Submission on the AER's *Draft decision ActewAGL distribution determination 2015-16 to 2018-19* dated November 2014 pursuant to clauses 6.10.2(c) and 6.10.3(e) of the National Electricity Rules

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PUBLIC VERSION

Contents

Introduction

1. ActewAGL Distribution makes this submission pursuant to clauses 6.10.2(c) and 6.10.3(e) of the National Electricity Rules (**Rules**).[1] The former clause permits any person to make a written submission to the AER on its *Draft decision ActewAGL distribution determination 2015-16 to 2018-19* dated November 2014 (**Draft Decision**) within the time specified in the invitation for written submissions on its Draft Decision published by the AER in accordance with clause 6.10.2(a)(5) (being 13 February 2015), while clause 6.10.3(e) permits the AER to invite written submissions on the revised regulatory proposal.

2. This submission sets out contentions and materials on which ActewAGL Distribution relies in responding to the AER's Draft Decision and in support of ActewAGL Distribution's revised proposal set out in its *Revised Regulatory Proposal 2015-19 Regulatory control period Distribution services provided by the ActewAGL Distribution electricity network in the Australian Capital Territory* dated January 2015 (**RRP**).

3. More specifically, under cover of this submission, ActewAGL Distribution adduces a range of materials, such as an opinion from Mr Neil Young QC and Mr Andrew McClelland of Counsel and various expert reports, that support the propositions advanced by ActewAGL Distribution in responding to the Draft Decision and in proposing its revised proposal. These materials are listed in the List of Attachments that appears in Appendix 1 to this submission.

4. This submission details:

    4.1 the propositions advanced by ActewAGL Distribution in the RRP in response to the Draft Decision and/or in support of its revised proposal in respect of which ActewAGL Distribution relies on the material now adduced; and

    4.2 the additional contentions now advanced by ActewAGL Distribution in reliance on those materials.

5. ActewAGL Distribution makes this submission against the background of:

    5.1 the limited time afforded to ActewAGL Distribution under the Rules to prepare its revised proposal and respond, in particular, to:

[1] Clause 11.56.4(a) of the Rules relevantly provides that 'current Chapter 6' governs the making of a distribution determination for the subsequent regulatory control period (**SRP**) for an 'affected DNSP' (which is defined in clause 11.55.1 of the Rules to include ActewAGL Distribution). Clause 11.65.2 of the Rules relevantly provides that references in rule 11.56 to 'current Chapter 6' are to be read as Chapter 6 of the Rules as in force immediately after the National Electricity Amendment (Network Service Provider Expenditure Objectives) Rule 2013) came into force. That rule came into force on 26 September 2013 contemporaneously with version 58 of the Rules. Furthermore, clause 11.65.2 states that references to 'current Chapter 6' in clause 11.56 of the Rules are to be read in this way despite clause 11.55.3 (which provides that rule 11.56 prevails to the extent of any inconsistency over any other clause of the Rules). Accordingly, except where otherwise stated, references to Chapter 6 of the Rules in this submission are to Chapter 6 in version 58 of the Rules.

- significant new economic benchmarking techniques and analysis included in the Draft Decision that, contrary to the scheme of the Rules, were not foreshadowed or consulted upon by the AER in the course of preparing its first Annual Benchmarking Report for distribution in accordance with clause 6.27 of the Rules; and

- the significant, unanticipated change in the AER's regulatory approach to forecasting expenditure (in particular as to the deterministic use of the economic benchmarking techniques and analysis referred to above), that the Better Regulation program required by the AEMC's 2012 Rule amendments was intended to avoid; and

5.2 the other procedural fairness concerns in respect of the AER's conduct in making the Draft Decision raised by ActewAGL Distribution in section 2.8 of the RRP.

6. ActewAGL Distribution's confidentiality claim in respect of this submission is detailed in Appendix 2 to this submission.

Importance of reliability to consumers

7. In its Draft Decision, the AER stated that it was not satisfied that ActewAGL Distribution's proposal adequately reflected the views of consumers, noting in particular that submissions suggested that consumers are willing to bear a higher risk of disruption for lower costs and prices and that the conclusions from ActewAGL Distribution's willingness to pay studies to the contrary were not consistent with the findings of the NSW and QLD Governments or AEMO's recent willingness to pay studies.[2] The AER observed that ActewAGL Distribution had not explained why its findings were inconsistent with these studies.

8. ActewAGL Distribution responded to these AER concerns in section 1.2.2 of its RRP.

9. In addition, in its Draft Decision, the AER stated in relation to the application of the service target performance incentive scheme (**STPIS**) to ActewAGL Distribution that the AER's STPIS establishes targets based on historical performance and provides financial rewards or penalties for distributors exceeding or failing to achieve, respectively, those targets, which rewards and penalties are calculated by taking into account the value of customer reliability (**VCR**). The AER then concluded that:[3]

> We do not accept ActewAGL's proposed VCR, which is based on evidence from the NERA and ANU studies. Instead of applying the proposed VCR, or the VCR prescribed in clause 3.2.2 of the STPIS, we consider the most recent VCR should be applied as it better reflects customers' current value for reliability.

10. In section 12.4 of the RRP, ActewAGL Distribution responded to the AER's draft decision to apply the "most recent VCR" with the following contention:

> VCR estimates at the NEM region level should not be used for applications that are specific to distribution networks in the ACT…The available evidence – namely AEMO's VCR estimate for the New South Wales NEM region…and the estimate derived by ActewAGL Distribution for the ACT…suggests the value placed on reliability by customers in the ACT is different to the value placed on reliability by customers in New South Wales.[4]

11. As a part of its Consumer Analysis Program, ActewAGL Distribution commissioned ORIMA Research to conduct qualitative consumer research, the results of which were received by ActewAGL Distribution in early 2015.[5]

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[2] Draft Decision, pp. 26 and 66-68

[3] Draft Decision, Attachment 11, pp. 11-7 to 11-9

[4] RRP, page 610

[5] A total of 20 people participated in the research, which was conducted in Canberra, on 3 and 4 December 2014 via three focus groups. The research was qualitative in nature, and participants were Canberra residents, representing the average householder

12. ActewAGL Distribution now adduces, as further support for its contention that its customers accord a higher value to reliability than customers in other jurisdictions and the AER should rely upon the NERA and ANU studies that it refers to in its RRP, Orima Research's report titled *ActewAGL Distribution: A report on qualitative consumer engagement research* and dated 20 January 2015 (**Orima Report**) as Attachment 1 to this submission. Orima Research relevantly concludes in the Orima Report (at p. 9):

> Overall, the research found that most participants considered reliability to be the most important factor in relation to their energy supply. Participants reported that a reliable supply was important to their daily lives, and felt an unreliable supply would be a severe inconvenience and a source of stress.
>
> The research also identified cost as an important factor to participants in relation to their energy supply, particularly for participants with a lower income. While **reliability was the most important factor for most participants**, a few indicated that they would be willing to compromise on reliability (i.e. experience more outages) for a reduced cost.
>
> While safety was also felt to be an important factor, most participants perceived that a high level of safety would be "a given" in Australia. [Bold emphasis added]

13. The Orima Report evidences the proposition that ActewAGL Distribution's customers, in contrast to those in other jurisdictions such as NSW and QLD and the views expressed by the AER in its Draft Decision, value reliability more highly than reduced costs. It also evidences the proposition advanced by ActewAGL Distribution in respect of the STPIS that AEMO's recent willingness to pay studies likely understate the VCR for customers in the ACT.

The NEO preferable decision

14. In Chapter 2 of the RRP, ActewAGL Distribution contended that:

    14.1 the Draft Decision neither contributes to the achievement of the national electricity objective (**NEO**) as required by section 16(1)(a) of the National Electricity Law (**NEL**) nor constitutes the decision that will contribute to the achievement of the NEO to the greatest degree (**NEO Preferable Decision**) as required by section 16(1)(d) of the NEL; and

    14.2 a distribution determination predicated on ActewAGL Distribution's revised proposal set out in that RRP is materially preferable to the Draft Decision in making a contribution to the achievement of the NEO (**Materially Preferable NEO Decision**).

15. In particular, ActewAGL Distribution set outs its contentions on the legal framework governing NEO preferable decision-making in section 2.2 of the RRP and its detailed contentions in support of the propositions set out in paragraph 14 above in sections 2.3 to 2.8 of the RRP. A summary of those contentions appears in section 2.1 of the RRP.

16. To provide further support for the propositions set out in paragraph 14 above, ActewAGL Distribution now adduces a report by Houston Kemp titled *AER Determination for ActewAGL Distribution - Contribution to NEO and Preferable NEO Decision* (**Houston Kemp Report**) as Attachment 2 to this submission. In that Report, Houston Kemp:

    16.1 discusses the economic role of the NEO, the principles that should be adopted in a regulatory regime that promotes that NEO and the role of the building blocks approach and economic benchmarking in meeting those objectives (in section 3 of the Houston Kemp Report);

    16.2 assesses whether, having regard to various expert reports adduced and relied upon by ActewAGL Distribution in support of the RRP, the AER's Draft Decision contributes to the achievement of the NEO (in section 4 of the Houston Kemp Report);

    16.3 establishes a framework for assessing whether a decision is the NEO Preferable Decision or a Materially Preferable NEO Decision and critiques the AER's approach in the Draft Decision to NEO preferable decision-making (in sections 5.1 and 5.2 of the Houston Kemp Report respectively); and

    16.4 assesses whether the AER's Draft Decision is the NEO Preferable Decision and a final determination predicated on ActewAGL Distribution's revised proposal would constitute a Materially Preferable NEO Decision as compared to the Draft Decision (in sections 5.3 and 5.4 of the Houston Kemp Report respectively).

17. ActewAGL Distribution adopts the conclusions reached by Houston Kemp on each of these matters in its Report (which conclusions are consistent with the contentions advanced in its RRP) and does so in reliance on the expert opinion, reasoning and analysis set out in that Report. These conclusions include, in particular, Houston Kemp's conclusions that:

17.1 the fundamental architecture of the NEO is of an economic nature and is concerned with promoting all three dimensions of economic efficiency, with the balance of the emphasis to be given to the longer term, that is to dynamic efficiency considerations;[6]

17.2 the building block approach prescribed by the Rules and the revenue and pricing principles constitute the essential elements of a framework of economic regulation that is capable of achieving the NEO;[7]

17.3 the expenditure factors specified in clauses 6.5.6(e) and 6.5.7(e) of the Rules, by contrast, are tools that may be adopted to assist the AER but are subordinate to the building block requirements and revenue and pricing principles and do not of themselves further the achievement of the NEO - the adoption of benchmarking in particular does not, of itself, contribute to the achievement of the NEO, rather, it is the extent to which the resultant expenditure forecasts reflect the costs that would be incurred by a prudent and efficient provider that is determinative of whether the achievement of the NEO is furthered;[8]

17.4 the Draft Decision cannot be said to satisfy the requirement under section 16(1)(a) of the NEL for the AER to perform or exercise its functions or powers in making a distribution determination so as to contribute to the achievement of the NEO because:[9]

- each of the experts reports to which Houston Kemp had regard provides strong evidence that, in relation to the relevant constituent decision(s) the AER is required to make in determining each building block cost, the Draft Decision does not contribute to the achievement of the NEO;

- and whereas the NEO requires the AER to strike a balance between the various dimensions of efficiency that promotes the long term interests of consumers,

[6] Houston Kemp Report at p. **[8]-[9]**
[7] Houston Kemp Report at pp. **[13]-[16]**
[8] Houston Kemp Report at pp. **[15]-[18]**
[9] Houston Kemp Report at p. **[47]**

the balance of the emphasis in the Draft Decision is on the short term interests of consumers and unnecessarily puts at risk their long term interests;

17.5 the NEO Preferable Decision is the decision which promotes dynamic efficiency to the greatest extent (and so the long term interests of consumers) without unduly compromising allocative and productive efficiency in the short term - that is, a NEO Preferable Decision is one which promotes the long term interests of consumers without unduly compromising their short term interests;[10]

17.6 an assessment of whether one decision is a Materially Preferable NEO Decision as compared to another decision is, in turn, likely to be informed by:[11]

17.7 the extent of the difference between the revenue allowances implied under the alternative decisions, with greater differences more likely to lead to materially different outcomes for the NEO;

17.8 the differing short and long term potential impacts associated with the alternative decisions, in relation to both cost and service outcomes; and

17.9 the extent to which differences between the alternative decisions relate to significant elements of the overall framework and therefore may be expected to have wider reaching consequences for future outcomes;

17.10 the AER's framework for determining the NEO Preferable Decision is not an adequate framework or geared to identifying the NEO Preferable Decision because:[12]

- it is neither well developed nor clear;
- its guiding criteria of 'a reasonable level of service at the lowest sustainable price' has little interpretative value; and
- its assessment of the appropriate balance between the factors that comprise the NEO appears to be undertaken by reference to the degree of compliance to its own assessment under the Rules;

17.11 having regard to various aspects of the Draft Decision and the expert reports considered by Houston Kemp, the AER has not, in making its Draft Decision, satisfied the requirement to make the NEO Preferable Decision including because the AER

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[10] Houston Kemp Report at pp. **[50] - [52]**

[11] Houston Kemp Report at pp. **[53] - [55]**

[12] Houston Kemp Report at p. **[55]-[56]**

gives primacy to productive efficiency in determining expenditure allowances at the expense of the long term interests of consumers;[13] and

17.12 overall, ActewAGL Distribution's revised proposal reflects a Materially Preferable NEO Decision as compared to the Draft Decision as it:[14]

- corrects the errors identified in that Decision; and
- in so doing and in contrast to that Decision, enables ActewAGL Distribution to recover its efficient costs (so ensuring that short term productive and allocative efficiency is not unduly compromised) while providing ActewAGL Distribution with appropriate incentives to achieve efficiencies going forward (so better promoting dynamic efficiency).

[13] Houston Kemp Report at pp. **[56]** - **[60]**

[14] Houston Kemp Report at pp. **[60]** - **[61]**

Implications of the Draft Decision for long term interests of consumers with respect to reliability, security and safety

18. In section 2.7 of the RRP, ActewAGL Distribution contended that a final determination predicated on the Draft Decision would not contribute to the achievement of the NEO and could not reasonably be said to be the NEO Preferable Decision because the expenditure allowances proposed by that Draft Decision:

    18.1 do not reflect a realistic expectation of the expenditure required to achieve the opex and capex objectives set out in clauses 6.5.6(a) and 6.5.7(a) respectively of the Rules;

    18.2 would necessitate drastic changes to ActewAGL Distribution's business model within an injudicious period of time; and

    18.3 as a consequence would deliver a short-term reduction in price at the expense of potentially dire consequences for reliability, security and safety.

19. Section 2.7.4 of the RRP, in particular, detailed the likely consequent effects of the Draft Decision on reliability, security and safety, citing and relying upon the AECOM report, titled *The Impact of the AER's Draft Decision on ActewAGL's Service and Safety Performance* and dated January 2015, attached to that RRP as Attachment B8.

20. ActewAGL Distribution now adduces the following additional material in support of the proposition that a final determination predicated on the Draft Decision would have potentially dire consequences for reliability, security and safety:

    20.1 a further AECOM report, *The Impact of the AER's Draft Decision on ActewAGL's Service Reliability and Safety Performance (Supplementary Report)*, and dated 13 February 2015, attached to this submission as Attachment 7 (**Further AECOM Report**); and

    20.2 the witness statement of Mr Steve Devlin, General Manager Asset Management of ActewAGL Distribution, dated 13 February 2015, attached to this submission as Attachment 8 (**Devlin Statement**).

21. The Further AECOM Report demonstrates, in quantified terms, that to implement the AER's draft decision would give rise to significantly increased safety and reliability risks.These arise from a number of sources but the report focuses on the reduced asset inspection frequency, leading to an inability to identify potential critical asset failures in advance. The consequent increase in actual failures would give rise to a marked increase in safety risk, especially that associated with catastrophic bushfires caused by failed network assets, and deteriorating reliability to the point of probable breach of the statutory minimum reliability limits. The increased risk costs arising

from the initial underinvestment in maintenance would, in real terms, more than offset the short term savings, causing transfer of an overall increased cost burden to later generations of customers

22. In the Devlin Statement, Mr Devlin states that:

22.1 even if it were practicable (having regard to safety, quality, security of supply and reliability considerations) for ActewAGL Distribution to reduce its opex to the extent proposed in the Draft Decision, based on his industry experience, he is of the view that implementing these initiatives would take considerable time, rather than being achievable as one step change;[15] and

22.2 in his opinion, based on current information and his experience at ActewAGL Distribution, in the energy industry and in regulated industries generally, the reductions proposed by the AER would:[16]

- likely lead to substantial underinvestment by ActewAGL Distribution in both capex and opex;
- compromise the safety, the reliability and the on-going sustainability of its network. In particular, the deferral or reduction of required network expenditure would increase staff, contractor and public safety risk, environmental risk and bushfire risk, and have network reliability implications and capacity impacts; and
- result in a need for substantial remedial reinvestment in the future to address deterioration in the network.

23. The Devlin Statement details (at paragraphs **[43]-[111]**) in particular the maintenance by ActewAGL Distribution of various of the categories of its network assets, the effect the AER's proposed opex cuts would have on its maintenance activities for each asset category and the likely safety and reliability implications of those changes in its maintenance activities.

[15] Devlin Statement at **[19]-[20]**

[16] Devlin Statement at **[22]-[24]** and **[115]-[119]**

AER's safety obligations under the WHS Act 2011 (Cth)

24. In response to the cuts to ActewAGL Distribution's expenditure allowances contemplated by the Draft Decision relative to those proposed by it and its historical expenditure allowances, ActewAGL Distribution obtained a legal opinion from Norton Rose Fulbright (**Norton Rose**) on the implications of the Draft Decision for the AER's duties and those of its officers under the *Work Health and Safety Act 2011* (Cth) (**WHS Act**) including in particular whether those duties would preclude the AER from making a final determination in the form contemplated by the Draft Decision in circumstances where this would impede ActewAGL Distribution from operating safely. A copy of the legal opinion provided by Norton Rose is attached at Attachment 9 to this submission.

25. In the legal opinion, Norton Rose concludes (at paragraphs [7]-[10]) that the AER, in making distribution determinations under the NEL and the Rules, will be subject to the duties imposed on a person conducting a business or undertaking by the WHS Act, including in particular the "primary duty of care" to ensure, so far as is reasonably practicable that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the AER's decision making.

26. Significantly, in respect of the operation of the AER's "primary duty of care" in the present circumstances, Norton Rose concludes (at paragraphs [11]-[12]):

> The AER's Determination neither requires ActewAGL to only spend the operating expenditure applied by it in its calculations nor specifies how ActewAGL allocates its operating expenditure between safety and other expenditure.
>
> However, if the AER is on notice of the safety implications of the operating expenditure provided for in the Draft Determination (for example, by the Revised Regulatory Proposals) and its final determination still allows for the same significantly reduced operating expenditure irrespective of these safety impacts, ***it will be*** in breach of the primary duty of care under the WHS Act (section 19(2)). [Emphasis in original]

27. The potential implications for the safe supply of electricity and the safe operation and maintenance of ActewAGL Distribution's distribution system of the making by the AER of a final determination that effects the cuts to ActewAGL Distribution's expenditure allowances contemplated by the Draft Decision are detailed in:

    27.1 section 2.7 of ActewAGL Distribution's RRP (Implications of the draft decision for long term interests of consumers with respect to reliability, security and safety);

    27.2 the AECOM report, titled *The Impact of the AER's Draft Decision on ActewAGL's Service and Safety Performance* and dated January 2015, cited and relied upon in section 2.7 of the RRP and attached to that RRP as Attachment B8;

27.3 the further submissions in respect of the reliability, security and safety implications of the Draft Decision set out in this submission at paragraphs 20 to 23 above;

27.4 the Further AECOM Report, cited and relied upon in the above discussion and attached to this submission as Attachment 7; and

27.5 the Devlin Statement, cited and relied upon in the above discussion and attached to this submission as Attachment 8.

28. It follows that the AER is on notice of the safety implications of any final determination that effects the expenditure allowances contemplated by the Draft Decision for the purposes of its "primary duty of care" under the WHS Act.

Operating expenditure (base year opex)

29. In its Draft Decision, the AER placed primacy on the economic benchmarking analysis performed by it and its consultant, Economic Insights, in assessing ActewAGL Distribution's revealed costs in the 2012/13 base year and its proposed total opex forecast for 2014/15-2018/19, and deterministically applies that analysis in deriving the AER's own alternative forecasts of base year and total opex.

30. In section 3.4.4 of its RRP, ActewAGL Distribution contended that, in doing so, the AER made a number of reviewable errors for reasons including (amongst others) because the model adopted by the AER is flawed and that model selection not justified, the Australian dataset on which the analysis relies unreliable and the analysis' use of international data is inappropriate for comparability reasons. In advancing those contentions, ActewAGL Distribution relied on the following expert reports:

    30.1 the report by Advisian titled *Opex Cost Drivers: ActewAGL Distribution Electricity (ACT)* and dated 16 January 2015, which was attached to the RRP as Attachment C2;

    30.2 the report by CEPA titled *Benchmarking and Setting Efficiency Targets for the Australian DNSPs: ActewAGL Distribution* and dated 19 January 2015, which was attached to the RRP as Attachment C3; and

    30.3 the report by Huegin titled *Huegin's response to Draft Determination on behalf of NNSW and ActewAGL, Technical response to the application of benchmarking by the AER* and dated 16 January 2015, which was attached to the RRP as Attachment C4.

31. ActewAGL Distribution now adduces two reports prepared for Networks NSW in respect of the economic benchmarking analysis relied on, and the use made of this analysis, by the AER in its Draft Decision that provide further support for ActewAGL Distribution's contentions in the RRP in respect of this matter. These reports are as follows:

    31.1 Frontier Economics' report for Networks NSW titled *Review of the AER's econometric benchmarking models and their application in the draft determinations for Networks NSW* and dated January 2015 (**Frontier Report**), attached to this submission as Attachment 11; and

    31.2 PWC's report for Networks NSW titled *Appropriateness of RIN data for benchmarking* and dated 9 January 2015 (**PWC Report**), attached to this submission as Attachment 12.

32. While these Reports were prepared for Networks NSW, the conclusions reached therein are equally applicable to the economic benchmarking analysis relied on, and the use made of that

analysis, by the AER in its Draft Decision in making its draft decision on ActewAGL Distribution's forecast opex for the 2014/15-2018/19 period. This is for reasons which include, in particular, that the benchmarking analysis relied on by the AER in the Draft Decision for ActewAGL Distribution is the same as that relied on by the AER for the purposes of its draft decisions for the NSW DNSPs.

33. In the Frontier Report, Frontier considers the approach of the AER and Economic Insights to benchmarking including the data compiled, selection of models, the domestic and international datasets used and the method of adjustments for factors outside of the modelling process itself. Frontier:

33.1 provides a detailed assessment of the international benchmarking undertaken by the AER and Economic Insights and identifies a number of shortcomings with that analysis, in section 3 of the Frontier Report;

33.2 offers an analysis of the Australian benchmarking RIN data used by the AER and Economic Insights in the benchmarking exercise, in section 4;

33.3 provides a discussion of the apparent weaknesses in the benchmarking RIN data collected by the AER and used by Economic Insights, including a discussion of the wide range of issues that may have confounded Economic Insights' analysis, in section 5;

33.4 provides an assessment of how the AER has made use of Economic Insights' efficiency analysis in its draft decisions for the NSW DNSPs, in section 6; and

33.5 provides a set of recommendations on how future benchmarking exercises could be significantly improved, in section 7.

34. Frontier concludes (at pp. vii.-xviii.) in particular that:

34.1 the international data from Ontario and New Zealand included in the dataset used by Economic Insights are not readily comparable to the data provided by the Australian networks pursuant to the economic benchmarking regulatory information notices issued to all 13 DNSPs in the NEM in September 2013 (**RINs**) for a number of reasons, including in particular that the pooling of data from Australia with that from Ontario and New Zealand is inappropriate because:

- there are comparability issues between Ontario, New Zealand and Australia owing to substantial differences in scale, population density, network characteristics, weather and terrain;
- there are apparent inconsistencies in the definition and basis of preparation of the data from Ontario, New Zealand and Australia, which have the potential to

materially confound Economic Insights' analysis and which have not been adequately investigated;

- there are apparent errors in the data reported by networks in Ontario and (to a lesser extent) New Zealand; and
- the AER and Economic Insights have failed to capture and control adequately for these differences;

34.2 the international data nonetheless performs a dominant role in Economic Insights' modelling, with the Australian DNSPs accounting for only 19 per cent of the preferred sample, New Zealand 26 per cent of the preferred sample and Ontario accounting for 54 per cent (more than half the sample). As a consequence, the Ontarian and New Zealand networks can be expected to drive Economic Insights' results for the full sample notwithstanding their clear lack of comparability with the Australian networks;

34.3 the AER and Economic Insights' assumption that the entirety of the residual variation they find, after accounting for idiosyncratic error, may be ascribed to inefficiency (rather than latent heterogeneity of circumstance) is a strong one and unsupported by the available evidence;

34.4 by contrast, Frontier conclude that it is highly likely that the majority of the remaining variation is in fact explicable by latent heterogeneity, including by reference to its investigation of the "true" fixed and random effects models first proposed by Greene and some simple Data Envelopment Analysis;

34.5 a key limitation of the AER's RIN data is that it is based on eight years of back-cast information which may be estimated and not reflect actual outturn information for the DNSPs, and cannot realistically be expected to be reported on a consistent basis across the DNSPs, but the AER has not taken sufficient time to check the data and resolve any potential inconsistencies;

34.6 given the scale of the inefficiencies identified by the AER and Economic Insights (in the range of 40 per cent to 55 per cent) and the likely effect on future network sustainability so severe, the AER would be justified in applying them on the virtually one-for-one deterministic basis the AER proposes only if it were extremely certain about the robustness of the modelling results;

34.7 the apparent convergence of the results from the range of different models employed by the AER (on which it relies for confidence in the results) is unsurprising and does not suffice to confer this certainty given that these results are based on very closely related models, all of which are derived from the same data and all of which are missing the same wider review of factors and sense checks (such as the

Data Envelopment Analysis foreshadowed by the AER in its Expenditure Forecast Assessment Guideline); and

34.8 given the modelling flaws, data concerns and the AER's inability to account adequately for the profound heterogeneity between Australian DNSPs, the results contained in the Economic Insights report are entirely unreliable and should play no role in the AER's final determinations.

35. ActewAGL Distribution adopts the conclusions reached by Frontier in the Frontier Report (which conclusions are consistent with the contentions advanced in its RRP) and does so in reliance on the expert opinion, reasoning and analysis set out in that Report.

36. In the PWC Report, PWC assesses the historic data for the period 2006-2013 inclusive collected by the AER pursuant to the RINs used by the AER for benchmarking purposes, by examining the RIN data itself and reviewing the statements made by the DNSPs in the Basis of Preparation documents accompanying their responses to the RINs.[17] PWC considered in particular:[18]

36.1 differences in the preparation of the economic benchmarking RIN templates;

36.2 differences in the approved cost allocation methods of each DNSP;

36.3 the accounting standards and methodologies as outlined in the financial statements and reports of each DNSP during the period 2009 to 2013; and

36.4 exogenous factors that are outside the DNSPs' control including differences in operational practices, guidelines and legislative requirements.

37. Chapter 4 of the PWC Report details the issues identified by PWC with the data inputs relied on by the AER including differences in interpretation, estimation techniques and allocation policies. PWC identifies a number of issues with the AER's use for benchmarking purposes of the historic RIN data for the period 2006-2013 inclusive. These issues include in particular the following issues identified by PWC (at pp.6 and 21) as having a potentially high impact on the benchmarking relied on by the AER in making its draft determinations for the NSW DNSPs:

37.1 the RAB allocation into capital inputs was subject to interpretation;

37.2 whether adjusted demand was estimated by the DNSPs;

37.3 differences in vegetation management practices in each jurisdiction;

37.4 inputs used to calculate network length were subject to interpretation;

[17] PWC Report at pp. 5 and 20

[18] PWC Report at p. 20

37.5 cross ownership and related party arrangements differed across the DNSPs;

37.6 differences in cost allocation methods and capitalisation policies as between the DNSPs; and

37.7 differences in accounting methodologies and the application of accounting standards.

38. PWC observes (at p. 21) that these data quality issues directly impact on the AER's benchmarking results as they are a central part of the MTFP and PPI analysis.

39. In addition, PWC identifies the following additional issues with the RIN data relied on by the AER in performing its benchmarking analysis:

39.1 differing treatment by the DNSPs of metering costs depending on jurisdictional requirements;

39.2 the techniques used to estimate the service lives of various asset classes were different as between the DNSPs;

39.3 the calculations of energy density and customer density were inconsistent between DNSPs;

39.4 the DNSPs utilised different approaches to the disaggregation of revenue into customer classes;

39.5 revenue from incentive schemes was estimated;

39.6 historic transformer capacity data was estimated;

39.7 a direct reconciliation of spatial data and billing data was not possible;

39.8 the relative age of the networks differs across DNSPs;

39.9 differing service quality and reliability standards as between DNSPs; and

39.10 differing energy fuel mix in each network including gas and solar penetration levels.

40. ActewAGL Distribution adopts the conclusions reached by PWC in the PWC Report (which conclusions are consistent with the contentions advanced in its RRP) and does so in reliance on the expert opinion, reasoning and analysis set out in that Report.

41. Finally, against the background of Frontier's conclusions regarding the use of international data in the AER and Economic Insights' benchmarking analysis, ActewAGL Distribution notes the cautionary approach that both the AER and the Australian Competition Tribunal have historically adopted to the use of international data in exercises of this kind, as follows:

41.1 In its September 2012 *Access arrangement draft decision Multinet Gas (DB No. 1) Pty Ltd Multinet Gas (DB No. 2) Pty Ltd 2013-17 Part 1* (**Multinet Decision**), the AER refused (at pp. 151-152) to accord any weight to a benchmarking study by Marchment Hill submitted by Multinet that demonstrated Multinet's performance was comparable to that of US and UK gas distributors on the basis that 'firms in other countries do not necessarily face the same economic conditions and cost pressures as Victorian gas businesses'. It is difficult to reconcile the AER's heavy reliance on international data in determining ActewAGL Distribution's forecast opex with the conclusions reached by the AER in the Multinet Decision.

41.2 Similarly, the Australian Competition Tribunal has considered the utility of using international data in benchmarking analysis in several telecommunications decisions and has come to conclusions including that a cautious approach must be taken to the use of such data or evidence[19] and that in order to place any reliance upon an international benchmarking analysis, it would be necessary to know much more about the regulatory environment and economic environment of the jurisdiction.[20] A brief outline of the relevant conclusions reached in each of these Tribunal decisions is set out in Appendix 3 to this submission.

42. In addition, in responding to the AER's draft decision on base opex in the 2013/13 year and the use made by the AER of economic benchmarking analysis, ActewAGL Distribution contended in section 3.4.4.2 of the RRP that, in making its decision on base opex, the AER acted contrary to the statutory scheme established by the Rules. Whereas the statutory scheme contemplates that the AER will use ActewAGL Distribution's proposal as the starting point, assess it and, if necessary, make adjustments to that proposal, and will use benchmarking as 'but one tool the AER can utilise to assess NSPs' proposals', the AER has, with only limited exceptions, put aside ActewAGL Distribution's proposed base opex and instead given primacy to its benchmarking analysis in making that decision, relying on that analysis almost exclusively and deterministically in deriving a substitute base opex estimate.

43. Further, in section 3.8 of the RRP, ActewAGL Distribution contended that the AER has a discretion under the Rules to establish a glide path to allow an achievable transition to the forecast opex in accordance with clause 6.5.6(c) of the Rules and, in the event the AER makes a final determination in respect of opex substantially similar to the Draft Decision, the only correct and reasonable decision would be to exercise that discretion to establish such a glide path. In so contending, ActewAGL Distribution submitted (at pp. 265-266) that:

43.1 in exercising its discretion whether to establish a glide path, the NEO and the opex objectives set out in clause 6.5.6(a) of the Rules require the AER to consider the

[19] See *Application by Telstra Corporation Limited [2009] ACompT 1* at [27] and *Application by Telstra Corporation Limited ABN 33 051 775 556* [2010] ACompT 1 at [446] and [479-482]

[20] See *Application by Optus Mobile Pty Limited & Optus Networks Pty Limited* [2006] ACompT 8 at [292-297] and *Re Telstra Corporation Ltd (No 3)* [2007] ACompT 3 at [336] and [385]

impacts of its opex decision on quality, safety, reliability and security, against the background of ActewAGL Distribution's present circumstances including:

- whether its opex allowance is achievable in practice, and the costs associated with any restructuring necessary for the business to be able to move to a robustly determined efficiency frontier; and
- the speed with which it is realistic to expect ActewAGL Distribution to be able to achieve the opex allowance, and the impact on its financial viability and therefore its ability to continue to maintain the quality, safety, reliability and security of the network; and

43.2 submitted that, in the event of a final determination on opex substantially similar to the Draft Decision, a decision to establish a glide path would contribute to the achievement of the NEO and be consistent with the RPPs, and would be materially preferable to a decision not to establish a glide path having regard to a consideration of these matters.

44. ActewAGL Distribution relied for this purpose on the contentions and materials concerning the extent to which the opex allowance was achievable in practice, the costs associated with any restructuring necessary to achieve those allowances and the resultant consequences of the Draft Decision for reliability, security and safety detailed in section 2.7 of the RRP. ActewAGL Distribution now also relies for this purpose upon the additional material concerning those matters adduced under cover of this submission and discussed at paragraphs 20 to 23 above, being the Further AECOM Report and the Devlin Statement.

45. In addition, ActewAGL Distribution now adduces a legal opinion from Mr Neil Young QC and Mr Andrew McClelland of Counsel concerning the AER's draft decision on forecast opex and its discretion to establish a glide path (**Counsel Opinion**), as Attachment 18 to this submission. In particular, consistent with the propositions advanced by ActewAGL Distribution in the RRP, Mr Young QC and Mr McClelland conclude in this opinion that:

45.1 the methodology that the AER has deployed to make its draft decision about forecast opex is inconsistent with the Rules, in that it involves adopting the AER's own benchmarked reports as the primary reference point for making those decisions and gives little or no weight to ActewAGL Distribution's forecast opex. This approach constitutes reviewable error of the kind specified in sections 71C(1)(c) or (d) of the NEL in that it:[21]

- places an onus on ActewAGL Distribution to provide a 'satisfactory explanation' as to the difference between the AER's estimate and ActewAGL Distribution's own, contrary to clause 6.5.6(c) of the Rules;

[21] Counsel Opinion at [5] and [23]-[68]

- is unreasonable insofar as it places primary reliance on benchmarking for the purposes of clause 6.5.6(c) of the Rules, which approach elides proper consideration of the opex factors in clause 6.5.6(e) of the Rules and the opex criteria in clause 6.5.6(c) of the Rules; and

- is unreasonable insofar as it places primary reliance on benchmarking for the purposes of clause 6.12.1(4) of the Rules in that the AER failed to have regard to ActewAGL Distribution's forecast opex for this purpose;

45.2 further, in making its Draft Decision, the AER has erred in the manner specified in section 71C of the NEL in confining itself to the question of whether ActewAGL Distribution's forecast opex reasonably reflects the efficient costs of an objectively prudent provider, having regard only to exogenous considerations. The Rules allow factors endogenous to ActewAGL Distribution to be taken into account in making decisions about forecast opex pursuant to clauses 6.5.6(c) and 6.12.1(4)(ii) of the Rules where that is required to promote the NEO, including the manner in which ActewAGL Distribution has structured its business in reliance on previous determinations by the AER and its ability to transition to much lower levels of opex immediately, and, in the present circumstances, the AER ought to have done so. These circumstances relevantly include:[22]

- the magnitude of the reduction in opex determined by the AER in its Draft Decision;

- the retrospective effect of that reduction in opex as a consequence of the adjustment in respect of the transitional regulatory control period to the total revenue requirement for the SRP required by clauses 11.65.4(h) and (i) of the Rules;

- the sudden impact of that reduction in opex; and

- the submissions made by ActewAGL Distribution about the effect of the Draft Decision on its ability to ensure the safety and reliability of its services; and

45.3 the AER has a discretion under the Rules to establish a glide path pursuant to the control mechanism it establishes under clause 6.12.1(11) of the Rules so as to allow ActewAGL Distribution to transition to the level of opex determined in accordance with clause 6.5.6(c) of the Rules.[23] However, as is the case in the present circumstances, such a "glide path" would generally not be required by the NEO if the AER's decision under clause 6.12.1(4)(ii) of the Rules is correctly made, as the expenditure required to, for example, ensure the safe and reliable supply of

[22] Counsel Opinion at [6] and [69]-[95]

[23] Counsel Opinion at [7] and [96]-[106]

electricity and, where appropriate, the DNSPs' endogenous circumstances would then be accommodated in the AER's decision pursuant to that clause.

46. ActewAGL Distribution submits, on the basis of the Counsel Opinion, that its forecast opex for the years of the SRP determined in accordance with clauses 6.5.6(c) and 6.12.1(4) of the Rules should itself, therefore, provide for a stable and achievable transition to any reduced level of opex determined by reference to comparative efficiency that takes account of the time and cost associated with restructuring activities, and does not compromise ActewAGL Distribution's ability to maintain the safe and reliable operation of its system and provision of its services.

Efficiency benefit sharing scheme (application to ActewAGL Distribution in the 2014/15-2018/19 period)

47. In its Draft Decision, the AER relevantly concluded that the *Efficiency Benefits Sharing Scheme for Electricity Network Service Providers* it published on 29 November 2014 (**Current EBSS**) (which is stated to apply to electricity transmission and distribution determinations for regulatory control periods commencing after November 2013) would not apply to ActewAGL Distribution in the 2014/15-2018/19 period.[24] The AER reasoned that, because the application of an efficiency benefit sharing scheme (**EBSS**) in one regulatory control period is intrinsically linked to the adoption of a revealed cost forecasting methodology in the next and it was uncertain whether the AER would rely on ActewAGL Distribution's revealed costs in the 2014/15-2018/19 period in forecasting its efficient opex in the future, there was not a strong reason to apply the Current EBSS to ActewAGL Distribution in the 2014-15-2018/19 period and its application may result in perverse outcomes that are inconsistent with the objectives of the EBSS and the Rules' EBSS requirements. The AER also concluded that ActewAGL Distribution would already face adequate incentives to make efficiency improvements while its actual opex is more than that of a benchmark efficient service provider, such that the application of the Current EBSS was not necessary.

48. In section 12.2 of the RRP, ActewAGL Distribution responded to the AER's draft decision not to apply an EBSS to ActewAGL Distribution in the 2014/15-2018/19 period. In so doing, ActewAGL Distribution relied on an expert report by Houston Kemp titled *Opex and the Efficiency Benefit Sharing Scheme* and dated January 2015 (attached to the RRP as Attachment C1).

49. In the RRP, ActewAGL Distribution contended (at pp. 560-561 and 569-572) that the AER's Draft Decision, if adopted in making the final determination, would fail to provide ActewAGL with adequate incentives for efficiency in the 2014/15-2018/19 period and, accordingly, would not be consistent with the revenue and pricing principles or contribute to the achievement of the NEO. ActewAGL Distribution observed, in particular, that, under the Draft Decision, the incentives for efficiency would not be continuous, but falling, across the period and ActewAGL Distribution would have an incentive to defer the making of efficiency gains and to substitute capex for opex (including where this is inefficient). It further contended (at pp. 570-572) that the Draft Decision, if adopted in the final determination, would not effect a fair sharing (or the 30/70 intended sharing) of efficiency gains and losses between ActewAGL Distribution and its customers.

50. As a consequence, ActewAGL Distribution contended (at pp. 560-561 and 577) that, contrary to the AER's draft decision that no EBSS apply to it in the 2014/15-2018/19 period, the AER should:

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[24] Draft Decision, Attachment 9, pp. 9-11 to 9-12

50.1 continue to apply a revealed cost approach and so adopt ActewAGL Distribution's revised opex forecast and not that specified in the Draft Decision and, thus, apply the Current EBSS (subject to the two modifications proposed in its *Regulatory Proposal 2015-19 Subsequent regulatory control period Distribution services provided by the ActewAGL Distribution electricity network in the Australian Capital Territory* dated 2 June 2014 (resubmitted 10 July 2014) (**RP**) and, again, in its RRP); and

50.2 if the AER maintains its draft decision on opex in making its final determination, implement an alternative EBSS that contributes to the achievement of the NEO and is compliant with the EBSS requirements established by clause 6.5.8(c) of the Rules, in that it:

- is designed to operate in conjunction with the regulatory approach adopted by the AER to forecast opex (that is, using economic benchmarking);
- provides ActewAGL Distribution with incentives that are continuous - that is, invariant to the timing of efficiency gains or losses - and symmetric - that is, both reward ActewAGL Distribution for efficiency gains and penalise it for efficiency losses;
- effects a fair sharing of efficiency gains and losses between it and its customers; and
- is designed to work in conjunction with the other incentive schemes under the Rules (including in particular the CESS and the STPIS) such that it does not promote inefficient substitution between capex and opex.

51. ActewAGL Distribution observed (at p.577), however, that, in the limited time available since the AER made known to ActewAGL Distribution its new proposed approach to determining ActewAGL Distribution's opex forecast, it had been unable to develop an alternative EBSS and secure the expert advice required for this purpose.

52. ActewAGL Distribution is now in a position to provide more details of the alternative EBSS it proposes be applied to it in the 2014/15-2018/19 period, in circumstances where (contrary to ActewAGL Distribution's submission) the AER maintains its draft decision on opex in making its final determination and does so in reliance on the Houston Kemp report titled *The Impact of the EBSS on Distributor Incentives* and dated 11 February 2015 now adduced by ActewAGL Distribution and attached to this submission as Attachment 19 (**Further EBSS Report**).

53. In its Further EBSS Report, Houston Kemp observes (at pp. 1 and 6) that ActewAGL Distribution's incentives for efficiency will be a product of the combined effect of the method for forecasting (or resetting) the opex allowance and the applicable EBSS. It concludes (at pp. 1-2 and 6-7) that

incentives of the kind described in paragraphs 50.2 above will be delivered by calculating an EBSS carry-forward reward or penalty for a regulatory control period using:

53.1 the Current EBSS when the opex allowance for that period has been reset using a DNSP's revealed costs; and

53.2 a net present value (**NPV**) EBSS (such as that developed by the AER and presented to a joint stakeholder forum on 29 April 2013 following the initiation of consultation for the Better Regulation Program expenditure incentive work stream) when the opex allowance for that period has been reset by reference to comparative efficiency.

54. It concludes therefore (at pp. 5-6) that, where there is uncertainty as to the manner in which opex allowances will be reset for the next regulatory control period (i.e. the AER does not commit to the method for setting the future opex allowance), the EBSS carry-forward amount to be included in the building block costs for that next period should be calculated in the manner described above - that is, using the Current EBSS where the opex allowance is reset using revealed costs and an NPV EBSS where it is reset using comparative efficiency.

55. Houston Kemp illustrates (at pp. 7-10) the manner in which:

55.1 the Current EBSS will deliver incentives of the kind described in paragraphs **[34]** above where the opex allowance is reset using a DNSP's revealed costs approach; and

55.2 an NPV EBSS will deliver those incentives where it is reset using comparative efficiency, both where the opex allowance in the preceding period (in which the efficiency gains or losses are incurred) is set using revealed costs and where it is set by reference to comparative efficiency.

56. In so doing, Houston Kemp emphasises (at p. 7) that, where the opex allowances for the period in which the EBSS is applied are set by reference to comparative efficiency but are reset using a DNSP's revealed cost approach for the next period, the Current EBSS must be applied to calculate the carry-forward amounts for the next regulatory control period as though that incremental EBSS was being restarted - that is, the year 1 incremental efficiency gain or loss must be calculated as the difference between forecast opex and actual opex.

57. ActewAGL Distribution now contends therefore that, in making its final determination, the AER's constituent decision under clause 6.12.1(9) of the Rules, on how the applicable EBSS (being the Current EBSS) is to apply to ActewAGL Distribution, should be to the effect that:

57.1 where the opex allowances for the 2019/20-2023/24 regulatory control period are set using a revealed cost approach, the Current EBSS (subject to the two modifications proposed by ActewAGL Distribution in its RP and, again, in its RRP) is to apply to efficiency gains or losses realised by ActewAGL Distribution in the 2014/15-2018/19 period to calculate the EBSS carry-forward amounts for the 2019/20-2023/24 regulatory control period, noting that (as explained by Houston Kemp), where the opex allowances for the 2014/15-2018/19 period are instead set by reference to comparative efficiency, the carry-forward amounts for the 2019/20-2023/24 regulatory control period must be calculated as though the Current EBSS was being restarted - that is, the year 1 incremental efficiency gain or loss must be calculated as the difference between forecast opex and actual opex; and

57.2 where the opex allowances for the 2019/20-2023/24 regulatory control period are set by reference to comparative efficiency, some variant of an NPV EBSS (similar to that developed by the AER and presented to a joint stakeholder forum on 29 April 2013 following the initiation of consultation for the Better Regulation Program expenditure incentive work stream) is to apply to efficiency gains or losses realised by ActewAGL Distribution in the 2014/15-2018/19 period to calculate the EBSS carry-forward amounts for the 2019/20-2023/24 regulatory control period (regardless of whether revealed costs or comparative efficiency is used to set opex allowances for the 2014/15-2018/19 period).

Capital expenditure

58. In its Draft Decision, the AER rejected ActewAGL Distribution's proposed forecast of augmentation capex, concluding that ActewAGL Distribution's proposed forecast exceeded the augmentation capex required to achieve the capex objectives, and instead included a significantly reduced forecast of augmentation capex its alternative estimate of total capex.[25]

59. The AER based its conclusion that ActewAGL Distribution's proposed forecast exceeded the augmentation capex required to achieve the capex objectives on (amongst other things) an internal engineering review of 5 of ActewAGL Distribution's major augex projects.[26] These projects relevantly included ActewAGL Distribution's planned zone substation earth grid upgrade.

60. In respect of the upgrade, the AER concluded that the failure by ActewAGL Distribution to provide any evidence of earth grid failures or degradation of performance suggests that there are no immediate or material issues with the overall condition and performance of these assets and that forecast capex should not be allowed where, as in respect of this upgrade, there is no certainty as to the need for expenditure or scope.[27] As a consequence, the AER disallowed $2.619 million ($2013/14) of ActewAGL Distribution's proposed forecast of augmentation capex.[28]

61. ActewAGL Distribution responded to the AER's internal engineering review of its major augex projects in section 4.4.4 of the RRP, at pages 309 to 323. ActewAGL Distribution addressed the AER's conclusions in respect of the zone substation earth grids upgrade, in particular, at pages 318 to 319 of the RRP.

62. ActewAGL Distribution explained the critical safety function of the earth grids installed at its zone substations and switching stations and observed that ActewAGL Distribution proposed a program of condition assessment testing and, where required, necessary remedial works because:

62.1 most of these assets have been in service for beyond their economic life; and

62.2 a 'do nothing' or 'run to failure' asset management strategy (of the kind implicitly endorsed by the Draft Decision) would involve unacceptable risks to the safety of ActewAGL Distribution's personnel and the public (including for example the risk of explosions or electrical shocks resulting in serious injury or death), ActewAGL Distribution's other major network assets and reliability.

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[25] Draft Decision, Attachment 6, p. 6-10 and Appendix A, p. 6-30

[26] Draft Decision, Attachment 6, Appendix A, pp. 6-30 to 6-31

[27] Draft Decision, Attachment 6, Appendix A, pp. 6-40 to 6-41

[28] Draft Decision, Attachment 6, Appendix A, p. 6-31

63. ActewAGL Distribution further observed that, since the release of the AER's Draft Decision, it had commenced condition testing of earth grids at two zone substations and, based on this assessment, ActewAGL Distribution had revised its program of earth grid condition assessment and refurbishment using a probabilistic methodology that suggested approximately one third of its earth grids would require refurbishment. On this basis, ActewAGL Distribution proposed revised capex for this program of $1.2 million ($2013/14) to undertake a major earth grid upgrade at one zone substation and earth grid refurbishment work at three others during the 2014/15-2018/19 period.

64. The two zone substations in respect of which the RRP states condition testing of earth grids commenced following release of the Draft Decision are ActewAGL Distribution's Fyshwick and Waniassa Zone Substations. ActewAGL Distribution now adduces two reports from PSD Energy in respect of this earth grid condition testing, one for each of these zone substations, as Attachments 24 and 25 of this submission (**PSDE Reports**).

65. The PSDE Reports detail the various earthing tests conducted on the existing earth grid at each of these zone substations, together with the results of those tests and the remedial actions required to address the issues identified in those results. In particular, PSD Energy measured the earth resistance of the earthing installation and verified if there are unsafe step and touch voltages in the substation and surrounds.

66. The PSDE Report in respect of the earth grid at the Fyshwick zone substation concludes (at pp. ii.-iv. and 41-43) that:

66.1 the visual inspection of the grid identified a number of issues that require attention including:

- the substation drawings are inaccurate in that infrastructures installed in the substation were not recorded on those drawings, including in particular two of the auxiliary transformers and the 11kV switch room;
- a safety risk associated with the absence of a grading ring for the earth grid for the gate opening outwards; and
- the lack of adequate bonding to the earth grid of the earthing connection from the overhead earth wire on the overhead line terminal poles coming into the substation;

66.2 modelling and site measurement of step and touch potentials of the earthing installation identified a high risk of touch voltages along the outside fence line - that is, at the south eastern corner of the substation, the substation boundary fence is close to the neighbourhood fence and high touch voltages were measured at this point;

66.3 reach potentials have voltages above the required safety limits between the substation boundary fence and neighbouring fencing, as well as the steel stairs leading to the neighbouring building;

66.4 a number of structures in the substation have bonding resistance readings of installed earth grid above the required limit of 10mΩ and some connections within the structure are to painted surfaces only (whereas a copper to steel contact is advised); and

66.5 the following remedial action is therefore recommended:

- a dedicated 120mm^2 conductor is installed at each overhead gantry pole (8 in total) connected from the overhead earth wire to the earth grid;
- a 1.5m wide 130mm thick layer of asphalt is placed around the outside of the substation in order to mitigate the potential high touch voltages;
- the substation fence gates are fitted with a stopper to prevent it from opening outwards or a grading ring installed covering the full swing of the gate;
- as the control room building structure earthing is inadequate, all steel parts should be bonded, and doors should have a flexible bonding strap and be earthed to the grid at a minimum of two points; and
- all the primary plant and structures to earth grid connections should be cleaned to ensure a copper to steel contact.

67. The PSDE Report in respect of the earth grid at the Wanniassa zone substation concludes (at pp. ii.-iii. and 37-39) that:

67.1 the substation drawings are inaccurate, in particular as to fence earthing, and require updating;

67.2 high touch potentials were measured at the north western corner of the substation boundary fence and the modelling of step and touch potentials indicates that there is a high risk of excessive touch potentials on the entire fence and, although the grading ring around the substation is maintaining safety limits for the most part, this would change if the fault level were to increase, the substation grid resistance to change or the current distribution were to change;

67.3 a number of structures in the substation have bonding resistance readings above the required limit of 10mΩ and some connections within the structure are to painted surfaces only (whereas a copper to steel contact is a necessity) and there are also a number of operators' earth mats that have poor connections back to the earth grid;

67.4 132kV fault levels in the substation are relatively high and the grid risers are just outside the requirements of the relevant standards which, while not a safety risk, reduces safety margins, such that, if the fault is sustained for a duration in excess of 3 seconds, the conductors could overheat; and

67.5 the following remedial action is therefore recommended:

- a 1.5m wide 130mm thick layer of asphalt is placed around the outside of the substation fence between the western gate and north western corner in order to mitigate the potential high touch voltages;
- all primary plant and structures to earth grid connections should be cleaned to ensure a copper to steel contact; and
- the operator earth mats' connections to the structure are disconnected, cleaned and reconnected.

68. The PSDE Reports, therefore, provide evidence of the degradation of the performance of existing zone substations earth grids and non-compliance against the current industry mandatory earthing standards. This condition assessment outcome is associated with the ageing nature of these assets that ActewAGL Distribution expected in proposing the zone substation earth grid upgrade and of the resultant need for the proposed expenditure on this upgrade.

Return on equity

69. In section 8.3 of the RRP, ActewAGL Distribution contended that the method adopted by the AER in its Draft Decision will not result in a return on equity that is consistent with the allowed rate of return objective set out in clause 6.5.2(c) of the Rules. In summary, ActewAGL Distribution stated that it holds this view because:

69.1 the AER relies on the SL-CAPM as being a superior return on equity model when it is not (section 8.3.5.1 of the RRP);

69.2 the AER has failed to adequately have regard to all relevant estimation methods/models, market data and other evidence (see in particular section 8.3.5.1.2 of the RRP);

69.3 the AER places too much weight on unreliable Australian regression data and omits relevant international evidence in determining an equity beta of 0.7 (see section 8.3.5.2 of the RRP); and

69.4 the AER places too much weight on historical averages and fails to take into account relevant and current evidence in relation to the MRP, incorrectly interprets the Wright approach and uses unreliable survey estimates in determining the MRP at 6.5 per cent which as a result does not reflect prevailing market conditions (see section 8.3.5.3 of the RRP).

70. To provide further support for the above contentions, ActewAGL Distribution adduces the additional reports referred to below in this Return on Equity section (namely Attachments 26, 27, 28, 29, 30, 31 and 32). ActewAGL Distribution adopts the conclusions reached in each of those reports[29] (which conclusions are consistent with the contentions advanced in its RRP) and does so in reliance on the expert opinion, reasoning and analysis set out in those Reports.

71. In the Draft Decision, the AER does not rely at all on the Fama French model, Black CAPM nor the DDM to inform its overall return on equity estimate as a cross-check of the SL-CAPM (consistent with its Rate of Return Guideline).

72. In section 8.3.5.1.2 of the RRP, ActewAGL Distribution contended that the AER should use a wide range of return on equity models, including the Fama French model, Black CAPM and SFG's DDM, to inform the AER's decision.[30] ActewAGL Distribution maintains this position.

73. To provide further support for ActewAGL Distribution's proposition that the AER should rely on the Fama French model to inform its overall return on equity estimate, ActewAGL Distribution now adduces a report by SFG titled *Using the Fama-French model to estimate the required return on equity* dated February 2015 (**SFG Fama French Report**) as Attachment 30 to this submission.

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[29] With one exception, see RRP at p. 437 where ActewAGL Distribution proposes that equal weight should be given to the results of all return on equity models it relies upon.

[30] RRP, page 447-448

In that report SFG considers the question of whether the Fama-French model is able to contribute to the allowed rate of return objective and specifically, whether having access to evidence from the Fama-French model is likely to improve or reduce the quality of the final estimate of the required return on equity. SFG concludes:

> we report cost of equity estimates from the Fama-French model, alongside cost of equity estimates from the Sharpe-Lintner CAPM and the Black CAPM. Our view is that the most reliable cost of equity estimate for a benchmark energy network will result from consideration of output from all three models together with estimates from the dividend discount model – as set out in our companion report, SFG (2015 ROE).[31]

74. To provide further support for the proposition that the AER should rely on Black CAPM to inform its overall return on equity estimate as a cross-check of the SL-CAPM, ActewAGL Distribution now adduces a report by SFG titled *Beta and the Black Capital Asset Pricing Model* dated February 2015 (**SFG Beta and Black CAPM Report**) as Attachment 31 to this submission.

75. ActewAGL Distribution considers that these reports demonstrate that the AER's assumption, that there will be one model or estimation method that is clearly superior to all others, and the finding that in fact there is one such model (the SLCAPM), is not supported by the evidence before the AER. On the contrary, a detailed examination and comparison of the sources of information reveals that each return on equity model has strengths and weaknesses, and that no one model can said to be superior to others. In such circumstances, where there is no basis upon which to distinguish between the sources of information, it is incorrect and unreasonable to adopt a "foundation" model approach.

76. In response to the comments raised by the AER and other regulators, and their consultants, on matters that include whether the DDM applies in Australia, the best version of the DDM, and the best inputs into the DDM, ActewAGL Distribution now adduces an opinion from SFG that, in addition to addressing those comments, uses the DDM to estimate the return on equity that is commensurate with the efficient financing costs of (1) a benchmark efficient entity and (2) the average firm in the market, and which is reflective of prevailing conditions in the market for funds. This report also provides an updated estimate of SFG's return on equity. SFG's report is attached to this submission as Attachment 28 (**SFG Share Prices Report**).

77. In order to address the issues raised by the AER in its Draft Decision with reliance upon a number of the discussed asset pricing models in the estimation of the return of equity, ActewAGL Distribution adduces an additional report prepared by NERA, attached to this submission as Attachment 26 (**NERA Empirical Performance Report**).

78. The NERA Empirical Performance Report sets out NERA's assessment of the empirical performance of the CAPM models. NERA concludes that the AER's sole reliance on SL-CAPM is not supported by the available evidence. In particular, the evidence indicates that the SL-CAPM significantly underestimates the returns generated by low-beta portfolios and the extent to which the returns to low-beta portfolios is underestimated is both statistically and economically significant.[32]

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[31] SFG Fama French Report, 30-31

[32] NERA Empirical Performance Report at pp. 54-59

79. In section 8.3 of the RRP, ActewAGL Distribution contended that the AER has failed to adequately have regard to all relevant estimation methods/models, market data and other evidence. In particular, ActewAGL Distribution made reference to the fact that the AER's Rate of Return Guideline does not give any role to the Fama French model despite substantial evidence that this model is used widely by market practitioners (see section 8.3.5.1 of the RRP).

80. In further response to the AER's analysis of independent expert reports that is set out in its Draft Decision,[33] ActewAGL Distribution now adduces an additional report prepared by Incenta Economic Consulting (**Incenta**) titled *Further update on the required return on equity from Independent expert reports*, dated February 2015, attached to this submission as Attachment 27 (**Incenta Report**). The Incenta Report updates the evidence on independent expert reports to the present time, further to its previous report titled *Update of evidence on the required return on equity from independent expert reports,* 20 August 2014 (**Previous Incenta Report**) which was considered by the AER in its Draft Decision.[34]

81. Relevantly, the conclusions in the Incenta Report[35] include that there are three principal shortcomings in the AER's consideration and conclusions in relation to the information that may be drawn from independent expert reports as follows:

81.1 while the AER concluded that the only reports of relevance are those that related to regulated infrastructure businesses, Incenta opines that a consideration of all reports that undertake a discounted cash flow valuation analysis (and so require an estimate of the WACC) provide a source of evidence as to whether the WACC (and cost of equity in particular) moves mechanistically with the "spot" risk free rate of return as the AER's standard approach incorrectly assumes;

81.2 Incenta opines that the AER's assertion that independent experts derive a cost of equity by adding a risk premium to the "spot" risk free rate mischaracterises the practice of independent experts and, most relevantly, means that the AER fails to detect the strong negative relationship between the risk premium and the risk free rate that is observed by independent experts. The assumption that the risk premium is held constant is inconsistent with the observed practice of the independent experts; and

81.3 Incenta further opines that the AER has misinterpreted Grant Samuel's independent expert reports,[36] and in particular Grant Samuel's Envestra report,[37] being the reports the AER concedes are very relevant to regulated infrastructure. The AER consequently has understated the risk premium that was applied by the relevant independent expert.

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[33] Draft Decision, Attachment 3: Rate of Return, pp. 3-89 to 3-93, and see also Table 3-20

[34] Draft Decision, Attachment 3: Rate of Return, p. 3-95, including footnotes 351 and 352

[35] Incenta Report, pages (1) to (2)

[36] Draft Decision, Attachment 3: Rate of Return, pp. 3-93 to 3-94, and Table 3-20 (lists 16 Grant Samuel reports)

[37] Draft Decision, Attachment 3: Rate of Return, page 3-94, Table 3-20 (lists Grant Samuel's Envestra report)

82. ActewAGL Distribution notes that it attached to the RRP (see Attachment F13) the letter that Grant Samuel provided to the AER in which Grant Samuel clarifies the AER's misapprehensions about its methodology.[38]

83. In the Draft Decision, the AER states that the equity beta is a key input parameter in SL-CAPM. The AER considers that because the SL-CAPM works on the basis that investors can diversify away business–specific risk, only systematic risk is relevant for determining equity beta. The AER adopts an equity beta point estimate of 0.7 from a range of 0.4 to 0.7 for a benchmark efficient entity as it considers an equity beta of 0.7 is reflective of the systematic risk a benchmark efficient entity is exposed to in providing regulated services.[39]

84. In section 8.3.5.2 of the RRP, ActewAGL Distribution contended that the AER places too much weight on unreliable Australian regression data and omits relevant international evidence in determining an equity beta of 0.7. In section 8.3.5.2.1 of the RRP, ActewAGL Distribution further contended that the AER's adoption of the top of the range equity beta point estimate will not adequately correct for any bias in the SL-CAPM[40].

85. To provide further support for ActewAGL Distribution's contentions noted in the preceding paragraph, ActewAGL Distribution has adduced the SFG Beta and Black CAPM Report (Attachment 31). In section 3 of that report, SFG concludes that the relevant international evidence supports an equity beta estimate of above the 0.7 estimate. SFG discusses the unreliable Australian regression data in section 4 of its report.

MRP

86. In the Draft Decision, the AER acknowledges that the MRP cannot be directly observed. The AER then proceeds, after stating it has considered a range of conceptual and empirical evidence to determine a point estimate which it says has regard to prevailing conditions in the market for equity funds and contribute to achieving the allowed rate of return objective, namely an estimate of 6.5%.[41]

87. In section 8.3.5.3 of the RRP, ActewAGL Distribution contended there were a number of reasons that the AER erred in its estimation of the MRP. In addition, ActewAGL Distribution stated that the AER's approach to determining the MRP differs from that proposed by ActewAGL Distribution. One of those differences is that the AER's estimate of the MRP has not changed since publication of its Rate of Return Guideline, despite apparent changes in prevailing market conditions. In particular, the risk-free rate has fallen significantly, from 4.1% at the time the Rate of Return Guideline was published, to 3.55% at the time of the Draft Decision (and is currently well below 3%) - see Attachment 28. ActewAGL Distribution contends that this in itself indicates

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[38] RRP, Attachment F13, Grant Samuel and Associates, 2015, *Grant Samuel Response to AER Draft Decision*, January 2015

[39] Draft Decision, Attachment 3: Rate of Return, p. 3-235

[40] However, ActewAGL Distribution notes that the AER's range of 0.4 to 0.7 is inconsistent with the recommendation of Henry (2014) that "the point estimate for β lies in the range 0.3 to 0.8". As noted by SFG in the SFG Beta and Black CAPM Report, if the AER had adopted the range of 0.3 to 0.8, it might have set the point estimate to 0.8 on the basis that the secondary evidence (being the Black CAPM) pointed to a higher estimate. ActewAGL Distribution therefore disputes that the equity beta estimate of 0.7 is an adoption of the 'top of the range'.

[41] Draft Decision, Attachment 3: Rate of Return, p. 3-195

that market conditions have changed and that the MRP may now be higher than it was at the time the Rate of Return Guideline was published and higher than when ActewAGL Distribution submitted both its RP and RRP. In support of this contention see section 5 of the SFG Share Prices Report (Attachment 28).

88. In sections 8.3.5.3.1, 8.3.5.3.2 and 8.3.5.3.3 of the RRP, ActewAGL Distribution also contended that the AER should:

88.1 take into account the Wright approach when estimating the MRP;

88.2 use independent valuation reports to inform its estimate of the MRP;

88.3 use SFG's construction of the DDM to inform its estimate of the MRP.

89. While each of the estimation methodologies proposed by ActewAGL Distribution can be updated for recent data in order to derive a current estimate of the MRP, ActewAGL Distribution is concerned that the AER's methodology is not similarly responsive to changes in market conditions. This is likely due to the fact that the AER's approach puts too much weight on historical excess returns and fails to take into account a number of relevant estimation methodologies of the prevailing conditions which provide a strong indication of current market conditions, such as the DDM, the Wright approach, and evidence from independent expert reports.

90. In the RRP, ActewAGL Distribution also stated that the AER's approach to determining the MRP differs from that proposed by ActewAGL Distribution, in that the AER does not agree with SFG's adjustments for the value of imputation credits or its estimate of the value of those credits. In the Draft Decision, the AER stated:

> Insofar as investors value imputation credits, the definition of the equity risk premium in SLCAPM should account for the capitalised value of personal tax credits. This is because under an imputation tax system, some personal tax payments will be capitalised into the risk premium.
>
> The risk premium will reduce when some personal tax payments are capitalised into the risk premium. Therefore, we need to adjust the MRP to include the personal tax credits. This adjustment is required to calculate the return on equity that reflects an after-company tax but before-personal tax return. This is to be consistent with the return on capital and cash flows which are defined on an after company tax but before personal tax basis.[42]

91. In the SFG Share Prices Report (Attachment 28), SFG has responded to the AER's approach referred to in the preceding paragraph and other matters raised in the Draft Decision including the role and best estimate of the long run growth rate in dividends, the use of analyst price targets and forecast, and the impact of recent changes in the risk-free rate. SFG also considered theoretical restrictions on empirical estimates, and different approaches for grossing up stock returns for the value of imputation credits.

92. One of the matters raised in the Draft Decision is the AER's disagreement with SFG's approach to providing an estimate of the MRP, in particular, SFG's adjustments to account for the value of

[42] Draft Decision, Attachment 3: Rate of Return, p. 3-207

imputation credits.[43] The AER notes that it does not use independent valuation reports to inform its estimate of the MRP.[44]

93. In the SFG Share Prices Report (Attachment 28), SFG repeats its previous point that:

> the AER makes an assumption about imputation credits in estimating the market return that implies a comparatively low value for imputation credits, but embedded in the AER's post-tax revenue model is an assumption of a comparatively high value for imputation credits. The AER considers that we have mis-characterised the way in which the AER accounts for imputation credits.[45]

94. Accordingly, SFG re-phrases the issue in section 4 of the SFG Share Prices Report with direct reference to the computations from market return estimates and the AER's post-tax revenue model to reiterate its point (see section 4.3 of the report at Attachment 28). In summary, SFG's view:

> remains that the AER should either estimate the market return in a manner consistent with the AER's post-tax revenue model, or adjust the post-tax revenue model so that the AER accounts for imputation credits in a consistent manner to the market return estimate.[46]

95. SFG concludes, in the SFG Share Prices Report (Attachment 28), that:

95.1 given ActewAGL Distribution has proposed an estimate for the value of imputation credits (gamma) of 0.25, and that SFG adjusts total returns in a manner consistent with the AER's post-tax revenue model, SFG estimates market returns including imputation credits as the return from dividends and capital gains × 1.1071;[47]

95.2 across all approaches to estimating the market cost of equity from share prices and analyst forecasts, encompassing different datasets, models, long term growth assumptions and imputation adjustments, there is no support for maintaining an estimate for the market risk premium of 6.5%. Even if the AER approach is accepted in its entirety, the market risk premium estimate at present is 8.53%. Further, adding 6.5% to the current risk free rate of 2.66% gives an implied market return of 9.16%. The market return estimates generated by the AER approach have never fallen below 9.48% over the nine years for which data is available[48]; and

95.3 SFG's best estimate of the expected market return at 31 December 2014 is 11.37% which implies a market risk premium estimate of 8.72%. These estimates are consistent with the equations in the AER post-tax revenue model and an assumption that the value of imputation credits (gamma) is 0.25.[49]

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[43] Draft Decision, Attachment 3: Rate of Return, p. 3-209

[44] Draft Decision, Attachment 3: Rate of Return, p. 3-210

[45] SFG Share Prices Report, page 17

[46] SFG Share Prices Report, page 17

[47] SFG Share Prices Report, page 21

[48] SFG Share Prices Report, page 33

[49] SFG Share Prices Report, page 33

96. To provide further support for the propositions ActewAGL Distribution raises in respect of the MRP, see the NERA Historical Estimates Report (Attachment 29) where NERA addresses a number of the data related aspects of the historical estimates of the MRP raised in the Draft Decision.

97. ActewAGL Distribution maintains its disagreement with the AER's estimate for the MRP of 6.5%. This estimate does not reflect prevailing conditions in the market for equity funds and will not contribute to the achievement of the allowed rate of return objective.

Conclusion

98. ActewAGL Distribution notes that the estimate of the return of equity contained in the RRP (10.16%) is now out of date. To provide support for this proposition, ActewAGL Distribution now adduces a report by SFG titled *The required return on equity for the benchmark efficient entity*, dated February 2015 (**SFG Overall Cost of Equity Report**) as Attachment 32 to this submission. In that Report, SFG combines all the evidence from the other companion reports (SFG Share Prices Report, SFG Beta and Black CAPM Report, and SFG Fama French Report) and updates the return on equity estimate using the most recent data available at 9.87%[50].

[50] SFG Overall Cost of Equity Report, page 35

Gamma

99. In the Draft Decision, the AER determined a gamma of 0.4. In so doing, the AER departs from its position in the Rate of Return Guideline in relation to the distribution rate. Whereas in the Rate of Return Guideline the AER stated that it would apply a distribution rate (or payout ratio) of 0.7, in the Draft Decision the AER refers to two estimates of the distribution rate:

    99.1 a market-wide distribution rate (including listed and unlisted equity) of 0.7; and

    99.2 a distribution rate for listed equity only of 0.8.[51]

100. In section 8.5.6 of the RRP, ActewAGL Distribution maintained its position that gamma should be 0.25 (being a product of a distribution rate of 0.7 and a theta of 0.35).[52] It further stated that the estimation method that the AER proposes to adopt will not result in an estimate of gamma that reflects the value equity-holders place on imputation credits. The errors evident in the AER's method were summarised as:

    100.1 the AER's (revised) definition of theta - which seeks to exclude the effect of certain factors on the value of imputation credits - is conceptually incorrect and inconsistent with the requirements of the Rules;

    100.2 the AER incorrectly uses equity ownership rates as direct evidence of the value of distributed credits (theta), when in fact equity ownership rates will only indicate the maximum set of investors who may be eligible to redeem imputation credits and who may therefore place some value on imputation credits. Theta can be no higher than the equity ownership rate and will in fact be lower due to factors which reduce the value of credits distributed to Australian investors;

    100.3 the AER has erred in its interpretation of the equity ownership data - the ranges used by the AER for the equity ownership rate are inconsistent with the evidence in the Draft Decision;[53]

    100.4 the AER uses redemption rates as direct evidence of the value of distributed credits (theta), when in fact redemption rates are no more than an upper bound (or maximum) for this value;

    100.5 the AER has erred in concluding that market value studies can reflect factors, such as differential personal taxes and risk, which are not relevant to the task of measuring theta. Market value studies are direct evidence of the value of imputation credits to investors;

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51 Draft Decision, Attachment 4: Value of imputation credits, p. 4-16

52 RRP, p. 487

53 See in particular Figure 4-4 and Figure 4-5 of the Draft Decision, Attachment 4: Value of imputation credits, p. 4-56

100.6 the AER has erred in its interpretation of market value studies. The AER considers market value studies in a very general manner, rather than considering the merits of the particular market value estimate proposed by ActewAGL Distribution;

100.7 as well as (correctly) observing that the market-wide distribution rate is 0.7, the AER has also relied on a higher estimate of the distribution rate for listed equity only. Given that data on the distribution rate is available for all equity, it is neither necessary nor appropriate to separately identify a distribution rate for listed equity only based on a limited sample; and

100.8 the AER's ultimate conclusion as to the value for gamma is inconsistent with the evidence presented in the Draft Decision, including the AER's own analysis of the equity ownership rate and redemption rate - the analysis of these rates only provide a check on the point estimate (and indicate that the upper bound for theta is 0.43).[54] Accordingly, that analysis evidences that the AER has overestimated the value of imputation credits.

101. In the RRP, ActewAGL Distribution contended that:

101.1 it is clear that what is required under the Rules is an estimate of the value of imputation credits to investors in the business;

101.2 accounting for gamma in this way ensures that the overall return received by investors (including the value they ascribe to imputation credits) is sufficient to promote efficient investment in, and use of, infrastructure, for the long-term interests of consumers; and

101.3 market value studies indicate the value of imputation credits to investors, as reflected in share price movements. Accordingly, the best estimate of theta from market value studies is 0.35.[55]

102. ActewAGL Distribution maintains that the correct approach to estimating gamma is as set out in section 8.5.6 of its RRP. This involves estimating the distribution rate using ATO data and estimating theta based on the value of imputation credits reflected in share price movements (i.e. using dividend drop-off analysis, regarding which the procedures use to select and filter the data using that analysis was found to be appropriate by the Tribunal[56]). Combining the observed distribution rate (0.7) with the best estimate of theta from market value studies (0.35) leads to an estimate for gamma of 0.25 as proposed by ActewAGL Distribution in its RRP. ActewAGL Distribution now adduces a report by Professor Gray in further support of the conclusion that the best available estimate of gamma is 0.25, attached to this submission as Attachment 33 (**SFG Gamma Report**).[57]

[54] RRP, page 489

[55] RRP, page 487, 489

[56] *Application by Energex Limited (Gamma) (No 5)* [2011] ACompT 9 [18]-[19]

[57] SFG, *Estimating gamma for regulatory purposes*, February 2015, 4

Value of distributed credits (theta)

103. Consistent with ActewAGL Distribution's continuing position in the current determination process that gamma (and therefore theta) must reflect the value of imputation credits to investors,[58] Professor Gray notes:

> Under the building block approach, the regulator makes an estimate of gamma and then reduces the return that is available to investors from dividends and capital gains from the firm accordingly. In my view, it is clear that this is consistent with a value interpretation. If the value of foregone dividends and capital gains is greater than the value of received imputation credits, the investors will be left under-compensated, and vice versa.[59]

Market value studies

104. Further to ActewAGL Distribution's contention that the AER's concern about 'problematic estimation methodologies' may apply to some market value studies does not apply to the particular study relied on by ActewAGL Distribution,[60] Professor Gray notes that the dividend drop-off literature has evolved over time, and that the SFG studies use current state-of-the-art techniques. Professor Gray explains:

> In relation to dividend drop-off studies, I first note that the dividend drop-off literature has evolved over time, as do all areas of scientific investigation. This evolution has seen the development of different variations of the econometric specification, different variations of regression analysis, and different types of sensitivity and stability analyses. It has also seen material growth in the available data. The SFG studies use the latest available data, and they apply a range of econometric specifications, regression analysis and sensitivity and stability analyses that have been developed in the literature. The SFG estimate of 0.35 is based on this comprehensive analysis. It is not as though the SFG studies use one of the reasonable approaches and other studies use different reasonable approaches. The SFG studies are comprehensive state-of-the-art studies.[61]

Distribution rate

105. Further to ActewAGL Distribution's statement in the RRP that it considers that it is neither necessary nor appropriate to separately identify a distribution rate for listed equity businesses only,[62] ActewAGL Distribution now submits that the AER's definition of the benchmark efficient entity is not confined to listed entities only. The AER's conceptual definition of the benchmark entity is a pure play, regulated energy network business operating within Australia. Therefore, there is no conceptual basis to confine the dataset for estimating the distribution rate to listed equity.[63]

106. Professor Gray further notes that even if the dataset were to be limited to listed entities, the AER’s estimate of 0.8 is likely to be overstated to the extent that foreign-sourced income enables

[58] For example, see RRP, Attachment F5, *Detailed response to the AER's draft decision in relation to Gamma*, page 3

[59] SFG Gamma Report, 13

[60] RRP, Attachment F5, *Detailed response to the AER's draft decision in relation to Gamma*, pages 7-8

[61] SFG Gamma Report, 36

[62] RRP, Attachment F5, *Detailed response to the AER's draft decision in relation to Gamma*, page 1

[63] AER, 2013, *Better Regulation: Rate of Return Guideline*, December 2013, page 7

large listed companies to distribute a higher proportion of imputation credits (compared to the benchmark efficient entity, which is assumed to have no access to foreign-sourced income). Professor Gray concludes that there is no reasonable basis to adopt a distribution rate of 0.8, even if the data is restricted to listed firms only.[64]

Range of estimates relied on by the AER

107. Regarding the AER's use of tax statistics, and ActewAGL Distribution's concern around the use of redemption rates from tax statistics for the purposes of estimating theta, ActewAGL Distribution notes that the reasons for its concern include because the redemption rate is necessarily an upper bound for theta rather than a measurement of theta.[65] In this regard, ActewAGL Distribution further contends[66] that it would be an error to adopt a redemption rate any higher than 0.43 based on Handley and Maheswaran (2008) because that study is not an empirical measure of redemption rates for the relevant period. This has been pointed out to the AER since the *Energex*[67] proceedings, and the AER should desist from erroneously using Handley and Maheswaran for this purpose.

[64] SFG Gamma Report, 47

[65] RRP, Attachment F5, *Detailed response to the AER's draft decision in relation to Gamma*, pages 11-12

[66] RRP, Attachment F5, *Detailed response to the AER's draft decision in relation to Gamma*, page 11

[67] *Application by Energex Limited (Gamma) (No 5)* [2011] ACompT 9

Appendix 1 - list of attachments

The following is a list of attachments referred to in, and adduced under cover of, ActewAGL Distribution's submission.

No.	Attachment author, title, date	Confidential
Importance of reliability to consumers		
1	Orima Research, *ActewAGL Distribution: A report on qualitative consumer engagement research*, 20 January 2015 (**Orima Report**)	No
The NEO preferable decision		
2	Houston Kemp, *AER Determination for ActewAGL Distribution - Contribution to NEO and Preferable NEO Decision*, February 2015 (**Houston Kemp Report**)	No
3	Hansard, South Australia House of Assembly, 9 February 2005, 27 September 2007, 26 September 2013	No
4	Expert Panel, *Review of Limited Merits Review Regime*, Stage 1 Report,	No
5	Expert Panel, *Review of Limited Merits Review Regime*, Stage 2 Report, 30 September 2012	No
6	Ofgem, *Handbook for implementing the RIIO model*, 4 October 2010	No
Implications of the Draft Decision for safety and the WHS Act		
7	AECOM, *The Impact of the AER's Draft Decision on ActewAGL's Service Reliability and Safety Performance (Supplementary Report),* 13 February 2015 **(Further AECOM Report)**	No
8	Witness Statement of S Devlin, General Manager, Asset Management ActewAGL Distribution, 13 February 2015 (**Devlin Statement**)	No
9	Norton Rose Fulbright, Legal Opinion: *Liability of the AER in relation to Draft Determination on the ACT electricity distribution revenue proposal*, 16 January 2015 (**Norton Rose Opinion**)	No
10	Ian Hanger AM QC, *Report of the Royal Commission into the Home Insulation Program*, 29 August 2014	No

No.	Attachment author, title, date	Confidential
Operating expenditure		
11	Ausgrid, *Revised regulatory proposal for the period 1 July 2014 to 30 June 2019*, 20 January 2015, Attachment 1.05 - Frontier Economics - *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015 (**Frontier Report**)	No
12	Ausgrid, *Revised regulatory proposal for the period 1 July 2014 to 30 June 2019*, 20 January 2015, Attachment 1.10 - PWC - *Independent Expert Advice on appropriateness of RIN data for benchmarking comparisons*, 9 January 2015 (**PWC Report**)	No
13	*Access arrangement draft decision Multinet Gas (DB No. 1) Pty Ltd Multinet Gas (DB No. 2) Pty Ltd 2013-17 Part 1*	No
14	*Application by Telstra Corporation Limited* [2009] ACompT 1	No
15	*Application by Telstra Corporation Limited* [2010] ACompT 1	No
16	*Application by Optus Mobile Pty Limited & Optus Networks Pty Limited* [2006] ACompT 8	No
17	*Re Telstra Corporation Ltd (No 3)* [2007] ACompT 3	No
18	N Young QC and A McClelland, *Memorandum of Advice In the Matter of ActewAGL Distribution, ActewAGL Distribution - AER Draft Decision on Operating Expenditure for 2015 to 2019 Regulatory Control Period*, 13 February 2015 (**Counsel Opinion**)	No
Efficiency benefits sharing scheme		
19	Houston Kemp, The Impact of the EBSS on Distributor Incentives ActewAGL EBSS (**Further EBSS Report**), 11 February 2015	No
20	AER, 2013, Expenditure and Assessment Forum, 29 April 2013, EBSS models	No
21	AER, 2013, Expenditure and Assessment Forum - Powerpoint Slides, *Expenditure incentive guidelines: Presentation on key issues*, April 29 2013	No
22	AER, 2013, Expenditure and Assessment Forum - Powerpoint Slides, *Expenditure Forecast Assessment Guidelines: Interactions with incentive frameworks*, April 29 2013	No
23	AER, 2013, Public Forum Powerpoint Slides, *Better Regulation: Expenditure assessment and incentives: Presentation on key issues*, April 29 2013	No

No.	Attachment author, title, date	Confidential
Capital expenditure		
24	psdenergy, *Fyshwick Zone Substation Earth Grid Condition Assessment Report*, February 2015	No
25	psdenergy, Wanniassa Zone Substation Earth Grid Conditioning Report, February 2015	No
Return on capital		
26	NERA, *Empirical Performance of Relevant Models for Estimating the Return on Equity*, February 2015 (**NERA Empirical Performance Report**)	No
27	Incenta, *Further update on the required return on equity from Independent expert reports*, February 2015 (**Incenta Report**)	No
28	SFG, 2015, *Share prices and the cost of equity for the market and a benchmark energy network*, February 2015 (**SFG Share Prices Report**)	No
29	NERA, *Historical Estimates of the Market Risk Premium*, February 2015 (**NERA Historical Estimates Report**)	No
30	SFG, 2015, *Using the Fama-French model to estimate the required return on equity*, February 2015 (**SFG Fama French Report**)	No
31	SFG, 2015, *Beta and the Black Capital Asset Pricing Model*, February 2015 (**SFG Beta and Black CAPM Report**)	No
32	SFG, *The required return on equity for the benchmark efficient entity*, February 2015, (**SFG Return on Equity Report**)	No
33	SFG, 2015, *Estimating gamma for regulatory purposes*, February 2015 (**SFG Gamma Report**)	No

Appendix 2 - Confidentiality claim

Completed Confidentiality Template

ActewAGL Distribution sets out below the completed Confidentiality template in respect of this submission in accordance with the AER's *Better Regulation Confidentiality Guideline* dated November 2013 (**Confidentiality Guideline**).

Title, page and paragraph number of document containing the confidential information	Description of the confidential information	Topic the confidential information relates to (e.g. capex, opex, the rate of return etc.)	Identify the recognised confidentiality category that the confidential information falls within	Provide a brief explanation of why the confidential information falls into the selected category If the information falls within 'other' provide further details on why the information should be treated as confidential	Specify reasons supporting how and why detriment would be caused from disclosing the confidential information	Provide any reasons supporting why the identified detriment is not outweighed by the public benefit (especially public benefits such as the effect on the long term interests of consumers)

Proportion of confidential material

In accordance with the Confidentiality Guideline, ActewAGL Distribution sets out below a proportion of confidential material notice in respect of this submission.

Submission Title	Number of pages of submission that include information subject to a claim of confidentiality	Number of pages of submission that do not include information subject to a claim of confidentiality	Total number of pages of submission	Percentage of pages of submission that include information subject to a claim of confidentiality	Percentage of pages of submission that do not include information subject to a claim of confidentiality
Submission on the AER's Draft decision ActewAGL distribution determination 2015-16 to 2018-19 dated November 2014 pursuant to clauses 6.10.2(c) and 6.10.3(e) of the National Electricity Rules	0	50	50	0%	100%
Attachments	0	2785	2785	0%	100%

Note: This notice is an approximate indication of the proportion and comparative proportion of material in ActewAGL Distribution's submission that is subject to a claim of confidentiality compared to that which is not.

Other

In addition, in accordance with the Confidentiality Guideline, ActewAGL Distribution:

- Highlights the confidential information in the submission and attachments thereto with yellow shading;
- On provision to the AER of this submission, also provides:
    - a public version of the documents which contain confidential information to the AER (in which any confidential information has been redacted or 'blacked out' such that formatting and page numbering remain as in the confidential version); and

- the completed Confidentiality template in Microsoft Word format; and

- For electronic documents, specifies in the filename whether the document is 'public' or 'confidential'.

Appendix 3 - summary of Australian competition tribunal decisions on use of international data

The Australian Competition Tribunal has reached conclusions on reliance in a network regulatory context on international data including for the purpose of benchmarking in a number of decisions as follows:

- In *Application by Telstra Corporation Limited* [2009] ACompT 1, Telstra relied upon evidence about the experience of overseas cable operators and sought to argue (at [27]) that, having regard to international experience, the Tribunal should be satisfied that Optus could operate as an efficient and effective competitor through its Hybrid Fibre Coaxial network. The Tribunal's view (at [27]) was that comparisons with the experience of overseas cable operators who do not operate in the same regulatory, commercial and physical environment as Optus should be treated with extreme caution.

- In *Application by Telstra Corporation Limited* [2010] ACompT 1, Telstra and the ACCC applied a variety of techniques to estimate the equity beta, including international benchmarking, and agreed that some caution should be applied to ensure accurate comparables are used (see [479]). The ACCC considered that more emphasis should be given to Ovum's direct beta estimate based on five years of monthly data (at [446]). The Tribunal preferred the countries (entities) used in the ACCC benchmarking but was mindful of the caution express by both the ACCC and Telstra over the use of benchmarking (see [481-482]). The Tribunal did not rely on the benchmarking alone to the exclusion of other techniques employed by Telstra and the ACCC, such as the direct beta estimates.

- In *Application by Optus Mobile Pty Limited & Optus Networks Pty Limited* [2006] ACompT 8, Optus requested CRA to undertake an international benchmarking analysis for the purpose of supporting the reasonableness of its domestic GSM terminating access service price (at [292]). The Tribunal stated (at [296]) that it did not consider the international benchmarking analysis proffered by Optus to be of any assistance in determining the issue as to the reasonableness of Optus' price. It stated that "in order to place any reliance upon the international benchmarking analysis it would be necessary to know much more about the regulatory environment within which they were determined, the state of the relevant markets and the socio-economic environment in which the mobile services were operative" (at [297]).

- In *Re Telstra Corporation Ltd (No 3)* [2007] ACompT 3, Telstra submitted that the reasonableness of its price terms was supported by reasons including the calculations it had made relating to international benchmarks (at [336]). The Tribunal was not satisfied that Telstra had provided sufficient evidence to support the use of international benchmarking. It said (at [385]) that "to place any reliance upon the international benchmarking analysis it would be necessary to know much more about the regulatory framework, the cost of capital and the price structures employed in other jurisdictions".