indeed any level of detail) which aspects of the Network NSW businesses' proposed opex involve inefficient expenditure. It has not properly engaged with the detail of the proposals, or examined or considered which particular items of expenditure (if any) should be managed more efficiently. It has not considered the circumstances of each individual business. Rather, it has identified wholesale adjustments to be made on a global level based on a benchmarking model.

Nor has the AER taken into account in a proper manner the constraints and obligations faced by the Network NSW businesses. For example, the Network NSW businesses cannot dramatically reduce the number of their employees, and cannot reduce employee numbers without incurring significant redundancy costs. These matters cannot simply be ignored, or simply assumed to be borne by shareholders. As Professor Newbery observes in a report provided for each of the NSW DNSPs and as provided in their revised proposals, a proper application of regulatory economics requires an allowance to be given for any restructuring costs. Otherwise, the owners of the business are not given an opportunity to obtain a proper return on the investment, which in turn would affect regulatory risk and the perception of the stability of returns from regulated businesses.

Further, the benchmarking conducted by the AER is itself fundamentally flawed. It provides no adequate basis to reject the forecasts of operating expenditure provided by the Network

NSW businesses. The resulting allowance for opex is not in accordance with the NER, including because it does not meet the operating expenditure objective.

The deficiencies in the AER's approach to benchmarking are multi-faceted and have been analysed in detail in the expert reports provided with the revised proposals.

The legal opinion set out in Attachment 7 goes into these issues in more detail.

Revenue Smoothing

Smoothing for the transitional year 2014-15

The AER's draft determinations calculated smoothed allowed revenues for 2014-15 equal to the transitional determination allowances. We agree with this approach for the following reasons:

- Prices for 2014-15 have already been set to recover the transitional determination revenue allowances for 2014-15;
- The Rules require that any difference between the AER's transitional determination on revenue allowances for 2014-15 (made in April 2014) and the AER's final determination on revenues for each of the years across the 2014-19 period be "trued-up" in PV terms over the full 2014-19 period; and
- Smoothing revenues over the entire 2014-19 period such that smoothed revenues for 2014-15 are equal to those set in the transitional determination is the simplest approach for giving effect to the transitional year true-up.

Smoothing for 2015-16 to 2018-19

The AER's draft determinations for the NSW DNSPs applied unprecedented reductions to smoothed revenue allowances, below both previous (2009-14) levels and levels set in its own transitional determination for 2014-15.

However, rather than recognise the impacts of this reduction on financial sustainability (especially in the short-term) and price stability for customers over the 2015-19 period, the AER's draft determination smoothed all real reductions (beyond 2014-15) into one year, i.e. 2015-16.

We submit that, the AER's draft determination is inconsistent with the pricing principles in the National Electricity Law and the National Electricity Objective (**NEO**) because it fails to have regard to the impact of the proposed revenue smoothing approach on the financial sustainability of the NSW DNSPs, pricing efficiency and price stability for consumers over the 2015-19 period. Financial sustainability and price stability are both crucial to achieving the National Electricity Objective (NEO), which is to

"promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—

(a) price, quality, safety, reliability and security of supply of electricity; and

(b) the reliability, safety and security of the national electricity system."

If the NSW DNSPs were made financially unsustainable in the short-term, then they would not be able to undertake necessary replacement, augmentation and maintenance expenditure required to ensure safety and reliability of the NSW electricity network. In the worst case, inability to meet debt obligations in the short term could lead to insolvency.

Even if the NSW DNSPs were able to recover from short-term financial hardship caused by the significant immediate revenue reductions contained in the AER's draft determinations, the lack of investment and maintenance in the short-term could have adverse safety, reliability and security implications.

To preserve financial sustainability and to promote pricing stability, any significant reductions to allowed revenue building blocks (such as those foreshadowed in the AER's draft determinations), the AER should have been implemented through a proposed staged reduction in revenues through the revenue smoothing mechanism within the regulatory revenue models. .

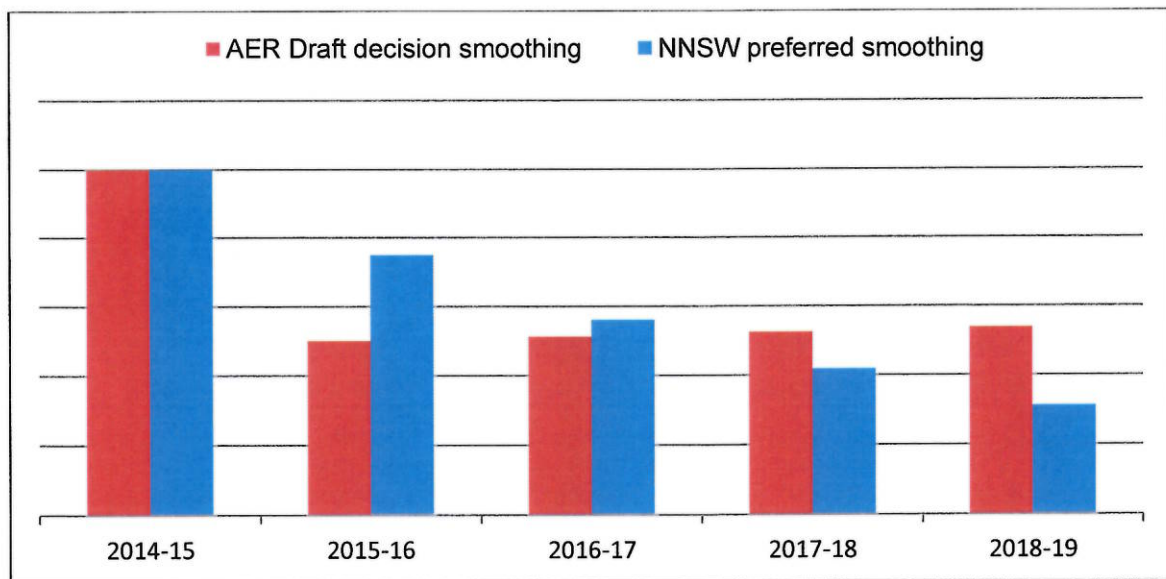
The AER should also provide the NSW DNSPs with the ability to address any under-recovery or over-recovery of annual revenues through the unders and overs account for a period of more than one year. This will facilitate greater pricing stability and flexibility in addressing changing circumstances over the 2015-19 regulatory control period.

The smoothing approach applied by the AER in its draft determinations does not provide the NSW DNSPs with an appropriate opportunity to improve tariff efficiency and equity without imposing unacceptable price shocks. The AER's draft decision to impose a single real reduction in revenue requirements for 2015-16 would limit the NSW DNSPs' ability to deliver the long-term benefit of tariff reform to customers because it would not be possible to develop and implement a full tariff reform agenda for 1 July 2015, particularly given the need to engage our customers and other stakeholders prior to any decision on tariff reform.

In addition, if the AER were to apply the smoothing approach as contained in its draft determination, it would result in a significant price decrease in 2015-16, potentially followed by nominal price increases from 2016-17. This pricing volatility created by a large "P nought" adjustment is likely to send confusing price signals to consumers who try to manage their electricity bills and may lead to potential price increases beyond 2015-16 greater than initially forecast at the time of the final determination – an outcome that would be inconsistent with the NEO.

The AER's draft determination fails to take into account the benefits of a staged transition to target price stability for customers over the 2014-19 period. There have been significant reductions in overall energy consumption over the past 6 years. The vast majority of distribution network costs are fixed and need to be recovered over a long time horizon. As a result if overall energy consumption declines over the 2014-19 period, the price per customer must be increased to recover the same level of revenue (holding other things equal). If any revenue reductions were staged over the 2014-19 period, this would provide some buffer to consumers against the impact of overall declines in energy consumption. The graph below illustrates such an approach.

Figure 2: NSW preferred smoothing approach v AER Draft decision approach



If you would like to discuss this response further please contact Mr Mike Martinson, Group Manager Regulation at Networks NSW on (02) 9249 3120 or via email at michael.martinson@endeavourenergy.com.au.

Yours sincerely

Vince Graham
Chief Executive Officer
Ausgrid, Endeavour Energy and Essential Energy

Attachments

Attachment 1 – Using the Fama-French model to estimate the required return on equity

Attachment 2 – Share prices, the dividend discount model and the cost of equity for the market and a benchmark energy network

Attachment 3 – Estimating gamma for regulatory purposes

Attachment 4 – Further update on the required return on equity from independent expert reports

Attachment 5 – Historical estimates of the market size and value premiums

Attachment 6 – Legal opinion on cost of debt

Attachment 7 – Legal opinion on Benchmarking

