



## **AER DRAFT DECISIONS FOR NSW AND ACT ELECTRICITY DISTRIBUTORS**

ENA response, 13 February 2015

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# 1. EXECUTIVE SUMMARY

The ENA welcomes the opportunity to comment on the Australian Energy Regulator's (AER) draft determinations in relation to the distribution networks serving New South Wales (NSW)<sup>1</sup> and the Australian Capital Territory (ACT)<sup>2</sup>. The ENA represents the businesses operating Australia's electricity transmission and distribution and gas distribution networks, responsible for \$100 billion in energy network infrastructure which plays a vital role Australia's economy and community.

The ENA's members strongly support a robust regulatory framework administered by an independent AER under transparent *National Electricity Rules* and the *National Electricity Law*, which prioritise the long-term interests of consumers. The ENA's members were active participants in the Australian Energy Market Commission's Economic Regulation of Network Service Providers rule change in 2012 including supporting the ability of the AER to make appropriate use of economic benchmarking as a regulatory tool. Members contributed strongly to the AER's Better Regulation Program, including embracing the Consumer Engagement Guideline and other initiatives.

The ENA's members recognise that there are significant public concerns due to recent increases in electricity prices over the past 7 years and that network costs have been a major contributor of price rises in some (but not all) jurisdictions. Some key pressures which have increased network costs are reducing, particularly improvements in the cost of borrowing and lower growth in peak demand. Network businesses have also undertaken major saving initiatives in operating and capital expenditure. The network industry considers the recent changes to the regulatory framework provide a number of opportunities to further enhance sound and efficient network pricing that effectively balances the interests of consumers and the need for investment in and maintenance of network infrastructure.

As the NSW and ACT determinations are among the first full evaluations of network proposals under the recently amended rules framework, it is vital that the AER serves electricity consumers by making decisions which are robust, compliant and predictable to consumers and investors familiar with the *National Electricity Rules* and guidelines published by the AER.

It is important that the AER's determinations meet the *National Electricity Objective* by serving the long-term interests of consumers. This will require:

- » A regulatory environment in which efficient investment is expected to occur in a timely manner;
- » A rate of return which is commensurate with the regulatory and commercial risks involved in providing regulated services;
- » Regulatory outcomes which provide consumers with confidence that network charges are no higher than necessary; and
- » Revenues and prices that advance the long-term interests of consumers with respect to the safety, reliability and quality of the power supply.

The ENA considers that there is a number of concerning features in the AER draft determinations for the NSW and ACT distribution businesses which not only fail to serve the long-term interests of consumers in these jurisdictions but which would also undermine the effectiveness of the electricity network regulatory regime in Australia if upheld in the final determinations.

The ENA has not sought to identify every issue in the AER draft determinations, recognising that detailed responses will be considered from the local network providers, consumers and other stakeholders. This submission focuses particularly on those issues in the draft determinations which have implications not only for the long-term interests of NSW and ACT consumers, but consumers in other Australian jurisdictions subject to the *National Electricity Rules*.

In this context, the particular concerns with the AER draft determinations for NSW and ACT electricity distribution businesses are summarised as:

- » The decisions represent **a departure from best practice regulation** as they are inconsistent with past AER's decisions, the AER's published guidelines and the legal requirements of the *National Electricity Rules*;
- » Key elements of decisions **compromise incentive-based regulation** for distribution networks, including the decision to abandon the Efficient Benefit Sharing Scheme;
- » The decisions set operating expenditure allowances in a top-down manner based on the **inappropriate and mechanistic use of economic benchmarking** which itself has been developed without appropriate

<sup>1</sup> AusGrid, Endeavour Energy and Essential Energy

<sup>2</sup> ActewAGL

validation and consultation in a manner that compromises procedural fairness;

- » The AER has not demonstrated that its proposed operating expenditure reductions, combined with the **retrospective nature** of the draft determinations, can be achieved without negatively affecting core networks functions required to sustain safe and reliable operation of networks;
- » Similarly, the decisions on capital expenditure allowances are overly reliant on the **deterministic use of technical models such as the calibrated 'repex' model** with weaknesses in inputs and methodology;
- » The AER has not demonstrated that its substitute expenditure forecast permits the businesses to address their **legal obligations** and avoid potentially significant implications for service outcomes including the reliability and safety valued by consumers;
- » The approach to determining **the regulated rate of return** is selective in its consideration of alternative financial models for evaluating the cost of equity and mandates a 'transition' to a trailing average cost of debt allowance; and
- » In some cases, the draft decisions are **opaque or unsound in the treatment of the network business' consumer engagement research.**

The ENA recognises the significant resourcing and stakeholder management challenges facing the AER as it rapidly administers regulatory determinations for every Australian network business under the revised rules framework. We also recognise strong consumer expectations that networks will achieve genuine cost savings wherever possible and network charges will be efficient, without reducing current levels of service.

However, as outlined in this submission, the ENA considers that unsustainable funding reductions in the draft determinations may result in 'service reductions in disguise', rather than efficiency, for consumers. The ENA urges the AER to apply a more rigorous and prudent approach to determining the building blocks of the revenue allowance. While the current draft determinations may achieve greater short-term price reductions, electricity consumers will ultimately pay more if networks are prevented from prudent funding of operations, maintenance and reinvestment. The AER's final determinations should re-establish the incentive-based regulation enshrined in the *National Electricity Rules* for the long-term interests of consumers.

The Australian energy network industry remains strongly supportive of the appropriate, robust use of economic benchmarking based on valid information as a regulatory tool, while avoiding its use in a mechanical or deterministic manner to determine revenue allowances.

Due to the significant concerns of Australian gas and electricity network businesses about the process, outcomes and application of the benchmarking analysis by the AER and its consultants, industry has requested a briefing from the AER to address these issues. At the very least it would be desirable to have an urgent technical engagement between the AER and industry in order to resolve the technical issues. This engagement is particularly important given the AER's benchmarking reports were released two months after the requirements of the *National Electricity Rules*, coincident with the draft decisions. The ENA would like to reinforce the importance of this engagement and looks forward to meeting with the AER in due course.

## 2. BACKGROUND

### 2.1. ENERGY NETWORKS ASSOCIATION

The Energy Networks Association is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia. ENA members own assets valued at over \$100 billion in energy network infrastructure.

### 2.2. CONTEXT OF THE AER'S DRAFT DECISIONS

The ENA's members strongly support a robust regulatory framework administered by an independent AER under transparent *National Electricity Rules* which seeks to achieve the *National Electricity Objective* in the long-term interests of consumers. The ENA's members were active participants in the Australian Energy Market Commission's Economic Regulation of Network Service Providers rule change in 2012 including supporting the ability of the AER to make appropriate use of economic benchmarking as a regulatory tool. Members contributed strongly to the AER's Better Regulation Program, including embracing the Consumer Engagement Guideline and other initiatives.

As the NSW and ACT determinations are among the first full evaluations of network proposals under the recently amended rules framework, it is vital that the AER serves electricity consumers by making decisions which are robust, compliant and predictable to consumers and investors familiar with the *National Electricity Rules* and guidelines published by the AER.

It is important that the AER's determinations meet the *National Electricity Objective* by serving the long-term interests of consumers. This will require:

- » A regulatory environment in which efficient investment is expected to occur in a timely manner;
- » A rate of return which is commensurate with the regulatory and commercial risks involved in providing regulated services;
- » Regulatory outcomes which provide consumers with confidence that network charges are no higher than necessary; and
- » Revenues and prices that advance the long-term interests of consumers with respect to the safety, reliability and quality of the power supply.

However, it is vital for consumers that this new regulatory framework is administered with a focus on the long term interest of consumers – rather than short-term price minimisation at the expense of long-term service and cost outcomes.

The ENA is making this submission because the approaches and methodologies applied in these determinations may form the basis for future AER decisions due in the next round of determinations. The ENA is concerned that the AER's approaches in the draft determinations have the potential to undermine the effectiveness of the electricity network regulatory regime for future determinations. This submission focusses particularly on those issues in the draft determinations which have implications not only for the long-term interests of NSW and ACT consumers, but consumers in other Australian jurisdictions subject to the *National Electricity Rules*.

## 3. KEY ISSUES

### 3.1. DEPARTURE FROM BEST PRACTICE REGULATION

The AER's decisions represent a departure from best practice regulation as they are inconsistent with past AER's decisions; the AER's published guidelines and the legal requirements of the *National Electricity Rules*. Therefore, the ENA is concerned that if upheld at the final decision stage, such decision-making by the AER will lead to greater uncertainty over future regulatory decisions' outcomes and reduce confidence in the regulatory regime.

In order to minimise network charges in the short-term, the AER's draft determinations introduce regulatory approaches and interpretations of the *National Electricity Rules* which have profound consequences for Australian electricity consumers if they are upheld and more widely adopted in future determinations. These approaches represent a significant shift which was not intended or required by the Australian Energy Market Commission's rule changes of 2012, or documented in the AER's Better Regulation guidelines. Collectively, the draft determinations have the effect of significantly altering the price/service/risk undertaking from service providers to consumers and propose to do so without:

- » Empirical assessment of the service and risk trade-offs caused by unprecedented funding reductions; and
- » Meaningful, adequate consumer engagement on those trade-offs as envisaged in the AER's own Better Regulation guideline.

The significant changes in regulatory practice introduced in the draft determinations include:

- i) **the abandonment of key elements of incentive-based regulation.** The AER's draft decisions are not in line with an incentive-based regulatory regime that is provided for within the Revenue and Pricing principles specified at section 7A of the *National Electricity Law*, schemes under *the National Electricity Rules* and the approach foreshadowed by the Forecast Assessment Guideline which states:

*"For recurrent expenditure, we prefer to use revealed (past actual) costs as the starting point for assessing and determining efficient forecasts. If a DNSP operated under an effective incentive framework, actual past expenditure should be a*

*good indicator of the efficient expenditure the NSP requires in the future. The ex-ante incentive regime provides an incentive to improve efficiency (that is, by spending less than the AER's allowance) because DNSPs can retain a portion of cost savings made during the regulatory control period. However, the incentive to spend less than our allowance must not be to the detriment of the quality of the services the DNSP supplies.<sup>13</sup>*

By using a 'top-down' estimate to impose exceptional operating expenditure reductions based on benchmarking analysis, the AER has departed from its stated revealed costs approach. The draft determinations would not only abandon the Efficiency Benefit Sharing Scheme for the forthcoming regulatory period but, also retrospectively for the 2009-14 regulatory period for ActewAGL and Essential Energy. This retrospectively abandons the explicit gain-sharing framework under the regime.

**ii) the deterministic application of benchmarking.** As discussed in section 3.2, the draft determinations have relied on mechanistic adjustments to benchmark operating expenditure estimates to introduce the most significant operating expenditure reductions in the history of Australia's electricity network industry. Apart from the substantial procedural and methodological issues discussed below in relation to the development of the benchmarking analysis, the deterministic application of benchmarking in the draft determinations is inconsistent with the cautionary guidance provided by the Australian Energy Market Commission and the Productivity Commission which expected benchmarking to be used as a diagnostic tool in the regulatory process, at least until robust data and methodologies were available<sup>4</sup>. The use of a new benchmarking analysis in such a deterministic manner to justify significant operating expenditure reductions is in stark contrast to the application of benchmarking in regulatory processes by Ofgem, where substantially longer datasets and experience are available.

**iii) decision-making that may be perceived as opportunistic due to selective or internally inconsistent approaches.** A number of approaches are

<sup>3</sup> Australian Energy Regulator, Expenditure Forecast Assessment Guideline for Electricity Distribution, 2013, p.8.

<sup>4</sup> Productivity Commission, Electricity Network Regulatory Frameworks, Report No. 62, 9 April 2013, pp.52-55.  
Australian Energy Market Commission, Review into the use of Total Factor Productivity for the determination of Prices and Revenues: Final Report, 30 June 2011, p.ii.

adopted by the AER which appear selective or inconsistent, with the common feature being that they maximise short-term price reductions to consumers, albeit at the expense of the long-term interest of consumers. For instance:

- » **Transitions.** The AER has explicitly provided to no transition to the operating expenditure allowance proposed, at the expense of network owners and to the short-term benefit of customers. However, it intends to mandate a 10 year transition to a "trailing average" approach for setting the cost of debt allowance, for businesses which already adopt a trailing average approach.
- » **Reliability funding and performance.** The AER's draft determination for ActewAGL does not take into account the inconsistency between the targets set for the Service Target Performance Incentive Scheme (STPIS) based on historic performance and the expenditure allowance provided based on minimum standards.<sup>5</sup> Equally, the draft determination does not recognise the distortionary effect on the incentive regime of an operating allowance in which the network service provider bears 100% of the impact of underperformance and a STPIS in which the provider bears only 25% of underperformance. As HoustonKemp notes, the AER draft determination for ActewAGL incentivises reliability performance which is below the efficient level and not in the interests of consumers.<sup>6</sup>

The ENA considers the final determinations should ensure impartial and internally consistent approach to constituent decisions, rather than seeking to maximise short-term price reductions over the long-term interest of consumers.

## 3.2. OPERATING EXPENDITURE FORECAST

### 3.2.1. PROCEDURAL FAILURES

The AER draft determinations set operating expenditure allowances in a top-down manner based on the inappropriate and mechanistic use of economic

<sup>5</sup> ActewAGL, Revised Regulatory Proposal 2015-19, p.593.

<sup>6</sup> ActewAGL, Revised Regulatory Proposal 2015-19, p. 59.

benchmarking which has, itself, been developed without appropriate validation and consultation in a manner that compromises procedural fairness.

The AER did not consult on the final benchmarking models that it utilised in the draft determinations for NSW and ACT electricity distribution businesses during the Forecast Expenditure Assessment Guideline development process. The ENA notes that the AER dedicated significant efforts in order to engage with the industry in relation to the Augex and Repex models. While the ENA has significant concerns with the performance of these models, network firms appreciated the fact that these models underwent consultation prior to being used more substantively in regulatory determinations. In contrast, the AER has failed to release its benchmarking models in advance of the NSW and ACT regulatory determination process. As a result, the AER relied upon an untested and non-peer reviewed benchmarking approach as the basis for rejection and substitution of the businesses' operating expenditure forecasts.

The ENA notes that AER has made substantial changes to the benchmarking approach that it foreshadowed in its Forecast Expenditure Assessment Guideline. The ENA is concerned that the AER has made such substantial changes to the way it undertook benchmarking in the draft determinations, including changes to techniques, the model specification and data and that these material changes were not subject to proper consultation and peer review.

A further issue is that in its draft determinations the AER relied upon the annual benchmarking report which was not released in accordance with the *National Electricity Rules* and did not undergo the required consultation and scrutiny. Under the revised *National Electricity Rules*, the AER is required to produce an annual benchmarking report in consultation with network service providers (cl. 8.7.4 of the *National Electricity Rules*). In making its decision on the businesses' proposed capital and operating expenditure, the AER has to have regard to its most recent benchmarking report. This report was required to be released by the AER by September 30, 2014 (cl. 6.27 (d) of the *National Electricity Rules*). The transitional arrangements put in place by the Australian Energy Market Commission were intended to provide NSW and ACT electricity distribution businesses with 2 months to consider the AER's first benchmarking report before the release of the draft determinations in accordance with the timeframes set out in clause 11.56.4(o). It was not intended that consideration should only be able to occur during the brief period provided for the preparation of a revised regulatory proposal.

Additionally, the AER does not appear to have complied with the consultation requirements under cl. 8.7.4(c). The AER benchmarking report released on 27 November 2014 was fundamentally different to the draft report which it circulated to network businesses in August 2014. For instance, ActewAGL has noted the final report included "...two further benchmarking techniques, specifically *stochastic frontier analysis* (which is the AER's preferred technique) and *least squared estimation regression analysis*, in three further models; and adjustments to its benchmarking analysis to address deficiencies in that analysis in accounting for ActewAGL Distribution's operating environment."<sup>7</sup>

Given the final report was not subject to consultation required under the clause 8.7.4(c) of the *National Electricity Rules*, the businesses' first real opportunity for comment on the benchmarking approach ultimately adopted by the AER has been in their revised regulatory proposals. Given the potentially significant operational implications of the AER's proposed decisions based on benchmarking, it would be desirable for the AER to also explicitly address the obligation under Clause 8.7.4(b)(2) of the *National Electricity Rules* to consult with the ACT's Technical and Safety Regulator about relevant technical and safety obligations in preparing its annual benchmarking report.

These procedural failures undermine confidence and transparency in the regulatory framework. It is important that the AER redress these issues prior to its final determinations in relation to NSW and ACT businesses and confirms resourcing or management actions which will avoid procedural fairness being compromised in forthcoming determinations.

### 3.2.2. AER'S BENCHMARKING RESULTS

In its draft determinations for NSW and ACT electricity distribution businesses the AER made substantial use of benchmarking in setting distribution operating expenditure. The ENA has significant concerns with the robustness of the inputs and outputs of the benchmarking analysis.

The Australian energy network industry remains strongly supportive of the appropriate and robust use of economic benchmarking based on valid information as a regulatory tool, while avoiding its use in a mechanical or deterministic manner to determine revenue allowances.

Due to the significant concerns of Australian gas and electricity network businesses about the process, outcomes

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<sup>7</sup> ActewAGL, Revised Regulatory Proposal 2015-19, p.120.



and application of the benchmarking analysis by the AER and its consultants industry has requested a briefing from the AER to address these issues. This engagement is particularly important given the AER's benchmarking reports were released two months after the requirements of the *National Electricity Rules*, coincident with the draft decisions. At the very least it would be desirable to have an urgent technical engagement between the AER and industry in order to resolve of the technical issues. The ENA would like to reinforce the importance of this engagement and looks forward to meeting with the AER in due course.

The industry is concerned that the AER's current approach to the development of the benchmarking analysis and its application within the draft determinations is inconsistent with the rigor and transparency required for good regulatory practice and may actually undermine confidence in benchmarking as a regulatory tool.

A key concern is the application of economic benchmarking to deterministically set 'top-down' operating allowances. The ENA and affected members have raised significant concerns with the AER regarding the robustness of the inputs and outputs of the benchmarking analysis. Some of the ENA's specific concerns are:

» **Data quality** – extensive use has been made of international data from just two jurisdictions (New Zealand and Ontario) to 'back fill' a lack of sufficient data points in analysis to establish the relative efficiency of Australian networks. This has been mixed with 'backcast' Australian estimates of data points, rather than out-turn data, introducing further uncertainty.

It appears that the AER have not provided any detailed analysis as to the relationship between the cost drivers and operating costs across the countries. The ENA is concerned that the use of international data, in a manner which was not subject to thorough consultation or peer review, appears to have overwhelmed the Australian data used in benchmarking and necessitated the omission of variables in the AER's benchmarking analysis.

» **Comparability** – benchmarking outputs do not appear to have been robustly tested for the different basis on which input data was collected and maintained by networks existing reporting and IT systems. As the AER was aware before its benchmarking, it has been well understood that, while network businesses complied with the RIN requirements there were unavoidably substantive differences in the basis of preparation. This extends to differences in definitions and data collection limitations within individual businesses. Even where

data input has a consistent basis of preparation, comparisons should be treated with caution due to a range of circumstantial differences between businesses which are unrelated to their efficiency. For example, the differences in cost allocation and capitalisation policies across the businesses have implications for costs assigned to operating expenditure. Lower/higher capitalised overheads will inflate/deflate the relative level of a business's operating expenditure when compared to its peers. The AER did not appropriately account for these differences; therefore, its benchmarking would disadvantage businesses with lower capitalisation of overheads (holding all other things constant). As highlighted in a review by Frontier Economics for Networks New South Wales, there are substantial differences in some definitions between the Australia RIN data and international jurisdictions that the AER benchmarking analysis has not taken into account. For instance the definitions of key variables such as circuit length and customer numbers are substantially different between the Australian RIN data and New Zealand<sup>8</sup>.

» **Model stability and performance** – the application of the underlying benchmarking and cost models produce outcomes which are unrealistic. As an example, the benchmarking model adopted by the AER implies efficient operating expenditure for Essential Energy which is implausible without impacting on service outcomes, reliability or safety. After excluding vegetation management costs (which are generally outsourced through competitive contracting) the benchmarking model implies that Essential Energy could operate with operating funding which could only support a workforce of about 10 per cent of the current staffing. Further, it would leave Essential Energy operating with less operating expenditure than the largely urban-based Endeavour Energy, despite having a network over 5.5 times the line length. Similarly, the AER has reduced ActewAGL's operating expenditure to a level not seen since before 1999 despite a 40 per cent increase to scale in terms of assets to maintain and customers to serve.<sup>9</sup> In addition, the AER's benchmarking model is very sensitive to the inclusion of alternative operating environment variables. CEPA expert report for ActewAGL concluded that in view of the sensitivity of the inefficiency results to the specification of the modelling, significant caution should be placed on the results of any one

<sup>8</sup> AusGrid Revised Regulatory Proposal, p.148.

<sup>9</sup> ActewAGL, Revised Regulatory Proposal 2015-19, Table 2.5, p.62.



specification as it is unlikely to control for all the differences between the companies.<sup>10</sup> Also, a review by Frontier Economics for Networks New South Wales concluded the AER's model fails to control adequately for important differences that arise as a result of differences in service area and customer density.<sup>11</sup>

It is generally recognised that benchmarking techniques are unable to fully control for all the individual characteristics of businesses and the interpretation of results should be careful to avoid assuming that differences are all explained by management efficiency. In its draft determinations, the AER has made upward adjustments ranging from 10 to 30 per cent to the base year opex to address this issue. It is unclear to the ENA on what empirical basis these adjustments have been derived and whether they are sufficient to provide businesses with a reasonable opportunity to recover at least the efficient costs. For example, the AER made a consistent 10 per cent adjustment for all three NSW electricity distribution businesses in order to account for 15 operating environment differences that were not captured in the AER's preferred benchmarking model.

Network firms' consultants Huegin and Frontier Economics have both concluded that the post-modelling adjustments are unlikely to be sufficient to account for the operating environment differences. Furthermore, making the necessary adjustments before modelling, rather than after modelling, appears to be more appropriate and is also in line with Ofgem's approach.

The ENA considers that such arbitrary and unsubstantiated post-modelling adjustments will lead to greater uncertainty over future regulatory decisions' outcomes and reduce confidence in the regulatory regime.

The AER's benchmarking practice is inconsistent with best practice, as identified in the Productivity Commission's measures of benchmarking<sup>12</sup>. A range of network firms and industry commentators have highlighted concerns in relation to the validity, accuracy, robustness and fit-for-purpose nature of the benchmarking measures and statistical practices including: controlling for operating environments, divulgence of model selection process, model adequacy, meaningful inferences, corroboration and explanation of inefficiencies.

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<sup>10</sup> CEPA, *Benchmarking and Setting Efficiency Targets for Australian DNSPs*, January 2015, p.v.

<sup>11</sup> Frontier Economics, *Review of the AER's econometric benchmarking models and their application in the draft determinations for Networks NSW*, January 2015, p. xii.

<sup>12</sup> AusGrid, *Revised Regulatory Proposal and Preliminary Submission*, 2014, p. 142.

The ENA recognises that consultant reviews mentioned in this submission have been commissioned by Networks New South Wales and ActewAGL. There are clearly substantial issues which highlight the need for peer review to provide the AER and stakeholders with confidence in the benchmarking analysis. Network firms have urged the AER and the Australian Government, to seek their own review of the AER's benchmarking approach and model outputs by a recognised independent body with substantial expertise in benchmarking issues. This is consistent with Productivity Commission's recommendation that the AER should submit its major benchmarking analyses of electricity networks for independent expert peer review.<sup>13</sup> The Productivity Commission is well-placed to undertake this function, having recently examined the issue in its *Review of Electricity Network Regulatory Frameworks*.

### **3.2.3. ROLE OF BENCHMARKING IN OPEX ASSESSMENT**

The ENA considers that the AER has placed unreasonable weight on its benchmarking analysis in rejecting businesses' operating expenditure forecasts. In doing so, the AER has also failed to have sufficient regard to other factors that it is required to consider under the *National Electricity Rules*. Benchmarking is one of 11 factors that the AER needs to take into consideration. In addition, the ENA disagrees with the AER's decision to include two additional benchmarking factors, as consideration of benchmarking is already captured under cl. 6.5.6 (e) (4).

The ENA notes the AER's draft determinations summarise how the AER has taken the operating expenditure factors into account. It appears that in many instances the AER relied on its benchmarking analysis to assess whether the proposed expenditure had met the criteria. The AER's draft determinations indicate a reliance on its benchmarking analysis which is almost exclusive, through its application in many of the other operating expenditure criteria. For instance, the operating expenditure criteria provide for consideration of the extent to which the business actual operating expenditure has outperformed the efficient operating expenditure allowance set by the AER in the previous regulatory determination. The AER effectively placed little weight on this performance due to its undue focus on a benchmarking estimate. The ENA considers such an approach does not represent a proper assessment of businesses' proposals under the operating expenditure criteria.

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<sup>13</sup> Productivity Commission, *Electricity Network Regulatory Frameworks*, Report No. 62, 9 April 2013, p.55.

Having decided to impose a substitute forecast of operating expenditure, it is concerning that, the AER did not as in previous determinations, undertake a detailed assessment of the components of operating expenditure or commission an engineering review of maintenance programs. Instead, the regulator has placed undue weight on the nascent benchmarking techniques to justify significant operating expenditure reductions.<sup>14</sup>

The AER effectively used its alternative estimates of operating expenditure as a basis for substituting businesses' proposed forecasts, rather than engaging with the details of businesses' forecasts. This is evident from how the AER describes its assessment process:

*Our approach is to compare the service provider's total forecast opex with an alternative estimate that we develop ourselves. By doing this we form a view on whether we are satisfied that the service provider's proposed total forecast opex reasonably reflects the criteria. If we conclude the proposal does not reasonably reflect the opex criteria, we use our estimate as a substitute forecast.<sup>15</sup>*

This approach fundamentally overturns the policy intent for a service provider's regulatory proposal to be considered in full, and to be a starting point for examination. Further, the ENA considers that the AER did not provide sufficient reasons and analysis to support that its substitute forecasts meet the operating expenditure criteria.

The ENA considers that such an approach is inconsistent with the Australian Energy Market Commission's intent that the regulatory proposal should be the most significant input into the AER's decision. The AER should have undertaken a more detailed examination of businesses' proposals to ensure that the decisions appropriately consider each business's circumstances and drivers of expenditure. Indeed, NSW and ACT electricity distribution businesses expressed significant concerns that the AER did not sufficiently engage with their regulatory proposals.

Finally, the AER used benchmarking analysis as a basis for its substitute forecast. The previous two sections demonstrate that it is unreasonable to use benchmarking analysis for these purposes due to limitations in its development and application.

### 3.2.4. IMPACT OF THE AER'S OPEX DECISION

The magnitude of the operating allowance reductions imposed by the AER's draft determinations appears to be unprecedented and would reduce operating expenditure for these businesses in real terms to a level which has not been observed in 10 to 15 years. This is particularly significant, given the effect is to reduce operating expenditure to a level significantly below the quantum approved as efficient by the AER in the previous regulatory period, as demonstrated in [Figure 1](#).

Under the *National Electricity Rules* which applied to the AER's decisions for the 2009-14 period, the regulator was not permitted to approve an operating expenditure allowance for the businesses which was inefficient. In a number of cases, the relevant network has underspent its operating expenditure allowance previously approved as efficient by the AER, and yet the regulator has concluded based largely on its new benchmarking analysis that such operating expenditure is now significantly above an efficient level. This is used to justify a significant and backdated, reduction in the operating expenditure allowance. This regulatory practice has the potential to threaten confidence in the investment environment required to support the long-term interests of consumers and to undermine the model for incentive-based regulation intended by the regulatory regime.

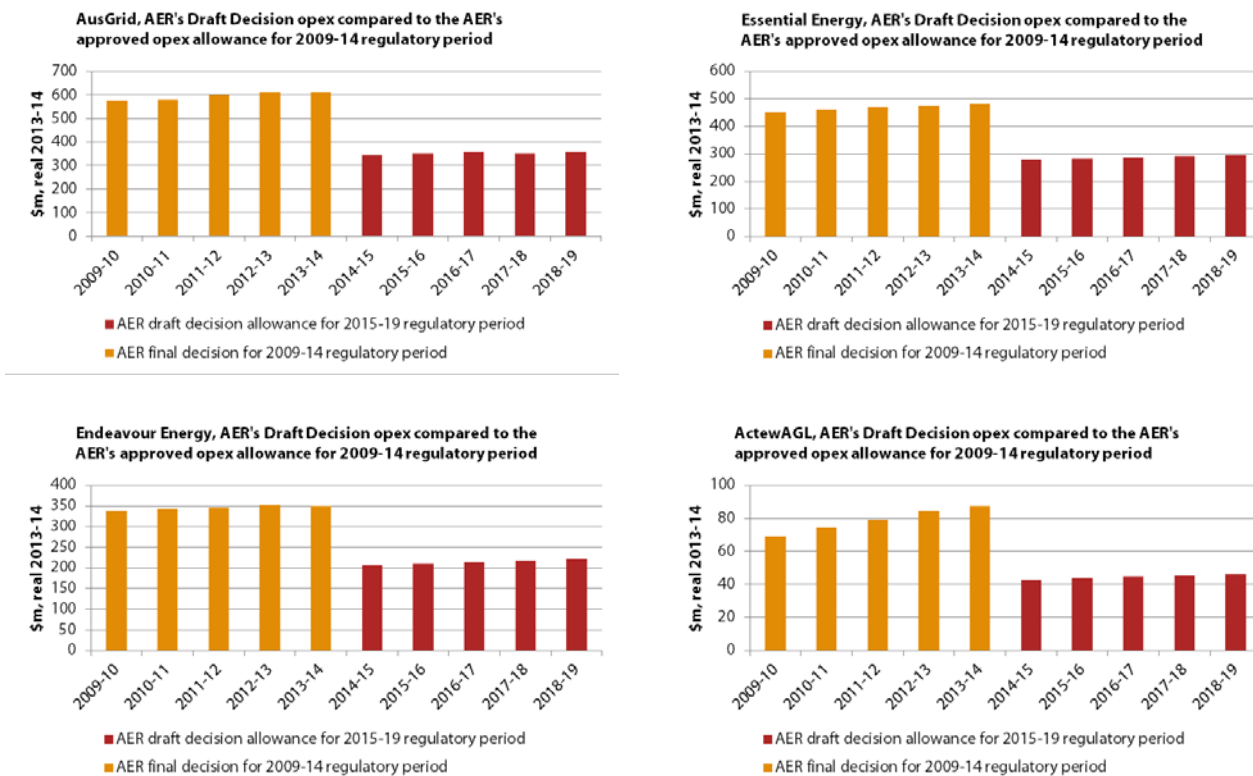
The AER has not demonstrated that its proposed operating expenditure reductions, combined with retrospective nature of the draft determinations (which include a true-up between the placeholder revenue and full determination) can be achieved without negatively affecting core networks functions required to sustain safe and reliable operation of networks.

The draft determinations effectively impose retrospective reductions in operating (and capital) allowances which are outside of the reasonable anticipation of networks given the transitional determinations. [Figure 2](#) demonstrates how the retrospectivity of the AER's decisions would leave NSW and ACT businesses to operate their networks for the remaining four years of the regulatory period with the operating expenditure, which is significantly below the AER's draft decision allowance.

<sup>14</sup> AusGrid, Revised Regulatory Proposal, p.137.

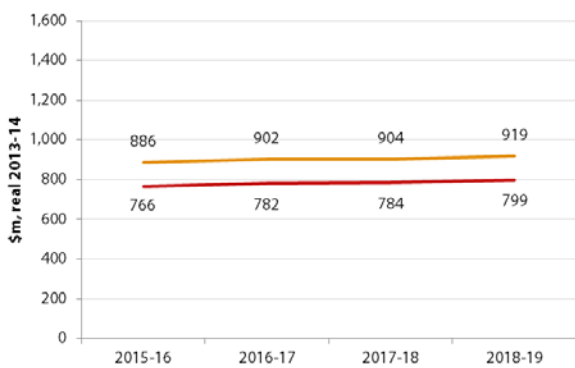
<sup>15</sup> AER, Draft Decision Endeavour Energy distribution determination 2015-16 to 2018-19 – Attachment 7, November 2014, p12.

**Figure 1: The AER's Changing View of Efficient Operating Expenditure**



Source: AER's Final Decisions for 2009-14 regulatory period and AER's Draft Decisions for 2015-19 regulatory period

**Figure 2: Operating expenditure, retrospectivity of the AER's draft decisions and true-up**



**Comment:** Red line represents the AER's draft operating expenditure allowance for the NSW and ACT electricity distribution businesses. Orange line shows how 'over-recovery' from transitional year will need to be accounted for in the remaining four years of the regulatory period.

Source: AER draft decisions

The AER's draft decisions would result in significant changes in revenues, AER and prices between the transitional and full determinations. This outcome is inconsistent with the Australian Energy Market Commission's intent for smooth price changes over the two determinations, provided in cl.11.56.3 (b) and (d) of the *National Electricity Rules*. Such volatility in revenues and prices is contrary to the long-term interests of consumers. This is because significant price variations would not contribute to the *National Electricity Objective*, as it is not consistent with the Revenue and Pricing Principles with regard to promoting efficient investment.

### 3.3. CAPITAL EXPENDITURE FORECAST

The AER made significant reductions to the proposed capital expenditure programs of NSW and ACT electricity distribution businesses (Table 1). The cuts up to 42 per cent of distribution capital expenditure are based largely on the AER revising businesses' replacement expenditure proposals.

In setting replacement capital expenditure, the AER placed significant weight on the Repex model's outputs, in a number of instances setting the replacement expenditure allowance for the relevant categories at an upper limit of the reasonable range derived by the model.

**Table 1:** AER's proposed reductions to replacement expenditure

Network firm	Repex reduction (%)
AusGrid	-42.0
Essential Energy	-21.2
Endeavour Energy <sup>16</sup>	-35.2
ActewAGL	-25.2

**Source:** AER Draft Decisions for AusGrid, Essential Energy, Endeavour Energy and ActewAGL.

The AER's calibrated Repex model uses asset age and standard deviations based on businesses' replacement volumes from the past five years.

The calibrated Repex model has the following key limitations:

- » The model does not take into account replacement drivers other than asset lives. There are drivers other than assets lives factors relating to risks that are unrelated to age or deterioration. One example of this is a need to comply with bushfire mitigation and changes in environmental legislation.
- » The model is calibrated to replacement volumes from the past five years, thereby assuming that past replacement volumes and expenditure are indicative of a business's future needs. There are problems with this assumption as it ignores factors such as investment cycle or one-off major projects. Therefore, the model is unlikely to produce reasonable forecasts of capital

expenditure that reflect the circumstances of network businesses in the next regulatory control period.

- » The model adopts a goal seeking approach that seeks to derive a "standard life" for an asset class based on historical expenditure and the asset age profile. If there is a lack of data or underspending in the past, this will manifest as unrealistic life assumptions.

The ENA has argued in the past that technical models such as the Repex model can be a useful part of a suite of tools in providing a 'reasonableness check' on expenditure forecasts for some specific processes or activities, but should not be used deterministically.

The ENA urges that, to the extent that the AER rejects the bottom-up forecasts presented by NSW and ACT electricity distribution businesses, the AER's final decisions should include assessment of supporting evidence contained within businesses' regulatory proposals in relation to replacement expenditure requirements for individual asset classes or assets.

The ENA considers that deterministic use of high-level tools, such as the Repex model, can lead to erroneous outcomes. For example, where a business considers that the failure of the asset is likely, replacement prior to the asset's average replacement age may be justified. The Repex model is not capable of accounting for such circumstances, and therefore, cannot substitute for a detailed analysis of replacement programs.

The ENA also notes that in its modelling the AER relied on 'backcast' data rather than actual data, introducing further uncertainty to the modelling outcomes. Network firms have argued that underlying data on age of assets, replacement ages and expenditure costs can be highly unreliable due to the fact the data were not historically stored in the manner requested by the AER in its Regulatory Information Notices.

Further, the AER does not appear to have given due consideration to the trade-offs between different expenditure categories, for example a reduction in replacement expenditure is likely to lead to an increase in the operating expenditure required to maintain the aging assets.<sup>17</sup> Add to this, AER did not consider the consequences of the deferred expenditure, which has the potential to significantly increase businesses' future capital expenditure requirements.

The ENA considers that the AER's substitute replacement expenditure forecast cannot be supported given the

<sup>16</sup> There are concerns with how the AER has determined this number for Endeavour Energy. For further information see Endeavour Energy, Revised Regulatory Proposal, pp.105-106.

<sup>17</sup> Jacob, System Capex and Maintenance Prudency Assessment, January 2015, p.6.

information before the AER. The reduction of expenditure based on the outputs from the Repex model risks delivering a forecast which is insufficient to maintain safety and security of the networks to meet their obligations under the *National Electricity Law*.

### 3.4. PRUDENT ASSESSMENT OF DECISION CONSEQUENCES

The AER did not demonstrate how it took into account the consequences of its decisions for the legal obligations of the network service providers and potentially significant implications for service outcomes including the reliability and safety valued by consumers.

Further, the ENA has significant concerns with the new regulatory principles evident in the AER's draft decisions for NSW and ACT electricity distribution businesses:

- » The AER has suggested that network firms should reduce replacement expenditure and accept greater risk and higher rates of asset failure,<sup>18</sup> and
- » The AER has suggested that it may be more efficient to have more local service interruptions at local level with customer compensation.<sup>19</sup>

In making these suggestions, the AER appears to have disregard consumer engagement research on customer preferences that NSW and ACT electricity network businesses submitted to the AER in support of their regulatory proposal.

It is not clear how the AER has undertaken appropriate due diligence in the constituent decisions of its draft determinations to ascertain the operational impacts of operating and capital expenditure reductions on consumers including the safety, reliability and quality of electricity network services. For example, ActewAGL notes that its operating expenditure would be reduced in real terms to a level not seen since before 1999 and that the network asset base and its customers have increased 40% since then.

The ENA urges the AER to fully address this omission by assessing the operational impacts prior to any final determination which involves a step change in funding which may impact safety, reliability and other consumer outcomes. This is more important where such impacts may

not be immediate or short-term, but nevertheless are an economic cost of the AER's decision ultimately paid for by consumers.

The ENA notes that AusGrid commissioned independent technical analysis concluding that the impacts of the AER draft determination would include a 7.3% increase in the frequency of customer outages (SAIFI) by 2020 and a 25% increase in the duration of customer outages (SAIDI) by 2020.<sup>20</sup>

R2A noted the potential for significant increases in the safety risks including the fatality rate, if Ausgrid were to operate within the revenue allowance proposed by the AER:

*If Ausgrid were to operate within the constraints of the AER's draft determination, then in the short term, the number of safety incidents, especially to employees, is expected to spike. ....In the longer term, this analysis indicates that for the foreseeable threats to members of the public considered in this review, an increase of around 3.4 per annum in the fatality rate from network hazards would most likely occur. In addition, the likelihood of the Ausgrid network starting a catastrophic bushfire (meaning 100 fatalities and 1,000 houses lost) more than doubles as a result of increased equipment failures due to longer inspection cycles.<sup>21</sup>*

Similarly, a report by AECOM for ActewAGL concluded that the magnitude of capital and operating expenditure allowances proposed in the AER's draft determinations would result in higher asset failure rates, inability to carry out planned maintenance and an increase in response time to more than double of current performance.<sup>22</sup>

The ENA notes that electricity networks across NSW and ACT have delivered reliable and safe supply of electricity to their customers. The trends in parameters SAIDI and SAIFI, which represent the duration and frequency of service interruptions, are demonstrated in [Figure 3](#).

<sup>18</sup>AER, Draft decision for Endeavour Energy distribution determination 2015-16 to 2018-19, November 2014, Attachment-6, Capital Expenditure, p.6-59.

<sup>19</sup> AER, Draft decision for Endeavour Energy distribution determination 2015-16 to 2018-19, November 2014, Overview, p.26.

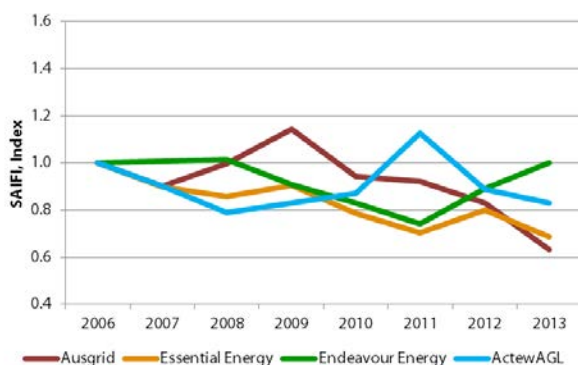
<sup>20</sup> AusGrid, Revised Regulatory Proposal, p.36.

<sup>21</sup> AusGrid, Revised Regulatory Proposal, p.36.

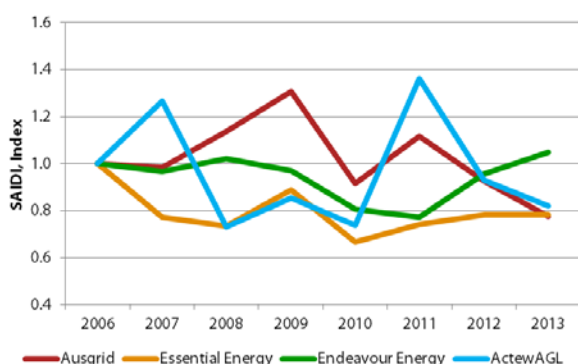
<sup>22</sup> AECOM, The Impact of the AER's Draft Decision on ActewAGL's Service and Safety Performance, January 2015, pp.20-21.



**Figure 3:** SAIDI and SAIFI parameters (indexed, 2006=1)



**Note:** excluding MEDs, whole of network unplanned SAIFI.



**Note:** excluding MEDs, whole of network unplanned SAIFI.

**Source:** Economic benchmarking RIN data, SAIDI and SAIFI excluding excluded outages.

Most customers have experienced improvements in service measures since 2006, which was a point in which there was significant policy and government concern around the potential for underinvestment affecting future services. There does not appear to be a systematic consideration by the AER of the potential for historically large capital and operating expenditure reductions to affect future reliability or service measures. Instead, these draft determinations wind back expenditure to a level which may not be prudent, or consistent with managing and maintaining the long-term service potential of the network assets.

Further, it is unclear to the ENA on what rational basis the AER has arrived at the conclusion that the businesses are too risk-averse when the interests of consumers are concerned. For example, over the last ten years ActewAGL undertook three studies on customer willingness to pay for network services. These studies estimated the amounts that customers are willing to pay for changes in supply reliability and quality, undergrounding of overhead power lines and customer service levels. The findings of these studies indicated that customers value high service levels and

would not accept lower service levels in exchange for corresponding lower prices.<sup>23</sup> These findings contradict the AER's suggestion that it may be more efficient to compensate customers after a service interruption that ensure that there is sufficient capacity to avoid the event.<sup>24</sup>

If maintained at a final decision stage, the AER's current regulatory approach would encourage network owners to defer prudent and efficient capital or operating expenditure programs, increasing the risks and service and reliability outcomes in the future. Should this deferral be sustained over time, the conditions for a further phase of underinvestment, potentially followed by a short-term policy response to the consequences of this underinvestment, is possible. As a result, consumers may face higher risks arising from network asset failures and also price volatility and networks may face a higher overall risk of assets.

### 3.5. REGULATED RATE OF RETURN

The network sector has a number of issues with the AER's Rate of Return Guideline which have not yet been addressed by the AER. The ENA considers that the guideline approach to estimating the return on equity and the return on debt falls short of meeting the requirements the revised National Electricity Rules. This is because the AER's preferred methodology wrongly limits the scope of information considered to be relevant in making an estimate of the prevailing cost of equity and may not allow NSW electricity distribution businesses to recover at least the efficient costs of debt finance.

The revised *National Electricity Rules* require that the AER genuinely considers and weighs a broader range of estimation methods, financial models, market data and other evidence in determining the allowed rate of return.

In relation to the return on equity, the ENA considers that the AER's 'foundation model' compromises the capacity for each piece of evidence to be given due weight through the return on equity estimation process. The exclusion of the Fama-French Model is an example of how the AER's approach fails to give the relevant evidence clear weight. The ENA notes that the Fama-French Model is commonly used by market practitioners in making important investment decisions, as well as in academic work. The contribution of the Fama-French Model to improving predictability of stock returns has been recognised by the

<sup>23</sup>ActewAGL, Revised Regulatory Proposal 2015-19, p.12.

<sup>24</sup>AER, Draft decision for ActewAGL distribution determination 2015-16 to 2018-19, November 2014, Overview, p.24.



Nobel Prize Committee in its reasons for awarding the Nobel Prize for Economics to Eugene Fama. The ENA considers that this recent development is relevant to consideration of Fama-French Model and the role it should play in estimating the allowed return on equity.

Further, the ENA has argued in the past that the AER's criteria, which the AER had identified as guiding the implementation of its overall rate of return approach, risks delivering the rate of return outcomes that fail to have regard to relevant evidence. There is high potential for these criteria to conflict with the requirements of the rules and lead the AER into making decisions which are inconsistent with the rules. It is the application of these criteria that lead the AER to give no weight to the Fama-French model.

The ENA continues to support the 'multi-model' approach which the industry advocated for during the Rate of Return Guideline development process. The 'multi-model' approach transparently considers all relevant evidence, discusses the reliability of each piece of evidence, and assigns weights to each piece of evidence, as well as specifies the reasons for assigning those weights.

Given that the AER has a clear preference for the Sharpe-Lintner CAPM (SL CAPM), which it uses as 'foundation model', a number of businesses decided to derive the best possible estimate of the return on equity under the SL CAPM. However, this should not be considered as an agreement that the SL CAPM is a superior return on equity model.

NSW electricity distribution businesses relied on the SFG's regression based estimates for beta, risk free rate (RFR) and market risk premium (MRP), based on long-term historical data, when populating the model. A long-term averaging approach achieves consistency between the nature of the MRP estimate (largely historically based) and the RFR. This can be viewed as consistent with ensuring decisions take fuller consideration of the Wright approach, which is discussed and recognised in the AER's guideline.

Turning to the return debt, NSW and ACT electricity distribution businesses proposed an immediate transition to the trailing average approach. In its draft decisions, the AER has rejected an immediate adoption of the trailing average approach.

The ENA considers that the transition path set out by the AER in its Rate of Return Guideline is fair and appropriate, where a transition to the new cost of debt approach is to apply. Should the AER propose a transition for businesses that already use a debt financing approach consistent with an efficient benchmark, the AER should satisfy itself that the

businesses retain a reasonable opportunity to recover at least the efficient costs of debt finance.

### 3.6. CONSUMER ENGAGEMENT

Network businesses have embraced increasing forms of consumer engagement and stakeholder transparency in recent years including in the development of regulatory proposals, trade-offs between customer service, reliability and cost outcomes, pricing proposals and the planning of network infrastructure or non-network solutions. The issue of consumer engagement has been further reinforced in the AEMC's 2012 rule change process, as well as the AER's initiative to develop the Consumer Engagement Guideline.

NSW and ACT electricity distribution businesses have made genuine efforts to effectively engage their consumers. The businesses conducted a range of engagement activities including, public forums, customer surveys, presentations and conversations with consumer representative groups, willingness to pay studies etc. The extensive consumer engagement activities formed a significant input in development of businesses' proposals.

In its draft determinations, the AER concluded that businesses' proposals have failed to reflect consumer concerns and views. The AER also criticised businesses compliance with its Consumer Engagement Guideline. The ENA considers that such criticism is unreasonable, given the information provided to the AER throughout the determination process; and the limited time available from the publication of the final Consumer Engagement Guideline.

In some cases, the AERs draft determinations are not transparent in evaluating the validity of the network business' consumer engagement research on customer preferences, and the reasons for assessments by the service provider being set aside appear arbitrary or unsound. In making its judgment on the effectiveness of consumer engagement, the AER relies heavily on feedback provided in submissions from various consumer groups. It is not clear from the draft determinations how submissions have been weighted or how the AER has dealt with some of the claims put forward in these submissions.

The ENA strongly supports the enhanced consumer engagement with network processes when assessing future network expenditure. It is important that network firms and the AER work together to ensure that there is an alignment with consumer engagement best practice.