

**Commonwealth of Australia**

***Electricity (National Scheme) Act 1997 (ACT)***

**In the Australian Competition Tribunal**

**File No. 5 of 2015**

**Re**                    **Application under section 71B of the National Electricity Law for a review of a distribution determination made by the Australian Energy Regulator in relation to ActewAGL Distribution pursuant to clauses 6.11.1 and 11.56.4 of the National Electricity Rules**

**Applicant**        **ActewAGL Distribution (ABN 76 670 568 688)**

**Address of Applicant**    **ActewAGL House, 40 Bunda Street, Canberra ACT 2601**

**SUBMISSIONS IN SUPPORT OF APPLICATION FOR  
LEAVE TO APPLY**

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Prepared by Fleur Gibbons  
DLA Piper Australia  
Tel        (03) 9274 5000  
Email    [fleur.gibbons@dlapiper.com](mailto:fleur.gibbons@dlapiper.com)  
Address for service   DLA Piper Australia  
                             140 William Street  
                             Melbourne Vic 3000

Ref   FCG:LMH 0354593/8 (1209643922)

Fax   (03) 9274 5111

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## A INTRODUCTION

1. This proceeding concerns a review of the final determination by the Australian Energy Regulator (**AER**) titled *Final Decision ActewAGL distribution determination 2015/16 to 2018/19 (Final Determination)*. The Final Determination was published on 30 April 2015.
2. On 21 May 2015, ActewAGL Distribution (**ActewAGL**) lodged with the Australian Competition Tribunal (**Tribunal**) an application for leave to apply for review and an application for review (**Application**).
3. These are ActewAGL's submissions in support of its application for leave to apply for review.
4. On 2 June 2015, the Tribunal made directions (amended on the same date) for the conduct of the proceeding insofar as concerns the grant of leave. Order 3 required the AER to give *each* of the applicants to ACT Nos 1 to 7 of 2015 notice of whether it intends to submit that the threshold requirements for the grant of leave by the Tribunal are not satisfied on the grounds set out in a *particular* application and the basis for any such objection.
5. On 12 June 2015, the AER filed and served its *Notice Regarding Applications for Leave* pursuant to that order (**AER Notice**).
6. The AER Notice appears to foreshadow the AER's intention to oppose the grant of leave to ActewAGL in respect of at least some of the grounds set out in its Application and on the basis of at least some of the leave criteria. However, the extent to which the AER intends to oppose the grant of leave, and to rely on the leave criteria referred to in the AER Notice, in respect of ActewAGL's particular Application cannot be ascertained from that Notice.
7. As detailed in a letter from ActewAGL's legal representatives to the AER's legal representatives also on 12 June 2015,<sup>1</sup> ActewAGL raised these concerns with the AER Notice with the AER, by reference to the deficiencies in that Notice, and requested that the AER remedy these matters.
8. By letter dated 15 June 2015, the AER's legal representatives responded, in essence asserting that the AER Notice identified the AER's position on leave and the reasons for that position as required by the Tribunal's directions, including by identifying the provisions that the AER will rely upon, identifying the matters it maintains must be established for the grant of leave and identifying 'the kinds of 'flaws' in respect of the serious issue requirements which the AER intends to raise at the leave hearing.<sup>2</sup>
9. In so stating, the AER's letter can only be understood as speaking in respect of the Applications generally. It remains the case that the AER Notice does not identify with any certainty the AER's position on leave and the reasons for that position *in respect of ActewAGL's particular Application*.
10. As a consequence, the AER's position on leave for ActewAGL and the reasons for that position will be known to ActewAGL only when the AER files and serves its submissions on

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<sup>1</sup> Letter from DLA Piper to Corrs Chambers Westgarth (copied to the Tribunal) dated 12 June 2015.

<sup>2</sup> Letter from Corrs Chambers Westgarth to DLA Piper (copied to the Tribunal) dated 12 June 2015.

leave 3 business days prior to the commencement of the leave hearing. Accordingly, ActewAGL's submissions on leave are necessarily extensive and, while ActewAGL has sought to address the matters raised by the AER to the extent practicable in the present circumstances, it will likely need to address much of the AER's position on the grant of leave to ActewAGL in its reply submissions on leave.

## **B REGULATORY REGIME**

11. The regulatory regime applicable to the making, and review by the Tribunal, of the Final Determination is described in paragraphs 14 to 58 of the Application.
12. Paragraph 46 to 58 of the Application discuss the National Electricity Law (**NEL**) regime for merits review by the Tribunal. Division 3A of Part 6 of the NEL provides for merits review by the Tribunal of 'reviewable regulatory decisions'. The nature of review by the Tribunal under the NEL and the powers of the Tribunal in such a review are governed by the NEL. In addition to the matters discussed in the Application in that regard, ActewAGL observes that the merits review which the NEL permits under Division 3A of Part 6 of the NEL is circumscribed by:<sup>3</sup>
  - 12.1 the grounds of review in section 71C(1) of the NEL which are the subject of the leave granted by the Tribunal;
  - 12.2 the matters that are legitimately raised by the AER under section 71O(1) of the NEL;
  - 12.3 the matters that are permissibly raised by a party other than the AER under section 71O(2) of the NEL; and
  - 12.4 the review related matter (inclusive of decision related matter under section 28ZJ of the NEL), and any new information or material, that the Tribunal may consider in making a determination in accordance with section 71R of the NEL.
13. In the AER Notice, it foreshadows that it intends to oppose the grant of leave in respect of '[s]ome of the applications' in ACT 1 to 7 of 2015 by reference to the criteria in section 71O(2) of the NEL.<sup>4</sup> ActewAGL does not understand the AER to be raising any issue in respect of its Application by reference to section 71O(2), however, as the AER provides a number of examples of its concern by way of paragraphs in the applications of Ausgrid, Endeavour Energy and Essential Energy but makes no mention of ActewAGL's Application.<sup>5</sup> Accordingly, it is unnecessary for ActewAGL to further address section 71O(2) of the NEL in these submissions.

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<sup>3</sup> *Application by United Energy Distribution Pty Limited (No 2)* [2012] ACompT 8, [58]-[73].

<sup>4</sup> AER Notice, [5]. In so doing, the AER does not identify the relevance of section 71O(2) of the NEL (which does not itself establish a criterion for the grant of leave) to the criteria for the grant of leave nor the basis on which it maintains that any section 71O(2) issue results in the non-satisfaction, in the present circumstances, of the leave criteria.

<sup>5</sup> The parenthetical discussion in the AER Notice at [5].

## C STATUTORY SCHEME FOR LEAVE TO APPLY FOR REVIEW

### 1. NEL provisions

14. The provisions governing an application for leave to apply for merits review are set out in Division 3A of Part 6 of the NEL. Section 71B of the NEL provides that an 'affected or interested person or body', with the leave of the Tribunal, may apply to the Tribunal for a review of a 'reviewable regulatory decision'. 'Affected or interested person or body' is defined in section 71A of the NEL to include a regulated network service provider (**NSP**) to whom the 'reviewable regulatory decision' applies.
15. 'Reviewable regulatory decision' is defined in section 71A to include a distribution determination, being either a network revenue or pricing determination (as defined in section 2 of the NEL), that sets a regulatory period.
16. An application under section 71B(1) of the NEL:
  - 16.1 may only be made on one or more of four specified grounds (section 71C of the NEL); and
  - 16.2 must be made no later than 15 business days after the reviewable regulatory decision is published in accordance with the NEL or the National Electricity Rules (**NER**) (section 71D of the NEL).
17. Sections 71E to 71H of the NEL further govern the Tribunal's decision with respect to the granting of leave to apply for review. In respect of the present Application, ActewAGL must satisfy the Tribunal that its Application meets the threshold criteria under sections 71E and 71F. Section 71G of the NEL is not relevant to the present application for leave to apply as ActewAGL is the regulated NSP to whom the reviewable regulatory decision relates.<sup>6</sup> It is presumably for this reason that the AER states, in the AER Notice, that it does not intend to oppose leave being granted to ActewAGL by reference to section 71G of the NEL.<sup>7</sup>
18. Section 71E of the NEL provides:
 

Subject to this Subdivision, the Tribunal must not grant leave to apply under section 71B(1) unless it appears to the Tribunal—

  - (a) that there is a serious issue to be heard and determined as to whether a ground for review set out in section 71C(1) exists; and
  - (b) that the applicant has established a *prima facie* case that a determination made by the Tribunal varying the reviewable regulatory decision, or setting aside the reviewable regulatory decision and a fresh decision being made by the AER following remission of the matter to the AER by the Tribunal, on the basis of 1 or more grounds raised in the application, either separately or collectively, would, or would be likely to, result in a materially preferable NEO decision.

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<sup>6</sup> Section 71G of the NEL, by its terms, only applies to a person or body referred to in paragraph (b) or (c) of the section 71A definition of 'affected or interested person or body'. A regulated NSP to whom the reviewable regulatory decision applies is referred to in paragraph (a) of that definition.

<sup>7</sup> AER Notice, [7].

19. An additional threshold, which applies to reviewable regulatory decisions that are network revenue or pricing determinations such as the Final Determination, is set out in section 71F of the NEL. Section 71F provides:

- (1) This section applies if—
  - (a) leave to apply under section 71B(1) is in relation to a reviewable regulatory decision that is a network revenue or pricing determination; and
  - (b) the ground for review relied on by the applicant relates to the amount of revenue that may be earned by a regulated network service provider that is specified in or derived from that decision.
- (2) Despite section 71E, the Tribunal must not grant leave to apply under section 71B(1) even if there is a serious issue to be heard and determined as to whether a ground for review set out in section 71C(1) exists unless the amount that is specified in or derived from the decision exceeds the lesser of \$5 000 000 or 2% of the average annual regulated revenue of the regulated network service provider.

20. Finally, under section 71H of the NEL, the Tribunal may refuse to grant leave to apply under section 71B(1) to the regulated NSP if the Tribunal is satisfied the service provider:

20.1 without reasonable excuse:

- 20.1.1 failed to comply with a request (including a request for relevant information), or a direction, of the AER made under the NEL or the NER for the purposes of making the decision; or
- 20.1.2 conducted itself in a manner that resulted in the making of the AER's decision being delayed; or

20.2 misled, or attempted to mislead, the AER on a matter relevant to the AER's decision.

21. The interpretation of each of the grounds for review and the threshold criteria in sections 71E and 71F of the NEL is set out in the following sections.

## **2. Grounds for review**

22. As noted in paragraph 16, an application for leave to apply can only be made on one or more of four specified grounds. Section 71C(1) of the NEL provides:

- (1) An application under section 71B(1) may be made only on 1 or more of the following grounds:
  - (a) the AER made an error of fact in its findings of facts, and that error of fact was material to the making of the decision;
  - (b) the AER made more than 1 error of fact in its findings of facts, and that those errors of fact, in combination, were material to the making of the decision;

- (c) the exercise of the AER's discretion was incorrect, having regard to all the circumstances;
  - (d) the AER's decision was unreasonable, having regard to all the circumstances.
- 23. A leave applicant's complaint must be able to be characterised as falling within one or more of the grounds specified in section 71C of the NEL.<sup>8</sup>
- 24. ActewAGL's Application raises grounds for review under each of the four grounds specified in section 71C(1) of the NEL. Each of those grounds is discussed below.

## 2.1 Error of fact

- 25. The question of what constitutes a finding of 'fact' varies according to the statutory context in which that word or like words are used.<sup>9</sup>
- 26. The expression 'findings of fact' in section 71C(1)(a) and (b) of the NEL should be interpreted 'broadly enough to be meaningful in relation to the function of the AER under review'.<sup>10</sup> As the Tribunal observed in *Application by APT Allgas Energy Limited (No 2)*:<sup>11</sup>

The nature of the AER's task under the NGL and NGR necessarily involves an assessment as to likely future occurrences and states of affair, formed on the basis of expert opinion and evidence of current and historic facts. The phrase "finding of fact" should not be given a meaning that would render its applicability to the AER's functions minor and largely superficial. That is, "the term 'findings of fact' should be interpreted broadly enough to be meaningful in relation to the function of the" AER under review: *ACCC v ACT* at [171].

- 27. Findings of fact may include findings of the following kind:<sup>12</sup>
  - 27.1 the existence of an historical or present fact being an event or circumstance;
  - 27.2 an opinion about the existence of a future fact or circumstance; and
  - 27.3 opinions formed by the AER based upon approaches to the assessment of facts or methodologies which it has chosen to apply.
- 28. The Tribunal has also indicated that the absence of an explanation for, and reasoning in support of, a conclusion reached by a decision-maker may reveal that the process of fact finding or decision making was in error.<sup>13</sup>

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<sup>8</sup> *Application by United Energy Distribution Pty Limited (No 2)* [2012] ACompT 8, [57].

<sup>9</sup> *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [171].

<sup>10</sup> *Application by Energex Limited (No 2)* [2010] ACompT 7 at [28]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [171]; *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [27]; *Application by Envestra Limited (No 2)* [2012] ACompT 4 at [29]; *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [31].

<sup>11</sup> *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [31].

<sup>12</sup> *Application by Energex Limited (No 2)* [2010] ACompT 7 at [29]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [171].

<sup>13</sup> *Application by EnergyAustralia* [2009] ACompT 7 at [16].

29. To establish this ground of review, the applicant must establish an error of fact and that the error (or errors in combination) was (or were) 'material'.
30. The Tribunal need not be satisfied that the factual finding(s) of the AER was (or were) illogical or irrational; such a restriction is not supported by the structure of section 71C(1) of the NEL.<sup>14</sup> The Tribunal, within the confines of the 'review related matter', is simply required to decide whether there was an error or errors of fact in the AER's findings that is or are material to the making of the decision. In making that assessment, the Tribunal is intended by section 71R(1) and (6) of the NEL to place itself in the position of the original fact finder and decide on that material the fact or facts in issue on the review application. In this way, section 71C contemplates a merits review of the AER's factual findings.
31. An error of fact is 'material' if the relevant decision of the AER depends or is based on the error.<sup>15</sup>

## 2.2 Incorrect exercise of discretion

32. The ground of review under section 71C(1)(c) requires that the exercise of the AER's discretion was incorrect, having regard to all the circumstances. A discretionary decision involves the weighing up of relevant facts.<sup>16</sup> As the Tribunal observed in *Application by ActewAGL Distribution*:<sup>17</sup>

Describing the meaning of a discretionary decision is also a difficult matter. The description "discretionary" is often applied to several types of decision making processes. It is most commonly applied to decision making which involves essentially a weighing up of relevant facts. First the decision maker finds the facts. Then the decision maker undertakes a weighing up process which involves taking into account considerations that are found to be relevant, assessing the weight to be given to those considerations so assessed and determining what, as a result of that process, is the right result. Another approach is found in *Norbis v Norbis* (1985-1986) 161 CLR 513, 518. There Mason and Deane JJ described a discretionary decision as one which involves an assessment that calls for "value judgments in respect of which there is room for reasonable differences of opinion, no particular opinion being uniquely right."

33. The Tribunal has held that a decision which is not determined by reference to the applicable criteria in the NEL and the NER is likely to have involved an incorrect exercise of discretion.<sup>18</sup> Similarly, an incorrect exercise of discretion may occur where:

33.1 the exercise of the discretion is:<sup>19</sup>

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<sup>14</sup> *Re: Application by ElectraNet Pty Limited (No 3)* [2008] ACompT 3 at [73].

<sup>15</sup> See *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [32] where the Tribunal referred to *Ibrahim v Minister for Immigration and Citizenship* [2009] FCA 1328 at [8] in support of this statement; see also: *Application by Envestra Limited (No 2)* [2012] ACompT 4 at [34] and *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [34].

<sup>16</sup> *Application by ActewAGL Distribution* [2010] ACompT 4 at [34].

<sup>17</sup> [2010] ACompT 4 at [34].

<sup>18</sup> *Application by EnergyAustralia and Others* [2009] ACompT 8 at [64].

<sup>19</sup> *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [47]-[48]; *Re: Application by ElectraNet Pty Limited (No 3)* [2008] ACompT 3 at [66]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [174].



- 33.1.1 based upon a misconception or misapplication of the relevant principles, methodologies or factors to be considered under the NEL or NER;
- 33.1.2 affected by the failure to have regard to a mandatory relevant factor as prescribed by the NEL or NER, including any one or more of the requisite principles, methodologies or factors; or
- 33.1.3 affected by the regulator taking into account a factor extraneous to those factors relevant by reason of the NEL and the NER;
- 33.2 a decision contains a logical error or an unexplained discretionary choice made in reaching a conclusion;<sup>20</sup> or
- 33.3 the exercise of discretion is based upon an established factual error.<sup>21</sup>
- 34. In addition, failure to afford procedural fairness may result in the exercise of the AER's discretion being incorrect.<sup>22</sup> Further, if the reasons for a decision contain an element of arbitrariness, in the sense of an unexplained discretionary choice made in reaching a conclusion, then the Tribunal has indicated it may readily be concluded that the exercise of discretion miscarried or was in error.<sup>23</sup>

## 2.3 Unreasonableness

- 35. The ground for review in section 71C(1)(d) of the NEL requires that the decision under review (rather than a step in the decision maker's factual findings or reasoning) is unreasonable, having regard to all the circumstances.<sup>24</sup>
- 36. The scope of the 'unreasonableness' ground of review goes beyond *Wednesbury* unreasonableness.<sup>25</sup> It includes the notion of want of reason.<sup>26</sup> The Tribunal has stated that there must be logical error or irrationality in the decision.<sup>27</sup> The Tribunal has also stated that it is not possible to give an exhaustive definition of what constitutes an unreasonable decision, but indicated that at one extreme, an arbitrary or capricious decision will be unreasonable, but

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<sup>20</sup> *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [49]; *Application by EnergyAustralia and Others* [2009] ACompT 8 at [67].

<sup>21</sup> *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [49]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [175].

<sup>22</sup> *Application by Energex Limited (No 2)* [2010] ACompT 7 at [34]-[35]; *Application by Energy Australia and Others* [2009] ACompT 8 at [312(d)]; *Re: Application by ElectraNet Pty Ltd* [2008] ACompT 1 at [56].

<sup>23</sup> *Application by EnergyAustralia and Others* [2009] ACompT 8 at [63].

<sup>24</sup> *Re: Application by ElectraNet Pty Limited (No 3)* [2008] ACompT 3 at [74].

<sup>25</sup> *Application by EnergyAustralia and Others* [2009] ACompT 8 at [64]-[68].

<sup>26</sup> *Application by United Energy Distribution Pty Ltd* [2012] ACompT 1 at [49] and [50].

<sup>27</sup> *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [49]; *Application by Envestra Limited (No 2)* [2012] ACompT 4 at [51]; *Application by APT Allgas Energy Limited (No 2)* [2012] ACompT 5 at [51].

at the other extreme, it will not be sufficient merely to reach a different view to the original decision maker.<sup>28</sup>

37. A decision which is not determined by reference to the applicable criteria in the NEL and the NER is likely to be unreasonable in all the circumstances.<sup>29</sup> In addition, a failure to take into account a matter which is required to be considered, or consideration of a matter which is irrelevant, will constitute unreasonableness.<sup>30</sup> Further, a failure to accord procedural fairness may have the consequence that the AER's decision is unreasonable in all the circumstances.<sup>31</sup>
38. ActewAGL submits that it is sufficient for the purposes of an application for leave to apply that the alleged errors fall into one or more of the categories set out in section 71C of the NEL. The issue then becomes whether there is a serious issue to be heard and determined as to whether a ground for review exists, whether ActewAGL has established a *prima facie* case that a determination made by the Tribunal on the basis sought in section F of the Application would result in a materially preferable NEO decision, and whether the revenue threshold is satisfied in respect of revenue related errors.

### 3. Serious issue to be heard and determined threshold

39. Under section 71E(a) of the NEL, the Tribunal must not grant leave to apply under section 71B(1) unless it appears to the Tribunal that there is a serious issue to be heard and determined as to whether a ground for review set out in section 71C(1) exists.

#### 3.1 Decisions and principles concerning serious issue threshold

40. In *Re: Application by ElectraNet Pty Ltd* [2008] ACompT 1 (*ElectraNet*), the Tribunal indicated that the concept of 'a serious issue to be heard and determined' should be analysed and applied by reference to the learning and principles applicable to the grant of interlocutory injunctions.<sup>32</sup> The Tribunal noted that the concept is also found in section 237(2)(d) of the *Corporations Act 2001* (Cth) (**Corporations Act**), which relates to the power of the Court to grant leave to a party to bring a statutory derivative action on behalf of another company.<sup>33</sup> On the principles applicable to the grant of interlocutory injunctions (which principles have been adopted in the context of section 237(2)(d) of the *Corporations Act*<sup>34</sup>), the relevant inquiry is whether the applicant has made out a *prima facie* case in the sense that, if the evidence remains as it is, there is a probability that at trial the applicant will be held entitled to

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<sup>28</sup> *Application by Envestra Limited* (No 2) [2012] ACompT 3 at [52]; *Application by ActewAGL Distribution* [2010] ACompT 4 at [35]; *Application by United Energy Distribution Pty Ltd* [2012] ACompT 1 at [52] and [53].

<sup>29</sup> *Application by EnergyAustralia and Others* [2009] ACompT 8 at [68]; *Application by Envestra Limited* (No 2) [2012] ACompT 4 at [54]; *Application by APT Allgas Energy Limited* (No 2) [2012] ACompT 5 at [54].

<sup>30</sup> *Application by ActewAGL Distribution* [2010] ACompT 4 at [35].

<sup>31</sup> *Application by SPI Electricity Pty Ltd* [2012] ACompT 2 at [53] and [59].

<sup>32</sup> *ElectraNet* at [39] to [42].

<sup>33</sup> *ElectraNet* at [39].

<sup>34</sup> See, for example, *South Johnstone Mill Ltd and Others v Dennis and Others* (2007) 163 FCR 343 at [77] to [80]; *Cemcon Constructions Pty Ltd v Hall Concrete Constructions (Vic) Pty Ltd and J Hall Concrete Constructions Pty Ltd* [2009] FCA 696 at [24] to [25].

relief.<sup>35</sup> In that context, the phrase 'a probability' does not mean that the applicant must show that it is more probable than not that at trial the applicant will succeed.<sup>36</sup> It is sufficient that the applicant show a sufficient likelihood of success to justify in the circumstances the preservation of the status quo pending trial.<sup>37</sup>

41. ActewAGL respectfully submits that, contrary to the decision in *ElectraNet*, the phrase 'serious issue to be heard and determined' should be given its ordinary meaning in the context of the NEL and is a lower threshold than establishing a *prima facie* case. In this regard, ActewAGL submits that:
  - 41.1 the 'serious issue to be heard and determined' threshold in the context of the NEL merely goes to the issue of whether an applicant should have an opportunity to put a case for review to the Tribunal. It can be distinguished from the grant of an interlocutory injunction where the Court is considering whether to maintain the status quo pending determination of the proceedings - a decision which of itself can affect third parties;
  - 41.2 the ability for an applicant to seek review by the Tribunal under the NEL is provided in a statute which restricts the economic freedom of those like ActewAGL who are subject to its regime. A review by the Tribunal provides additional confidence in the outcomes produced by a regulatory regime, which outcomes can have significant consequences for those affected by them. As such, the serious issue to be heard and determined threshold should not be high;
  - 41.3 the use of the words '*prima facie* case' in respect of the materially preferable NEO decision threshold in section 71E(b) of the NEL clearly shows that the legislature intended the phrase 'serious issue to be heard and determined', which appears in the same section, to have a different meaning. If the legislature considered '*prima facie* case' and 'serious issue to be heard and determined' to have the same meaning, it would have used the same words in describing the two thresholds in section 71E; and
  - 41.4 the NEL provides a number of limitations on the grant of leave in addition to the serious issue to be heard and determined threshold, including the materially preferable NEO decision requirement in section 71E(b), the revenue threshold requirement in section 71F and the ability for the Tribunal to refuse leave under section 71H.
42. Nonetheless, regardless of whether there is any distinction between the tests for serious issue to be heard and determined and *prima facie* case, ActewAGL submits that the distinction will not be determinative of the outcome of its application for leave because the Application satisfies the requirement for a serious issue to be heard and determined on either test.

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<sup>35</sup> *Beecham Group Ltd v Bristol Laboratories Pty Ltd* (1968) 118 CLR 618, pages 622-623; *Australian Broadcasting Corporation v O'Neill* (2006) 227 CLR 57, page 82. The second inquiry outlined in *Beecham Group Ltd v Bristol Laboratories Pty Ltd* (1968) 118 CLR 618, being whether the inconvenience or injury which the plaintiff would be likely to suffer if an injunction were refused outweighs or is outweighed by the injury which the defendant would suffer if an injunction were granted, is not relevant to the test under section 71B(1) of the NEL.

<sup>36</sup> *ElectraNet* at [42]; *Australian Broadcasting Corporation v O'Neill* (2006) 227 CLR 57, page 82.

<sup>37</sup> *ElectraNet* at [42]; *Australian Broadcasting Corporation v O'Neill* (2006) 227 CLR 57, page 82.

43. In three recent decisions, the Tribunal has considered whether the equivalent provision to section 71E(a) of the NEL in the National Gas Law (NGL) (being section 248) required a different test, with a lower threshold, to the test applicable to the grant of interlocutory injunctions when considering whether there is a serious question to be heard and determined.
44. In *Application by APT Allgas Energy Pty Ltd* [2011] ACompT 11, the Tribunal considered a submission by the applicant that it should not follow *ElectraNet*, but rather adopt the ordinary and grammatical meaning of 'serious issue to be heard and determined' in the context of the NGL.<sup>38</sup> The Tribunal decided that it was not necessary to determine whether it should depart from the principles enunciated in *ElectraNet*, or whether those principles imposed a burden different from the ordinary meaning of the words in section 248, because it was satisfied that on both tests the threshold was satisfied in that matter.<sup>39</sup> The Tribunal did, however, note that 'where there is a statutory formulation of a threshold test such as that in s 248, there is often little benefit in any paraphrase of the wording of the actual expression used'.<sup>40</sup>
45. Again, in *Application by Envestra Limited* [2011] ACompT 12 and *Application by Envestra Limited* [2011] ACompT 13, the Tribunal decided that it was not necessary to determine whether the Tribunal's approach in *ElectraNet* was incorrect.<sup>41</sup> However, in each of those cases, the Tribunal noted that the test imposed by section 248 of the NGL was not a particularly onerous one. The Tribunal said:<sup>42</sup>
- The Tribunal agrees that the test imposed by s 248 is not a particularly onerous one, and that it requires the Applicant to show that there is a sufficient prospect of success to justify in the circumstances it being given the opportunity to have the Reviewable Decision reviewed by the Tribunal. The Tribunal as presently advised does not regard *ElectraNet* as imposing any more complex or refined test than the ordinary words used in s 248.
46. Accordingly, even if the serious issue to be heard and determined threshold is to be interpreted by reference to the principles applicable to the grant of interlocutory injunctions as the Tribunal in *ElectraNet* considered (i.e. whether the applicant has established a *prima facie* case), ActewAGL submits that it is sufficient for the applicant to show a sufficient likelihood of success to justify it having the opportunity to have the reviewable regulatory decision reviewed by the Tribunal.
47. Further, there is no requirement for the Court to make determinations about contested issues.<sup>43</sup> The very notion of a '*prima facie* case' precludes the determination of disputed questions of fact in deciding whether the applicant has established a *prima facie* case<sup>44</sup> and, as the grant of leave by the Tribunal does not finally determine rights, it need not decide any disputed point of law in determining whether there is a serious question to be heard and

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<sup>38</sup> *Application by APT Allgas Energy Pty Ltd* [2011] ACompT 11 at [26].

<sup>39</sup> *Application by APT Allgas Energy Pty Ltd* [2011] ACompT 11 at [27].

<sup>40</sup> *Application by APT Allgas Energy Pty Ltd* [2011] ACompT 11 at [27].

<sup>41</sup> *Application by Envestra Limited* [2011] ACompT 12 at [21] and *Application by Envestra Limited* [2011] ACompT 13 at [21].

<sup>42</sup> *Application by Envestra Limited* [2011] ACompT 12 at [21] and *Application by Envestra Limited* [2011] ACompT 13 at [21].

<sup>43</sup> *South Johnstone Mill Ltd and Others v Dennis and Others* (2007) 163 FCR 343 at [80].

<sup>44</sup> *North Ganalanja Aboriginal Corporation v Queensland* (1996) 185 CLR 595, pages 638 and 639 per McHugh J in discussing the meaning of the term '*prima facie* case'.

determined, particularly where other factors make it undesirable to decide a complex point of law.<sup>45</sup> Further, it would be inappropriate on an application for leave to reach any conclusion about the strength of the arguments each side would seek to make in relation to the issues.<sup>46</sup>

48. To the extent that the AER contends that the application made under section 71B(1) must itself establish a serious issue to be heard and determined as to whether a ground for review in section 71C exists,<sup>47</sup> this is incorrect. The correct inquiry is whether it appears to the Tribunal, having regard to the application and the submissions made and material adduced by the applicant in support of the grant of leave to apply, that there is a serious issue to be heard and determined as to whether a ground for review in section 71C exists.

### 3.2 Application to current leave application

49. Applying the above case law to the present circumstances, ActewAGL is required to demonstrate a sufficient likelihood of success to justify leave to apply being granted. The likelihood of success required to justify leave being granted is informed by the fundamental importance of the Final Determination having regard to its impact on ActewAGL (in that it is determinative of the revenue it may earn from direct control services over the 2014-19 period) and the NEO, and the fact that the grant of leave does not affect rights. That likelihood need not be strong and does not require the Tribunal to form any view about contested facts. It is sufficient if ActewAGL demonstrates a reasonably arguable case in respect of a ground for review.<sup>48</sup>
50. The Tribunal does not need to make determinations going to the merits of the case put forward by ActewAGL. It is sufficient that there is a serious issue to be determined on the basis of the evidentiary material put forward by ActewAGL in the Application, the Affidavit of Fleur Catriona Gibbons affirmed on 21 May 2015 (**First Affidavit of Fleur Gibbons**), these submissions and the further affidavit of Fleur Catriona Gibbons affirmed on 19 June 2015 (**Second Affidavit of Fleur Gibbons**).
51. As set out in Section E below, ActewAGL maintains that there is a sufficient likelihood that ActewAGL will be successful on the grounds for review in its Application to justify it having the opportunity to have the Final Determination reviewed by the Tribunal.

### 4. *Prima facie* case as to materially preferable NEO decision threshold

52. Under section 71E(b) of the NEL, the Tribunal must not grant leave to apply under section 71B(1) unless it appears to the Tribunal that the applicant has established a *prima facie* case that a determination made by the Tribunal varying the reviewable regulatory decision, or setting aside the reviewable regulatory decision and a fresh decision being made

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<sup>45</sup> As above, at page 639 per McHugh J in discussing the establishment of a *prima facie* case in proceedings for an interlocutory injunction.

<sup>46</sup> *Cemcon, Re Hall Concrete Constructions (Vic) Pty Ltd* [2009] FCA 696 at [25]; *Vinciguerra v MG Corrosion Consultants Pty Ltd* (2010) 79 ACSR 293 at [147].

<sup>47</sup> AER Notice, [2] and [4].

<sup>48</sup> Cf *Australian Broadcasting Corporation v O'Neill* (2006) 227 CLR 57, page 296 (Callinan J).

by the AER following remission of the matter to the AER by the Tribunal, on the basis of one or more grounds raised in the Application, either separately or collectively, would, or would be likely to, result in a materially preferable NEO decision.

53. At paragraphs 281 to 325 of its Application, ActewAGL specifies the manner in which a determination by the Tribunal to make one or more of the orders sought in section F of the Application with respect to the Final Determination, on the basis of either on or more of the grounds raised in the Application, separately or collectively, would result in a materially preferable NEO decision.
54. In addition to the general discussion of the materially preferable NEO decision requirement under sections 71C(1a) and 71E(b) of the NEL at paragraphs 284 to 305 of the Application, ActewAGL provides the following discussion of *prima facie* case in the context of the leave threshold in section 71E(b) of the NEL.

#### 4.1 'Prima facie case'

55. Section 71E(b) of the NEL requires the applicant is to establish a *prima facie* case that the correction of the errors, incorrect exercise of discretion or unreasonableness alleged, either separately or collectively, would, or would be likely to, result in a materially preferable NEO decision.
56. Section 71E(b) of the NEL is satisfied where the applicant establishes a *prima facie* case as to a materially preferable NEO decision on the basis of either one of the grounds of review considered separately or a number or all of the grounds considered together. This is evident from the phrase 'on the basis of 1 or more grounds raised in the application, either separately or collectively' in section 71E(b) of the NEL.
57. Whereas the Tribunal is required, in determining whether to vary or set aside and remit the reviewable regulatory decision in accordance with section 71P(2) of the NEL, to consider the reviewable regulatory decision as a whole, having regard in particular to any interrelationships between the constituent components of the decision and between the constituent components of the decision and the grounds for review,<sup>49</sup> the applicant is required only to establish a *prima facie* case that, if the reviewable regulatory decision were varied or set aside and remitted on the basis that one or more of the grounds were established, this would deliver a materially preferable NEO decision.
58. This is evident from a consideration of sections 71E(b) and 71P(2a) of the NEL and is confirmed by the Standing Council on Energy and Resources' (SCER's) *Regulation Impact Statement Limited Merits Review of Decision-Making in the Electricity and Gas Regulatory Frameworks Decision Paper* dated 6 June 2013 (**Merits Review RIS**),<sup>50</sup> wherein the SCER described the reformed merits review process as follows:<sup>51</sup>

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<sup>49</sup> Sections 71P(2a) and (2b) of the NEL.

<sup>50</sup> The Merits Review RIS is also referred to in the general discussion of the materially preferable NEO decision requirement under sections 71C(1a) and 71E(b) of the NEL at paragraphs 284 to 305 of the Application.

<sup>51</sup> SCER, Merits Review RIS, page 40.

... the existing grounds for review will be amended so that an additional obligation will be placed on the applicant to establish a *prima facie* case that addressing a matter raised in its application for review (in the case of revenue determinations, this would presumably be either through increasing or decreasing overall revenues) would deliver a materially preferable outcome in the long term interest of consumers as expressed in the NEO and NGO.

SCER considers that this is achieved through a process where:

1. applicants must demonstrate that the original decision-maker made an error of fact, an incorrect exercise of discretion or was unreasonable in its original decision and make a *prima facie* case that addressing this would lead to a materially preferable outcome in the long term interests of consumers; and
2. the Tribunal assesses whether, taking into account any interlinked matters, addressing the grounds and the interlinked matters would deliver a materially preferable outcome (in the context of the overall decision) in the long term interests of consumers, as set out in the NEO or NGO.

59. The applicant need only establish a '*prima facie* case' that a determination varying or setting aside and remitting the reviewable regulatory decision would or would be likely to result in a materially preferable NEO decision. The previous observations of the Tribunal on the establishment of a *prima facie* case in the context of considering the requirement of section 71E(a) of the NEL are apposite to section 71E(b) (see paragraphs 40 and 46 above). Specifically:

59.1 the concept of a '*prima facie* case' should be analysed and applied by reference to the learning and principles applicable to the grant of interlocutory injunctions and the grant of leave under section 237(2)(d) of the Corporations Act to a party to bring a statutory derivative action on behalf of another company;<sup>52</sup> and

59.2 the test is not a particularly onerous one and requires the applicant to show that there is a sufficient prospect of success to justify in the circumstances it being given the opportunity to have the reviewable regulatory decision reviewed by the Tribunal.<sup>53</sup>

60. It follows that, to establish a *prima facie* case, the applicant need not show that it is more probable than not that at trial the applicant will succeed in establishing that a determination by the Tribunal varying or setting aside and remitting the reviewable regulatory decision to the AER would or would be likely to result in a materially preferable NEO decision.<sup>54</sup> There is no requirement for the Tribunal to make determinations about contested issues.<sup>55</sup> The very notion of a '*prima facie* case' precludes the determination of disputed questions of fact in deciding whether the applicant has established a *prima facie* case<sup>56</sup> and, as the grant of leave by the Tribunal does not finally determine rights, it need not decide any disputed point of law

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<sup>52</sup> *ElectraNet* at [39] to [42].

<sup>53</sup> *Application by Envestra Limited* [2011] ACompT 12 at [21]; *Application by Envestra Limited* [2011] ACompT 13 at [21].

<sup>54</sup> *Australian Broadcasting Corporation v O'Neill* (2006) 227 CLR 57, page 82.

<sup>55</sup> *South Johnstone Mill Ltd and Others v Dennis and Others* (2007) 163 FCR 343 at [80].

<sup>56</sup> *North Ganalanja Aboriginal Corporation v Queensland* (1996) 185 CLR 595, pages 638 to 639 per McHugh J in discussing the meaning of the term '*prima facie* case'.

in determining whether a *prima facie* case exists, particularly where other factors make it undesirable to decide a complex point of law.<sup>57</sup> Further, it would be inappropriate on an application for leave for the Tribunal to reach any conclusion about the strength of the arguments each side would seek to make in relation to the issues.<sup>58</sup>

## 4.2 Application to current leave application

61. Applying the case law to the present circumstances, the *prima facie* case requirement will be satisfied if the Tribunal is satisfied, on what is put forward by ActewAGL and without determining any issues in dispute, that there is a sufficient likelihood that a determination to vary or remit the Final Determination to correct the error(s) alleged by any one or more of the grounds would result in a materially preferable NEO decision. That likelihood need not be strong and does not require the Tribunal to form any view about contested facts or make determinations on the merits of the case put forward by ActewAGL as to the existence of a materially preferable NEO decision. Nor is it necessary, when considering this leave requirement, for the Tribunal to evaluate afresh the grounds put forward by ActewAGL. Rather, section 71E(b) of the NEL is addressing (as is clear from section 71E(a) and section 71E(b), and the SCER's Merits Review RIS extracted above) a separate assessment of one or more grounds in the context of the NEO. It is sufficient if ActewAGL demonstrates a case that is reasonably arguable on its face that a determination by the Tribunal varying or setting aside and remitting the reviewable regulatory decision to the AER to correct the error(s) alleged by any one or more of the grounds would or would be likely to result in a materially preferable NEO decision.<sup>59</sup>
62. To the extent that the AER contends that the application made under section 71B(1) of the NEL must itself establish such a *prima facie* case,<sup>60</sup> this is incorrect. The correct inquiry is whether it appears to the Tribunal, having regard to the application and the submissions made and material adduced by the applicant in support of the grant of leave to apply, that the applicant has established such a *prima facie* case.
63. As set out in Section F below, ActewAGL maintains that there is a sufficient likelihood that ActewAGL will be successful in establishing that a determination by the Tribunal to make one or more of the orders sought in section F of the Application, on the basis of either on or more of the grounds raised in the Application, separately or collectively, would result in a materially preferable NEO decision to justify it having the opportunity to have the Final Determination reviewed by the Tribunal.

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<sup>57</sup> As above, at page 639, per McHugh J in discussing the establishment of a *prima facie* case in proceedings for an interlocutory injunction.

<sup>58</sup> *Cemcon, Re Hall Concrete Constructions (Vic) Pty Ltd* [2009] FCA 696 at [25]; *Vinciguerra v MG Corrosion Consultants Pty Ltd* (2010) 79 ACSR 293 at [147].

<sup>59</sup> Cf *Australian Broadcasting Tribunal v O'Neill* (2006) 227 CLR 57, page 296 (Callinan J).

<sup>60</sup> AER Notice, [2] and [4].



## 5. Revenue threshold

64. As set out in paragraph 19 above, some applications for leave to apply are subject to a revenue amount threshold.
65. Section 71F of the NEL, which sets out that threshold, only applies to an application for leave to review if:
  - 65.1 leave to apply is in relation to a reviewable regulatory decision that is a network revenue or pricing determination; and
  - 65.2 the ground for review relied on by the applicant relates to the amount of revenue that may be earned by a regulated NSP that is specified in or derived from that decision.
66. The threshold to be applied in these circumstances is that the amount that is specified in or derived from the decision must exceed the lesser of \$5 million or 2% of the average annual regulated revenue of the regulated NSP.

### 5.1 Decisions and principles concerning revenue threshold

67. The revenue threshold only applies where the ground for review relied on by the applicant relates to the amount of revenue that may be earned by a distribution network service provider (**DNSP**) that is specified in, or derived from, the relevant decision. That is, the threshold applies only where revenue related errors are alleged.
68. ActewAGL submits that it is the amount at issue given the grounds of review that is subject to the revenue threshold.
69. It is apparent from the form of section 71F that it is intended to operate as a materiality filter. On its face, the reference to 'the amount of revenue that may be earned by a regulated NSP that is specified in ... that decision' suggests that the provision is concerned with the amount of allowable revenue specified in the reviewable regulatory decision. However, in circumstances where the provision is intended to operate as a materiality threshold, and the threshold is the lesser of \$5 million or 2% of revenue, if this interpretation were adopted, section 71F(2) would not have any role because the threshold amount would be exceeded in every case.
70. In interpreting the NEL, a purposive construction of the provisions should be adopted.<sup>61</sup> A construction that is more consistent with the apparent object of section 71F(2) is that the provision is concerned with the quantitative difference between the revenue amount resulting from the position advanced by the applicant in the application and the revenue amount in the regulatory decision under review. Similarly, the appropriate construction of the phrase 'the amount of revenue that may be earned by a regulated NSP that is ... derived from that decision' is that the threshold applies to the amount in issue, determined by reference to the amount that can be derived from the position advanced by the applicant in the application and the amount that can be derived from the decision under review.

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Clause 7 of Schedule 2 to the NEL.

71. This interpretation is confirmed by the Tribunal's decision in *Application by Energex Limited (No 4)* [2011] ACompT 4 where the Tribunal considered that the legislative history of section 71F of the NEL<sup>62</sup> shows that the expression 'the amount [that is] specified in or derived from the decision' is the amount at issue in light of the grounds upon which the AER's decision is challenged.<sup>63</sup>
72. Further, ActewAGL contends that the revenue threshold test should be applied to the cumulative amounts due to, or arising from, all of the errors alleged by the NSP.
73. Section 71F(2) of the NEL provides that 'the Tribunal must not grant leave to apply under section 71B(1) ... unless the amount that is specified in or derived from the decision exceeds the lesser of \$5 000 000 or 2% of the average annual regulated revenue of the regulated network services provider'. Section 71B provides for an application 'for a review of a reviewable regulatory decision'. Reading section 71F(2) together with section 71B suggests that the test to be applied should relate to the application for review in its entirety (that is, all grounds of review), where one or more of those grounds is of the kind to which the revenue threshold applies.
74. ActewAGL's contention that whether the revenue threshold in section 71F of the NEL is satisfied with respect to an application is determined by reference to the cumulative effect of all the errors alleged with respect to that application is supported by the Tribunal's decision in *Application by Energex Limited (No 4)* [2011] ACompT 4. In that case the Tribunal rejected the view that the revenue threshold should be satisfied in respect of each ground of review. Rather, the Tribunal concluded that the legislative history of section 71F of the NEL shows that the effect of all the alleged errors must be taken into account when determining whether the threshold in section 71F is satisfied.<sup>64</sup> In addition, the Tribunal considered that the relevant grounds in respect of which there may be aggregation are those grounds which meet the serious issue to be heard and determined threshold.<sup>65</sup>

## 5.2 Application to current leave application

75. For the purposes of applying the revenue threshold to those aspects of the Application to which section 71F(2) applies, the Tribunal should determine the amount to be applied to the threshold by reference to the amount at issue in the present proceeding (that is, the difference between the revenue amount resulting or derived from the position advanced by ActewAGL in the Application and the revenue amount in, or derived from, the Final Determination). Further, the Tribunal should adopt a construction of section 71F that requires the quantitative impact of all grounds of review relied on by ActewAGL to which section 71F applies (and

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<sup>62</sup> The Tribunal in *Application by Energex Limited (No 4)* [2011] ACompT 4 undertook a detailed review of the legislative history of section 71F of the NEL at [24] to [44]. Section 71F of the NEL has not been subsequently amended. In particular, the *Statutes Amendment (National Electricity and Gas Laws - Limited Merits Review) Act 2013*, which effected the recent amendments to the NEL merits review regime, made no change to section 71F of the NEL.

<sup>63</sup> *Application by Energex Limited (No 4)* [2011] ACompT 4 at [50].

<sup>64</sup> *Application by Energex Limited (No 4)* [2011] ACompT 4 at [52]. This decision has been followed and applied in several subsequent decisions of the Tribunal, particularly in the context of the NGL. See, for example, *Application by APT Allgas Energy Pty Ltd* [2011] ACompT 11 at [29]; *Application by Envestra Limited* [2011] ACompT 12 at [23]; and *Application by Envestra Limited* [2011] ACompT 13 at [23].

<sup>65</sup> *Application by Energex Limited (No 4)* [2011] ACompT 4 at [54].

which meet the serious issue to be heard and determined threshold in section 71E(a)), to be aggregated for the purposes of determining whether the revenue threshold is satisfied.

## **D ACTEWAGL'S CASE FOR LEAVE - PRELIMINARY MATTERS**

76. For the purpose of establishing that the grounds of review outlined in its Application meet the threshold criteria in the NEL for granting leave, ActewAGL refers to and relies on its Application, the First Affidavit of Fleur Gibbons, these submissions and the Second Affidavit of Fleur Gibbons.
77. After addressing some preliminary matters in this section D, ActewAGL sets out additional submissions in respect of its application for leave to apply in respect of the serious issue to be heard and determined requirement in section E, the prima facie case requirement in section F and the revenue threshold in section G.
78. ActewAGL submits that, based on its Application, the First Affidavit of Fleur Gibbons, these submissions and the Second Affidavit of Fleur Gibbons, the Tribunal can be satisfied that it should grant ActewAGL leave to apply for review of the AER's Final Determination.
79. ActewAGL is empowered to make an application for review under section 71B(1) of the NEL. This is because:
  - 79.1 ActewAGL's Application relates to the Final Determination;
  - 79.2 the Final Determination is a distribution determination that sets a regulatory period, and is thus a 'reviewable regulatory decision' within the meaning given to that term by section 71A of the NEL;<sup>66</sup> and
  - 79.3 ActewAGL is the regulated NSP to whom the Final Determination applies and thus, by reason of paragraph (a) of the definition of 'affected or interested person or body' in section 71A of the NEL, ActewAGL is an 'affected or interested person or body'.
80. The complaints made by ActewAGL in its Application are all properly characterised as falling within one or more of the grounds specified in section 71C of the NEL. ActewAGL disagrees with the AER's contention, in paragraph 3 of the AER Notice, that certain of complaints made in ActewAGL's Application do not fall within the limits of the grounds for review specified in section 71C(1) of the NEL.
81. Specifically, the AER contends in the AER Notice that:
  - 81.1 an opinion of the AER informed by its evaluative judgment about an issue does not constitute a finding of fact, with the consequence that the complaint made in paragraph 203 of ActewAGL's Application does not fall within the limits of section 71C(1)(a) and/or (b);<sup>67</sup>

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<sup>66</sup> Final Determination, page 59.

<sup>67</sup> AER Notice, [3(a)].

- 81.2 a finding of fact by the AER in circumstances where there is material before the AER that could support a different finding does not constitute an error of fact, with the consequence that the complaint made in paragraph 205 of ActewAGL's Application does not fall within the limits of section 71C(1)(a) and/or (b);<sup>68</sup>
- 81.3 a preference of the AER for one model or methodology as compared to another does not constitute a finding of fact, with the consequence that the complaint made in paragraph 204.3 of ActewAGL's Application does not fall within the limits of section 71C(1)(a) and/or (b);<sup>69</sup>
- 81.4 a finding by the AER as to the weight to accord to different regulatory considerations does not constitute a finding of fact, with the consequence that the complaint made in paragraph 113.4.6 of ActewAGL's Application does not fall within the limits of section 71C(1)(a) and/or (b);<sup>70</sup>
- 81.5 a failure by the AER to give adequate weight or have sufficient regard to evidence, especially consultants' reports, does not constitute a legitimate ground of review, with the consequence that the complaint made by paragraph 278.13 of ActewAGL's Application does not fall within the limits of section 71C(1)(c) and/or (d);<sup>71</sup> and
- 81.6 a failure by the AER to accord procedural fairness to ActewAGL is not a permissible ground of review, with the consequence that the complaint made by paragraph 309.5 of ActewAGL's Application does not fall within the limits of section 71C(1)(c) and/or (d).<sup>72</sup>
82. Each of these AER contentions is incorrect. ActewAGL responds to those contentions, in turn, as follows:
- 82.1 contrary to the AER's contention and for the reasons already discussed, an opinion of the AER informed by its evaluative judgment about an issue constitutes a finding of fact,<sup>73</sup> the AER's finding that the return on equity for a benchmark efficient entity with a similar degree of risk to ActewAGL was 7.1% (this finding being the subject matter of paragraph 203 of ActewAGL's Application) is thus properly characterised as a finding of fact and it therefore follows that the complaint made by paragraph 203 of ActewAGL's Application properly falls within the limits of the grounds specified in section 71C(1)(a) and/or (b);
- 82.2 the AER's contention concerning paragraph 205 of ActewAGL's Application goes to whether a ground in section 71C(1)(a) or (b) is established and, in any event,

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<sup>68</sup> AER Notice, [3(b)].

<sup>69</sup> AER Notice, [3(c)].

<sup>70</sup> AER Notice, [3(d)].

<sup>71</sup> AER Notice, [3(e)].

<sup>72</sup> AER Notice, [3(f)].

<sup>73</sup> See paragraphs 27.3 of these submissions. See also *Application by Energex Limited (No 2)* [2010] ACompT 7 at [29]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [171].

the complaint made in paragraph 205 of ActewAGL's Application is that the AER's factual finding that the return on equity was 7.1% cannot be reconciled with the preponderance of the evidence before the AER (and not merely that the evidence before the AER could support a different finding on the return on equity) and, thus, properly falls within the limits of the grounds specified in section 71C(1)(a) and/or (b);

- 82.3 while a choice made by the AER between permitted models or methodologies does not constitute a finding of fact,<sup>74</sup> the complaint made by paragraph 204.3 of ActewAGL's Application was not that the AER preferred one expert opinion or methodology over another but rather that the AER's factual findings on the relative attributes of one model as compared to another cannot be sustained on the preponderance of the evidence before the AER and were in error and, thus, properly falls within the limits of the grounds specified in section 71C(1)(a) and/or (b);
- 82.4 while the AER is correct in contending that a finding as to the weight to accord to different regulatory considerations does not constitute a finding of fact,<sup>75</sup> it does not follow that the complaint made by paragraph 113.4.6 of ActewAGL's Application does not fall within the limits of the section 71C(1) grounds of review. This is because the complaint made in paragraph 113.4.6 of ActewAGL's Application was not of an error or errors of fact within the limits of section 71C(1)(a) and/or (b) but of an incorrect exercise of discretion or unreasonable decision within the limits of section 71C(1)(c) and/or (d) of the NEL;<sup>76</sup>
- 82.5 a failure by the AER to give adequate weight or have sufficient regard to evidence, especially consultants' reports, involves the weighing up of relevant considerations and is, accordingly, a discretionary decision<sup>77</sup> and may render the AER's decision illogical or irrational and wanting of reason, and thus, the complaint made by paragraph 278.13 of ActewAGL's Application properly falls within the limits of section 71C(1)(c) and/or (d); and
- 82.6 contrary to the AER's contention and as already discussed, the Tribunal has recognised that a failure by the AER to afford procedural fairness may result in the exercise of the AER's discretion being incorrect or its decision unreasonable in all the circumstances,<sup>78</sup> and may found an inference that the AER's exercise of discretion miscarried or was in error.<sup>79</sup> It follows that the complaint made in paragraph 309.5 of ActewAGL's Application properly falls within the limits of the grounds specified in section 71C(1)(c) and/or (d).

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<sup>74</sup> *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [32]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [172].

<sup>75</sup> *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [32]; *Australian Competition and Consumer Commission v Australian Competition Tribunal and Another* (2006) 152 FCR 33 at [172].

<sup>76</sup> See the opening words of paragraph 113 of ActewAGL's Application.

<sup>77</sup> *Application by ActewAGL Distribution* [2010] ACompT 4 at [34].

<sup>78</sup> See paragraphs 34 and 37 of these submissions. See also *Application by SPI Electricity Pty Ltd* [2012] ACompT 2 at [53] and [59]; *Application by Energex Limited (No 2)* [2010] ACompT 7 at [34] to [35]; *Application by Energy Australia and Others* [2009] ACompT 8 at [312(d)]; *Re: Application by ElectraNet Pty Ltd* [2008] ACompT 1 at [56].

<sup>79</sup> See paragraphs 34 of these submissions. See also *Application by EnergyAustralia and Others* [2009] ACompT 8 at [63].

83. ActewAGL filed its application with the Tribunal on 21 May 2015, that is, within 15 days of the Final Determination being published as required by section 71D of the NEL. The AER accepts that this is so.<sup>80</sup>
84. There is no basis for the Tribunal to refuse to grant leave under section 71H of the NEL. ActewAGL did not:
- 84.1 without reasonable excuse:
    - 84.1.1 fail to comply with a request (including a request for relevant information), or a direction, of the AER made under the NEL or the NER for the purposes of making the Final Determination; or
    - 84.1.2 conduct itself in a manner that resulted in the making of the Final Determination being delayed; or
  - 84.2 mislead, or attempt to mislead, the AER on a matter relevant to the Final Determination.
85. The AER appears to accept this is so, having indicated in the AER Notice that it does not intend to oppose leave being granted by reference to the leave criterion established by section 71H of the NEL.<sup>81</sup>

## **E ACTEWAGL'S CASE FOR LEAVE - SERIOUS ISSUE TO BE HEARD AND DETERMINED**

### **1. Opex allowance**

#### **1.1 Overview**

86. The basis for ActewAGL's application for review of the AER's decision on ActewAGL's operating expenditure (**opex**) allowance is set out at paragraphs 62 to 118 of the Application. ActewAGL also refers to and relies on paragraphs 34 to 40 of the First Affidavit of Fleur Gibbons.
87. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue. That is, there is a sufficient likelihood that ActewAGL will be successful on those grounds to justify it having the opportunity to have the Final Determination reviewed by the Tribunal.
88. ActewAGL's Application raises broad areas of deficiency in the AER's decision about its opex allowance:
- 88.1 the methodology by which the AER approached its task of making decisions about ActewAGL's opex allowance was inconsistent with the methodology

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<sup>80</sup> AER Notice, [6].

<sup>81</sup> AER Notice, [7(c)].

prescribed by clauses 6.5.6(c) and 6.12.1(4) of the NER, and was therefore contrary to law;

- 88.2 the AER's benchmarking methodology has such serious technical deficiencies that it had no value as a means of assessing ActewAGL's efficient costs, and ought not to have played any part in the AER's decisions pursuant to clauses 6.5.6(c) and 6.12.1(4) of the NER; and
- 88.3 the AER erred by presumptively confining itself to the question of whether ActewAGL's forecast opex reasonably reflects the efficient costs of an objectively prudent provider, having regard only to exogenous considerations (ie, matters that are beyond the control of a DNSP, such as the weather and geography). That is to say, the AER has assumed, from the outset, that it is prohibited by the NER from taking into account the real world consequences of its decision on consumers, to the extent that those consequences arise from endogenous considerations (ie, matters within the control of ActewAGL, such as its previous business decisions). This was wrong as a matter of law, and having regard to the cogent material before the AER of the serious impact of the AER's decision on ActewAGL's ability to deliver safe and reliable supplies of electricity, was a matter that the AER should have considered.
89. Each of these three areas of deficiency is discussed in detail below. As to the technical deficiencies in the AER's benchmarking methodology, it is significant to this leave application that the AER's benchmarking methodology has been subjected to extensive review by a number of economic experts, including Frontier Economics, Advisian, Huegin, Professor Newbery of Cambridge Economic Policy Associates (**CEPA**) and Houston Kemp.<sup>82</sup> Each of those reports reached conclusions to the effect the output of the AER's modelling methodology has little or no value as an indicator of the efficiency of ActewAGL's costs in the base year, nor does it provide a reasonable basis for determining the opex that reasonably reflects the opex criteria. Each of those experts is eminent in his or her field. The experts were retained by the DNSPs, but are otherwise independent experts, setting out their genuinely held opinions. Further, their conclusions are extensively reasoned.
90. The experts' views are more than simply an assertion that the AER's methodology could have been conducted in a more robust way. The experts are unanimous in their view that the Cobb Douglas stochastic frontier analysis opex cost function model (**CD SFA**), and the ad-hoc post modelling adjustments made by the AER to the output of that model, are not fit for the purpose to which the AER put them – namely, as the sole determinant of the DNSPs' opex allowances. In those circumstances, there is clearly a serious issue to be tried about whether the exercise of the AER's discretion to rely on that benchmarking methodology to determine ActewAGL's opex allowance was incorrect, or unreasonable, within the meaning of sub-sections 71C(1)(c) or (d) of the NEL.

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Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015; Huegin, *Response to Draft Determination on behalf of NNSW and ActewAGL*, 16 January 2015; Advisian, *Opex cost drivers: ActewAGL Distribution Electricity (ACT)*, January 2015; and CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015. PwC also issued a report about the Australian data used in the AER's model: PwC, *Independent Expert Advice on appropriateness of RIN data for benchmarking comparisons*, January 2001. PwC concluded that there were significant deficiencies in that data that makes it unreliable to be used for benchmarking.

91. In summary, the deficiencies in the AER's modelling methodology are as follows:
- 91.1 Economic Insights has not ensured (and it is likely that it could not have ensured) that the international data used in the CD SFA model was prepared on a consistent basis both *within* those countries, and *between* those countries and Australia;
  - 91.2 the Australian data the AER has relied upon is from an immature data set and is inconsistent across the Australian DNSPs;
  - 91.3 Economic Insights' model specification does not control for critical operating differences across the companies in the combined (Australian and international) data set. This deficiency in the model specification was imposed because Economic Insights wished to use international data because of the unreliability of Australian data, but there was limited data available between the three countries;
  - 91.4 the comparability issues in the data set are conceded by the AER, in that the AER has had to consider (and in many instances make) numerous and qualitatively substantial ad-hoc post modelling adjustments. However, those adjustments are arbitrary, and the AER should not have had any confidence that they adequately reflected the heterogeneous differences between ActewAGL and other companies in the data set. Further, to the extent that adjustments are needed to data because of comparability issues, the data should have been normalised *before* it was used in the models, not afterwards. The ex-post adjustment approach chosen by the AER to address comparability issues renders the efficiency scores generated by the CD SFA model and the AER's resultant opex allowance for ActewAGL unreliable;
  - 91.5 the AER's selection of an efficiency frontier, which differs from the efficiency frontier generated by the CD SFA model and the ad-hoc post modelling adjustments is arbitrary, and is effectively an admission of the unreliability of the benchmarking exercise;
  - 91.6 the AER's reliance on a single top down model, with serious flaws, to determine ActewAGL's opex allowance is not in line with regulatory best practice;
  - 91.7 the AER wrongly concluded that it was unable to have regard to the endogenous circumstances of ActewAGL, and the serious real world consequences to consumers of a reduction in ActewAGL's opex of the magnitude implicit in the Final Determination; and
  - 91.8 the AER's reliance on a single top down model to determine ActewGL's opex allowance has otherwise caused it to not have proper regard to the opex criteria.
92. These deficiencies in the AER's benchmarking methodology are serious, and infect every level of the AER's decision about ActewAGL's opex allowance. Further the deficiencies do not simply relate to the quantum of the AER's alternative forecast for ActewAGL; if the deficiencies raised by ActewAGL and in the reports of the independent experts are accepted by the Tribunal, then the consequence is that AER's forecast has no value, and cannot be relied on in any respect.



## 1.2 Intrinsic limitations of benchmarking

93. The AER's decision about ActewAGL's opex allowance constitutes its first attempt to deploy comparative benchmarking analysis for the purpose of assessing and determining a DNSP's opex allowance. Before discussing the errors in that decision, it is important to make some observations about the uses and limitations of benchmarking generally, and the role that the NER contemplates benchmarking should play in the AER's decisions about DNSPs' opex allowances.
94. Benchmarking is the process of evaluating the performance of an entity by comparison to some externally determined standard, or by reference to performance of a peer or set of peers.<sup>83</sup> The term 'benchmarking' encompasses a range of techniques. At one end of the spectrum are simple forms of benchmarking, such as partial performance indicators (**PPIs**), which are simple ratios between an output factor and an input factor (eg, the ratio of customer numbers to opex levels). Whilst this technique is relatively simple in comparison to other benchmarking techniques it does not account for the different factors beyond the control of businesses that can influence the calculation of the ratios.<sup>84</sup> At the other end of the spectrum are more sophisticated techniques that seek to account for multiple drivers of performance and statistical noise.
95. Whatever the technique used, however, there are intrinsic challenges to benchmarking DNSPs. Regardless of the sophistication of the model used, its ability to explain the real world reasons for differences in performance between two firms is limited. Each of the DNSPs operate in different environments, with the consequence that some observed differences in costs might be caused by these differences. Theoretically, benchmarking models seek to model opex efficiency by allowing for those differences, such that any remaining unexplained differences in performance can be attributed to relative efficiency. In practice, using a statistical technique to adequately explain real world differences between DNSPs is extremely difficult to achieve.<sup>85</sup>
96. As Frontier Economics points out, a perennial question in the measurement of relative efficiency is the extent to which it is possible to capture satisfactorily *three* different aspects of the unexplained variation in a regression model.<sup>86</sup> These are:
  - 96.1 *idiosyncratic error* arising from errors of measurement, sampling and specification (of the variables and model);
  - 96.2 *latent heterogeneity* in the sample arising from the possibility that the sample is drawn from several different parent populations; and

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<sup>83</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 5.

<sup>84</sup> Huegin, *Response to Draft Determination on behalf of NNSW and ActewAGL*, 16 January 2015, page 9.

<sup>85</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 5.

<sup>86</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 9.

96.3 *residual inefficiency* arising from the differences in managerial performance that the regulator is attempting to measure.

97. Few models are able to separate out all three factors. In particular, although stochastic frontier analysis (one of the key technique used by Economic Insights) is able to distinguish idiosyncratic error and inefficiency, it does not address the issue of whether the part of the error composition which is ascribed to inefficiency, could also reflect latent heterogeneity.<sup>87</sup>
98. A further and related limitation of benchmarking generally is that explanatory power of a model is critically dependent on the quality of the data fed into it. If data relating to each firm used in the benchmarking exercise has been prepared on a different basis, then the model's explanatory power will be limited – and perhaps non-existent. Further complications arise when international data is used in the benchmarking exercise. As Frontier Economics puts it:<sup>88</sup>

There are also likely to be more prodigious differences in operating environment when taking data from very different countries. Differences that can sometimes be safely assumed away within region (e.g. assuming that climate may be sufficiently similar to require no adjustment) may become material in the context of a sample drawn from many countries.

Designing a benchmarking methodology that accounts adequately for all of these factors is extremely challenging – and in our view is unlikely to be possible without significant effort.

99. These intrinsic challenges in benchmarking make it risky to be deployed as the sole determinant of a DNSP's opex allowance. There is a significant likelihood that were benchmarking to be used as the sole determinant of a DNSP's opex allowance, opex reductions would be imposed on that DNSP on the basis of performance differences that are not reflective of management inefficiencies.

### **1.3 Place of benchmarking in the decision making process under clauses 6.5.6(c) and 6.12.1(4) of the NER**

100. The framework by which the AER must make its constituent decisions about ActewAGL's opex allowances under clauses 6.5.6(c) and 6.12.1(4) of the NER is set out at paragraphs 64 to 67 of the Application.
101. The NER mandate that a DNSP's proposal is the starting point for the AER's decision to determine its opex allowance. This is apparent from the terms of clause 6.5.6(c) of the NER, which provides that the AER must accept the relevant DNSP's forecast opex if it is satisfied that the total of the forecast opex for the regulatory control period reasonably reflects each of the operating expenditure criteria in clause 6.5.6(c)(1) to (3).
102. The fact that a DNSP's proposal is the starting point for the AER's decision to determine its opex allowance is also apparent from relevant extrinsic material. In particular, the Australian

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<sup>87</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 9.

<sup>88</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 7.

Energy Market Commission (**AEMC**) stated in its *Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012 and National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012* of 29 November 2012 (**2012 Rule Determination**):<sup>89</sup>

The NSP's proposal is necessarily the procedural starting point for the AER to determine a capex or opex allowance. The NSP has the most experience in how a network should be run, as well as holding all of the data on past performance of its network, and is therefore in the best position to make judgments about what expenditure will be required in the future. Indeed, the NSP's proposal will in most cases be the most significant input into the AER's decision.

103. Although the AER is required by clause 6.5.6(e)(4) of the NER to have regard to benchmark opex in deciding whether the a DNSP's opex forecast reasonably reflects the operating expenditure criteria in clause 6.5.6(c)(1) to (3), that is only one of a number of factors in clause 6.5.6(e) of the NER to which the AER must have regard. For example, clause 6.5.6(e)(f) provides that the AER must also have regard to the actual and expected operating expenditure of the DNSP during any preceding regulatory control periods.
104. Indeed, the way in which the opex objectives in clause 6.5.6(a) and the opex criteria in clause 6.5.6(c) are formulated, involving numerous disparate but interconnected criteria, militates against taking a broad brushed approach that elevates any one of the opex factors in clause 6.5.6(e), least of all benchmarking, to a primary or deterministic level of importance.
105. For example, in determining whether a DNSP's proposed opex reasonably reflects the efficient costs of meeting the opex objectives in clause 6.5.6(a)(3) of the NER (the opex required to *maintain* the quality, reliability and security of supply of the distribution system and standard control services to the extent that there is no applicable regulatory obligation or requirement), it might be inferred that benchmarking will be of limited assistance, given that the quality, reliability and security of supply of the benchmarked firms will inevitably be different. A holistic approach is therefore required, giving proper regard to each of the opex factors in clause 6.5.6(e), and how they bear upon each of the opex objectives and opex criteria in clause 6.5.6(a) and (c) of the NER respectively.
106. The operation of the regulatory framework as discussed above is reflected in relevant extrinsic material. In particular, the AEMC stated in its 2012 Rule Determination:<sup>90</sup>

Benchmarking is but one tool the AER can utilise to assess NSPs' proposals. It is not a substitute for the role of the NSP's proposal. ...

The intention of a benchmarking assessment is not to normalise for every possible difference in networks. Rather, benchmarking provides a high level overview taking into account certain exogenous factors. It is then used as a comparative tool to inform assessments about the relative overall efficiency of proposed expenditure. This view is consistent with that put forward in a submission by Grid Australia to the consultation paper. Further, it is intended that the annual benchmarking report will be a useful tool for stakeholders, such as consumers, to engage in the regulatory process and have better information about relative performance of

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<sup>89</sup> 2012 Rule Determination, page 111.

<sup>90</sup> 2012 Rule Determination, page 107.

their NSPs.

107. It is only where the AER is not satisfied that ActewAGL's forecast opex reasonably reflects the opex criteria that the NER permit the AER to determine on its own estimate of ActewAGL's opex. The analysis performed by the AER may be relevant to both the assessment of whether ActewAGL's proposal is reasonable, and the determination of an appropriate substitute in the event that the AER decides that proposal is not reasonable. Therefore, the AER may permissibly approach both exercises by determining its own forecast of expenditure based on the material before it. Nevertheless, it is not permissible for the AER to set aside ActewAGL's proposal and replace it with its own. The AEMC stated:<sup>91</sup>

The Commission remains of the view that the AER is not "at large" in being able to reject the NSP's proposal and replace it with its own. The obligation to accept a reasonable proposal reflects the obligation that all public decision-makers have to base their decisions on sound reasoning and all relevant information required to be taken into account. Some submissions have referred to the concept of an evidentiary burden, or onus of proof, as some submissions have termed it, that the AER has. To the extent the AER places probative value on the NSP's proposal, which is likely given the NSP's knowledge of its own network, then the AER should justify its conclusions by reference to it, in the same way it should regarding any other submission of probative value. In circumstances where the NSP is required to provide information in support of its proposal, and the AER is required to explain its decision, an evidentiary burden does not appear to reside with one party more than another.

108. In its Final Determination, the AER asserts that the 2012 Rule Determination was intended to promote the AER's use of benchmarking for assessing and determining opex forecasts. The AER states:<sup>92</sup>

The new NER stipulate that the AER will undertake and publish regular benchmarking reports, and that we must have regard to these reports in assessing whether networks' proposed opex forecasts reasonably reflect the opex criteria. Further, the AEMC removed potential constraints in the NER on the way the AER may use benchmarking.

109. The AER's reference in the Final Determination to the removal of 'potential constraints in the NER on the way the AER may use benchmarking' relates to amendments to clause 6.5.6(c)(2) of the NER in the 2012 Rule Determination. Before those changes were made, clause 6.5.6(c)(2) of the NER required the AER to consider whether the forecast opex for the regulatory control period reasonably reflects the costs that a prudent operator 'in the circumstances of the relevant Distribution Network Service Provider' would require to achieve the opex objectives.<sup>93</sup>
110. Although the AER is correct to say that that change was intended to promote the AER's use of benchmarking for assessing and determining opex forecasts, it is important not to overstate

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<sup>91</sup> 2012 Rule Determination, page 112.

<sup>92</sup> Final Determination, page 7-68.

<sup>93</sup> Insofar as the AER refers to benchmarking reports in the passage of the Final Determination referred to above, its observations are irrelevant; the AER did not have regard to its benchmarking reports in assessing ActewAGL's opex. The benchmarking model used in the benchmarking report was different to the model relied on by the AER in the Final Determination.

the position. The change to clause 6.5.6 of the NER was not intended to give primacy to benchmarking in setting opex allowances, nor is it to be understood as giving the AER a mandate to have regard to benchmarking if the results of its benchmarking are not sufficiently reliable to have probative value.

111. In its 2012 Rule Determination, the AEMC considered that the words 'in the circumstances of the relevant Distribution Network Service Provider' ought to be deleted from clause 6.5.6(c)(2) of the NER. However, by doing so, the AEMC did not intend that the individual circumstances of the DNSP could be ignored, nor did it intend that benchmarking could be used in a way that elevated its importance above that of any other opex factor in clause 6.5.6(e) of the NER. The AEMC stated:<sup>94</sup>

The Commission is of the view that the removal of the "individual circumstances" clause does not enable the AER to disregard the circumstances of a NSP in making a decision on capex and opex allowances. **Benchmarking is but one tool the AER can utilise to assess NSPs' proposals. It is not a substitute for the role of the NSP's proposal.** Should the phrase remain, it appears that the AER's interpretation of it may restrict it from utilising appropriate benchmarking approaches to inform its decision making.

The Commission considers that the removal of the "individual circumstances" phrase will clarify the ability of the AER to undertake benchmarking. It assists the AER to determine if a NSP's proposal reflects the prudent and efficient costs of meeting the objectives. That necessarily requires a consideration of the NSP's circumstances as detailed in its regulatory proposal. [Bold emphasis added]

112. The AER correctly observes that it has discretion about the relative weight to be accorded to the opex factors.<sup>95</sup> As the AER notes, the AEMC observed in its 2012 Rule Determination:<sup>96</sup>

As mandatory considerations, the AER has an obligation to take capex and opex factors into account, but this does not mean that every factor that will be relevant to every aspect of every regulatory determination the AER makes. The AER may decide that certain factors are not relevant in certain cases once it has considered them.

113. The AER's discretion is not, however, unlimited. In determining the relative weight to accord to the opex factors, the AER must exercise its discretion reasonably, in a manner that will contribute to the achievement of the NEO and having regard to the revenue and pricing principles (RPPs). It cannot, for example, ascribe weight to one of those factors (for example, benchmarking) and none to another of those factors in circumstances where that is not reasonable on the balance of the evidence before it.

#### 1.4 Manner in which the AER constructed its alternative opex forecast

114. The manner in which the AER constructed its alternative opex forecast for the 2014–19 period is set out at paragraphs 83 to 91 and 111 of the Application. In particular:<sup>97</sup>

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<sup>94</sup> 2012 Rule Determination, page 107.

<sup>95</sup> Final Determination, page 7-85.

<sup>96</sup> 2012 Rule Determination, page 115.

- 114.1 the AER relied on a CD SFA model developed by its consultant, Economic Insights, to generate opex 'efficiency' scores for the Australian DNSPs;
- 114.2 the Australian data used in the CD SFA model was sourced from responses by all 13 Australian DNSPs to economic benchmarking regulatory information notices (**RINs**) issued by the AER requesting eight years of historic data (for the years 2005/06-2012/13 (inclusive)).<sup>98</sup> However, Economic Insights concluded that there was insufficient variation in the RIN data to allow it to reliably estimate even a simple version of an opex cost function model.<sup>99</sup> Accordingly, Economic Insights decided that it was necessary to include data from New Zealand and Ontario, Canada, into its models to increase the sample size so as to obtain more 'robust' estimates.<sup>100</sup> In the result, the Australian DNSPs accounted for 19% of the sample used in Economic Insights' models. The New Zealand DNSPs accounted for 26%, and the Ontarian DNSPs accounted for 54%;<sup>101</sup>
- 114.3 the outputs in the CD SFA model are customer numbers, line length and ratcheted maximum demand, with a single environmental variable (share of underground cabling).<sup>102</sup> That is to say, the CD SFA model measures the opex of a service provider against those outputs, to assess the assumed opex efficiency of that service provider. The CD SFA model assumes that any difference in opex that are not attributed to those outputs is caused by management inefficiency;
- 114.4 based on the relationship between ActewAGL's opex and its customer numbers, line length, ratcheted maximum demand and share of underground cabling over the 2006 to 2013 period, ActewAGL's 'raw' efficiency score, according to the CDA SFA model, was 39.9%.<sup>103</sup> That is to say, the CD SFA model implied that ActewAGL was 39.9% as efficient over the benchmarking period (2005/06 to 2012/13 (inclusive)) as the 'frontier' service provider in the sample used in the CD SFA model.<sup>104</sup> Were that score to be applied without modification, the AER concluded that ActewAGL's opex should be reduced by 61% in the base year;<sup>105</sup>

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<sup>97</sup> See generally table 7.4 of the Final Determination at page 7-26 and Table A.12 at page 7-260.

<sup>98</sup> Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 17 November 2014, page 2. See also Ausgrid, *Essential Energy, Endeavour Energy: Appropriateness of RIN data for benchmarking*, PwC, 9 January 2015, page 5.

<sup>99</sup> Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 17 November 2014, page 28.

<sup>100</sup> Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 17 November 2014, page 31.

<sup>101</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page xi.

<sup>102</sup> Final Determination, page 7-25.

<sup>103</sup> Final Determination, page 7-27.

<sup>104</sup> The most efficient Australian DNSP, according to the results generated by the CD SFA model, was CitiPower Pty (**CitiPower**) with a score of 0.95. Thus, ActewAGL was, according to the results generated by the CD SFA model, 42% as efficient as CitiPower over the benchmarking period ( $39.9/95.0 = 42\%$ ).

<sup>105</sup> Final Determination, page 7-27.

- 114.5 however, the AER concluded that the 'raw' results from the CD SFA model ought to be adjusted in two respects:
- 114.5.1 rather than using CitiPower as the benchmark for efficiency comparisons, the first adjustment made by the AER was to set a lower benchmark based on the efficiency score for the business at the bottom of the upper third (top 33%) of companies in the benchmark sample (represented by AusNet Services);
  - 114.5.2 the AER conceded that the CD SFA model did not capture all operating environment factors (**OEFs**) likely to affect opex incurred by a 'prudent and efficient' ActewAGL.<sup>106</sup> The AER observed that '[t]his is because accounting for too many differences in the model can lead to unstable results. The available data on operating environment differences is also a limiting factor'.<sup>107</sup> The AER therefore considered the impact of more than 60 proposed OEFs which were not incorporated in the CD SFA model, and concluded that adjustments were required for four 'material' OEFs, and for the collective effect of 20 'immaterial' OEFs. The AER concluded that a 23% reduction to ActewAGL's comparison score was warranted, based on its assessment of these OEFs. That is to say, the AER concluded that 23% of assumed opex inefficiency of ActewAGL resulted from factors that were not captured by the CD SFA model;
- 114.6 the combined effect of the CD SFA model efficiency score for ActewAGL, and its ad-hoc post modelling adjustments, results in a difference of 36.2% between ActewAGL's efficiency score and the assumed 'efficiency frontier' (being the efficiency score for AusNet Services);<sup>108</sup>
- 114.7 the AER calculated ActewAGL's average opex over the 2006 to 2013 period, and reduced that amount by 36.2% to calculate the opex that it assumes that a hypothetical efficient DNSP would have incurred over that period;<sup>109</sup>
- 114.8 the average opex over the 2006 to 2013 period represents, at least notionally, the opex that a hypothetical efficient DNSP would have incurred at the midpoint of that period (ie, 2009). The AER trended the midpoint efficient opex forward to a 2012–13 base year based on Economic Insights' opex partial factor productivity growth model. It estimated the growth in efficient opex based on growth in customer numbers, line length, ratcheted maximum demand and share of undergrounding. It estimated the growth in efficient opex based on ActewAGL's growth in these inputs in this period to be 13.26%;<sup>110</sup>

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<sup>106</sup> Final Determination, page 7-27.

<sup>107</sup> Final Determination, page 7-52.

<sup>108</sup> Final Determination, page 7-27.

<sup>109</sup> Final Determination, page 7-27.

<sup>110</sup> Final Determination, page 7-27.

- 114.9 the output of the preceding step is in real \$ 2013. The AER converted that amount to real \$ 2013–14 for the purposes of forming its substitute estimate of base opex;<sup>111</sup>
- 114.10 the AER's assumed 'efficient' opex in the 2012/13 base year is \$45.1 million (\$ 2013/14). ActewAGL's actual opex in the base year, on which ActewAGL's forecast opex for the 2014-19 period was based, was \$67.2 million (\$ 2013/14). The difference between those two figures is 32.8%;<sup>112</sup> and
- 114.11 over the five years of the 2014-19 period, the difference between ActewAGL's forecast base opex and the AER's forecast base opex is \$110.5 million (\$ 2013/14).<sup>113</sup>
115. As is apparent from the matters set out above, the AER's methodology for determination of an alternative opex forecast for ActewAGL involved a great many steps and assumptions. A flaw in any one of those steps and assumptions would have the result of rendering the assumed 'efficient' opex for ActewAGL for the 2012/13 base year unreliable.
116. Further, although the AER describes the 32.8% difference between its own opex forecast for the 2012/13 base year, and ActewAGL's forecast opex for the base year, as an 'adjustment', that is a misnomer. The AER has not 'adjusted' ActewAGL's forecast. It has had no regard to ActewAGL's forecast in developing its own forecast. The 32.8% difference between the two figures is better described as a *reconciliation* between ActewAGL's forecast and the AER's own forecast, rather than an 'adjustment'.
117. The AER also conducted two further analyses of ActewAGL's historical opex. The first was by way of PPIs that focused on particular categories of opex in isolation (referred to as 'category analysis'). Although it is unclear, in its Final Determination the AER appeared to alter the position it had taken in the draft decision for ActewAGL for the subsequent regulatory control period published on 27 November 2014 (**Draft Decision**) that its PPI analysis was capable of corroborating its own forecast. Rather, in the Final Determination, the AER stated that 'category analysis' by way of PPIs is an appropriate technique for diagnosing areas for further qualitative review, and that the PPIs deployed by the AER indicated, in particular, that there were inefficiencies in ActewAGL's workforce and vegetation management practices.<sup>114</sup>
118. The second analysis by the AER of ActewAGL's historical opex was a review of ActewAGL's workforce and vegetation management practices. The analysis conducted by the AER of those categories of expenditure was deeply flawed, for the reasons discussed below. However, leaving that issue aside, the review was qualitative, not quantitative. That is to say, although the AER concluded that there were inefficiencies in ActewAGL's workforce and vegetation management practices, it did not seek to quantify the extent to which those asserted inefficiencies resulted in opex that an efficient DNSP would not have incurred.

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<sup>111</sup> Final Determination, pages 7-27 and 7-28.

<sup>112</sup> Final Determination, page 7-47.

<sup>113</sup> The revenue impact of the AER's decision about base year opex is further developed in the Application at [317] and [318].

<sup>114</sup> Final Determination, page 7-143.



119. In the circumstances, therefore, the AER appears not to have had any 'real world' information that verified that the quantum of the difference between its forecast base year opex, and ActewAGL's forecast year opex, was due to inefficiency. Rather, the AER assumed that in the absence of that information, its own forecast (determined solely by reference to its benchmarking analysis) was to be preferred.
120. The AER described its approach in the following terms:<sup>115</sup>

Our approach is to compare the service provider's total forecast opex with an alternative estimate that we develop. By doing this we form a view on whether we are satisfied that the service provider's proposed total forecast opex reasonably reflects the opex criteria. If we conclude the proposal does not reasonably reflect the opex criteria, we use our estimate as a substitute forecast. This approach was expressly endorsed by the AEMC in its decision on the major rule changes that were introduced in November 2012. The AEMC stated:

While the AER must form a view as to whether a NSP's proposal is reasonable, this is not a separate exercise from determining an appropriate substitute in the event the AER decides the proposal is not reasonable. For example, benchmarking the NSP against others will provide an indication of both whether the proposal is reasonable and what a substitute should be. Both the consideration of "reasonable" and the determination of the substitute must be in respect of the total for capex and opex.

Our estimate is unlikely to exactly match the service provider's forecast because the service provider may not adopt the same forecasting method. However, if the service provider's inputs and assumptions are reasonable, its method should produce a forecast consistent with our estimate.

If a service provider's total forecast opex is materially different to our estimate and we find no satisfactory explanation for this difference, we may form the view that the service provider's forecast does not reasonably reflect the opex criteria. Conversely, if our estimate demonstrates that the service provider's forecast reasonably reflects the opex criteria, we will accept the forecast. Whether or not we accept a service provider's forecast, we must provide the reasons for our decision.

121. The AER applied that methodology in making its decision to reject ActewAGL's forecast opex in substitute for its own:<sup>116</sup>

We compared ActewAGL's opex forecast to an opex forecast we constructed using the method outlined above. ActewAGL's proposal is higher than ours and we are satisfied that it does not reasonably reflect the opex criteria. For this reason, we have substituted ActewAGL's total opex forecast with our total opex forecast.

## **1.5 Manner in which AER used its alternative opex forecast as a basis for its decision was contrary to the NER**

122. As is apparent from the matters set out above, the AER's benchmarking methodology was used as the sole determinant of ActewAGL's opex allowance. Apart from using ActewAGL's average opex over the benchmarking period (2005/06 to 2012/13 (inclusive)), to which it

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<sup>115</sup> Final Determination, page 7-16.

<sup>116</sup> Final Determination, page 7-22.

applied an 'efficiency' adjustment based on the CD SFA model and its ad-hoc post modelling adjustments, the AER has had no regard to ActewAGL's actual opex in 2012/13 in determining the quantum of ActewAGL's 'efficient' opex.

123. In that regard, the Tribunal ought to exercise considerable caution about the manner in which the Final Determination describes the AER's decision-making processes. In particular, when describing the methodology by which it has made its decisions under clauses 6.5.6(c) and 6.12.1(4) of the NER, the AER has asserted in the Final Determination that 'our forecasting approach uses the service provider's actual opex as the starting point'.<sup>117</sup> The AER has even sought to reinforce the perception that it has 'started' with ActewAGL's forecast diagrammatically, in a flow chart setting out its purported decision making methodology.<sup>118</sup> That assertion has been given added prominence in the Final Determination, presumably in response to criticism by the DNSPs about the methodology that the AER had adopted to make its decisions about those DNSPs' opex allowances.
124. The assertion that the AER has 'started' with ActewAGL's forecast opex is window dressing. It is meaningless. The Final Determination makes it plain that the AER constructed its own forecast. Because that forecast was lower than ActewAGL's, and it was not satisfied that there was an explanation for the difference, it rejected ActewAGL's forecast and adopted its own as the appropriate allowance. ActewAGL's forecast did not otherwise play a role in the AER's decision-making process, whether as a 'starting point' or otherwise.
125. Likewise, the references in the Final Determination to the AER having made an 'adjustment' to ActewAGL's base year opex tends to mask the nature of the AER's decision. As discussed in paragraph 116, the AER has not 'adjusted' ActewAGL's forecast opex. Rather, the AER has developed its own forecast, and adopted that, rather than ActewAGL's forecast. The AER's methodology inverts the approach required by the NER.
126. The AER's stated methodology involves using the AER's own forecast, derived from its benchmarking reports, as the starting premise for determining whether the DNSP's forecast reasonably reflects the opex criteria in clause 6.5.6(c) of the NER.
127. The AER has assumed, in particular, that 'if the service provider's inputs and assumptions are reasonable, its method should produce a forecast consistent with our estimate'.<sup>119</sup> That is to say, the AER has adopted, as a starting premise, the assumption that its own forecast is correct. That the AER has adopted that methodology appears to be confirmed by the following statement in the Final Determination:<sup>120</sup>

If a service provider's total forecast opex is materially different to our estimate and there is no satisfactory explanation for this difference, we may form the view that the service provider's forecast does not reasonably reflect the opex criteria.
128. The fact that the AER has adopted that methodology is also confirmed by the fact that the AER has adopted its own forecast, despite not having undertaken any quantitative analysis of

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<sup>117</sup> See for example Final Determination, page 7-44.

<sup>118</sup> Final Determination, page 7-17.

<sup>119</sup> Final Determination, page 7-16.

<sup>120</sup> Final Determination, page 7-16.

the reasons for the difference between its forecast and ActewAGL's. That is to say, to the extent that there is a discrepancy between the benchmarked results and ActewAGL's forecast opex, the Final Determination does not disclose that significant further investigation has occurred, having regard to the opex factors. Rather, as discussed above, the AER has assumed that absent an adequate explanation for that discrepancy, ActewAGL's forecast opex should be rejected and its own forecast adopted.

129. As discussed above, the AER conducted a *qualitative* analysis of ActewAGL's workforce and vegetation management practices, but this appears to have been deployed by the AER as a means of confirming that there is no adequate explanation for the differences between ActewAGL's forecast opex and the benchmarked results. The AER's review was incapable, in itself, even leaving aside its deficiencies, of corroborating the quantum of the AER's own forecast.
130. Given that the most likely source of the 'satisfactory explanation' as to the difference between the AER's estimate and the DNSP's estimate is the DNSP itself, the AER's methodology appears to create an onus on the DNSP to provide that explanation. Further, in circumstances where the AER's estimate has been disclosed for the first time in the Draft Decision, ActewAGL has been placed in the position of only being able to commence seeking to discharge that onus *after* the Draft Decision was made, and in a limited time contrary to the scheme of regulatory process established by the NER.
131. The AER's methodology does not, as the AER implies in the passage of the Final Determination referred to at paragraph 120, have the endorsement of the AEMC. The AEMC observed that the decision to reject a DNSP's forecast, and the decision as to an appropriate opex allowance, might rely on the same material, including benchmarking analysis. That is not the same thing as saying that there ought to be a presumption that the AER's own forecast should apply, if there is no explanation for the reasons for the difference between that forecast and the DNSP's forecast.
132. As discussed above, the terms of clause 6.5.6 of the NER, as well as the statement by the AEMC referred to in paragraph 120 to the effect that the DNSP's proposal is 'necessarily the procedural starting point' for determining forecast opex, is inconsistent with the AER's methodology.
133. Indeed, the AEMC itself eschewed the notion that there ought be any onus on any party (including the AER) in respect of the decision to accept or reject a DNSP's opex forecast. In its 2012 Rule Determination, the AEMC states (bold emphasis added):<sup>121</sup>

The Commission remains of the view that the AER is not "at large" in being able to reject the NSP's proposal and replace it with its own. The obligation to accept a reasonable proposal, reflects the obligation that all public decision-makers have to base their decisions on sound reasoning and all relevant information required to be taken into account. Some submissions have referred to the concept of an evidentiary burden, or onus of proof, as some submissions have termed it, that the AER has. To the extent the AER places probative value on the NSP's proposal, which is likely given the NSP's knowledge of its own network, then the AER should justify its conclusions by reference to it, in the same way it should regarding any other submission of probative value. **In circumstances where the NSP is required to provide information in support of its proposal, and the AER is required to explain its decision,**

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<sup>121</sup>

2012 Rule Determination, page 112.

**an evidentiary burden does not appear to reside with one party more than another.** [Bold emphasis added]

134. The implicit onus that the AER's methodology places on ActewAGL is contrary to the manner in which clause 6.5.6(c) of the NER contemplates a decision to accept or reject a DNSPS's forecast opex will be made. That error is more than a mere matter of form. As discussed above, it creates an onus on ActewAGL that it can only begin to discharge after the Draft Decision is made. Such a decision would not, therefore, be authorised by the NER.
135. The AER's methodology also necessarily involves a failure to properly consider the opex objectives in clause 6.5.6(a) of the NER and the opex criteria in clause 6.5.6(c) of the NER. Each of those opex objectives and opex criteria are different. The extent to which a DNSPS forecast opex reasonably reflects the costs of achieving each of the opex objectives and opex criteria requires separate consideration.
136. Benchmarking is one technique that can be used to inform the regulator's view as to the opex that is required to meet the opex objectives having regard to the opex criteria. However, clause 6.5.6(e) of the NER reflects the intrinsic role and limitations of benchmarking as being but one tool available to the regulator to assist in informing its decisions. There are ten 'opex factors' prescribed in clause 6.5.6(e) to which the AER must have regard, of which benchmarking is but one. The AER is not required to give each of those considerations equal weight. It may consider some of those factors irrelevant, or not equally probative. However, the AER's discretion in that regard is not unlimited. That discretion must actually be exercised, and it must be exercised reasonably. In that regard, it must be remembered that the NER does not contemplate that benchmarking, in itself, will promote the national electricity objective (NEO).
137. Accordingly, by adopting the methodology described of assessing ActewAGL's total forecast opex against an alternative estimate that the AER developed itself principally in reliance on benchmarking reports (ie, the opex factor specified in clause 6.5.6(e)(4) of the NER), the AER has effectively sidestepped discrete and focussed consideration on whether each opex objective and opex criteria has been met. Rather, the AER has adopted, as a starting premise, the assumption that benchmarked results properly reflect the costs of achieving each of the opex objectives and opex criteria, unless the DNSP establishes otherwise. It could not, having adopted that approach, have discharged its obligation to properly consider the opex objectives and the opex criteria.
138. This is particularly apparent in the case of opex objectives prescribed by clause 6.5.6(a)(3) and (4) of the NER, as applied by clause 6.5.6(c) of the NER. Those provisions require the AER to accept a DNSP's forecast opex if the AER is satisfied that the forecast reasonably reflects the following costs:
  - (3) to the extent that there is no applicable *regulatory obligation or requirement* in relation to:
    - (i) the quality, reliability or security of supply of *standard control services*; or
    - (ii) the reliability or security of the *distribution system* through the supply of *standard control services*,

to the relevant extent:

- (iii) maintain the quality, reliability and security of supply of *standard control services*; and
    - (iv) maintain the reliability and security of the *distribution system* through the supply of *standard control services*; and
  - (4) maintain the safety of the *distribution system* through the supply of *standard control services*.
139. In determining the opex that ActewAGL requires to achieve that objective, clause 6.5.6(e)(5) requires the AER to have regard to the actual and expected opex of ActewAGL during any preceding regulatory control periods. The standards of quality, reliability and security of supply of standard control services of ActewAGL, the DNSPs against which ActewAGL has been benchmarked, and the international firms used within the AER's benchmarking models, are different. The historical opex of ActewAGL, the DNSPs against which ActewAGL has been benchmarked, and the international firms used within the AER's benchmarking models, are different.
140. Against that background, by elevating its benchmarking analysis (and the opex forecast derived from that analysis) to a presumptive level of importance, the AER has led itself into error, in that its methodology does not enable it to give proper consideration to the opex that is required to meet the opex objective of maintaining the quality, reliability and security of supply of standard control services of the distribution system through the supply of standard control services. The benchmarked results are simply unable to inform the opex that is required to meet that objective.
141. In the circumstances, the methodology adopted by the AER for the purpose of exercising its discretion about ActewAGL's opex allowance was contrary to the manner in which NER contemplates that discretion would be exercised. That is to say, the exercise of the AER's discretion in that way was unlawful. Accordingly, its discretion was exercised in a way that was incorrect, or unreasonable, within the meaning of sub-sections 71C(1)(c) or (d) of the NEL. Further, a decision which does not conform with clause 6.5.6(c) cannot be regarded as a decision that contributes to the NEO, as required by section 16(1)(a) of the NEL, nor could that decision be a 'preferable reviewable regulatory decision' for the purposes of section 16(a)(d) of the NEL.

## **1.6 AER's benchmarking methodology had serious flaws that rendered it unfit to be used as the principal basis for the AER's decisions about opex**

### *Introduction*

142. Aside from the AER's failure to assess ActewAGL's opex allowance in a manner that is mandated by the NER, the AER's benchmarking methodology has such serious deficiencies that it had no value as a means of assessing ActewAGL's efficient costs, and ought not to have played any part in the AER's decisions pursuant to clauses 6.5.6(c) and 6.12.1(4) of the NER.

### *AER's use of non-comparable international data in the models*

143. The first deficiency in the AER's benchmarking methodology relates to the use of international data in its models. As discussed in paragraph 91.1, international data played a

central, even overwhelming, role in the models developed by Economic Insights and relied on by the AER. Economic Insights acknowledges that its models, including the CD SFA model that the AER used to determine ActewAGL's opex allowance, cannot be made operational in the absence of international data:<sup>122</sup>

After a careful analysis of the economic benchmarking RIN data we concluded that there was insufficient variation in the data set to allow us to reliably estimate even a simple version of an opex cost function model (e.g. a Cobb–Douglas LSE model with three output variables and two operating environment variables)...

Hence, in this case, there is little additional data variation supplied by moving from a cross-sectional data set of 13 observations to a panel data set of 104 observations. As a consequence we are essentially trying to use a data set with 13 observations to estimate a complex econometric model. The 'implicit' degrees of freedom are near zero or even negative in some cases, producing model estimates that are relatively unstable and unreliable.

We thus concluded that to obtain robust and reliable results from an econometric opex cost function analysis we needed to look to add additional cross sectional observations which meant drawing on overseas data, provided largely comparable DNSP data were available...

144. As noted previously in these submissions, the Australian DNSPs accounted for 19% of the sample used in Economic Insights' models. The New Zealand DNSPs accounted for 26%, and the Ontarian DNSPs accounted for 54%.<sup>123</sup>
145. Self evidently, there are significant comparability issues between Australia, New Zealand and Ontario, including by reason of their vastly different weather conditions, population density, scale of operations and geography. However, it appears that Economic Insights has chosen to incorporate data from these countries into its model, not because they were comparable, but because data was available that was similar in form to the data in the AER's economic RIN benchmarking database.<sup>124</sup> Likewise, the choice of output variables in the CD SFA model (energy throughput, ratcheted maximum demand, customer numbers and circuit length) appears to have been largely determined by the data that was available between all three countries.<sup>125</sup> In essence, therefore, both the construction of the models used by Economic Insights, and the data used within those models, were dictated by what was available to Economic Insights to use, not what was likely to give the most reliable indicator of efficient costs. Of itself, that ought to cause the Tribunal significant concern about the reliability of the output of Economic Insights' models.
146. The use of international data within the models gives rise to the following additional concerns:

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<sup>122</sup> Economic Insights, *Economic benchmarking assessment of operating expenditure for NSW and ACT electricity DNSPs*, 17 November 2014, pages 28 to 29.

<sup>123</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page xi.

<sup>124</sup> Economic Insights, *Economic benchmarking assessment of operating expenditure for NSW and ACT electricity DNSPs*, 17 November 2014, page 29.

<sup>125</sup> Economic Insights, *Economic benchmarking assessment of operating expenditure for NSW and ACT electricity DNSPs*, 17 November 2014, page 11.

- 146.1 the 13 DNSPs in Australia are significantly larger than the 37 companies from Ontario and the 18 companies from New Zealand that Economic Insights has used. The differences in scale between the Australian DNSPs, and the international firms used in Economic Insights' data set, is apparent from the following table prepared by Frontier Economics:<sup>126</sup>

Table 8: Comparison of average scale of Australian and Ontarian networks

	Australia	Ontario	New Zealand	Australian value as a multiple of Ontarian value	Australian value as a multiple of New Zealand value
Energy (GWh)	11,038	3,073	1,441	4	8
Maximum Demand (MW)	2,346	603	287	4	8
Ratcheted Maximum Demand (MW)	2,516	651	313	4	8
Customer Numbers	731,308	124,270	96,577	6	8
Circuit Length (kms)	56,561	5,045	6,771	11	8

- 146.2 there are significant differences in climate and geography between Australia, New Zealand and Ontario. The differences in temperature between Australian cities and Ontario cities are particularly marked. Other environmental considerations such as vegetation management requirements will be different between countries. It may be inferred that differences in conditions will have led to differences in designs in the networks; certainly there is no reason to suppose that those differences will nevertheless have led to the same relationships between costs and cost drivers;<sup>127</sup>

- 146.3 Ontario, New Zealand and Australia have different guidelines on the reporting of data.<sup>128</sup> Inconsistent reporting of data creates difficulties in ensuring that the reporting of opex used in the benchmarking is consistent across companies in the data set – both *within* Australia, New Zealand and Ontario, and *between* Australia, New Zealand and Ontario;

<sup>126</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 26.

<sup>127</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 34. Frontier Economics notes, for example, that DNSPs in Ontario have a significantly larger portion of their cables underground when compared to New Zealand and Australian DNSPs, presumably because power lines are more susceptible to damage in harsher weather. This will change the relationship between opex and capex in Ontario, when compared to the other two countries.

<sup>128</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 43.

- 146.4 as Frontier Economics notes, 'the boundaries between opex and capex can often be a matter of judgment, even in the presence of apparently definitive rules' and '[i]n addition to potential differences in reporting of a given activity, networks can often substitute between opex and capex activities at the planning stage, as depending on the prevailing regulatory treatment it may be more rewarding for them to incur opex rather than capex, or vice versa';<sup>129</sup>
- 146.5 Economic Insights cannot say with certainty that the reporting in different countries does not impact on the parameter estimates. It makes an *assumption*, and in ActewAGL's submission it is a poor one, that operating spend and reporting in Ontario and New Zealand is based on exactly the same considerations as those in Australia. Clearly this is wrong as the reporting even in Australia varies by DNSP;
- 146.6 an examination of the data reported by networks in Ontario has revealed several large inconsistencies that suggest that concerns expressed by the experts about the comparability of data within overseas jurisdictions are well founded. For example, Frontier Economics notes, in respect of Ontario:<sup>130</sup>
- 146.6.1 nine instances in which reported opex, in consecutive years, rose or fell by 30% or more;
  - 146.6.2 three instances in which reported energy supplied increased from one year to the next by 97% or more;
  - 146.6.3 three instances in which reported maximum demand changed between consecutive years by 30% or more;
  - 146.6.4 one instance (by Halton Hills Hydro Inc.) in which reported ratcheted maximum demand rose by 75% between 2011 and 2012; and
  - 146.6.5 six instances in which reported circuit length changed between consecutive years by 32% or more; and
- 146.7 although some attempt has been made by the AER to address inconsistency in the data between *Australian* DNSPs,<sup>131</sup> the inconsistencies in the reporting of data of companies *within* Ontario and New Zealand and *between* Australian and the overseas DNSPs do not appear to have been investigated or controlled for by the AER.<sup>132</sup>

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<sup>129</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, pages 52 and 53.

<sup>130</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, pages 55 and 56.

<sup>131</sup> Prior to using the RIN data, Economic Insights made adjustments to opex for three companies: END, ERG, and ESS. The differences for END were due to misallocated metering costs, while the differences for ERG and ESS were due to solar feed-in tariffs. See CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page 10.

<sup>132</sup> Other than by use of a 'dummy variable', discussed below.



147. ActewAGL pointed out in its revised regulatory proposal for the subsequent regulatory control period of 20 January 2015 (**Revised Regulatory Proposal**) that the Ontario Electricity Distribution Sector Review Panel does not even consider that the Ontario data is internally comparable.<sup>133</sup> ActewAGL referred to the report of Advisian, which states:<sup>134</sup>

With regard to the Ontario data, the Ontario Electricity Distribution Sector Review Panel does not consider its DNSPs or industry structure is comparable to other provinces within Canada or states in Australia and has recently determined that there is a need to consolidate the existing DNSPs.

148. In addition, Economic Insights have used data from the New Zealand Commerce Commission (NZCC), but have failed to recognise that the NZCC itself cannot rely on the use of benchmarking to set starting values:<sup>135</sup>

The Commission may not, for the purposes of this Section, use comparative benchmarking on efficiency in order to set starting prices, rates of change, quality standards, or incentives to improve quality of supply.

149. As is apparent from the passage cited in paragraph 160, Economic Insights recognised the need for comparability in the DNSP data between jurisdictions. It made some attempt at addressing comparability between the companies in the data set. However, those attempts were limited; necessarily so, given the inherent deficiencies in the data set.

150. The Final Determination refers to two principal attempts by Economic Insights to account for differences in the international and Australian data sets.<sup>136</sup> First, Economic Insights observed that NZ and Ontario have a small number of large DNSPs and a large number of small DNSPs. Accordingly, it nominated 'cut-off' points to identify different possible subsets of comparable data:

- a large dataset of 86 DNSPs (all those with >10,000 customers);
- a medium-sized dataset of somewhat larger 68 DNSPs (those with >20,000);
- a smaller dataset of 37 larger DNSPs (those with >50,000); and
- a reduced dataset of 25 of the largest DNSPs (those with >100,000).

151. However, the choice of 'cut-off' point was arbitrary. There is no reason why a cut-off point based on customer numbers might ensure comparability, as opposed to other 'cut off' points, such as length of network and/or density. Economic Insights did not provide any reason for its choice of 'cut-off' points, such as evidence of economies of scale in customer numbers. Accordingly, there is no reason to assume that the companies that made the cut are comparable.

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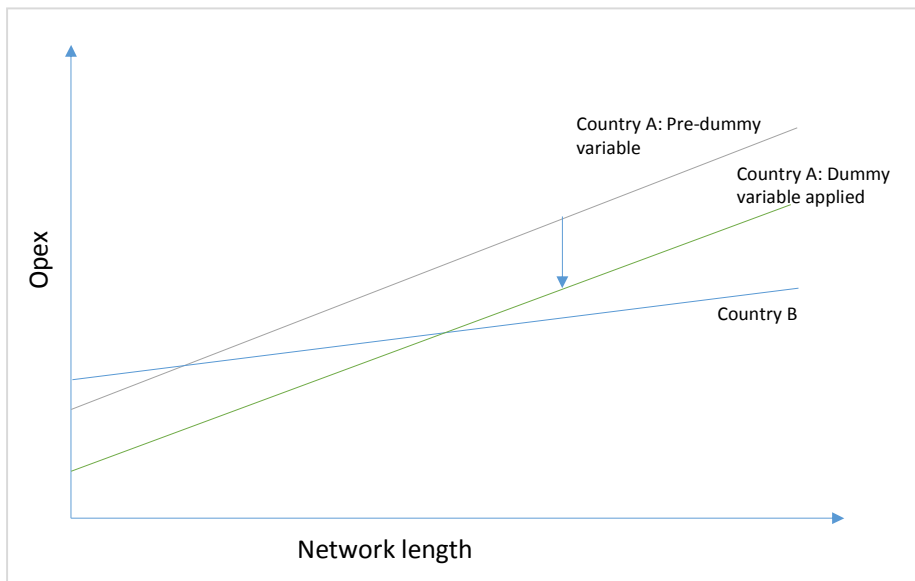
<sup>133</sup> Revised Regulatory Proposal, page 148.

<sup>134</sup> Advisian, *Opex cost drivers: ActewAGL Distribution Electricity (ACT)*, January 2015, page 102.

<sup>135</sup> *Commerce Amendment Act 2008* (New Zealand), section 52P, cited in the Revised Regulatory Proposal, page 148.

<sup>136</sup> Final Determination, page 7-115.

152. Another attempt to accommodate different operating environments across the different countries, besides the 'share of underground cables', was to introduce dummy variables for NZ and Ontario. Economic Insights stated that the dummy variables 'pick up differences in opex coverage (as well as systematic differences in OEFs such as the impact of harsher winter conditions in Ontario)'.<sup>137</sup>
153. However, including a dummy variable in the model specification does not necessarily control for these within and across country differences. A dummy variable only controls for *level* cost differences between datasets not *cost relationship* differences. CEPA's report contains a graphic which illustrates the point:<sup>138</sup>



154. Accordingly, the use of a dummy variable might be appropriate to adjust for fixed differences in cost between jurisdictions (such as the imposition of a fixed tax in one jurisdiction that is not imposed in another jurisdiction, that causes opex to be higher by a constant amount in the first jurisdiction). However, a dummy variable is entirely inapposite to adjust for differing costs relationships between jurisdictions. As CEPA puts it:<sup>139</sup>

The introduction of the dummy variable takes a fixed amount of Country A's opex per network length to bring its average in line with Country B's. However, the slope of the line (the relationship between opex and network length) is not impacted by the introduction of the country dummy variable. A proper econometric analysis is more complex than this and should take account of country-specific slopes, which will require more variables to take this into account. For example, if the relative prices of labour and capital differ, then one would expect a different relationship between cost and customer numbers (e.g. higher labour costs should lead to more capex and lower maintenance costs, but higher costs of dealing with customers).

<sup>137</sup> Economic Insights, *Economic benchmarking assessment of operating expenditure for NSW and ACT electricity DNSPs*, 17 November 2014, page 33.

<sup>138</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page 16.

<sup>139</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page 16.

155. The issue is of significant concern, because most of the data used within Economic Insights' models, including the CD SFA model, comes from overseas. Australia only accounts for one-fifth of the data points used. Accordingly, even with the use of a 'dummy variable', the slopes (coefficients) estimated by the regression models will closely follow overseas companies, rather than the Australian DNSPs, because of the sheer volume of data used within the models that comes from overseas. That is to say, the model will reflect costs relationships between opex and drivers of opex that exist in those overseas companies, rather than modelling relationships that exist in Australia.
156. This is demonstrated by the following table prepared by CEPA, which shows how closely the coefficients in the model follow the coefficients for Ontario and New Zealand:<sup>140</sup>

Table E.2: Comparison of coefficients across countries/regions

	Medium dataset		Australia	New Zealand	Ontario
Variable	Coefficient	95% C.I.	Coefficient	Coefficient	Coefficient
Log(CustomerNos)	0.667***	0.49, 0.84	1.146***	0.566***	0.732***
Log(CircuitLength)	0.106***	0.03, 0.18	0.13	0.201*	0.041
Log(RMDemand)	0.214***	0.06, 0.37	-0.242	0.206*	0.234**
Log(ShareUGC)	-0.131***	-0.20, -0.07	-0.021	-0.088	-0.211***
Year	0.018***	0.01, 0.02	0.034***	0.023***	0.010***
New Zealand	0.05	-0.15, 0.25			
Canada	0.157**	0.01, 0.30			
Constant	-26.53***	-34.3, -18.8	-58.778***	-37.122***	-9.690**
<b>Additional statistics</b>					
Observations	544	-	104	144	296

Note: significance stars as follows, \*10%, \*\*5%, \*\*\*1%.

157. Economic Insights' response to these criticisms does nothing to heighten confidence in the reliability of its models. First, Economic Insights states:<sup>141</sup>

The DNSPs' consultants' reports generally fail to recognise that the purpose of our study was not to undertake international benchmarking but rather we included overseas DNSPs to improve the precision of our parameter estimates. More precise parameter estimates increase confidence in model accuracy and allow more accurate accounting for output change in forecasts of future opex productivity growth. [original emphasis]

158. Economic Insights' assertion that it has not been engaged in international benchmarking is apt to mislead if not understood correctly. It is true that Economic Insights (and the AER) have not used the output of the models to compare (or benchmark) the efficiency of Australian DNSPs with overseas companies. That is to say, the AER has assumed that the 'efficiency frontier' against which ActewAGL is to be compared is determined by the efficiency scores of Australian DNSPs, not the efficiency scores of the international companies. In that sense, Economic Insights and the AER have not engaged in 'international benchmarking'.

<sup>140</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page ix.

<sup>141</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page vi.

159. However, Economic Insights' observation that it has not been engaged in international benchmarking evades the substance of the criticism that the experts have made. Although the output of the models has not been used to rank Australian DNSPs with international companies, nevertheless the data included within the models generally consists of international data. The international data largely determined the parameter estimates and hence the efficiency scores. If (as appears to be the case), the international data was not comparable within each country, and was not comparable between those countries and Australia, then the output of the models is largely meaningless.

160. Secondly, Economic Insights states:<sup>142</sup>

We agree that were an international benchmarking study to be undertaken, then it would be important to ensure maximum comparability across opex and output categories. However, for the purpose at hand, the inclusion of country dummy variables provides adequate allowance for systematic differences. This is evidenced by the similarity in our efficiency results using the EBRIN data only and using the three country database.

161. However, differences in reporting or cost allocation methodologies *within* either the NZ or Ontario data would cause that data to be internally inconsistent. In this case opex would not be comparable within each jurisdiction without making adjustments. This would mean that cost relationships would not be accurately represented by the data, and parameter estimates would be biased. A dummy variable does not control for these inconsistencies. For example, Economic Insights' argument that the dummy variable controls for adverse weather conditions faced by Ontario DNSPs (relative to New Zealand and Australia) requires an assumption that all Ontario DNSPs face the same weather conditions.<sup>143</sup> This is surprising given Economic Insights takes account of the different climate conditions in the Australian DNSPs' service areas in its *ex post* adjustment.<sup>144</sup> This implies that Economic Insights accepts weather conditions can vary across DNSPs and an adjustment is required for it.

162. Thirdly, and in respect of the criticisms made by the experts that the results of the models are largely driven by international data, Economic Insights states:<sup>145</sup>

Some of the DNSPs' consultants argue that the results in Economic Insights (2014) are driven by the inclusion of data from New Zealand and Ontario. This is incorrect. Our EBRIN-only results are consistent with our three country results – the benefit of including the overseas data is to improve the precision of our parameter estimates but it does not change the pattern of results.

163. This response does not withstand scrutiny either. Economic Insights states, 'it is important to recognise that the characteristics of the Australian RIN data make any econometric model estimated using only the RIN data insufficiently robust to support regulatory decisions'.<sup>146</sup> In that context, it is somewhat surprising that Economic Insights seeks to use an econometric

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<sup>142</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page vi.

<sup>143</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, pages 14 and 27.

<sup>144</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page 12.

<sup>145</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page v-vi. See also pages 24 to 25.

<sup>146</sup> Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page 25.

model using only the RIN data as a basis for corroborating the model it has constructed using international data. If the RIN data *is* sufficiently robust to be used as a basis for regulatory decisions, then there would be no need to limit the model parameters to customer numbers, line length, and ratcheted maximum demand (those parameters having been chosen because data was available across all three countries).

164. In any event, Economic Insights has run its CD SFA model using RIN data without adjustment for the OEFs that it subsequently concedes ought to be made to account for differences between DNSPs that are not otherwise accounted for in the CD SFA model, including differences in capitalisation rates. If the RIN data is normalised for differences in capitalisation rates between DNSPs *before* modelling, then the results of the CD SFA model using that RIN data are likely to be different.<sup>147</sup>

*The Australian data the AER has relied upon is from an immature data set and is inconsistent across the Australian companies*

165. In addition to the unreliability of the international data used in Economic Insights' models, the experts have raised serious issues about the extent to which the Australian data used in the models are consistent.
166. The Australian data used in Economic Insights' models was sourced from responses by all 13 Australian DNSPs to RINs issued by the AER requesting eight years of historic data (for the years 2005/06-2012/13 (inclusive)).<sup>148</sup>
167. A key limitation of that data is that the DNSPs had not kept much of the data in the detail and form they were required to produce. Accordingly, the data had to be 'back cast'. The AER's guidelines specified that if a DNSP could not populate an input cell in the RIN Templates with actual information, it had to provide its 'best estimate'.
168. Frontier Economic notes that 'it is simply not realistic to expect that the back-casted data will be reported on a consistent basis across the DNSPs for a number of reasons' including that:<sup>149</sup>
- 168.1 the quality of historical records kept by different networks is likely to vary considerably;
  - 168.2 it may not be possible to retrieve certain data from legacy information systems that have since been superseded. It may also be difficult for a given network to marry together data from old and new systems in a seamless way if the way in which information has been recorded has changed over time (e.g. with changes in information technology systems);
  - 168.3 key personnel with important institutional knowledge may have moved on;

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<sup>147</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page 11.

<sup>148</sup> Economic Insights, *Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs*, 17 November 2014, page 2. See also Ausgrid, *Essential Energy, Endeavour Energy: Appropriateness of RIN data for benchmarking*, PwC, 9 January 2015 page 5.

<sup>149</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, pages xii to xiii.

- 168.4 networks may have faced time and resourcing constraints in compiling the RIN data to the AER's timetable, and may not have had sufficient opportunity to undertake the full due diligence required when back-casting several years of historical information, which is no trivial exercise; and
- 168.5 even with extensive consultation on the RIN templates, and the reporting guidance available from the AER, there is likely to have been considerable variation between networks in the interpretation of reporting requirements, and practices surrounding the classification of data into ambiguously-defined reporting categories. These challenges are likely to be especially large when networks are completing RIN data for the first time, and have had not had the benefit of learning and improvement over time.
169. Indeed, Frontier Economic notes that five DNSPs – ActewAGL, CitiPower, Powercor Australia, AusNet Distribution and United Energy – report no expenditure on vegetation management, yet all the networks reported vegetation management spans between 2009 and 2013.<sup>150</sup>
170. The principle issue is the way in which expenditure is divided between capex and opex. Each of the DNSPs have a different cost allocation methodology (**CAM**). Moreover, even leaving aside differences in the CAM between DNSPs, the manner in which they are *applied* is subject to considerable flexibility.
171. Further, as Frontier Economics points out, in addition to potential differences in reporting of a given activity, networks can often substitute between opex and capex activities at the planning stage, as depending on the prevailing regulatory treatment it may be more rewarding for them to incur opex rather than capex, or vice versa.<sup>151</sup>
- Economic Insights' model specification did not control for critical operating differences across the companies*
172. Even leaving aside the critical issues about non-comparability of data, both within Australia, within NZ and Ontario, and between Australia, New Zealand and Ontario, the CD SFA model is critically limited by the selection of explanatory variable or outputs.
173. As discussed in paragraph 114.3, the outputs in the CD SFA model are customer numbers, line length, ratcheted maximum demand and share of underground cabling. That is to say, the CD SFA model measures the opex of a service provider against those outputs, to assess the assumed opex efficiency of that service provider. The CD SFA model assumes that any differences in opex that are not attributed to those outputs is caused by management inefficiency.
174. This is plainly a deficiency in the CD SFA model. In that regard, it is important to be aware that Economic Insights was not free to construct a theoretically robust model. It was constrained by limitations in the data that was available for all three countries. Thus, the

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<sup>150</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, pages xiv.

<sup>151</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 53.

construct of the CD SFA model was driven by practical limitations in the data, rather than a bottom up consideration of the most appropriate range of outputs to measure opex efficiency.

175. Relevantly, Huegin makes the following points:<sup>152</sup>

The exhaustive data requirements of stochastic frontier analysis mean that the extensive data set collected by the AER, including a wide range of environmental variables, was largely ignored because the same information could not be collected for DNSPs in Ontario.

This limited dataset means that aside from differences in peak demand, customer connections, the share of a network underground and circuit length, the SFA model assumes the only other reason that opex varies between DNSPs in the NEM, New Zealand and Ontario is inefficiency. Whether or not this assumption is a valid one is irrelevant. The point is that the model used to determine the NSW and ACT businesses base year opex could not have been robustly tested and validated because the data is not available to conduct the required sensitivity tests. For example data limitations mean the following could not be considered as drivers of opex:

- asset age;
- climate factors;
- customer demographics;
- network design;
- network voltages;
- network accessibility;
- network utilisation;
- reliability standards;
- scale;
- policy and regulation; and
- the physical environment within which network operates.

To disregard these drivers of network opex means that their effects on opex are aggregated and labelled as inefficiency, with some networks with favourable operating conditions appearing efficient whilst DNSPs in challenging conditions appear inefficient.

176. Frontier Economics points out that there appear to be very substantial differences in real opex from year to year for a number of the Australian companies, both upwards and downwards. Frontier Economics states that the causes of those variations are unclear. But what is clear is that the simple cost drivers used in the CD SFA model also cannot explain this variation. The cost drivers in the CD SFA model are typically very slow moving, evolving incrementally over time. Such cost drivers cannot possibly explain the jumps up and down in incurred cost seen over the period.<sup>153</sup>

177. Frontier includes a graph that shows these changes in opex in graphical form:<sup>154</sup>

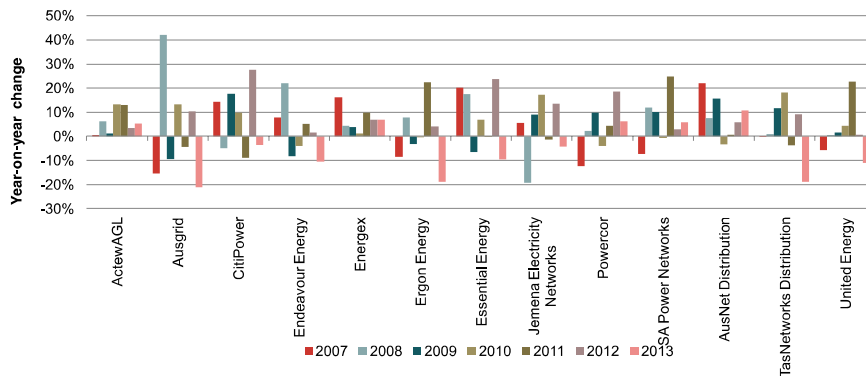
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<sup>152</sup> Huegin's response to Draft Determination on behalf of NNSW and ActewAGL Technical response to the application of benchmarking by the AER, 16 January 2015, page 42.

<sup>153</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 66.

<sup>154</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 67.

Figure 24: Year-on-year change in real opex



178. Frontier concludes:<sup>155</sup>

It seems difficult to conceive that there has been no external driver for this variation, i.e. that all of this variation should properly be considered as either “noise” or changes in managerial efficiency. The scale of variation is simply too great. We conclude that either there must have been, over this period, other important drivers of cost beyond those included in the EI model, or that the cost data has been prepared on an inconsistent basis.

*Evidence that CD SFA models produces arbitrary outcomes*

179. As Huegin points out, it is impossible to conduct any sensitivity testing of the CD SFA model because data is not available to conduct the required sensitivity tests. This, of itself, is concerning, if primary weight is to be placed on that model for the purposes of determining ActewAGL's opex allowance.
180. Huegin has compared the rankings of the Ontario networks from the Economic Insights model and data with the benchmarking results relied upon by the Ontario Energy Board (OEB). Huegin points out that the OEB analysis is based on a total expenditure model, whereas the Economic Insights efficiency analysis is based on opex only. Although one would not expect the two studies to match, it is nevertheless concerning that rankings between the two models are vastly different.<sup>156</sup>
181. Huegin also ran a number of alternative benchmarking methods and models using the data set used in the CD SFA model. The outcome of that exercise shows greatly differing outcomes in terms of the efficiency of ActewAGL to the upper quartile. Thus, it would appear that the AER's conclusions about the opex inefficiency of ActewAGL was highly sensitive to the model the AER chose to use (being the CD SFA model). The inconsistency of the results between models makes it extremely concerning that the AER has chosen to place so much weight on a single model, the CD SFA model, in order to make its decisions to reject ActewAGL's opex forecast and to determine an alternative opex forecast. Further, as Huegin concludes, it appears that the manner in which most of the models have been discarded in

<sup>155</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 66.

<sup>156</sup> Huegin, *Technical response to the application of benchmarking by the AER*, 16 January 2015, page 13.



favour of a single model 'demonstrates selectivity, rather than an acknowledgement of inherent sensitivity'.<sup>157</sup>

*Post modelling adjustments are inaccurate and are a second best approach*

182. In the Final Determination, the AER stated that it has provided an input margin of 23% to ActewAGL to account for differences in OEFs, not accounted for in Economic Insights' SFA model. The AER came to this conclusion after assessing more than 60 different OEFs that the AER, service providers, and other stakeholders identified in the process of this review and in response to the AER's benchmarking report.

183. The necessity to make these adjustments is an acknowledgement of the deficiencies in the CD SFA model and data used within the model. The AER itself notes:<sup>158</sup>

It is important to recognise that service providers do not operate under exactly the same operating environment factors (OEFs). OEFs may have a significant impact on measured efficiency through their impact on a service provider's opex. It is desirable to adjust for material OEF differences to ensure that when comparisons are made across service providers, we are comparing like with like to the greatest extent possible. By identifying the effect of OEFs on costs one can determine the extent to which cost differences are exogenous or due to inefficiency.

Some key OEFs are directly accounted for in Economic Insights' SFA model. Where this has not been possible, we have considered the quantum of the impact of the OEF on ActewAGL's opex relative to the comparison firms. We have then adjusted the SFA efficiency scores based on our findings on the effects of OEFs.

184. Having regard to the quantum of adjustments that the AER regards must be made to the efficiency score for ActewAGL generated by the CD SFA model (ie, a 23% adjustment), then it is clear that even the AER considers there are serious comparability issues in the data used within the CD SFA model. In that context, it is difficult to understand how the AER considers it to be reasonable to place reliance on the outcome of that model as the sole determinant of ActewAGL's opex allowance.

185. In any event, the Final Determination discloses that the AER's approach to making those adjustments differed, depending on whether it subjectively considered the OEF to be material. Where, in the AER's opinion, the OEF is 'material', then the AER has made a subjective assessment of the quantum of that OEF for the purpose of making the adjustment.<sup>159</sup>

186. However, in respect of OEFs that the AER considers to be 'immaterial', it has adopted a different approach:<sup>160</sup>

186.1 where an individually immaterial OEF is likely to provide a cost disadvantage, the AER allowed a flat 0.5% adjustment;

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<sup>157</sup> Huegin, *Technical response to the application of benchmarking by the AER*, 16 January 2015, page 36.

<sup>158</sup> Final Determination, pages 7-173 to 7-174.

<sup>159</sup> Final Determination, page 7-175.

<sup>160</sup> Final Determination, page 7-175. The AER states that the exception to this approach is where it has been able to quantify the immaterial OEF.

186.2 where there is some doubt about whether an individually immaterial OEF will provide a cost advantage or disadvantage, the AER also allowed a flat 0.5% adjustment; and

186.3 where an individually immaterial OEF is likely to provide a cost advantage, the AER provided an OEF adjustment of negative 0.5%.

187. By adopting that methodology, the AER made the following OEF adjustments:<sup>161</sup>

**Table A.6 Summary of final decision on OEF adjustments**

Factor	Adjustment	Reasons against OEF criteria <sup>536</sup>
Capitalisation Practices	8.5%	<ul style="list-style-type: none"> <li>Although capitalisation practices are the result of management decisions, differences in capitalisation practices can lead to material differences that are unrelated to efficiency.</li> <li>ActewAGL's capitalisation practices, with regard to vehicle and IT costs, provide it with a material cost disadvantage relative to the comparison firms.</li> <li>Economic Insights' SFA model does not include variables that account differences in capitalisation practices between the NEM service providers.</li> </ul>
Backyard reticulation	5.6%	<ul style="list-style-type: none"> <li>Backyard reticulation has been required by ACT planning approaches.</li> <li>ActewAGL has provided evidence that backyard reticulation materially increases its costs.</li> <li>Economic Insights' SFA model does not include variables that account for backyard reticulation between the NEM service providers.</li> </ul>
Standard control services connections	4.0%	<ul style="list-style-type: none"> <li>The AER determines service providers' service classifications.</li> <li>Standard control services connections opex accounts for a material amount of ActewAGL's standard control services opex.</li> <li>Economic Insights' SFA uses network services data. Connection services are not included in network services.</li> </ul>
OH&S regulations	0.5%	<ul style="list-style-type: none"> <li>OH&amp;S regulations are not set by service providers.</li> <li>Data from the ABS and a PwC report commissioned by the Victorian Government suggest that differences in OH&amp;S regulations may materially affect service provider's opex.</li> <li>Economic Insights' SFA model does not include a variable that accounts for differences in OH&amp;S legislation.</li> </ul>
Individually immaterial factors	4.4%	There are various exogenous, individually immaterial factors not accounted for in Economic Insights' SFA model that may affect service providers' costs relative to the comparison firms. While individually these costs may not lead to material differences in opex, collectively they may.
<b>Total</b>	<b>23.0%</b>	

Source: AER analysis.

188. In respect of the 4.4% adjustment for 'immaterial' OEFs, the AER quantified the effect of immaterial factors as follows:<sup>162</sup>

<sup>161</sup> Final Determination, page 7-169.

<sup>162</sup> Final Determination, page 7-176.

**Table A.8 Summary of individually immaterial OEF adjustments**

Factor	Adjustment
Asset lives	-0.5%
Bushfires	0.5%
Building regulations	0.5%
Corrosive environments	0.5%
Cultural heritage obligations	0.5%
Environmental regulations	0.5%
Environmental variability	-0.5%
Extreme weather events	-0.5%
Grounding conditions	0.5%
Humidity and rainfall	0.5%
Network access	-0.1%
Planning regulations	0.5%
Proportion of 11kV and 22kV lines	0.5%
Solar uptake	-0.5%
Specialised skills	0.5%
Termites	0.0%
Traffic management	0.5%
Transformer capacity owned by customers	0.1%
Topography	0.5%
Underground services	0.4%
Total	4.4%

Source: AER analysis.

189. The quantum of the OEF adjustments made by the AER are arbitrary, and for that reason alone, one could not have any confidence that they adequately account for the heterogeneous differences between ActewAGL and other firms within the data set.<sup>163</sup>

190. Huegin states:<sup>164</sup>

[t]here is ... no detailed analysis or explanation of the justification for deeming other variables insignificant in the draft decision to support the AER's claim that only a few of the factors have a material effect on total opex ...

For all the consideration of environmental variables individually in the draft decision, the adjustment amount allowed for the collective influence of these variables is merely a subjective estimate.

191. The analysis in the Final Determination has the same vice. However, even if the OEF adjustments were properly quantified, then the manner in which they have been applied by the AER is deeply flawed. As ActewAGL notes in its Revised Regulatory Proposal, adjustments,

<sup>163</sup> See the discussion in the Revised Regulatory Proposal at page 160.

<sup>164</sup> Huegin, *Technical response to the application of benchmarking by the AER*, 16 January 2015, pages 51 and 52.

where required, should be made *before* modelling, by normalising the data set, rather than as post modelling adjustments. Professor Newbery of CEPA concludes that it would be more appropriate to make the adjustments before the modelling as inconsistent data may be affecting the modelling:<sup>165</sup>

Economic Insights has taken account of these adjustments and proposed that the frontier for AAD could be adjusted by 30% as a result. While I do not disagree that adjustments should be made where data are inconsistent, given the magnitude of the adjustments proposed by Economic Insights I consider that it would be more appropriate to make these adjustments before modelling (which would be consistent with the adjustments used for END, ERG and ESS), as the inconsistent data are likely to affect the modelling.

192. The difficulty with what the AER has done is that despite making post modelling OEF adjustments, the efficiency scores to which it is making those adjustment has been affected by the inclusion of non-comparable data. Post modelling adjustments do not address the fact that the costs relationships within the model, including those companies other than ActewAGL for which no OEF adjustments have been made, have been affected by the non-comparable data. Thus, those cost relationships are skewed by heterogeneous differences between the companies. The output of the model is therefore skewed by flawed data. That skewed cost relationship cannot be corrected by post modelling OEF adjustment made to one company only (ie, ActewAGL).<sup>166</sup>

193. Thus, the *order* in which the AER makes its adjustments, either before modelling or after modelling, affects the results of that modelling. This is a point made by Professor Newbery:<sup>167</sup>

Even normalising for differences identified by Economic Insights/ AER prior to modelling leads to a different efficiency target for the DNSPs.

194. Economic Insights has itself previously emphasised the importance of making data adjustments *before* modelling to account for differences between businesses:<sup>168</sup>

Operating environment conditions can have a **significant impact** on network costs and productivity and in many cases are beyond the control of managers. Consequently, to ensure reasonably like-with-like comparisons it is desirable to 'normalise' for at least the most important operating environment differences. ... **Differences in operating environment conditions are likely to affect achievable productivity growth rates as well as achievable productivity levels.** [emphasis added]

195. However, while Economic Insights have recognised the importance of making adjustments to data before modelling to create a comparable data set, they have failed to do so in their work for the AER as part of the Final Determination. The reason that Economic Insights has not done this appears to be because it was not possible to normalise the data used within the CD

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<sup>165</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, pages 10 to 11.

<sup>166</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, pages 10 to 11, notes that normalisation ought to occur before modelling, as 'the inconsistent data is likely to affect the modelling'.

<sup>167</sup> CEPA, *Benchmarking and setting efficiency targets for the Australian DNSPs: ActewAGL Distribution*, January 2015, page 13.

<sup>168</sup> Economic Insights, *Assessment of Data Currently Available to Support TFP-based Network Regulation*, June 2009, page 14 (as referred to in Revised Regulatory Proposal, page 185, footnote 348).

SFA model. There is, therefore a recurring theme in Economic Insights' approach: its methodology for assessing the DNSPs opex was driven by data (and in particular, use of international data), rather than an *a priori* decision about what would provide the most robust means of assessing ActewAGL's opex. While at a practical level that is understandable, it does not alter the fact that those practical limitations have diminished the probative value of the model to the point of non-existence.

*Arbitrary nature of selection of 'efficiency frontier'*

196. The choice of comparative benchmarking point for ActewAGL serves to highlight the arbitrary nature of the AER's benchmarking methodology.
197. Curiously, although Economic Insights rejects the criticisms made of its CD SFA model, it nevertheless determined that an even more conservative approach should be adopted to the use of benchmarking as the primary basis for the AER's opex decisions than was recommended by it in its earlier report relied on by the AER in its Draft Decision. Economic Insights stated:<sup>169</sup>

We have previously noted that it is prudent to adopt a conservative approach to choosing an appropriate benchmark for efficiency comparisons. Adopting a conservative approach allows for general limitations of the models with respect to the specification of outputs and inputs, data imperfections and other uncertainties. While we have not found any of the criticisms made of our 2014 economic benchmarking study warrant changes to be made to our underlying approach, we are of the view there may be a case for setting an even more conservative target than that used in Economic Insights (2014). This is particularly the case given that this is the first time economic benchmarking is being used as the primary basis for an Australian regulatory decision.

We are of the view that instead of using the customer weighted average of efficiency scores in the top quartile of possible scores (being those of CIT, PCR, SAP, UED and AND), a more conservative approach of using the lowest of the efficiency scores in the top quartile of possible scores is appropriate. This would make the average efficiency score of 0.77 achieved by AusNet Distribution the appropriate opex efficiency target (before allowance for additional operating environment factors).

198. While, of course, ActewAGL has benefited from the shift in the so-called 'efficiency frontier' between the Draft Decision and the Final Determination, the manner in which Economic Insights has decided on that shift serves to highlight the arbitrary nature in which the frontier was set in the first place. If Economic Insights (and, indeed, the AER) regards the criticisms of its benchmarking methodology referred to above to be without foundation, then why was the shift made? What was the underlying rationale for the decision to make the shift? If the AER was confident in the CD SFA model and its ad-hoc post modelling adjustment, why did it not set ActewAGL's opex allowance by reference to the most efficient Australian firm, as assessed by the CD SFA model?
199. Those questions are incapable of definitive answer, because the decision about where the frontier should sit does not have an analytical premise. That decision is based on nothing more than an unease about the reliability of the CD SFA model and the ad-hoc post modelling adjustments. Setting ActewAGL's opex allowance by reference to the bottom firm of the top

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Economic Insights, *Response to Consultants' Reports on Economic Benchmarking of Electricity DNSPs*, 22 April 2015, page x.

third of efficient firms (as per the Final Determination) is no more defensible than setting it by reference to the average of the top third of DNSPs (as per the Draft Decision). The choice between the two is arbitrary. The fact that such an arbitrary choice is apparently necessary, because of deficiencies in the CD SFA model, suggests that no reliance should be placed on the results of that model whatsoever.

*AER's vegetation and labour management review does not corroborate AER's forecast*

200. As stated in paragraphs 93 to 95 and 106 to 110 of the Application, the AER undertook a qualitative review of ActewAGL's labour costs and vegetation management costs as a supplement to its benchmarking analysis. In the Final Determination, the AER asserted that its qualitative review supported the outcome of its benchmarking methodology.<sup>170</sup> ActewAGL submits that for a number of reasons the AER erred in arriving at that conclusion.<sup>171</sup>
201. For the Draft Decision, the AER conducted a desktop review of ActewAGL's labour levels, costs and practices. It concluded that 'it uncovered labour and workforce inefficiencies' in ActewAGL's business.<sup>172</sup>
202. Further, the AER concluded in the Draft Decision that: '... one of the sources of ActewAGL's high expenditure in its base year opex (identified with our benchmarking techniques) is likely due to vegetation management practices.'<sup>173</sup> The AER's analysis focused on the efficiency of vegetation management expenditure related to above average rainfall in 2010/11 and 2011/12, which was the subject of a pass through application by ActewAGL to the AER in November 2013 (**2013 Pass Through Application**).<sup>174</sup>
203. For the Final Determination, the AER instructed EMCa to conduct a limited scope review of ActewAGL's labour and vegetation management practices. The AER asserts that EMCa's overall findings in its April 2015 Report (**EMCa Report**)<sup>175</sup> 'concur' with its conclusion in the Draft Decision that ActewAGL's labour and vegetation management practices are likely drivers of its poor benchmarking performance.<sup>176</sup>
204. ActewAGL submits that the conclusions of EMCa are deeply flawed, for the reasons discussed below. More importantly, however, the AER's assessment in relation to labour and vegetation management was qualitative, and not quantitative. The AER did not ascribe an amount or figure quantifying inefficiencies in ActewAGL's labour and vegetation management (and nor did EMCa). Having not done so, the AER's findings regarding labour

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<sup>170</sup> Final Determination, pages 7-48, 7-54 and 7-146.

<sup>171</sup> Application, paragraphs 114.13 to 114.15 and 115.3.

<sup>172</sup> Draft Decision, pages 7-32 and 46-47.

<sup>173</sup> Draft Decision, page 7-79.

<sup>174</sup> Draft Decision, pages 7-82 to 7-86; ActewAGL, *Vegetation management cost pass through*, November 2013 (Revised Regulatory Proposal, Attachment C75).

<sup>175</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015.

<sup>176</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, pages i-iii. See also Final Determination, pages 7-54 and 7-146.

and vegetation management did not, and could not, justify a quantitative assessment of efficient opex.

205. There is a fundamental disconnect between, on the one hand, the AER's quantitative assessment of efficient opex embedded in its benchmarking model and, on the other hand, the AER's qualitative assessment of efficient labour and vegetation costs. The latter cannot in any way justify the former because the latter is not quantified. In simple terms, the AER has not undertaken any quantitative work to determine the extent of ActewAGL's inefficient labour and vegetation management costs. The alleged inefficiency may be \$1 or \$10 million. This is a fundamental deficiency in the AER's findings which gives rise to a serious issue to be heard and determined.
206. Moreover, ActewAGL contests the AER's findings that its labour and vegetation management costs are inefficient and that such inefficiency supports the results of the AER's benchmarking model.
207. The AER's qualitative review of ActewAGL's labour costs and work practices does not support the AER's benchmarking modelling because:<sup>177</sup>
  - 207.1 as the AER accepts in its Final Determination,<sup>178</sup> ActewAGL is comparable to its peers on a cost per average staffing levels (**ASL**) basis;
  - 207.2 the AER's comparison of ActewAGL with other DNSPs on an ASL per customer basis is flawed and does not demonstrate that ActewAGL has too many employees because costs are driven by network characteristics, rather than customer numbers;
  - 207.3 as EMCa recognises,<sup>179</sup> Enterprise Bargaining Agreement restrictions on outsourcing are not unique to ActewAGL. Australian Business Lawyers & Advisors Pty Ltd (**ABLA**) considered that ActewAGL's Enterprise Bargaining Agreement is not any more restrictive or any more generous compared to ActewAGL's peers;<sup>180</sup>
  - 207.4 the AER has not demonstrated that higher levels of outsourcing will deliver more efficient expenditure; and
  - 207.5 no probative weight can be given to the EMCa Report and, as such, the EMCa Report does not provide any support for the AER's conclusion that there were inefficiencies in ActewAGL's labour practices.

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<sup>177</sup> Revised Regulatory Proposal, pages 200 to 2012 and Attachment C11, pages 2 to 23; Advision, *Opex cost drivers: ActewAGL*, January 2015, page 96; ABLA, *Review and comparison of ActewAGL's enterprise agreement provisions against other electricity network service providers*, January 2015, pages 4 and 5 (Revised Regulatory Proposal, Attachment C72).

<sup>178</sup> Final Determination, pages 7-150 to 7-151.

<sup>179</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, at [74(ii)]; Final Determination, page 7-155.

<sup>180</sup> ABLA, *Review and comparison of ActewAGL's enterprise agreement provisions against other electricity network service providers*, January 2015, pages 4 and 5 (Revised Regulatory Proposal, Attachment C72).

208. Further, the AER has previously recognised higher labour costs in the ACT by granting a real labour cost escalator above any other jurisdiction for the previous regulatory control period.<sup>181</sup> There are also a range of other factors which lead to labour cost pressures in the ACT. These include the size of the market, competitors for labour hire within the market and skill shortages. Despite these pressures, analysis undertaken by ABL shows that ActewAGL does not stand out from its peers in regard to salaries contained in its Enterprise Bargaining Agreement.<sup>182</sup>
209. By comparing ASLs against customer numbers, the AER does not recognise the characteristics of the network which drive costs rather than customer numbers. A simplistic analysis of customer numbers takes no account of economies of scale. Larger networks are more likely to be able to access economies of scale and appear to be more efficient on a simple comparison of workforce numbers in comparison with a small DNSP such as ActewAGL. Economic Insights identified the need to recognise scale impacts in reference to Envestra Qld, a small gas distribution network, where they state:<sup>183</sup>
- Simply comparing Envestra Qld opex partial indicators relative to group averages as WCC [a consultant] do takes no account at all of the all-important scale, customer diversity, energy density and opex/capex tradeoff differences.
210. In the Final Determination, the AER holds that 'ActewAGL could potentially achieve efficiencies by outsourcing more'.<sup>184</sup> However, the AER does not provide any evidence that establishes higher levels of outsourcing deliver more efficient expenditure. On the contrary, the expert evidence submitted by ActewAGL to the AER establishes that: '... the question of whether opex or capex tasks are carried out by internal or external labour is largely irrelevant to the efficiency of the outcome.'<sup>185</sup>
211. The AER's reasoning in relation to 'outsourcing' is incoherent. The AER concedes that outsourcing 'will not necessarily be the lowest cost option' and that ActewAGL's approach 'may not necessarily be inefficient'.<sup>186</sup> However, it asserts that due to restrictions on outsourcing in ActewAGL's Enterprise Bargaining Agreement, ActewAGL does not 'appear to be adopting the lowest cost option'.<sup>187</sup> It cites EMCA in concluding that ActewAGL's 'lack of outsourcing is a key reason why its labour costs in 2012-13 are not reflective of those of a prudent and efficient service provider'.<sup>188</sup> However, the AER does not include any amounts

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<sup>181</sup> Revised Regulatory Proposal, page 201.

<sup>182</sup> ABLA, *Review and comparison of ActewAGL's enterprise agreement provisions against other electricity network service providers*, January 2015, page 4 (Revised Regulatory Proposal, Attachment C72).

<sup>183</sup> Economic Insights, *Review of AER Draft Decision on Envestra Queensland's Base Year Opex*, March, page 16 (Revised Regulatory Proposal, C68). See also Revised Regulatory Proposal, page 200. Similarly, the authors in *Advisian, Opex cost drivers: ActewAGL*, January 2015, noted the synergies available to Victorian DNSPs (against which ActewAGL is compared) and states: "These synergies were available due to the co-location of networks. This impacts AAD uniquely as these synergies are not available in the ACT due to the small size, geographical isolation of the ACT and absence of co-located networks within the same jurisdiction."

<sup>184</sup> Final Determination, page 7-153.

<sup>185</sup> *Advisian, Opex cost drivers: ActewAGL*, January 2015, page 96 (Revised Regulatory Proposal, Attachment C2).

<sup>186</sup> Final Determination, page 7-153.

<sup>187</sup> Final Determination, page 7-153.

<sup>188</sup> Final Determination, page 7-156.



which it says comprise the extent of labour cost inefficiency. Further, while EMCa appears to criticise ActewAGL for not fully exploring outsourcing, EMCa does not conclude that outsourcing would necessarily reduce costs. Rather, EMCa states that '[s]imply moving to an outsourcing arrangement is no guarantee of reduced costs and risks' and suggested impractical and unlikely outsourcing arrangements such as partnering with NSW DNSPs.<sup>189</sup> Ultimately, the AER's reasoning does not provide any support for the results of the AER's benchmarking model.

212. In the Final Determination, the AER relies on EMCa's conclusion that there is 'evidence of systemic issues in ActewAGL's work practices, processes and systems that were considered to have existed in 2012/13 and that have resulted in labour inefficiencies.'<sup>190</sup> In reaching those conclusions, EMCa relies on the 2011 Marchmont Hill Consulting Report entitled 'Organisation Review ActewAGL Energy Networks' (**MHC Report**) and the Sinclair Knight Merz report entitled "Resource Planning to deliver ActewAGL's Program of Works for the FY 2012/12", Final Report, 27 March 2012 (**SKM Report**). EMCa's reliance on the MHC Report and SKM Report is misplaced for the reasons described below. EMCa's misplaced reliance on those Reports is an example (of which there are many in the EMCa Report) of the lack of evidence for EMCa's conclusions in its Report and demonstrates that all the conclusions in the EMCa Report should be treated with caution. The AER erroneously relies on EMCa's conclusions in its Final Determination<sup>191</sup> and, as such, the AER's conclusion that there were inefficiencies in ActewAGL's labour practices cannot be supported.
213. EMCa and the AER incorrectly assume that the MHC Report was concerned with enabling ActewAGL to achieve cost efficiencies which would result in reduced opex. However, ActewAGL previously informed the AER in its regulatory proposal for the subsequent regulatory control period of 10 July 2014 (**Regulatory Proposal**)<sup>192</sup> and Revised Regulatory Proposal<sup>193</sup> that the primary objective of the MHC review was to understand and address performance issues identified by ActewAGL's management, including in relation to safety and network reliability over the longer term.
214. The benefits of the programs and initiatives delivered to address the issues identified by MHC primarily relate to delivering services in the long term interests of consumers through improved safety, employee engagement, customer service, and productivity. This is also clear from a review of the MHC Report which, for example notes 'an increased awareness that safety performance must be improved and requires focus'<sup>194</sup> and except for small direct salary savings does not quantify any cost savings that would flow from an implementation of MHC's recommendations.<sup>195</sup> Further, most of the initiatives ActewAGL undertook to address the

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<sup>189</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, page 22.

<sup>190</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, pages 11 and 23. See also Final Determination, page 7-157.

<sup>191</sup> Final Determination, page 7-156 and 7-157.

<sup>192</sup> ActewAGL, *Regulatory Proposal, 2015-19 Subsequent regulatory control period*, 2 June 2014 (resubmitted 10 July 2014), page 216.

<sup>193</sup> Revised Regulatory Proposal, Attachment C11, page 18..

<sup>194</sup> MHC Report, section 1.

<sup>195</sup> MHC Report, section 9.1.

issues identified by MHC were rolled out during 2011 (although some of the activities extended throughout the remainder of the 2009/10 to 2013/14 regulatory control period).<sup>196</sup>

215. In its response to EMCa's draft report dated February 2015, ActewAGL provided the AER with a letter from MHC of 4 March 2015 in which MHC confirms the scope of its 2011 review and states that the AER's and EMCa's contention that MHC's findings indicate material labour cost inefficiencies is not supported by an examination of the MHC Report.<sup>197</sup> MHC states:<sup>198</sup>

A close examination of the 2011 MHC report finds no explicit references to inefficiency or poor productivity associated with that Reviews' findings.

Given that the scope of MHC's review was intentionally wide ranging, if such concerns had been identified, they would have been noted.

MHC considered all efficiency opportunities which might flow from the recommendations made in our earlier 2011 report. We did not state an explicit efficiency benefit as these were not directly apparent from our work.

216. In addition, MHC considers that the MHC Report records the view that any improvements will be implemented by 2012/13.<sup>199</sup> Further, MHC states that there is no evidence in that Report that supports the contention of the AER and EMCa that any such observed inefficiencies would not have been addressed by 2012/13.<sup>200</sup>
217. Accordingly, EMCa's purported analysis of the MHC Report in section 3.2.3 of its Report proceeds on an incorrect basis (ie, that the MHC review relates to opex efficiency and that the majority of the initiatives rolled out in response to the issues identified by MHC were not rolled out during 2011, but rather were implemented over a longer period of time), as a result of which there is no basis for EMCa's conclusions with respect to that Report or for its final conclusion that ActewAGL's 2012/13 labour costs were inefficient.<sup>201</sup>
218. EMCa's misplaced reliance on the MHC Report is one example of the lack of evidence for EMCa's conclusions in its Report. A further example, being EMCa's misplaced reliance on the SKM Report, is discussed below.
219. EMCa also relies on the SKM Report to support its conclusion that ActewAGL's 2012/13 labour costs were inefficient. However, EMCa mischaracterises the views expressed in the SKM Report. The SKM Report concerns an assessment of the workforce required to deliver ActewAGL's Program of Works for 2012/13. The SKM Report concludes that there is a forecast workforce shortfall to deliver the Program of Works.<sup>202</sup> EMCa relies on the

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<sup>196</sup> Revised Regulatory Proposal, Attachment C11, page 21.

<sup>197</sup> See also ActewAGL's submission to the AER entitled "ActewAGL Distribution's Response to EMCa's Draft report for the Review of ActewAGL Distribution's Labour Resourcing and Vegetation Practices" dated 4 March 2015.

<sup>198</sup> Letter from Marchmont Hill Consulting to ActewAGL, 4 March 2015, page 3.

<sup>199</sup> Letter from Marchmont Hill Consulting to ActewAGL, 4 March 2015, page 34.

<sup>200</sup> Letter from Marchmont Hill Consulting to ActewAGL, 4 March 2015, page 4.

<sup>201</sup> See also ActewAGL's submission to the AER entitled "ActewAGL Distribution's Response to EMCa's Draft report for the Review of ActewAGL Distribution's Labour Resourcing and Vegetation Practices" dated 4 March 2015.

<sup>202</sup> SKM Report, pages 5 and 23.

following sentence in the SKM Report to assert that ActewAGL has "a systemic issue with projects and program delivery":<sup>203</sup>

However, the business does not have a consolidated works management system making resource scheduling and forecasting on an ongoing basis, difficult.

220. SKM made that statement in the context of noting that a past review by SKM of ActewAGL's operational performance found that it was struggling to deliver the Asset Augmentation Projects and that the Capital Expenditure of the Asset Management Strategy Plan was not occurring to the schedule as planned.<sup>204</sup> Accordingly, the statement was not made in respect of ActewAGL's opex which was the subject of the EMCa Report. Indeed contrary to the conclusions on the efficiency of ActewAGL's opex in the base year reached by EMCa in reliance on the SKM Report, SKM expressly states that in its prior review:<sup>205</sup>

Finally a very high level review of the operational expenditure under the AMSP was conducted. This revealed that most programs involving inspection and maintenance work were being achieved within reasonable tolerances for quantity and budget.

221. It is absurd for EMCa to take one comment from a report out of context and to rely on it to assert that ActewAGL has a systemic issue with projects and program delivery. This is another example of EMCa's lack of evidence to substantiate the conclusions in its Report.
222. In addition, in concluding that there were inefficiencies in ActewAGL's workforce practices in the Draft Decision, the AER relied on an analysis undertaken by Deloitte titled *NSW Distribution Network Service Providers Labour Analysis (Deloitte Report)*.<sup>206</sup> The AER did not provide ActewAGL with a copy of the Deloitte Report despite requests by ActewAGL.<sup>207</sup> Further, the AER excised any reference to the Deloitte Report in the Final Determination. However, the overall conclusions reached in the Final Determination are largely identical to those expressed in the Draft Decision from which it may be inferred that the AER continued to place reliance, or at least took into account the contents of the Deloitte Report in making its Final Determination. In circumstances where ActewAGL has been deprived of the opportunity to review and make submissions in relation to that Report, ActewAGL has not been afforded procedural fairness, and the conclusions reached by the AER about ActewAGL's workforce practices cannot be considered to be reliable.
223. In the Final Determination,<sup>208</sup> the AER concluded that ActewAGL's vegetation management practices contained "systemic issues that indicate sources of inefficiency".<sup>209</sup> In response to

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<sup>203</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, page 11, paragraph 45.

<sup>204</sup> SKM Report, page 5.

<sup>205</sup> SKM Report, page 7.

<sup>206</sup> Draft Decision, page 7-78 and Confidential Appendix to Attachment 7, page 18.

<sup>207</sup> ActewAGL made a general request to the AER on 19 November 2014 to be provided with all material on which the AER relied in making the Draft Decision. On 5 December 2014, ActewAGL specifically requested that the AER provide it with the Deloitte Report.

<sup>208</sup> Final Determination, page 7-157.

<sup>209</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, page 36, paragraph 156.

criticism from ActewAGL, the AER acknowledged that its review of ActewAGL's vegetation management practices did not include identifying 40% inefficiency in its vegetation management opex.<sup>210</sup> In fact, the AER does not even seek to quantify the costs of ActewAGL's alleged inefficiencies.

224. As is the case with the AER's analysis of ActewAGL's labour costs, the AER's findings in relation to the costs of vegetation management do not provide any justification for the results of the AER's benchmarking models. The AER and EMCa do not come to terms with the task before them. They assert that ActewAGL is inefficient in relation to its vegetation management practices but they do not disclose any figures showing the extent of the alleged inefficiencies. ActewAGL submits that the failure to identify the amount of inefficient base year vegetation management expenditure reveals the limitations and inadequacies of what has occurred. In truth, the AER and EMCa have conducted an abstract and superficial assessment of ActewAGL's vegetation management practices without actually undertaking the task of identifying the amount of inefficient expenditure.
225. It should also be observed that the AER's and EMCa's criticism of ActewAGL's vegetation management practices is substantially confined to additional vegetation management expenditure the subject of the 2013 Pass Through Application.<sup>211</sup> Ultimately, the AER was deemed to accept the Application because it failed to make a decision within the prescribed time in the NER. EMCa's criticisms do not extend to ActewAGL's business as usual vegetation management expenditure. Rather, EMCa concludes that ActewAGL's contracting approach to business as usual vegetation management expenditure was appropriate to respond to foreseen levels of vegetation growth.<sup>212</sup>
226. The AER considers that the \$1.85 million that was the subject of the 2013 Pass Through Application is relevant to its benchmarking analysis and revealed costs in determining its substitute forecast even though those costs are non-recurrent. Conversely, in its Revised Regulatory Proposal, in moving to a revealed cost approach for vegetation management expenditure, ActewAGL adjusts actual vegetation management expenditure to take into account the 2012/13 positive pass through amount of \$1.85 million because that expenditure is non-recurrent and ActewAGL is recovering those costs through the pass through process.
227. In any event, those costs relate to only 2.5% of ActewAGL's adjusted base year opex (ActewAGL's total base year vegetation management costs (including the pass through costs) comprise only 7% of ActewAGL's adjusted base year opex).<sup>213</sup> In circumstances where the opex was not of a significant magnitude and was incurred in respect of an extraordinary event, no meaningful inferences should be drawn from an analysis of the costs of that event about ActewAGL's opex efficiency more generally.

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<sup>210</sup> Final Determination, page 7-158.

<sup>211</sup> Revised Regulatory Proposal, Attachment C11, page 40; ActewAGL, *Vegetation management cost pass through*, November 2013.

<sup>212</sup> EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, page 27, paragraph 102 and Addendum, page 40.

<sup>213</sup> ActewAGL's vegetation management costs for 2012/13 were \$5.18 million (see cell G28 of sheet '2.1 Expenditure summary' of attachment 'A3- Regulatory reset (5 year) RIN report template - Actual information - 2014' to ActewAGL's Regulatory Proposal). ActewAGL's adjusted opex for 2013/13 was \$7.18 million (see cell C12 of sheet 'Base year Std Ctrl' in confidential attachment 'B14 Opex model - confidential' to ActewAGL's Regulatory Proposal).

228. Further, there is no evidence that ActewAGL's base year vegetation management expenditure (including the expenditure the subject of the 2013 Pass Through Application) was inefficient. EMCa's analysis pays significant regard to the *AER's Final Determination, ActewAGL vegetation management cost pass through application*, of July 2014.<sup>214</sup> ActewAGL heavily contested the AER's conclusions in that determination, including taking the determination on appeal to the Tribunal. Due to a technical legal issue under the NER which meant that the AER's determination was out of time, the substantive issues in that appeal were not determined by the Tribunal.<sup>215</sup>
229. In addition, EMCa's conclusion (relied on by the AER in the Final Determination<sup>216</sup>) that ActewAGL's pass through expenditure was inefficient is largely based on its opinion that ActewAGL was not proactive in its vegetation management program. In forming that conclusion, EMCa fails to give sufficient regard to the findings of Jacobs Group, premised on its significant vegetation management experience, that ActewAGL was pro-active in its approach to vegetation management and it is not industry practice to monitor rainfall and pre-emptively adjust pruning practices.<sup>217</sup>

*The AER's reliance on a single top down model is not in line with regulatory best practice*

230. Having regard to all of the deficiencies referred to above, it was unreasonable for the AER to have placed sole reliance on a single model (along with ad hoc post modelling adjustments) to determine ActewAGL's opex allowance.
231. As discussed above, to the extent that the AER conducted any 'real world' analysis of ActewAGL's expenditure by reviewing its labour and vegetation management practices, its review was incapable of corroborating the results of the model that it relied on. Further, although the AER concludes that the CD SFA model is largely consistent with other models developed by Economic Insights, that provides no assurance as to the reliability of the CD SFA model. As Frontier Economics points out.<sup>218</sup>

Whilst the AER may feel some confidence in the robustness of its benchmarking analysis, due to the apparent convergence of results from a range of different models, we note that these various results are based on very closely related models, all of which are derived from the same data and all missing the same wider review of factors and sense checks. ... Hence, it is not surprising that the AER's results from the approaches considered appear consistent.

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<sup>214</sup> See for example, EMCa, *Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices at 2012/13*, April 2015, page 33, paragraph 135.

<sup>215</sup> On 29 July 2014 ActewAGL sought leave from the Tribunal to apply for review of the AER's decision on its 2013 Pass Through Application. ActewAGL subsequently identified that transitional Chapter 6 of the NER in the form set out in Appendix 1 to the NER (**Transitional Chapter 6**), applied to the 2013 Pass Through Application. Transitional Chapter 6 does not contain the same provisions allowing the AER to extend the 60 business day period in which it is to make a cost pass through determination. Rather, Transitional Chapter 6 provides that if the AER has not made a decision within that period, it is deemed to have accepted the application. The AER did not make the decision within the time required by transitional Chapter 6, accordingly, it was deemed to have accepted the 2013 Pass Through Application. As a consequence, the AER's decision on that Application is of no effect and on 25 August 2014 the Tribunal granted ActewAGL leave to withdraw its application to review the AER's decision: *Application by ActewAGL Distribution [2014] ACompT 2*.

<sup>216</sup> Final Determination, pages 7-159 to 7-160.

<sup>217</sup> Revised Regulatory Proposal, Attachment C11, page 35; ActewAGL, *Response to EMCa's Draft report for the Review of ActewAGL Distribution's Labour Resourcing and Vegetation Management Practices*, 4 March 2015.

<sup>218</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page xvii.

232. Frontier states:<sup>219</sup>

Drawing on our experience of practice in Europe, it is common for regulators to seek to triangulate “top down” benchmarking, of the kind produced by EI, with other sources of information, e.g. review by expert engineering consultants of unit costs, volumes of work, policies and practices in order to gain a more holistic view of network performance. If the engineering review finds evidence of inefficiency, or scope for improvements, this can strengthen the AER's confidence in applying the results from the top down model.

233. In that context, to the extent that the CD SFA had any value (which, by reason of the matters discussed earlier in these submissions, is questionable at best), then its proper use was as a tool to identify significant areas of expenditure anomaly between businesses which are then subject to further detailed investigation.

234. The AER appears to have misunderstood this. At page 7-167 of the Final Determination, the AER cites a statement made by the AEMC in its 2012 Rule Determination:<sup>220</sup>

The intention of a benchmarking assessment is not to normalise for every possible difference in networks. Rather, benchmarking provides a high level overview taking into account certain exogenous factors. It is then used as a comparative tool to inform assessments about the relative overall efficiency of proposed expenditure.

235. Were that statement to have been deployed in the context of discussing the use of benchmarking as a 'high level' tool to inform the AER's further investigations, it would be perfectly unexceptional. However, the AER has deployed that statement in the context of criticisms of the inadequacies of its modelling methodology,<sup>221</sup> where that modelling methodology is being used as the sole determinant of ActewAGL's opex allowance.

236. In that context, it is *not* appropriate to respond to those criticisms on the basis that it is appropriate to adopt a 'high level' or broad-brush approach to setting a DNSP's opex allowance. The AER is required to approach its decision about ActewAGL's opex allowance with rigour and with careful consideration of the opex objectives. A failure to do so would not be in the NEO. Neither the NER, nor the statement by the AEMC referred to above, excuses a departure from that requirement on the basis that benchmarking is being used to set ActewAGL's opex allowance.

*The AER's reliance on a single top down model is not in line with the NER*

237. Further, as submitted previously, reliance on a single top down model to determine ActewAGL's opex allowance has resulted in the AER failing to have proper regard to the opex objectives, the opex criteria and the opex factors in clause 6.5.6 of the NER.

238. The benchmarking methodology used by the AER, even leaving aside its deficiencies, is apt only to assess the short-term productive efficiency of ActewAGL. However, the NEO requires that the long-term interests of consumers must be promoted.

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<sup>219</sup> Frontier Economics, *Review of AER's econometric models and their application in the draft determination for Networks NSW*, January 2015, page 105.

<sup>220</sup> 2012 Rule Determination, pages 107-108.

<sup>221</sup> See for example Final Determination, page 7-175.

239. In that context, one of the matters that the AER must have regard to when making a decision about ActewAGL's opex allowance is whether the opex forecast is consistent with the Efficient Benefit Sharing Scheme (**EBSS**) applicable to ActewAGL:<sup>222</sup> (clause 6.5.6(e)(8) of the NER). In this case, the AER's decision has caused it to abandon its revealed cost approach to setting ActewAGL's opex, with the consequence that it has also had to abandon the EBSS in the 2014-19 period.
240. That outcome could only have been justified if the outcome of the AER's benchmarking methodology was highly robust. Otherwise the abandonment of the EBSS is likely to be inconsistent with the NEO, because it removes a significant incentive for DNSPs to pursue long term dynamic efficiency. As Houston Kemp puts it, the opex incentive arrangements set out in the Draft Decision (and, consequently, the Final Determination) are inconsistent with the long term interests of consumers, because they:<sup>223</sup>
- undermine the incentive for DNSPs to reduce future opex costs, by discouraging businesses from efficiently incurring expenditure to restructure;
  - do not provide a continuous incentive when outturn opex is below benchmark levels, and so encourage DNSPs to defer efficiency improvements;
  - increase the incentive to capitalise expenditure when opex is above benchmark levels while providing an incentive to substitute capex for opex when below benchmark levels;
  - frustrate the incentive to procure demand management services since the penalty for spending additional opex is over three times greater than the reward offered under the CESS for deferring network investments; and
  - obstruct the incentive to improve service performance since the penalty for spending additional opex is substantially greater than the reward provided for improved service performance under the STIPS.
241. Another of the matters that the AER must have regard to when making a decision about ActewAGL's opex allowance is whether the opex forecast is consistent with the national Service Target Performance Incentive Scheme (**STPIS**). As discussed in paragraphs 135 to 140, the AER's benchmarking methodology does not enable it to give proper consideration to the opex that is required to meet the opex objective of maintaining the quality, reliability and security of supply of standard control services of the distribution system through the supply of standard control services.
242. The AER asserts that a correlation between the efficiency scores derived by its CD SFA model (which it used to determine ActewAGL's opex allowance) and its multilateral partial factor productivity (**MPFP**) model (which it did not use to set ActewAGL's opex allowance), enables it to conclude that ActewAGL can maintain its existing standards of reliability with opex determined by reference to the CD SFA model. The AER's logic is flawed, and does not disclose that it has given the opex factor in clause 6.5.6(e)(8) of the NER serious

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<sup>222</sup> AER, *Efficiency benefit sharing scheme for the ACT and NSW 2009 distribution determinations*, February 2008.

<sup>223</sup> HoustonKemp, *Opex and Efficiency Benefit Sharing Scheme*, January 2015, page 32.

consideration. This topic is dealt with in more detail below in respect of ActewAGL's STPIS ground.

243. In all of the circumstances set out above, the AER's benchmarking model and ad-hoc modelling adjustments have no value in determining the extent to which ActewAGL's opex reasonably reflected the opex criteria in clause 6.5.6(c) of the NER. It was unreasonable for the AER to have used that model, and no other evidence or inquiry, as the sole determinant of ActewAGL's opex allowance. It should certainly not have been used to justify extraordinary reductions in opex of the kind imposed by the Final Determination.

### 1.7 AER erred in concluding it could not have regard to real world consequences of its decision

244. In deciding to rely solely on a single top down model to determine ActewAGL's opex allowance, the AER has made another significant error. It has confined itself to the question of whether ActewAGL's forecast opex reasonably reflects the efficient costs of an objectively prudent provider, having regard only to exogenous considerations (ie, matters that are beyond the control of a DNSP, such as the weather and geography). That is to say, it has assumed, from the outset, that it is unable to take into account the real world consequences of its decision on ActewAGL and consumers, to the extent that those consequences arise from endogenous considerations (ie, matters within the control of ActewAGL, such as previous business decisions).
245. That approach was adopted despite the fact that, if the assertions made in ActewAGL's Revised Regulatory Proposal are accepted, a reduction in its opex to the level determined by the AER in the Final Determination may have a catastrophic impact on ActewAGL's ability to deliver safe and reliable supplies of electricity. This consequence may arise from ActewAGL's inability to make a sudden alteration to its business structure to accommodate the significant reduction in opex that the Draft Decision would require it to achieve, particularly in a context where the reduction in opex has retrospective effect.
246. The AER's assumption that it was precluded from giving consideration to this issue when setting ActewAGL's opex allowance rests on two apparent bases. The first is the AER's view that in the 2012 Rule Determination, the AEMC 'is clear that while exogenous circumstances are relevant and should be accounted for, endogenous circumstances should not be considered'.<sup>224</sup>
247. The AER is simply wrong about that issue. It has misquoted the AEMC's comments about the purpose of the Rule change. What the AEMC in fact said was:

The final rule gives the AER discretion as to how and when it undertakes benchmarking in its decision-making. However, when undertaking a benchmarking exercise, circumstances exogenous to a NSP should generally be taken into account, and endogenous circumstances should **generally** not be considered. In respect of each NSP, the AER must exercise its judgement as to the circumstances which should or should not be included. However exogenous factors to be taken into account are likely to include:

- geographic factors: topography and climate;

<sup>224</sup>

Final Determination, pages 7-61 and 7-62.



- customer factors: density of the customer base (urban v rural), load profile, mix of customers between industrial and domestic;
- network factors: age, mix of underground and overhead lines, though this will depend on the extent to which this is at the election of the NSP; and
- jurisdictional factors: reliability and service standards.

If there are some exogenous factors that the AER has difficulty taking adequate account of when undertaking benchmarking, then the use to which it puts the results and the weight it attaches to the results can reflect the confidence it has in the robustness of its analysis.

Endogenous factors not to be taken into account may include:

- the nature of ownership of the NSP;
- quality of management; and
- financial decisions. [Bold emphasis added]

248. This passage suggests that, '**generally**', in exercising its discretions pursuant to clauses 6.5.6(c) and 6.12.1(4) of the NER, the AER is not to have regard to opex that is required to be incurred by reason of structural inefficiencies that were caused by the DNSP's own business decisions. The AER's reference to the AEMC passage set out above omits the word 'generally', which perhaps explains the AER's view that it can never have regard to endogenous considerations.
249. ActewAGL agrees that in the normal course of events, it may be consistent with the NEO to limit a DNSP to the efficient costs that a hypothetical DNSP in its position in a workably contestable market would incur to achieve the opex criteria and provided that proper account is taken of the opex criteria and opex objectives. The scheme contemplated by the NER is intended to create incentives, in that if a service provider spends inefficiently or imprudently, it will bear those additional costs and, conversely, if it achieves efficiencies it may make additional profits. This reflects conditions that would be faced by businesses operating in a competitive environment.
250. However, contrary to the view expressed by the AER in the Final Determination, the 2012 Rule Determination does not exclude the possibility that it may, in appropriate circumstances, be necessary to have regard to the endogenous circumstances of a DNSP for the purposes of making a determination under clauses 6.5.6(c) and 6.12.1(4) of the NER.
251. Section 7 of the NEL defines the NEO in the following terms:
- The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
- (a) price, quality, safety, reliability and security of supply of electricity; and
  - (b) the reliability, safety and security of the national electricity system.
252. Section 16 of the NEL provides that the AER must, in performing or exercising an AER economic regulatory function or power, perform or exercise that function or power in a

manner that will or is likely to contribute to the achievement of the NEO referred to in section 7 of the NEL.

253. The application of clauses 6.5.6 and 6.12.1(4)(ii) of the NER necessarily involves discretionary considerations. Further, clause 6.12.3 of the NER makes it clear that the AER has a discretion to accept or approve any element of a regulatory proposal:

Subject to this clause and other provisions of this Chapter 6 explicitly negating or limiting the AER's discretion, the AER has a discretion to accept or approve, or to refuse to accept or approve, any element of a regulatory proposal.

254. In those circumstances, it is not only consistent with the scheme of the NEL and the NER, but also relevant extrinsic material, for the AER to have regard to relevant endogenous factors in exercising its discretions under clauses 6.5.6 and 6.12.1(4)(ii) where that is necessary to promote the NEO.

255. The second reason that the AER appears to have formed the view that it cannot have regard to endogenous considerations when determining whether ActewAGL's opex reasonably reflects the opex criteria in clause 6.5.6(c) of the NER are its views that:

255.1 its decision does not constrain ActewAGL from spending inefficiently if it wishes (or is otherwise required to because of its business structure),<sup>225</sup>

255.2 in particular, if ActewAGL needs to take time to transition to the levels of opex allowed in the Final Determination, then ActewAGL is perfectly free to keep spending opex at inefficient levels to allow for that transition to take place,<sup>226</sup> and

255.3 to the extent that ActewAGL chooses (or is forced) to incur opex above efficient levels, that opex should be borne by ActewAGL's shareholders and not its consumers.<sup>227</sup>

256. Those comments are, with respect, somewhat naïve in the context of the massive reductions in opex imposed on ActewAGL by the Final Determination. The suggestion that ActewAGL is free to spend inefficiently, if it wishes to transition to lower opex, appears to assume that ActewAGL's management/board can responsibly allow cash outflows to exceed cash inflows, and that ActewAGL has the capacity to fund this. The assertion that if ActewAGL is forced to incur inefficient opex, its shareholders can fund it, appears to conflate ActewAGL and its shareholders, as if they are one entity, thereby assuming that ActewAGL's management can make operational decisions based on its shareholders' financial capacity. Those assumptions do not have a proper basis, either in fact, or in commercial reality.

257. An incontrovertible fact is that the opex reductions imposed on ActewAGL are extraordinary, having regard to past opex allowances by the AER, and the size of ActewAGL's network and customer base. Further, acting responsibly, ActewAGL's board and management will have to

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<sup>225</sup> Final Determination, pages 19 and 7-33 to 7-35.

<sup>226</sup> Final Determination, page 7-41.

<sup>227</sup> Final Determination, pages 14, 15 and 7-35 where the AER states '[h]ow a service provider will respond in light of funded opex being reduced is a matter of corporate governance and for shareholders.'

make significant and rapid changes to ActewAGL's business model. They cannot (as the AER suggests) freely continue to spend above ActewAGL's opex allowance. The implications of those changes to ActewAGL's business model to consumers, and whether those implications are in the NEO, ought to have been considered responsibly, not by way of commercially unrealistic platitudes by the AER of the kind described above.

258. In Attachment 20 to the Final Determination, the AER purports to set out cash flow analysis it undertook to assess the impact of its decisions on ActewAGL's financial viability. ActewAGL is bewildered by that analysis. It was not consulted about the analysis. Further, ActewAGL has been unable to replicate the workings contained with Attachment 20. Indeed, the source of the analysis is largely unidentified in footnotes except by the uninformative words 'Source: AER analysis.' In the circumstances, it was unreasonable for the AER to place any weight on that analysis. Alternatively, the lack of reasoning and identification of sources suggests, rather strongly, that the AER's reasoning about this issue is largely uninformed and unreliable.
259. In contrast to Attachment 20, ActewAGL put before the AER cogent 'real world' evidence to the effect that the level of reductions proposed by the AER would likely lead to substantial underinvestment by ActewAGL in capex and opex, and would likely compromise the safety, reliability and on-going sustainability of its electricity network.<sup>228</sup> Those consequences would plainly not be in the NEO. The AER was obliged to consider them. The AER ought to have considered, in particular, whether additional opex ought to be allowed to permit ActewAGL to restructure its business in an orderly way to transition to the different business model that the Final Determination requires it to implement. It was not consistent with the NEO for the AER to presume, from the outset, that its discretion is circumscribed so that it is precluded from doing so.
260. On page 53 of its Revised Regulatory Proposal, ActewAGL set out the restructuring costs it will have to incur to bring its opex down to the estimate the AER made of its 'efficient' level of opex in the Draft Decision. Given that the level of opex allowed in the Final Determination is not significantly higher, the submissions made in ActewAGL's Revised Regulatory Proposal about its restructuring costs remain apposite. The AER ought to have considered whether those restructuring costs, as well as additional opex to allow an orderly transition to lower levels of opex, should have been allowed to ActewAGL, rather than presumptively excluding those issues from its consideration.

## **1.8 AER erred in concluding it could not allow ActewAGL to transition to lower opex**

261. As submitted above, the AER has a discretion (and, indeed, an obligation) to consider whether to allow forecast opex in excess of the short term productively efficient costs an objectively prudent DNSP might incur. However, where the AER decided that it would promote the NEO to allow those additional costs, the AER has a discretion about the mechanism by which it will do so.
262. The first alternative is to allow those costs in the DNSP's forecast opex pursuant to decisions made under clauses 6.5.6 and 6.12.1(4)(ii) of the NER. The second alternative is to allow a 'glide path' towards the efficient costs an objectively prudent provider might incur pursuant to

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See Application at [97] to [102].

the AER's decision about a control mechanism under clause 6.12.1(11) of the NER. That is to say, the AER might elect, pursuant to its decision under clause 6.12.1(4)(ii) of the NER, to allow forecast opex at a level that does not have regard to endogenous considerations, while at the same time allowing for the relevant DNSP to recover a higher level of opex through the control mechanism. This would allow the DNSP to transition to that forecast opex over time.

263. The AER concluded that it did not have power to allow a glide path under either approach. Its reasons for doing so appear to rest on the same premise as its decision that it could not have regard to endogenous considerations when setting ActewAGL's opex allowance.<sup>229</sup> This error therefore is inextricably linked with a consideration of the AER's decision about ActewAGL's opex allowance more generally.

## **1.9 Conclusion: there is a serious issue to be heard and determined**

264. It is submitted that the matters set out above demonstrate that there is a sufficient likelihood that ActewAGL will be successful on a ground of review in section 71C(1) of the NEL to justify it having the opportunity to have the Final Determination reviewed by the Tribunal insofar as it relates to the AER's constituent decision under clause 6.12.1(4) about ActewAGL's opex allowance.
265. Insofar as those matters relate to deficiencies in the AER's benchmarking methodology, ActewAGL's grounds of review are well supported by several independent experts and, thus, the preponderance of the relevant expert material before the AER. Insofar as those matters relate to the proper construction of the NER, and the methodology and considerations that the NER require of the AER, ActewAGL's grounds are cogent, and it is appropriate that the Tribunal rule on them in a considered way at a substantive hearing, as they go to the heart of the AER's decision about ActewAGL's opex (and, indeed, the AER's future decisions about opex).
266. Further, the question of whether ActewAGL has demonstrated the likelihood of success 'justifies' it having the opportunity to have the Final Determination reviewed by the Tribunal connotes more than a simple assessment of probability of success. It requires a consideration of the significance of the asserted error, in terms of its impact on consumers. In this case, the magnitude of the reduction in opex implicit in the Final Determination, and the evidence presented by ActewAGL on the impact that will have on its ability to maintain the safety, reliability and on-going sustainability of its electricity network, ought to give the Tribunal serious cause for concern. The AER regards those matters as being endogenous matters that it cannot consider and, accordingly, does not rely on any real world evidence to suggest that ActewAGL's concerns are misplaced.
267. In that context, it is of vital importance to consumers that the Tribunal review the AER's decision, and ensure that it is properly founded. ActewAGL therefore submits that the nature of the errors that ActewAGL contends that the AER has made, and the significance of those errors, is sufficient to satisfy the requirement in section 71E of the NEL that there is a serious issue to be heard and determined as to whether a ground of review specified in section 71C(1) exists.

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Final Determination, page 7-39.

## 2. Service Target Performance Incentive Scheme (STPIS)

268. The basis for ActewAGL's application for review of the AER's decision to apply the national STPIS<sup>230</sup> to ActewAGL for the subsequent regulatory control period without modification to the performance targets applicable to ActewAGL is set out at paragraphs 119 to 134 of the Application. ActewAGL also refers to and relies on paragraphs 41 to 46 of the First Affidavit of Fleur Gibbons.
269. The STPIS is intended to balance the incentives to reduce expenditure with the need to maintain or improve service quality. It achieves this by providing financial incentives to distributors to maintain and improve service performance where customers are willing to pay for these improvements.
270. One of the constituent decisions on which the distribution determination is predicated is a decision by the AER on how the STPIS is to apply to ActewAGL: clause 6.12.1(9) of the NER.
271. In its Revised Regulatory Proposal, ActewAGL proposed that the s-factor component of the STPIS be applied to ActewAGL with revised performance targets on the basis of the following assumptions:<sup>231</sup>
- 271.1 weather-corrected reliability outcomes in the 2014-19 period are a function of existing assets as at 1 July 2014, capex in the 2014-19 period, and controllable opex in the 2014-19 period;
  - 271.2 the impact of each of these three components on reliability in a given year is proportionate to the component of the residual regulatory asset base (**RAB**) in that year relating to existing assets (assets contained in the opening RAB as at 1 July 2014), the component of the residual RAB in that year relating to capex in the 2014-19 period, and controllable opex in that year, respectively;
  - 271.3 the existing assets as at 1 July 2014 have the effect of maintaining reliability at the average performance observed over the past five years;
  - 271.4 capex in the 2014-19 period has the effect of aligning reliability with the minimum standards; and
  - 271.5 controllable opex has the effect of aligning reliability with the minimum standards.
272. In the Final Determination, the AER decided to apply the s-factor component of the national STPIS to ActewAGL without the modifications proposed by ActewAGL.<sup>232</sup> In particular, the AER concluded that allowed expenditure in the Final Determination reasonably reflects an amount that ActewAGL needs to maintain reliability at the current level. The AER therefore

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<sup>230</sup> The applicable national STPIS is that published by the AER under clause 6.6.2 of the NER on 1 November 2009 titled '*Electricity distribution network service providers—service target performance incentive scheme*'.

<sup>231</sup> Revised Regulatory Proposal, pages 617 to 618.

<sup>232</sup> See generally Attachment 11 to the Final Determination.

set ActewAGL's performance targets based on its average performance over the past five regulatory years in accordance with the STPIS.

273. The basic issue is this: during the five years on the basis of which its average reliability is calculated for the purpose of setting its targets under the STPIS, ActewAGL has been achieving levels of reliability in excess of its regulatory obligations. The AER concedes this in the Final Determination.<sup>233</sup> ActewAGL will be penalised under the STPIS if it fails to maintain those reliability levels.
274. However, the AER's opex allowance for ActewAGL in the Final Determination, determined using its CD SFA model and ad hoc post modelling adjustments, is materially lower than the opex that was incurred by ActewAGL to achieve that historic reliability performance and reflects the opex achieved by firms with materially inferior reliability performance. That is to say, ActewAGL is now expected to maintain levels of reliability that were generated by opex that was far in excess of what the AER now contends is efficient and on the basis of opex determined by reference to the opex incurred by firms achieving materially lower levels of reliability than ActewAGL's historic reliability levels. Accordingly, there is now a disconnect between the performance targets in the STPIS, and the basis on which opex is to be forecast in the Final Determination. ActewAGL would be expected to fail to meet the performance targets and incur financial penalties under the STPIS.
275. The fact that ActewAGL's historical level of opex over that five year period was (at least according to the AER) inefficient is not to the point. What is material is that that level of opex generated reliability performance not achieved by those firms by reference to whose opex the AER has set ActewAGL's opex for the 2014-19 period. Requiring ActewAGL to maintain the same levels of reliability with much lower levels of opex that, by reasons of the AER's approach to setting that opex, are inadequate to sustain those reliability levels (regardless of whether that opex is efficient) will likely result in ActewAGL failing to meet those targets, and suffering a financial penalty. This would further erode its ability to obtain a reasonable return, and would not be in the NEO.
276. The AER's reasons for concluding that allowed expenditure in the Final Determination reasonably reflects an amount that ActewAGL needs to maintain reliability at its historical levels over the five year period used to determine the targets under the STPIS is barely explained. Of itself, this suggests that the decision was unreasonable, in that there is an unexplained discretionary choice.
277. The AER's reasons appear to be as follows:
  - 277.1 it has set ActewAGL's opex by reference to the CD SFA model, which, it concedes, does not explicitly allow for the cost of achieving particular levels of reliability;
  - 277.2 however, Economic Insights' MPFP model does explicitly include an allowance for reliability;
  - 277.3 the efficiency scores of the MPFP model and CD SFA model are highly correlated (correlation coefficient of 0.95). This means that there is a high degree

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Final Determination, page 11-12.

of linear dependence between the efficiency scores. Linearly dependent efficiency scores would mean that the relationship between the MPFP model and CD SFA scores can be written as a linear combination of the form  $E_{MPFP} = a + b \cdot E_{CD\ SFA}$  with  $a$  and  $b$  being constants. That is not to say that the magnitude of the differences in efficiency scores (or the consequent opex reductions) between firms is similar across the two models;

- 277.4 the AER infers from this that to the extent that reliability differs across service providers, its impact on opex efficiency is not significant. In other words, reliability is not a significant determinant of opex efficiency;<sup>234</sup> and
- 277.5 accordingly, the AER concludes that the output of the CD SFA model reasonably reflects the levels of opex necessary to meet existing standards of reliability.
278. The logic in this approach is deeply flawed. High correlation in the efficiency scores between two models simply means that the results of the two models have a high degree of linear dependence, in the sense that the results of those models are linearly related across firms. It is possible for two models to have highly correlated results, but significantly different efficiency scores and implied opex reductions for a given firm.
279. The example below shows two models which have perfectly correlated efficiency scores. The efficiency scores generated by Model 2 are linearly related to the efficiency scores in Model 1 in that the former are 10 percentage points higher than the latter. That is, the relationship between the efficiency scores of those two models can be expressed as  $E_{Model2} = 0.1 + (1 \times E_{Model1})$ . The example discloses that the implied opex adjustment, which for firm  $i$  is equal to  $1 - E_i/E_{frontier}$ , is different for each non-frontier firm as between the two models, notwithstanding that the efficiency scores generated by those two models are perfectly correlated:

	Efficiency scores		Implied opex reduction	
	Model 1	Model 2	Model 1	Model 2
Firm 1	85%	95%	0%	0%
Firm 2	50%	60%	41%	37%
Firm 3	10%	20%	88%	79%

280. A finding of high correlation in the efficiency scores generated by two models, one of which includes reliability as an output and the other of which does not, is not sufficient to infer that the impact of reliability on opex is not significant. The following example illustrates that it is possible to observe perfect correlation in the efficiency scores generated by two such models even when reliability has a significant impact on opex.
281. Consider three firms that incur differing opex and achieve differing levels of reliability. Relatively high opex is incurred by Firm 3 due, in part, to its relatively high level of reliability

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Final Determination, page 7-196.

performance, while relatively low opex is incurred by Firm 1 due, in part, to its relatively poor level of reliability performance. Consider two models: Model 1, which does not include reliability as an output, and Model 2, which does include reliability as an output.

282. Accounting for reliability performance by moving from Model 1 to Model 2 will have the effect of improving the efficiency scores of firms with better reliability relative to the scores of other firms. Suppose that this effect follows the relationship  $E_{\text{Model 2}} = 0.4 + (0.5 \times E_{\text{Model 1}})$  such that the efficiency scores of the two models are perfectly correlated. As illustrated in the table below, where Model 2 is applied in place of Model 1, the efficiency score for Firm 1 is reduced and the efficiency score for Firm 3 is increased, consistent with their reliability performance relative to the average. The implied opex reductions, which are calculated relative to the frontier firm (Firm 1),  $1 - E_i/E_{\text{frontier}}$ , are consistent with reliability having a significant impact on opex. For example, the implied opex reduction for the firm that achieves better-than-average reliability is reduced from 58% to 32% when reliability is taken into account. Thus, while the efficiency scores in the two models are perfectly correlated, they are also consistent with reliability having a significant impact on opex.

	Reliability	Efficiency scores		Implied opex reduction	
		Model 1	Model 2	Model 1	Model 2
Firm 1	Poorer than average	96%	88%	0%	0%
Firm 2	Average	80%	80%	17%	9%
Firm 3	Better than average	40%	60%	58%	32%

283. In short, perfect correlation in efficiency scores from two models, one of which includes reliability as an output and the other of which does not, plainly does not mean that reliability has no impact on opex.
284. Drawing inferences about the similarities between the two models relied on for present purposes by the AER, being the CD SFA and MPFP models, is extremely suspect given the differences in the specification of those two models. The inputs, outputs and environmental factors in the two models are shown below:



Input	SFA	MPFP
Opex	✓	✓
Output	SFA	MPFP
Customer numbers	✓	✓
Circuit length	✓	✓
Ratcheted maximum demand	✓	✓
Energy throughput	x	✓
Minutes off-supply	x	✓
Environmental factors	SFA	MPFP
Proportion of underground cables	✓	x

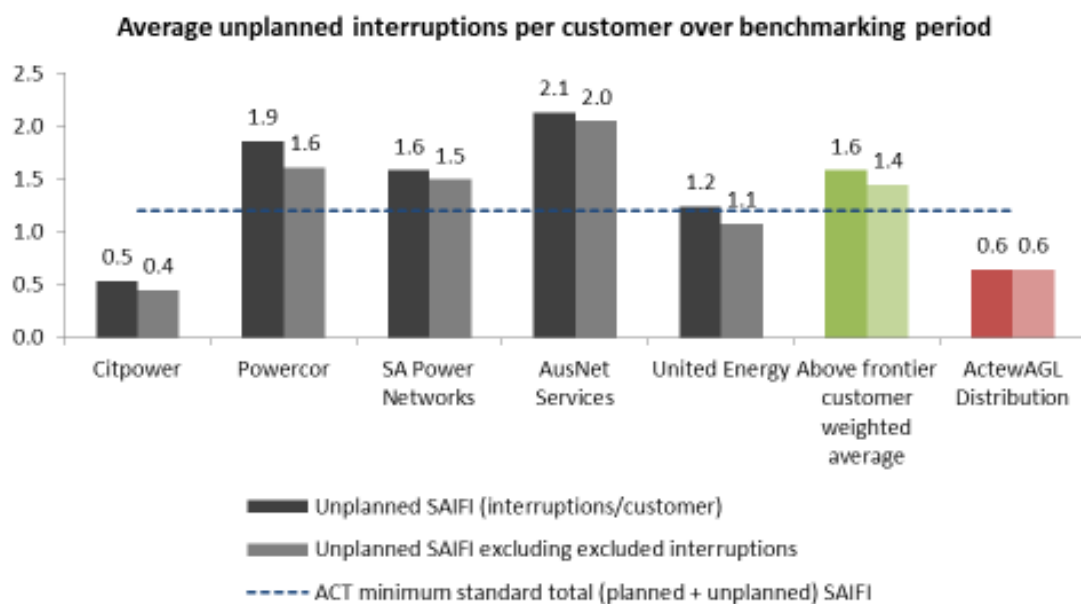
285. Significantly, the MPFP model includes minutes off-supply (i.e. reliability) as an output, while the CD SFA model does not.
286. Further, the CD SFA and MPFP models do not produce closely aligned implied opex reductions. This can be seen in the table below, which shows that the 'benchmarking comparison point' firm and the implied opex reductions for the NSW and ACT DNSPs are sensitive to the model employed. Changing the model from the CD SFA model to the MPFP model has the effect of changing the implied opex reductions relative to AusNet Services (the 'benchmarking comparison point' firm under the CD SFA model) and changing the firm with an efficiency score at the bottom of the top quartile from AusNet Services to Powercor Australia, with the consequence that it becomes the 'benchmarking comparison point' firm. Powercor Australia is included in the table below as the new 'benchmarking comparison point' for comparison.

DNSP	SFA - AusNet	MPFP - AusNet	MPFP – Powercor
ACT	36.2%	17.7%	36.2%
AGD	35.0%	24.6%	41.5%
END	12.8%	0.0%	19.3%
ESS	20.9%	19.8%	37.8%

287. It is unsurprising that the efficiency scores and implied opex reductions, as well as the 'benchmarking comparison point', are different as between the CD SFA and MPFP models, given their different specifications including in particular the inclusion of minutes off-supply (i.e. reliability) as an output of the latter but not as an output of the former. As already noted, nothing can be ascertained from the high degree of correlation between the efficiency scores generated by the two models regarding the relationship between reliability and opex. The example set out in paragraph 275 demonstrates that the differences in efficiency scores and implied opex reductions derived from the CD SFA and MPFP models may be due, at least in part, to differences in reliability performance across firms, notwithstanding the finding that the efficiency scores generated by the two models are highly correlated.
288. In any event, in its opex ground of review, ActewAGL has raised deep concerns about the fitness for purpose of the CD SFA model for regulatory decision making (and also the MPFP

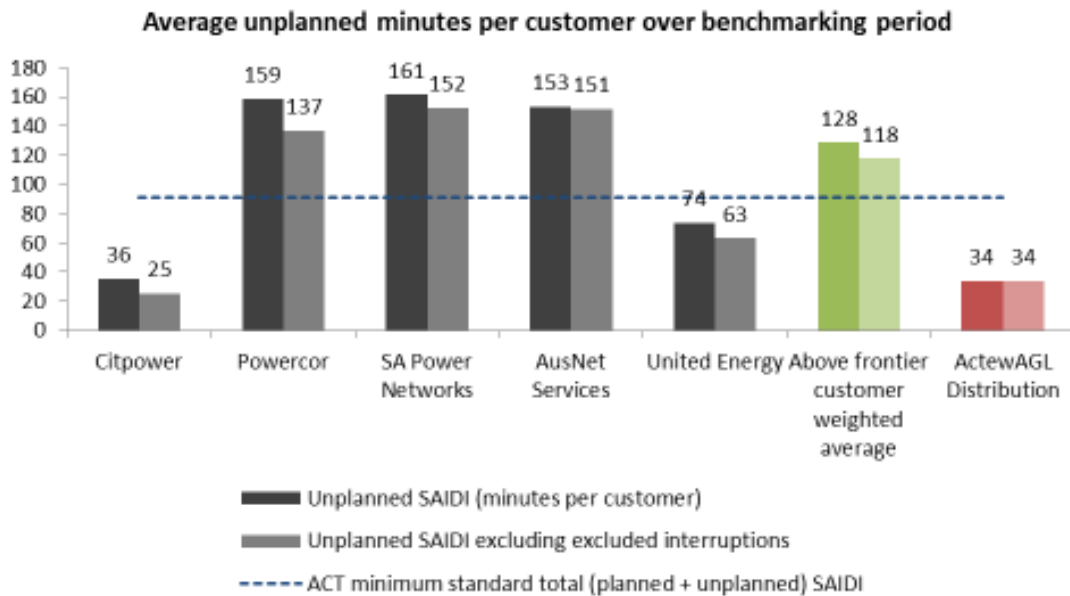
model, which not even the AER has relied on for the purpose of determining ActewAGL's opex allowance).

289. Further, leaving the models aside, for a moment, it is concerning that the AER's approach ignores the most significant real world piece of information: ActewAGL's opex is assessed by reference to a 'benchmark comparison point', AusNet Services (**SPD**), being the firm with an efficiency score at the bottom of the top quartile, or put another way the bottom firm in the top third of the most opex efficient Australian DNSPs (according to the CD SAFA model). The other firms in the upper third of the AER's benchmarked Australian DNSPs are Powercor (**PCR**), Citipower (**CIT**) United Energy (**UED**) and SA Power Networks (**SAP**). The SAIDI and SAIFI performance of these service providers as disclosed in their responses to the RINs is at a significantly *lower* standard than ActewAGL, as shown in the figures below:<sup>235</sup>



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Source: Economic Insights, AER draft decision ActewAGL distribution determination - Economic Insights DNSP productivity files, Work sheet: 00AER consolidated master sheet.xlsm, sheet "7. Quality of services", November 2014. File available: <http://www.aer.gov.au/node/11482>. These figures have been produced by ActewAGL using this Economic Insights data.



290. It is counterintuitive to assume that opex allowed to ActewAGL for the 2014-19 period, which is set by reference to AusNet Services, will enable ActewAGL to maintain existing levels of reliability, when AusNet Services itself is (and all of the other firms, with the possible exception of CitiPower, in the top third of opex efficient Australian DNSPs according to the CD SFA model are) unable to achieve that level of reliability at those levels of opex.
291. Indeed, the entire premise of the AER's conclusion about the STPIS targets, that reliability is largely unaffected by opex, is counterintuitive, and should have been based on more than largely inexplicable inferences drawn from discredited models. In the circumstances, it is submitted that there is a serious question to be tried in respect of the grounds of review in respect of the AER's STPIS decision.

### 3. Alternative control metering services annual charges (annual metering services opex)

292. The basis for ActewAGL's application for review of the AER's decision to reject ActewAGL's proposed opex for annual metering services is set out at paragraphs 135 to 165 of the Application. ActewAGL also refers to and relies on paragraphs 47 to 49 of the First Affidavit of Fleur Gibbons.
293. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue. The AER has made an objectively identifiable slip in the manner in which it has calculated ActewAGL's historical metering opex: it deducted certain 'adjustment amounts' from ActewAGL's historical metering opex, as recorded in a worksheet contained within ActewAGL's populated RIN Template, on the assumption that those adjustment amounts were included within that worksheet. In fact, they were not, and accordingly, the 'adjustment' was not necessary.

294. Contrary to the AER's contention at paragraph 4 of the AER Notice, paragraphs 157 to 163 of the Application identify in detail the evidence in the decision related matter on which ActewAGL relies to demonstrate the existence of a serious issue to be heard and determined. In particular, those paragraphs of the Application set out a detailed analysis of the relevant worksheets, which disclose the AER's slip. In the light of that evidence and analysis, there is clearly a serious issue to be heard and determined as to whether a ground of review set out in section 71C(1) of the NEL exists.

#### **4. Classification of metering services**

295. The basis for ActewAGL's application for review of the AER's decision on the classification of metering services is set out at paragraphs 166 to 174 of the Application. ActewAGL also refers to and relies on paragraphs 50 to 57 of the First Affidavit of Fleur Gibbons.
296. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue. As set out in section D(4) of the Application in detail, the AER's constituent decision on the classification of metering services (as set out in Appendix A of the Final Determination) does not accord with its reasoning in Attachment 16 of the Final Determination. The AER has made a mistake. The AER has acknowledged that it has made an error that must be corrected in the letters referred to at footnote 123 of the Application and, again, in the AER Notice at paragraph 8. There is, thus, no doubt that one or more of the grounds of review set out in section 71C(1) of the NEL is established.
297. Nonetheless, in the AER Notice, the AER contends that leave should not be granted to ActewAGL in respect of this ground because the AER intends, after the conclusion of this proceeding, to revoke the Final Determination and substitute a distribution determination varied to correct the AER's error in its constituent decision on the classification of metering services and, in these circumstances, there is no utility to this ground of review.<sup>236</sup>
298. In so contending, the AER does not establish the relevance of this matter to the NEL criteria governing the grant of leave by the Tribunal. In any event, the AER is incorrect as to the utility of this ground.
299. As already noted in paragraph 53 of the First Affidavit of Fleur Gibbons, the correspondence between the AER and ActewAGL concerning this matter discloses that, at the time of making ActewAGL's Application (and at the time of the filing and service of the AER Notice), there was disagreement between the AER and ActewAGL as to how the AER's error should be corrected.<sup>237</sup> In the AER's letter to ActewAGL dated 20 May 2015, the AER did not adopt the corrections to the constituent decision on service classification proposed by ActewAGL in its letter dated 18 May 2015<sup>238</sup> (which are substantively similar to the corrections sought by ActewAGL in its Application).<sup>239</sup>

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<sup>236</sup> AER Notice, [8].

<sup>237</sup> First Affidavit of Fleur Gibbons, [53]; letter dated 13 May 2015 from the AER to ActewAGL, letter dated 18 May 2015 from the ActewAGL to the AER and letter dated 20 May 2015 from the AER to ActewAGL contained in Annexure FCG-4 to the First Affidavit of Fleur Gibbons.

<sup>238</sup> ActewAGL's proposed corrections are set out on pages 2-3 of its letter to the AER dated 18 May 2015. The AER acknowledges that it does not adopt those proposed corrections in the fifth paragraph of its letter to ActewAGL dated 20 May 2015. See Annexure FCG-4 to the First Affidavit of Fleur Gibbons.

<sup>239</sup> Application, [326-6]

300. Perhaps more significantly, the manner in which the AER intended to correct the error in its constituent decision is itself subject to error, with the consequence that the AER's constituent decision on the classification of metering services in the substituted distribution determination contemplated by the AER would itself have been in error.
301. In the AER's letter to ActewAGL dated 20 May 2015, the AER stated that it intended that the constituent decision on the classification of services in the substituted distribution determination would vary from the constituent decision on classification in the revoked Final Determination as follows (with the marked up amendments representing those variations):<sup>240</sup>

In accordance with clause 6.12.1(1) of the NER, the following classification of services will apply to ActewAGL for the 2015-19 regulatory control period (listed by service group):

- Standard control services include network services, connection services, ~~type 5 and 6 unrecovered meter cost~~
- ~~Alternative control services include metering type 5 and 6 provision, installation, maintenance, reading, data services and transfer administration services, type 7 metering services and ancillary network services~~ Alternative control services include:
  - types 5 and 6 meter provision, maintenance, reading, data services, transfer administration services (including type 5 and 6 unrecovered meter cost)
  - types 7 metering services
  - ancillary network services.
- Unregulated services include type 1 to 4 metering services.

302. The AER's formulation of the varied constituent decision on classification contained errors and inaccuracies, including in that:

- 302.1 it refers to 'transfer administration services (including type 5 and 6 unrecovered meter cost)' in circumstances where the AER decided in its Final Determination not to classify any transfer administration service. The AER's detailed table of service classifications set out in Appendix A to Attachment 13 to the Final Determination makes no mention of such a service.<sup>241</sup> This is presumably because the AER concludes as follows in its Final Determination:<sup>242</sup>

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<sup>240</sup> Letter dated 20 May 2015 from the AER to ActewAGL contained in Annexure FCG-4 to the First Affidavit of Fleur Gibbons. The AER's contemplated variations to the constituent decision on service classification were set out in the Attachment to that letter. For ease of reference, those variations have been marked up on the constituent decision on service classification set out in Appendix A to the Overview to the Final Determination (at page 59).

<sup>241</sup> Final Determination, pages 13-18 to 13-22.

<sup>242</sup> Final Determination, page 16-22.

We have not approved a meter transfer fee relating to administrative costs associated with metering customers who switch to a competitive metering provider.

- 302.2 it fails to make any reference to the 'types 5 and 6 meter installation and commissioning service' classified as an alternative control service by the AER in its detailed table of service classifications set out in Appendix A to Attachment 13 to the Final Determination.<sup>243</sup>
303. In essence, if ActewAGL had not included this ground in its Application, the AER would have replaced one erroneous constituent decision on service classification with another equally erroneous constituent decision on service classification.
304. In these circumstances and against the background of the implications of the constituent decision on metering services for ActewAGL's recovery of the residual costs of its regulated metering following the introduction of metering contestability outlined at paragraph 168 of the Application, there was plainly utility in ActewAGL's Application for review of this ground by the Tribunal and the associated resolution of this matter with certainty and finality. In particular, this would have obviated the potential need for further merits and/or judicial review proceedings at a later time in respect of the AER's substituted distribution determination. This remained the position at the time of the filing and service of the AER Notice contending that this ground of review is without utility.
305. It is presumably for this reason, that by letter dated 16 June 2015 from its legal representatives to ActewAGL's legal representatives, the AER informed ActewAGL that it is now 'content to adopt' ActewAGL's proposed wording 'when it revokes and substitutes the Final Determination to correct the error in issue and re-asserted that 'any appeal is of no utility' to any party'.<sup>244</sup>
306. ActewAGL has difficulty in understanding the AER's contention that, against the background discussed above, an appeal on this ground is without utility. ActewAGL continues to hold the view that this ground has utility notwithstanding the AER's latest concession and that the AER's error should be corrected by the Tribunal by the making of orders on a conceded basis. ActewAGL will respond to the AER's contention that this ground is without utility when the AER explains the basis of this contention, presumably in its submission on leave.

## **5. Return on equity**

307. The basis for ActewAGL's application for review of the AER's decision to reject ActewAGL's proposed return on equity is set out at paragraphs 175 to 219 of the Application. ActewAGL also refers to and relies on paragraphs 58 to 65 of the First Affidavit of Fleur Gibbons.
308. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue. The reasons for this are set out below.

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<sup>243</sup> Final Determination, page 13-18.

<sup>244</sup> Letter dated 16 June 2015 from Corrs Chambers Westgarth to DLA Piper.

## 5.1 Overview

309. The AER made errors of fact, or alternatively incorrectly exercised a discretion or made an unreasonable decision, in determining the allowed return on equity. In particular, as discussed further below:

309.1 The AER's decision to only have regard to the return on equity estimate from one model was contrary to the NER. The NER require the AER to have regard to all relevant models. As discussed below, the extrinsic materials make clear that this requirement was inserted to dissuade reliance on a single model and to ensure that all relevant models and evidence are taken into account.

309.2 The AER's finding that the Sharpe Lintner Capital Asset Pricing Model (**SL CAPM**) is superior to all other models was contrary to the evidence.

309.3 The reasons relied on by the AER for ignoring estimates of the return on equity from other relevant models were flawed.

309.4 The AER's tiered approach to the use of evidence – where some evidence was given primary or fundamental weight, while other evidence was given a subsidiary role – meant that certain relevant evidence was given little or no weight in determining the return on equity. For example:

309.4.1 in relation to the market risk premium (**MRP**), evidence of the historical average excess returns was given fundamental weight in determining a 'baseline' estimate, while the AER's dividend growth model (**DGM**) analysis was used to provide directional information only. This approach meant that movement in the AER's DGM estimates had no impact on the AER's determination of the MRP; and

309.4.2 in relation to the equity beta, the AER gave primary weight to evidence from a very small set of domestic comparator firms, while evidence from a wider data set was given little or no weight.

309.5 The AER made errors of fact in the interpretation of key evidence, including evidence used in the AER's 'cross-check' analysis.

309.6 The AER ignored evidence which demonstrated that the return on equity produced by its approach was too low, and not commensurate with prevailing conditions in the market for equity funds.

309.7 The AER ignored evidence that the reductions in the return on equity estimates resulting from its approach were solely due to declines in the risk-free rate, which were caused by factors that did not impact, or did not impact to the same extent, on the return on equity. The AER effectively assumed that the required return on equity was falling in lock-step with the risk-free rate. Further, the AER erroneously concluded that in current market conditions, a largely fixed MRP (based primarily on historical measures) could be used with a prevailing (and depressed) risk free rate to make an accurate calculation of the return on equity, and one that contributes to the achievement of the allowed rate of return

objective.

310. Accordingly, there is a serious issue to be heard and determined in relation to the AER's decision on the return on equity and, thus, its constituent decision on the allowed rate of return for the transitional regulatory control period and each regulatory year of the subsequent regulatory control period under clauses 6.12.1(5) and 11.56.4(c) and (e) of the NER (**Allowed Rate of Return Decision**).

## 5.2 Background

### *Relevant Rules*

311. Pursuant to clause 6.5.2(d) of the NER, the allowed rate of return for a regulatory year must be:

- 311.1 a weighted average of the return on equity for the regulatory control period in which that regulatory year occurs and the return on debt for that regulatory period; and
- 311.2 determined on a nominal vanilla basis that is consistent with the estimate of the value of imputation credits,

(together, the weighted average cost of capital (**WACC**)).

312. Clause 6.5.2(e) states that, in determining the allowed rate of return, regard *must be had* to:
- 312.1 relevant estimation methods, financial models, market data and other evidence;
  - 312.2 the desirability of using an approach that leads to the consistent application of any estimates of financial parameters that are relevant to the estimates of, and that are common to, the return on equity and the return on debt; and
  - 312.3 any interrelationships between estimates of financial parameters that are relevant to the estimates of the return on equity and the return on debt.
313. The return on equity for a regulatory control period must be estimated such that it contributes to the allowed rate of return objective (clause 6.5.2(f)). In estimating the return on equity that contributes to the allowed rate of return objective, regard must be had to the prevailing conditions in the market for equity funds (clause 6.5.2(g)).

### *Background on changes to the return on equity rules*

314. Significant amendments were made to the rules governing the determination of the return on equity by the 2012 Rule Determination, with effect from 29 November 2012.<sup>245</sup>

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By the AEMC's *National Electricity Rules (Economic Regulation of Network Service Providers) Rule 2012 No.9 (2012 Rule Change)*.



315. The version of clause 6.5.2 that applied prior to 29 November 2012 required the return on equity to be determined using the SL CAPM. The November 2012 rule amendments removed the requirement to determine the return on equity using the SL CAPM and instead required that regard must be had to relevant estimation methods, financial models, market data and other evidence.
316. An additional significant amendment to clause 6.5.2 was the insertion of the allowed rate of return objective, being that the rate of return for a DNSP is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the DNSP in respect of the provision of standard control services. The NER require that both the return on equity and the return on debt are to be estimated such that they contribute to the achievement of the allowed rate of return objective. Further, in estimating the return on equity, regard must be had to prevailing conditions in the market for equity funds.
317. In making the 2012 Rule Change, the AEMC stated that the amendments being made to the return on capital rules provide the regulator with the flexibility to adopt the approach it considers appropriate to estimate the rate of return, 'provided it considers relevant estimation methods, financial models, market data and other information'. The AEMC noted that:<sup>246</sup>
- This is so the best estimate of the rate of return can be obtained that reflects efficient financing costs of the service provider at the time of the regulatory determination.
- In this way, the regulator can better respond to changing financial market conditions, particularly where volatile market conditions impact on a service provider's ability to attract sufficient capital to finance the expenditure necessary to provide a reliable energy supply to consumers.
318. One of the key drivers of the changes to the rate of return rules was a concern that estimation of the return on equity had become overly formulaic, and unduly bound to a single model (namely, the SL CAPM). Such a concern was noted by the Expert Panel for review of the limited merits review regime (whose recommendations led to the changes to the NEL merits review framework made in 2013, including the insertion of the 'materially preferable NEO decision' threshold) in the following terms:<sup>247</sup>

Put bluntly, at the moment the AER is required to proceed, as a matter of law, on the basis of a model that is known to abstract from a factor considered (in the Panel's view, rightly) to be a matter of such significance (i.e. regulatory risk or uncertainty) that it is afforded special mention in the revenue and pricing principles section of the NEL.

That this is more than a theoretical point is indicated by the fact that the Financial Investors Group told us that they had been concerned about the narrow, CAPM focus of the regulatory approach to date, and had urged the AER to pay more attention to conditions in capital markets themselves (in contrast to models of those markets). Whilst the Panel believes that the AER has rather more discretion than the AER itself appears to believe it has, it does appear to be the case that there is an inconsistency in the current combination of laws and rules that is impeding a more realistic, market-focused approach to the determination of returns on capital.

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<sup>246</sup> 2012 Rule Determination, November 2012, page iii.

<sup>247</sup> Professor George Yarrow, The Hon Michael Egan, Dr John Tamblyn, *Review of the Limited Merits Review Regime: Stage One Report*, 29 June 2012, pages 41 to 42.

The practical relevance of the problem has also been illustrated by the ACT's recent ATCO decision, the detail of which the Panel has not yet had time to fully absorb. In the name of regulatory certainty, the decision appears to elevate the standing of the CAPM in the NGR to something akin to its standing in the NER. The Panel is concerned that binding regulatory decisions hand and foot to a financial model **with known defects** does not immediately commend itself as an approach that will advance the NEO and NGO. [Bold emphasis added]

319. The AEMC echoed this concern in its draft rule determination in respect of its 2012 Rule Change, and accordingly sought to devise a new framework for estimating the rate of return that would require consideration of a wider range of models and estimation techniques. In its draft rule determination, the AEMC stated:<sup>248</sup>

The rate of return estimation should not be formulaic and be driven by a single financial model or estimation method. The estimation approach to equity and debt components should include consideration of available estimation methods, financial models, market data and other evidence to produce a robust estimate that meets the overall rate of return objective. This means giving the regulator discretion on how it should estimate these components, rather than limiting the estimation process to a particular financial model or a particular data source. **In the context of estimating the return on equity, the estimation should not be limited to the standard CAPM, but should consider other relevant evidence.** [Bold emphasis added.]

320. The AEMC, like the Expert Panel, considered that an estimation approach that was limited to a single model would not best meet the NEO and the RPPs. Rather the AEMC considered that estimates of the return on equity are likely to be more robust and reliable if they are based on a range of estimation methods. The AEMC explained in its 2012 Rule Determination:<sup>249</sup>

There are a number of other financial models that have varying degrees of weaknesses. Some of the financial models that have gained some prominence include the Fama-French three-factor model, the Black CAPM, and the dividend growth model. Weaknesses in a model do not necessarily invalidate the usefulness of the model. **Ultimately, it is important to keep in mind that all these financial models are based on certain theoretical assumptions and no one model can be said to provide the *right* answer.**

Given that there are other financial models and methods for estimating the cost of equity capital that vary in their acceptance academically and consequent usage by market practitioners, restricting consideration to the CAPM alone would preclude consideration of other relevant estimation methods.

**The Commission is of the view that estimates are more robust and reliable if they are based on a range of estimation methods, financial models, market data and other evidence.** A framework that eliminates any relevant evidence from consideration is unlikely to produce robust and reliable estimates, and consequently is unlikely to best meet the NEO, the NGO and the RPP. [Bold emphasis added]

321. The 2012 Rule Determination and, thus, these observations of the AEMC are 'Rule extrinsic material' that can be taken into account in the interpretation of clause 6.5.2 of the NER, and in particular in construing 'have regard to' where it appears in that clause to have its usual

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<sup>248</sup> AEMC, *Draft Rule Determinations: Draft National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012; Draft National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012*, August 2012 (**2012 Draft Rule Determination**), page 47.

<sup>249</sup> 2012 Draft Rule Determination, page 48.

meaning of 'give some weight to'.<sup>250</sup> Alternatively, if there is any ambiguity in that regard, the AEMC observations, being 'Rule extrinsic material', may be used to resolve that ambiguity in favour of construing 'have regard to' to mean 'give some weight to'.<sup>251</sup> It follows that the AER cannot properly be said to have had 'regard' to relevant models in determining that those models are not suitable for use in deriving the return on equity and that their use (in combination with the SL CAPM) is not preferable to the sole use of the SL CAPM.

322. As discussed below, notwithstanding the 2012 Rule Change and the AEMC's stated intent regarding the amendments to the return on equity rules in particular, the AER has maintained essentially the same approach to estimating the return on equity as it applied prior to the 2012 Rule Change. The AER has continued to rely exclusively on an estimate of the return on equity from the SL CAPM, and has not sought to estimate the return on equity using any other model, contrary to the intent of the new rate of return rules.
323. Accordingly, ActewAGL considers that there is a serious issue to be heard and determined as to whether the AER has properly complied with clause 6.5.2 of the NER, as amended by the AEMC in November 2012.

#### *AER decision*

324. In the Final Determination, the AER considered the proposal (proposed by various service providers) that return on equity be calculated by reference to four models, being the SL CAPM, the Fama French Three Factor Model (**Fama-French Model**), the Black Capital Asset Pricing Model (**Black CAPM**), and the DGM.<sup>252</sup> The AER did not accept this proposal.
325. Instead, the AER adopted a 'foundation model' approach to estimating the return on equity. The AER used the SL CAPM as the foundation model as it considered it to be superior to all other models for estimating the expected return on equity by reference to the benchmark efficient entity.<sup>253</sup>
326. Although the AER found other models that are used to estimate equity returns to be 'relevant', the AER did not estimate the return on equity from any other models. For the reasons discussed above, this is contrary to clause 6.5.2 of the NER, which provides that the AER must have regard to relevant models 'in determining the allowed rate of return'.
327. The AER stated that it used the 'theory' of the Black CAPM to inform its estimate of the equity beta parameter to be used in applying the SL CAPM.<sup>254</sup> The AER estimated the range for the equity beta based on empirical analysis of nine Australian energy firms from the period 1992 to 2013, five of which were no longer listed. The AER adopted a range of 0.4 to 0.7 and considered that a point estimate of 0.7 was reasonably consistent with international empirical estimates and the 'theoretical underpinnings of the Black CAPM'.

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<sup>250</sup> NEL, Schedule 2, section 8(1) and 8(2a). Clause 8(2a) of Schedule 2 to the NEL permits regard to be had to extrinsic material for the purposes of confirming the interpretation conveyed by the ordinary meaning of a provision.

<sup>251</sup> NEL, Schedule 2, section 8(2a). Clause 8(2a) of Schedule 2 to the NEL also permits regard to be had to 'Rule extrinsic material' if a provision is ambiguous or obscure, to provide an interpretation of it.

<sup>252</sup> Final Determination, page 3-219.

<sup>253</sup> Final Determination, page 3-32.

<sup>254</sup> Final Determination, page 3-32.

328. The AER stated that it used the DGM to inform its estimate of the MRP parameter to be used in applying the SL CAPM.<sup>255</sup> The AER established a range for the MRP based on the geometric average of historical excess returns and the AER's preferred construction of the DGM. This was assessed by the AER as producing a range for the MRP of 5.1% to 8.6%. The AER estimated a point estimate for the MRP of 6.5% based on its assessment of:<sup>256</sup>
- 328.1 historical excess returns, which indicated a MRP of approximately 6.0% from a range of 5.1% to 6.5%;
  - 328.2 DGM estimates, which the AER considered produced a range for the MRP of 7.4% to 8.6%;
  - 328.3 survey evidence and conditioning variables, which supported a MRP estimate of 6%; and
  - 328.4 other regulators' estimates as a 'cross-check', which the AER considered indicated a MRP estimate of around 6.5% is reasonable.
329. The AER considered that the Fama-French Model was relevant, but did not give it any weight.<sup>257</sup>
330. In its Draft Decision, the AER determined a value for the risk free rate of 3.55% based on an indicative averaging period of 17 September to 15 October 2014.<sup>258</sup> This value was applied to a MRP of 6.5%, and combined with an equity beta of 0.7, to give an overall return on equity of 8.1%.
331. In the Final Determination, the AER determined a value for the risk free rate of 2.55% based on the averaging period of 9 February to 6 March 2015.<sup>259</sup> This represented a reduction of 1% in the risk free rate relative to the Draft Decision notwithstanding that the Draft Decision used an indicative averaging period that occurred only six months prior to that used in the Final Determination. The value of 2.55% for the risk free rate was applied to an unchanged MRP of 6.5%, and combined with an equity beta of 0.7, to give an overall return on equity of 7.1%. This was a full percentage point less than the return on equity in the Draft Decision and more than three percentage points less than the return on equity from the 2009/10 to 2013/14 regulatory control period (being 10.29%).<sup>260</sup>

### 5.3 Errors in the Allowed Rate of Return Decision – return on equity

332. In relation to the Allowed Rate of Return Decision, the AER erred in concluding that a return on equity allowance of 7.1% contributes to the achievement of the allowed rate of return

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<sup>255</sup> Final Determination, page 3-32.

<sup>256</sup> Final Determination, pages 3-109 to 3-119.

<sup>257</sup> Final Determination, page 3-67.

<sup>258</sup> Final Determination, page 3-11.

<sup>259</sup> Final Determination, page 3-13.

<sup>260</sup> Final Determination, page 3-13.

objective. As alleged in the ground set out in paragraph 203 and detailed in paragraph 204 of ActewAGL's Application, this erroneous finding was based on a number of errors of fact and discretion which are set out below.

333. The AER's decision on the return on equity involved the following steps:

- 333.1 *Identification of the SL CAPM as the superior model:* The AER concluded that the SL CAPM is superior to all other models and should be used as the foundation model.
- 333.2 *Only the foundation model to be estimated:* The AER decided to only have regard to the estimate of the return on equity produced by the foundation model. The AER disregarded estimates from other models.
- 333.3 *Subsidiary roles for Black CAPM and DGM:* The AER assigned entirely subsidiary roles to the Black CAPM and DGM, and did not use them to determine the allowed rate of return. The role of these models was confined to providing directional information on SL CAPM parameters.
- 333.4 *Determination of the SL CAPM equity beta:* The AER adopted a two-step approach to estimating the equity beta. This involved determining a range for the equity beta based on a limited set of evidence, and then using other relevant evidence (including evidence suggesting the equity beta was outside that range) only to inform the selection of a point estimate from within that range, or to provide directional information.
- 333.5 *Use of Black CAPM theory to inform the SL CAPM beta estimate:* The AER considered that the theory of the Black CAPM warranted some adjustment to the SL CAPM equity beta. However the AER's adjustment was arbitrary, and not based on any empirical evidence.
- 333.6 *Determination of the MRP:* The AER adopted a three-step approach to determining the MRP, which involved giving some evidence fundamental weight and other evidence little or no weight. Evidence of the historical average excess returns was given fundamental weight in determining a 'baseline' estimate, while the AER's DGM analysis was used to provide directional information only. This approach meant that movement in the AER's DGM estimates had no impact on the AER's determination of the MRP. Other relevant evidence was disregarded.
- 333.7 *Adjustment for the value of imputation credits:* The AER made an adjustment to its estimates of the MRP for the value of imputation credits.
- 333.8 *Cross checks based on other relevant evidence:* The AER considered that its overall return on equity estimate was reasonable, having regard to certain 'cross-checks'.

334. The AER recognised that each of the four models was 'relevant'.<sup>261</sup> The AER also recognised that all models 'have strengths and weaknesses'.<sup>262</sup> However, the AER observed that the SL CAPM model is 'the current standard asset pricing model of modern finance', that 'it has been in use for a long period to estimate expected equity returns and transparently present the key risk and reward tradeoff ... that is at the heart of our task', and that 'it has wide acceptance'.<sup>263</sup> The AER also observed that using the other models would give rise to increased complexity which 'is not justified' and is not 'fit for purpose'.<sup>264</sup> The AER observed:<sup>265</sup>

We find that the SLCAPM is the clearly superior model for estimating return on equity. We do not consider that using the other models submitted by the service providers should be relied upon to directly estimate a return on equity (independently or as part of a multi-model approach) that best contributes to the achievement of the rate of return objective.

335. Further to paragraph 204.1 of ActewAGL's Application, that approach is not consistent with the requirement of clause 6.5.2 of the NER to 'have regard to' relevant models. This is confirmed by the comments of the AEMC in the passages of its 2012 Rule Determination extracted in paragraph 320 above. The NER were amended so that there would be a departure from simply applying 'the current standard asset pricing model'. Notwithstanding 'complexity', it is clear that clause 6.5.2 of the NER was amended to require consideration of more than one model, including for the expressly stated reason that no single model will produce the 'right' answer, and because the use of multiple models will produce a 'more robust and reliable' estimate.
336. On this basis, there is a serious issue to be heard and determined as to whether the AER's approach is consistent with the requirements in clause 6.5.2 of the NER.
337. Although there is reference in the Final Determination to the AER having had 'regard' to other models, there is no regard to such models in any relevant sense. Further to paragraph 204.4 of ActewAGL's Application, the AER says, in relation to the Black CAPM, that it gives the 'empirical results' from the model (ie, any model output) 'no role' in its assessment.<sup>266</sup> However, the AER says that it had regard to the 'theory of the Black CAPM' in selecting the figure for equity beta of 0.7. In this regard, the AER observed:<sup>267</sup>

We consider the theory behind the Black CAPM demonstrates that an uplift to the raw beta estimate may be appropriate due to concerns around market imperfections.

and

We consider the theoretical principles underpinning the Black CAPM demonstrate that market imperfections could cause the true (unobservable) expected return on equity to vary from the

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<sup>261</sup> Final Determination, pages 3-41 and 3-218.

<sup>262</sup> Final Determination, page 3-221.

<sup>263</sup> Final Determination, pages 3-31 to 3-32.

<sup>264</sup> Final Determination, page 3-220.

<sup>265</sup> Final Determination, page 3-55.

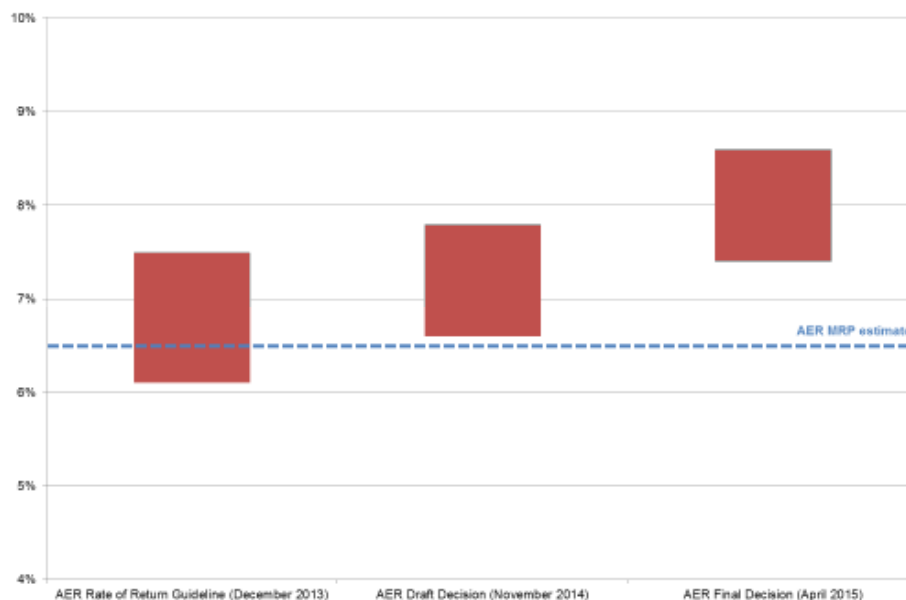
<sup>266</sup> Final Determination, page 3-90.

<sup>267</sup> Final Determination, pages 3-71 and 3-425.

SLCAPM estimate. For firms with an equity beta below 1.0, the Black CAPM may predict a higher expected return on equity than the SLCAPM. We use this theory to inform our equity beta point estimate, and consider it supports an equity beta above the best empirical estimate implied from Henry's 2014 report. However, while the direction of this effect may be known, the magnitude is much more difficult to ascertain. We do not consider this theory can be used to calculate a specific uplift to the equity beta estimate to be used in the SLCAPM. This would require an empirical implementation of the Black CAPM, and we do not give empirical evidence from the Black CAPM a role in determining the equity beta for a benchmark efficient entity...

338. Thus, the AER appears to accept that the 'theoretical principles' of the Black CAPM suggest that the SL CAPM has a downwards bias for low beta stocks. However, no uplift to the rate of return for a given beta is suggested. Rather, there is an entirely unexplained adjustment to equity beta itself (i.e. the relative risk). This adjustment occurs merely by selecting a figure within a range for equity beta formulated independently. This is not 'having regard to' the Black CAPM model itself, and indeed the AER expressly disavows this.
339. Further to paragraphs 204.1 and 204.2 of ActewAGL's Application, the AER says, in relation to the DGM, that it had regard to its market DGM in estimating the MRP. However, this is merely a further application of the SL CAPM, not the application of a DGM to derive a return on equity. Further, the AER merely adheres to a figure within its range for MRP based on historical excess returns, notwithstanding that its range of DGM figures is materially above the MRP figure selected, and notwithstanding that throughout the AER's decision-making process for the AER *Rate of Return Guideline* published in December 2013 (**Rate of Return Guideline**), then the Draft Decision, then the Final Determination, the AER's DGM figures have been increasing, as set out in the Figure below, but without this having any impact on the AER's figure for MRP.

**Figure 1: AER estimates of the MRP from DGM analysis**<sup>268</sup>



<sup>268</sup>

AER, *Explanatory Statement, Rate of Return Guideline*, December 2013 (**Rate of Return Guideline Explanatory Statement**), Appendix E, page 119; Draft Decision, page 3-232; Final Determination, page 3-308.

*Identification of the SL CAPM as the superior model*

340. Further to paragraph 104.3 of ActewAGL's Application, the AER made factual errors and errors of discretion, and was unreasonable, in determining that the SL CAPM was a clearly superior model and that other models were not fit for use to derive a figure for return on equity.
341. The AER concluded that the SL CAPM is superior to all other models that service providers suggested for estimating the expected return on equity for the benchmark efficient entity.<sup>269</sup> It was on this basis that the AER decided to place sole reliance on the SL CAPM.
342. However, there was a significant body of evidence before the AER that the SL CAPM was a poor fit to empirical data and suffered from downwards bias for low beta stocks (ie, stocks with a beta of less than one) and value stocks (ie, high book-to-market ratio stocks). That evidence included the following:

Study	Key conclusions
Black, Jensen and Scholes (1972) <sup>270</sup>	<p>Black, Jensen and Scholes (1972) test the SL CAPM theory against empirical data. Their results indicate that the empirical relationship between systematic risk exposure and returns was not consistent with SL CAPM theory. The relationship in the empirical data indicates a higher intercept and flatter slope than that indicated by the SL CAPM.</p> <p>The authors conclude that their results appeared to be strong evidence favouring rejection of the traditional form of the asset pricing model (i.e. the SL CAPM).</p>
Friend and Blume (1970) <sup>271</sup>	The empirical analysis by Friend and Blume (1970) indicates that low-beta stocks generate higher returns than the SL CAPM would suggest and high-beta stocks tend to generate lower returns than the SL CAPM predicts.
Fama and Macbeth (1973) <sup>272</sup>	Fama and Macbeth (1973) empirically test the assumption of the SL CAPM that the return on a zero-beta asset will be equal to the risk-free rate. Consistent with the earlier findings of Black, Jensen and Scholes (1972), they conclude that this assumption is not supported by the empirical data.

<sup>269</sup> Final Determination, page 3-32.

<sup>270</sup> Black, F., M.C. Jensen, and M. Scholes, 1972, 'The Capital Asset Pricing Model: Some empirical tests', in *Studies in the Theory of Capital Markets*, Michael C. Jensen, ed., New York: Praeger, pages 79 to 121, referred to in: SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, and Transend*, 27 May 2014, pages 20 to 22.

<sup>271</sup> Friend, I., M. Blume, 1970, 'Measurement of Portfolio Performance under Uncertainty', *American Economic Review*, 60, pages 561 to 575, referred to in: SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, and Transend*, 27 May 2014, pages 22 to 23.

<sup>272</sup> Fama, E.F., J.D. MacBeth, 1973, 'Risk, return, and equilibrium: Empirical tests', *Journal of Political Economy*, 81, pages 607 to 636, referred to in: SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, and Transend*, 27 May 2014, pages 23 to 24.



Study	Key conclusions
Rosenberg, Reid and Landstein (1985) <sup>273</sup>	The study by Rosenberg, Reid and Landstein, as well as other studies identifies a number of SL CAPM anomalies, where stock-specific characteristics seem related to differences in returns. In particular, the book equity value divided by the market equity value (book-to-market ratio) appears to be related to variation in returns.
Fama and French (1992) <sup>274</sup>	Fama and French (1992) demonstrate relationships between returns and book-to-market and size factors, which are not accounted for in the SL CAPM.
Brealey, Myers and Allen (2011) <sup>275</sup>	A recent study by Brealey, Myers and Allen confirms the findings of earlier studies, such as the study by Black, Jensen and Scholes (1972), that the pattern of empirical data is not consistent with what the SL CAPM would predict.
NERA (2015) <sup>276</sup>	Based on Australian data, and using both in-sample and out-of-sample tests, NERA conclude that there is evidence of bias in the SL CAPM. NERA states that the evidence indicates that the SL CAPM significantly underestimates the returns generated by low-beta portfolios and overestimates the returns generated by high-beta portfolios. In other words, the model has a low-beta bias. The extent to which the SL CAPM underestimates the returns to low-beta portfolios is both statistically and economically significant.

343. The key result of the study by Black, Jensen and Scholes (1972) is illustrated in the **Error! Reference source not found.**below.

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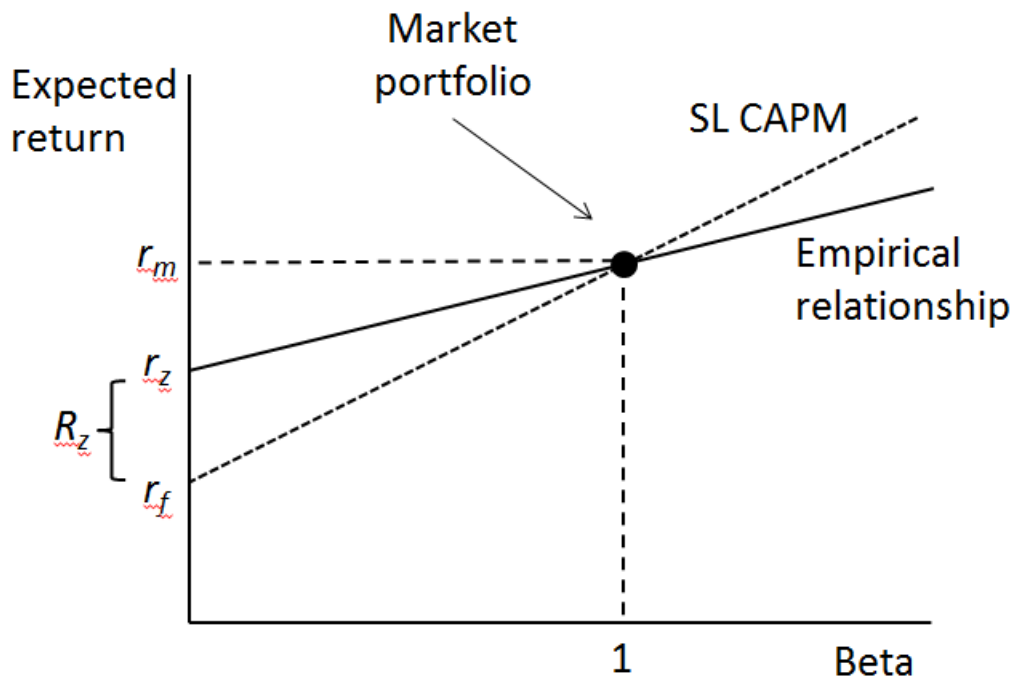
<sup>273</sup> Rosenberg, B., K. Reid, and R. Lanstein (1985), 'Persuasive evidence of market inefficiency', *Journal of Portfolio Management* 11, pages 9 to 17, referred to in: SFG, *The Fama-French model: Report for Jemena Gas Networks, ActewAGL, Transend, TransGrid, and SA PowerNetworks*, 13 May 2014, page 15.

<sup>274</sup> Fama, E.F. and K.R. French (1992), 'The cross-section of expected stock returns', *Journal of Finance* 47, pages 427 to 466, referred to in: SFG, *The Fama-French model: Report for Jemena Gas Networks, ActewAGL, Transend, TransGrid, and SA PowerNetworks*, 13 May 2014.

<sup>275</sup> Brealey, R.A., S.C. Myers, and F. Allen, 2011, *Principles of Corporate Finance*, 10th ed., McGraw-Hill Irwin, New York, NY, USA, referred to in: SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, and Transend*, 27 May 2014, page 24.

<sup>276</sup> NERA, *Empirical Performance of Sharpe-Lintner and Black CAPMs: A report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, AusNet Services, CitiPower, Energex, Ergon Energy, Powercor, SA Power Networks, and United Energy*, February 2015.

Illustration of the key result of early empirical tests of the SL CAPM<sup>277</sup>



344. In other words, the slope produced by the SL CAPM model is too steep.
345. The evidence before the AER also explained how other models such as the Black CAPM and Fama-French Model were developed specifically to overcome these known weaknesses in the SL CAPM model.<sup>278</sup>
346. The treatment by the AER of this evidence in the Final Determination is difficult to follow. When discussing the SL CAPM in that Determination, the AER observes:<sup>279</sup>
- Contrary to what some submissions indicated, there is no compelling evidence that the return on equity estimate from the SLCAPM will be downward biased **given our selection of input parameters**. [Bold emphasis added]
347. It is not clear what the emphasised words in the extract from the Final Determination set out above mean. As noted above in relation to the use of the 'theory' of the Black CAPM to select the equity beta, elsewhere in the Final Determination the AER appears to acknowledge that 'market imperfections could cause the true (unobservable) expected return on equity to vary from the SLCAPM estimate', thus apparently acknowledging at least some of the criticisms of the SL CAPM.

<sup>277</sup> SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, Transend and SA Power Networks*, 6 June 2014, page 22.

<sup>278</sup> SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, Transend and SA Power Networks*, 6 June 2014, [82]–[88].

<sup>279</sup> Final Determination, page 3-60.

348. Further to paragraphs 204.4, 208.2 and 208.3 of ActewAGL's Application, if, by the emphasised words in the Final Determination extract set out above, the AER means that its selection of the equity beta cures whatever difficulties might otherwise exist, this finding is without basis. There was no assessment by the AER as to the extent of any downward low beta bias in the SL CAPM or as to whether (and if so how, and to what extent) its approach to equity beta selection might rectify the problem. The AER's approach appears to be completely arbitrary.
349. In order to make some adjustment to the return on equity estimate by selecting an equity beta, it would be necessary to establish:
- 349.1 how much the return on equity produced by the SL CAPM model understates the real return on equity;
  - 349.2 the gradient of the SL CAPM curve; and
  - 349.3 the figure for equity beta that would produce the higher, more accurate return in accordance with the SL CAPM.
350. For example, looking at the figure in paragraph 343 above, if beta prior to adjustment is 0.5, it would be necessary to consider what beta would cause a figure on the dotted line to be the same height on the vertical axis as the solid black line is at beta = 0.5. That process could only proceed by assuming that the Black CAPM produced reliable results.
351. None of this was performed by the AER. The AER's approach therefore lacked any empirical or rational basis.
- No proper basis for declining to estimate the return on equity from all relevant models*
352. Further to the grounds alleged in paragraphs 204.3, 208, 209 and 210 of ActewAGL's Application, the AER was inconsistent, unbalanced and illogical in its assessment of the relative merits of the various models.
353. The AER applied standards of reliability and precision to the Black CAPM, the Fama-French Model and the DGM which, if applied to the SL CAPM, would cause the SL CAPM to fail the standards. In particular:
- 353.1 One reason cited by the AER for not having regard to the Fama-French Model is that estimates from this model are sensitive to different estimation periods and methodologies.<sup>280</sup> Similarly, the AER considered that the DGM is highly sensitive to input assumptions,<sup>281</sup> and that the Black CAPM can be 'very sensitive to implementation choices'.<sup>282</sup> However the same concern could be expressed about the SL CAPM, which is sensitive to both the estimation period used (as is evident from the difference between the AER's Draft Decision and Final

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280 Final Determination, page 3-68.

281 Final Determination, page 3-77.

282 Final Determination, page 3-75.

Determination estimates of the return on equity using the SL CAPM<sup>283</sup>) and the choice of input assumptions and methodologies (eg, methodologies used to estimate the MRP and equity beta).

- 353.2 Another concern expressed in relation to the Fama-French Model was that different forms of this model have been proposed from time to time, including by academics.<sup>284</sup> It was not an appropriate basis for the AER to dismiss the use of a model on the basis that additional factors had, from time to time, been suggested for incorporation in the model. The mere fact that researchers and PhD students suggest the use of additional factors from time to time does not invalidate the use of the original form of the model or suggest that it does not have predictive power, in the same way that this fact alone does not impugn the use of the SL CAPM (which is a single factor model). Faced with a model that has been applied in different forms, the appropriate response would be to consider which form of the model reflects the most recent advances in econometric methodology and is most likely to contribute to the achievement of the allowed rate of return objective.
- 353.3 A further criticism that is levelled at the Fama-French Model is that the AER considers the model is 'relatively complex to implement'.<sup>285</sup> This is also not a proper basis for declining to have regard to this Model, particularly having regard to the important financial and non-financial impact of the conclusions on the return on equity to significant entities providing an essential service to a very large number of consumers.
- 353.4 The AER expressed concerns regarding the empirical reliability of the Black CAPM, on the basis that there is a wide range of estimates for one of its parameters, the zero-beta premium.<sup>286</sup> Again, the same could be said of the SL CAPM, given the wide range of estimates for the equity beta and MRP. It was unreasonable for the AER to reject use of the Black CAPM on the basis that there are varying estimates of the zero-beta premium. Faced with a range of estimates for this parameter, the appropriate response would be to seek to identify the best estimate, as the AER did for each of the SL CAPM parameters. Rather than dismissing all estimates of the zero-beta premium on the basis that other (different) estimates had been generated by other studies, the AER ought to have considered the merits of the proposed estimate, including whether it was based on a robust estimation methodology and an appropriate dataset.
- 353.5 While criticising the 'empirical reliability' of the Black CAPM, the AER failed to recognise the significance of the empirical failings of the SL CAPM. As discussed above, there was empirical evidence before the AER that the SL CAPM

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283 In the Draft Decision, the AER determined a value for the return on equity of 8.1% based on an indicative averaging period of 17 September to 15 October 2014. In the Final Determination, the AER determined a return on equity of 7.1%, based on an averaging period less than six months later (being the averaging period of 9 February to 6 March 2015).

284 Final Determination, page 3-71.

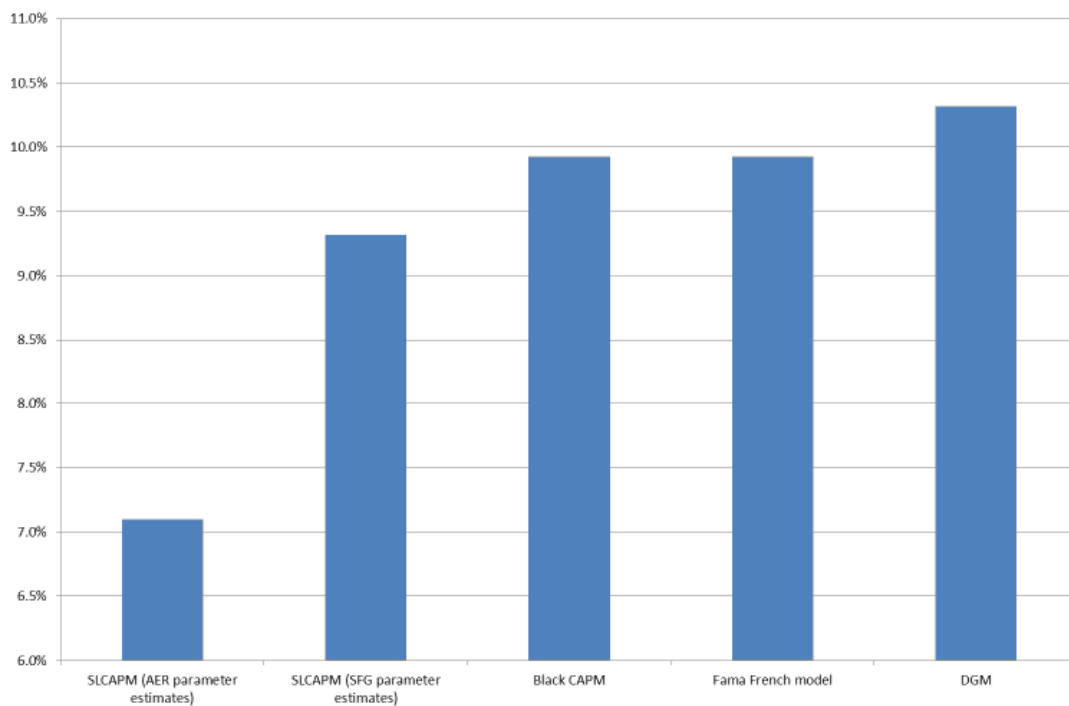
285 Final Determination, page 3-68.

286 Final Determination, page 3-258.

significantly underestimates the returns generated by low-beta portfolios.<sup>287</sup> This empirical evidence was consistent with the findings of previous studies referred to by the AER's own consultants.<sup>288</sup>

- 353.6 The AER criticised the DGM on the basis that the estimates produced by this model are 'very high', and inconsistent with what is indicated by the SL CAPM.<sup>289</sup> This was not a proper or logical basis for rejecting use of the DGM. It could equally be said that the AER's SL CAPM estimates are 'very low' when compared to estimates from other relevant models, as is shown by the Figure below.

#### Return on equity estimates from relevant models<sup>290</sup>



354. Other findings made by the AER in relation to the Black CAPM and Fama-French Model were incorrect and contrary to the evidence before the AER. In particular:

<sup>287</sup> NERA, *Empirical Performance of Sharpe-Lintner and Black CAPMs: A report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, AusNet Services, CitiPower, Energex, Ergon Energy, Powercor, SA Power Networks, and United Energy*, February 2015.

<sup>288</sup> John C. Handley, *Report prepared for the Australian Energy Regulator: Advice on the Return on Equity*, 16 October 2014, page 5.

<sup>289</sup> Final Determination, page 3-266.

<sup>290</sup> Estimates for the SL CAPM (SFG parameter estimates), Black CAPM, Fama-French Model and DGM are taken from: SFG, *The required return on equity for the benchmark efficient entity*, 13 February 2015, section 5; SFG, *The required return on equity for the benchmark efficient entity*, 12 March 2015, section 5.

- 354.1 The AER erred in concluding that the Black CAPM is not widely used to estimate the return on equity by equity investors, academics or regulators. One explanation of this error would appear to be that the AER only considered uses of the Black CAPM when it was expressly referred to as such. Contrary to the observations of the AER, the Black CAPM is commonly used to calculate the return on equity (although it is not always referred to in this context as the 'Black CAPM', but is sometimes referred to as the 'empirical CAPM').<sup>291</sup>
- 354.2 The AER erred in concluding that the Fama-French Model lacks theoretical foundation, and that this was a deficiency. The basis for development of the Fama-French Model was in studies documenting the empirical failings of the SL CAPM. The theoretical and empirical foundation for the Fama-French Model is discussed at some length by the Nobel Prize Committee, in the explanatory material accompanying the award of the Nobel Prize to Eugene Fama for contributions to this field.<sup>292</sup>
355. The reasoning referred to in the above paragraphs is a manifestation of an apparent presumption in favour of the status quo model, the SL CAPM, prior to the relevant evaluation. The AER has applied tests and thresholds to alternative models that are not applied to the status quo model. Moreover, where there is an observed difference between models, the AER has assumed that the SL CAPM is correct and that the alternative model is flawed, rather than properly investigating the reasons for the difference.
356. In relation to particular observations made by the AER in relation to the rival models:
- 356.1 Contrary to the AER's conclusion that the Black CAPM is not widely used, there was evidence that this model is used in practice. It is common for US regulatory cases to use what is known as 'the empirical CAPM', which is an implementation of the CAPM formula with an intercept above the contemporaneous risk free rate, consistent with the Black CAPM and the empirical evidence that supports it.<sup>293</sup> Similarly, it is common for independent expert reports to adopt a risk-free rate in excess of the contemporaneous risk-free rate, consistent with the Black CAPM theory that the regression intercept is likely to be above the risk-free rate.<sup>294</sup>
- 356.2 The AER does not appear to have any evidentiary basis for concluding that the Black CAPM estimates proposed by ActewAGL are empirically unreliable, other than its observation that it is different to other estimates. The empirical basis for the Black CAPM zero-beta premium estimates has been clearly explained.<sup>295</sup> Moreover, it has been explained that the main reason why these estimates differ from earlier estimates is because the estimation was done in such a way that the high returns to high book-to-market stocks did not affect the estimate of the zero-

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<sup>291</sup> SFG, *Beta and the Black Capital Asset Pricing Model*, February 2015, [71].

<sup>292</sup> Nobel Prize Committee, Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2013: Understanding Asset Prices, October 2013, section 7.

<sup>293</sup> SFG, *Beta and the Black Capital Asset Pricing Model*, February 2015, [71].

<sup>294</sup> SFG, *Beta and the Black Capital Asset Pricing Model*, February 2015, [70].

<sup>295</sup> SFG, *Cost of equity in the Black Capital Asset Pricing Model*, May 2014.

beta premium.<sup>296</sup> This was done to address a concern that earlier estimates of the zero-beta premium were affected by the empirical fact that stocks with a high book-to-market ratio for equity have historically earned high returns, and these stocks more often than not had low beta estimates.<sup>297</sup> That is, the difference between the proposed estimates of the Black CAPM zero-beta premium and earlier estimates does not indicate that the model is empirically unreliable; rather, it reflects a development in the methodology for estimating this parameter.

356.3 While it is true that the Fama-French Model (like the SL CAPM) is potentially sensitive to methodological choices, this does not constitute a proper basis for dismissing this Model out of hand. Rather, this means that each methodological choice needs to be carefully considered in light of the available evidence. The evidence before the AER included careful consideration of a range of methodological choices (eg, in relation to construction of factors, and data sources for parameter estimation) and the selection of the estimation approach that was considered to be the most appropriate in all of the relevant circumstances.<sup>298</sup> There was also clear explanation in the evidence before the AER of the reasons for each of the methodological choices made.<sup>299</sup> The AER does not appear to consider the merits of these methodological choices in the Final Determination. Rather, the AER simply observes that the output of the Fama-French Model is potentially sensitive to these choices.

356.4 The AER's concern that the Fama French Model is 'not clearly estimating ex ante returns'<sup>300</sup> appears to be bound up in a concern that the Model is merely an empirical model exploring the observed historical relationship between stock returns and lacks predictive power. However, the sharp distinction sought to be drawn by the AER has no logical basis. Much scientific progress depends upon establishing the existence of reliable relationships over time, from which conclusions may sensibly be drawn and predictions for the future made. This is inductive reasoning. The AER's observations are not a proper basis for rejection of the Fama-French Model.<sup>301</sup> On the contrary, the fact that a model performs well against historical data provides a reason for considering estimates of forward-looking returns based on that model.

356.5 In any event, the AER's concern that the Fama-French Model 'lacks a theoretical foundation' is overstated. Since the initial development of the Fama-French Model, the focus of the literature has been on developing theoretical underpinnings for the Fama-French Model factors, to explain why the additional factors assist in enabling the Fama-French Model to better fit the observed data.<sup>302</sup> A number of theoretical explanations for the Fama-French Model factors,

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296 SFG, *Beta and the Black Capital Asset Pricing Model*, February 2015, [65].

297 SFG, *Beta and the Black Capital Asset Pricing Model*, February 2015, [65].

298 SFG, *Using the Fama-French model to estimate the required return on equity*, 13 February 2015, [58]; SFG, *The Fama French model*, May 2014, section 4.

299 SFG, *The Fama French model*, May 2014.

300 Final Determination, page 3-68.

301 SFG, *Using the Fama-French model to estimate the required return on equity*, 13 February 2015, [65] to [71].

302 SFG, *Using the Fama-French model to estimate the required return on equity*, 13 February 2015, [73].

including that the performance of high book-to-market stocks may be explained by the risk of financial distress and/or exposure to market conditions, were referred to in the evidence before the AER.<sup>303</sup>

356.6 As in relation to the Fama-French Model, the AER expresses a concern in relation to the DGM that the DGM is sensitive to input assumptions. Again, this is not a proper basis for rejecting the DGM. SFG carefully considered a range of methodological choices (eg, in relation to model design and assumed growth rates) and selected the estimation approach that it considered to be the most appropriate in all of the relevant circumstances. SFG also explains how and why its methodological choices differ from those of the AER, in its implementation of the DGM.<sup>304</sup> Given a range of methodological choices, the appropriate course was for the AER to select the most appropriate methodology, not to reject the DGM on the basis that such choices were available.

356.7 The AER's concern that DGM estimates of the MRP are sensitive to changes in the risk-free rate<sup>305</sup> reflects a prior assumption that the MRP should be relatively stable and that it must be the return on equity that changes as the risk-free rate rises or falls. There is no basis for that assumption, and recent experience suggests otherwise. The evidence over time instead suggests that in certain periods the MRP may be relatively stable, and that in other periods it may be relatively volatile. The AER's own DGM analysis indicates that the MRP will move as the risk-free rate changes, while the overall return on equity will be more stable.<sup>306</sup> Thus, the DGM tends to reduce the sensitivity of the allowed return on equity to changes in risk-free rates, relative to the AER's implementation of the SL CAPM.<sup>307</sup>

357. As a consequence, the AER made an error or errors of fact, or alternatively incorrectly exercised a discretion or made an unreasonable decision, in concluding that the SL CAPM was superior to all other models and that each of the Black CAPM, the Fama-French Model and the DGM were not suitable for use in deriving the return on equity.

*The AER's application of its foundation model leads to an artificially low result*

358. Further to paragraphs 205 and 206 of ActewAGL's Application and the ground alleged in paragraph 207 of that Application, the evidence before the AER, including as referred to above, was that a return on equity of 7.1% was too low. This estimate fell below current

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303 SFG, *The Fama French model*, May 2014, [115] to [144].

304 SFG, *Alternative versions of the dividend discount model and the implied cost of equity*, May 2014; SFG, *Share prices, the dividend discount model and the cost of equity for the market and a benchmark energy network*, 13 February 2015.

305 Final Determination, page 3-302.

306 In the Draft Decision, the AER's DGM produced a range of estimates for the MRP of 6.6% to 7.8%, which implied a prevailing market return on equity of 10.15% to 11.35%, based on a prevailing risk-free rate of 3.55% (Draft Decision, page 3-232). In the Final Determination, the AER's DGM produced a range of estimates for the MRP of 7.4% to 8.6%, which implied a prevailing market return on equity of 9.95% to 11.15%, based on a prevailing risk-free rate of 2.55% (Final Determination, page 3-308). Thus, as the risk-free rate declined by 1%, the DGM estimate of the MRP rose by approximately 0.8% and the implied estimate of the prevailing market return only fell by 0.2%.

307 SFG, *The required return on equity for the benchmark efficient entity*, 13 February 2015, [66]; SFG, *The required return on equity for the benchmark efficient entity*, 12 March 2015, [64].



estimates of the return on equity from market practitioners and below estimates implied by the AER's DGM analysis.

359. This outcome was the product of declining yields of Commonwealth Government Securities (CGS) coupled with a fixed or relatively inflexible MRP as applied by the AER under the SL CAPM. The inflexibility in the AER's approach to estimating the MRP is demonstrated by the fact that it has continued to apply an MRP of either 6.0% or 6.5% (i.e. its estimate has only varied by 50 basis points) through the largest bull market and the largest financial crisis in modern times, as discussed below.
360. The output of the AER's application of the SL CAPM has been driven down by declining CGS yields, which has been caused by factors that do not impact, or do not impact to the same extent, on the return on equity. However the AER's approach assumes that as CGS yields have declined, risk premiums have not changed and the return on equity fallen in lock-step with the decline in CGS yields.
361. The evidence before the AER was that CGS yields were very volatile in recent times, and included evidence that CGS yields had been driven down by factors including:<sup>308</sup>
- 361.1 a flight to quality and the recognition of Australian CGS as a safe haven investment;
  - 361.2 a shrinking supply of AAA rated sovereign debt globally;
  - 361.3 a heightened risk aversion and increased levels of perceived risk (which would depress CGS yields but elevate the required return on equity); and
  - 361.4 heightened demand for liquid assets including demand produced by changes in banking regulations.
362. The evidence before the AER was that CGS yields had recently declined by 1.8% over 14 months and 1% over 4 months.<sup>309</sup> There was no analysis by the AER as to whether there was any proper basis for thinking that equity returns required in the market had declined this precipitously, and indeed there is no such proper basis. The reductions were well in excess of reductions in the interest rate. This indicated that the AER's inflexible application of the SL CAPM as a sole model was not a reliable means of deriving the return on equity, and therefore not one that contributes to the achievement of the allowed rate of return objective.
363. Further, the evidence before the AER<sup>310</sup> indicated that there was no proper basis for concluding that a largely fixed MRP (based primarily on historical measures) could be used with a prevailing (and depressed) risk free rate to make an accurate calculation of the return

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<sup>308</sup> CEG, *Estimating the cost of equity, equity beta and MRP*, January 2015, pages 24 to 25.

<sup>309</sup> Final Determination, page 3-13; Draft Decision, page 3-11. The risk-free rate applied by the AER in its placeholder distribution determination for the transitional regulatory control period of 16 April 2014 (**Transitional Determination**) was 4.3%. The risk-free rate in the Draft Decision was 3.55% and in the Final Determination was 2.55%.

<sup>310</sup> SFG, *The required return on equity for the benchmark efficient entity: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, APA, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015; SFG, *The required return on equity for the benchmark efficient entity Report for Ausgrid, Endeavour Energy and Essential Energy*, 12 March 2015.

on equity, and one that contributes to the achievement of the allowed rate of return objective, as the evidence suggested at least that realised excess returns have varied over time (meaning that the MRP must have fluctuated from time to time) and that current equity returns were not simply reducing in line with CGS yields. This means that before simply applying an MRP based primarily on historical average excess returns, it was necessary for the AER to consider whether the resulting return on equity would properly reflect prevailing conditions in the market for equity funds.

364. SFG explained that such an approach is illogical and contrary to evidence:<sup>311</sup>

...the AER's approach has been to maintain the 6.5% MRP estimate from its Guideline. The result is a material *decrease* in the allowed return on equity for the average firm from  $4.2\% + 6.5\% = 10.7\%$  to  $3.55\% + 6.5\% = 10.05\%$ . That is, the new evidence since the Guideline (according to the AER's own estimates [from its DGM estimations]) suggests a material *increase* in the required return on the market, whereas the AER has imposed a material *decrease* in the allowed return on the market.

Moreover, government bond yields have continued to fall since the recent draft decisions and averaged 2.64% over January 2015. If the AER were to maintain a market risk premium of 6.5% [in the *Final* Decision], there would be a further material fall in the allowed return on equity to  $2.64\% + 6.5\% = 9.14\%$ . This would represent a 14% fall in the allowed return on equity since the Guideline, when the only new evidence considered by the AER indicates that the required return on equity has increased. In our view, such an outcome would be devoid of all logic and is simply untenable.

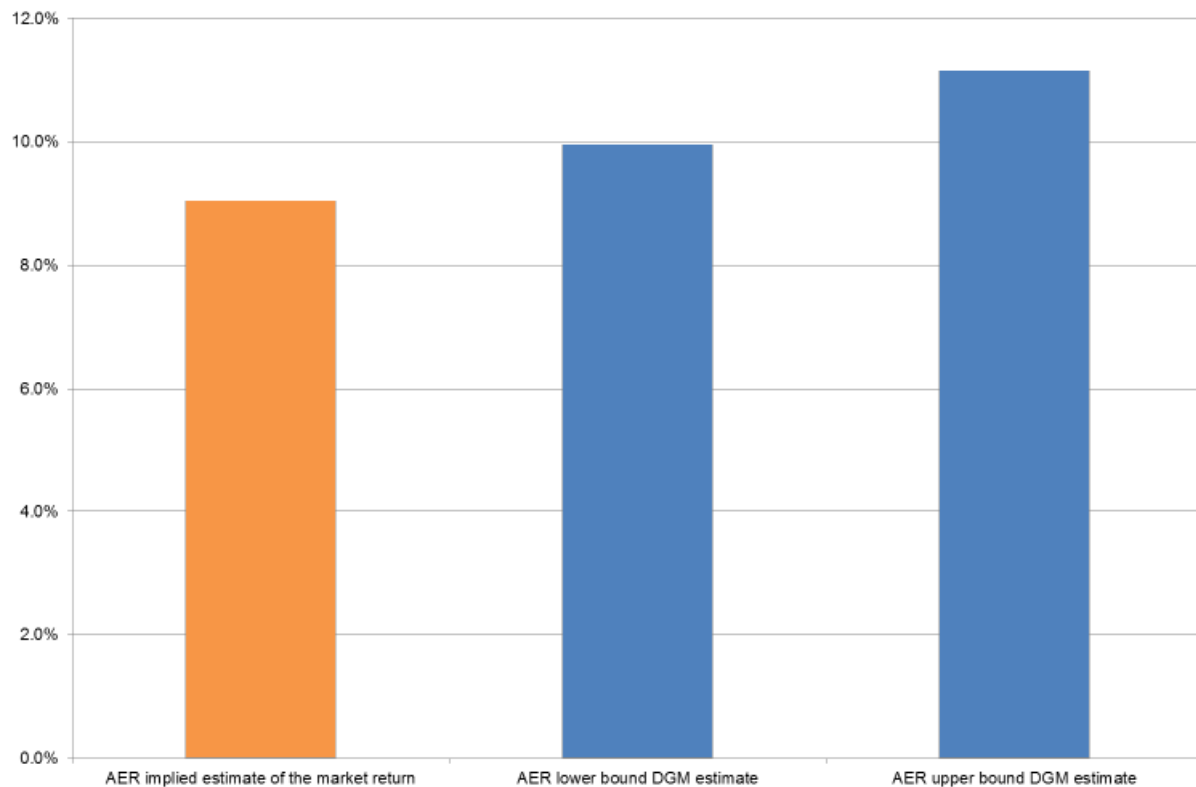
365. Further to the ground alleged in paragraph 212 of ActewAGL's Application, the AER failed to have regard to market-wide DGM estimates (including its own estimates) as providing an alternative means of assessing the return on equity and whether the matters impacting on yields of CGS were also impacting on the required equity return. The market-wide DGM provides an indicator of the prevailing market return on equity, which can then be compared to the market-average output of the AER's SL CAPM (ie, at an equity beta of one, being simply the risk free rate plus the MRP). In circumstances where there was evidence that the output of the AER's implementation of the SL CAPM was being impacted in a volatile way by global developments affecting CGS yields, the AER had an alternative means of assessing the prevailing conditions in the market for equity funds (including the MRP) and yet irrationally chose not to have regard to it. Had the AER had regard to this evidence, it would have been clear that its estimate of the return on equity (and implied estimate of the market return) was too low. As shown in the Figure below, the AER's implied estimate of the market return of 9.05%<sup>312</sup> is materially lower than its estimates of the market return from the DGM.

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<sup>311</sup> SFG, *The required return on equity for the benchmark efficient entity: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, APA, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, pages 24 to 25; SFG, *The required return on equity for the benchmark efficient entity Report for Ausgrid, Endeavour Energy and Essential Energy*, 12 March 2015, pages 24 to 25.

<sup>312</sup> This is calculated as the sum of the risk-free rate (being 2.55%) and the AER's estimate of the MRP (of 6.5%).

### AER implied estimate of market return compared to DGM estimates<sup>313</sup>



366. Finally, as alleged in paragraph 207 of ActewAGL's Application, the AER erred in concluding that its implementation of the SL CAPM, with a fixed or relatively inflexible MRP, would provide for certainty and predictability, in a manner that is consistent with achieving the allowed rate of return objective.<sup>314</sup> In fact, the AER's approach leads to unprecedented instability in estimates of the return on equity, as shown in the Table below.

### AER estimates of the return on equity over time<sup>315</sup>

Decision	Return on equity
AER final decision for NSW for 2009/10 to 2013/14 (as varied by the Tribunal)	11.8%

<sup>313</sup> The AER's DGM estimates of the MRP range from 7.4% to 8.6% (Final Determination, page 3-308). These are added to the risk-free rate of 2.55% to derive estimates of the market return from the AER's DGM.

<sup>314</sup> Final Determination, pages 3-15, 3-60 and 3-138.

<sup>315</sup> *Application by EnergyAustralia and Others (No 2)* [2009] ACompT 9; AER, *Final decision Australian Capital Territory distribution determination 2009-10 to 2013-14*, 28 April 2009, page 108; *Ausgrid Endeavour Energy Essential Energy ActewAGL Transitional distribution decision 2014-15*, April 2014, page 37; Draft Decision, page 3-10; Final Determination, page 3-11.

Decision	Return on equity
AER final decision for ActewAGL for 2009/10 to 2013/14	10.3%
AER transitional decision for NNSW and ActewAGL	8.9%
AER Draft Decision	8.1%
AER Final Determination	7.1%

*Determination of the SL CAPM equity beta*

367. The AER concluded that the equity beta lies in the range of 0.4 to 0.7.<sup>316</sup> From within this range, the AER selected a point estimate of 0.7.
368. As alleged by the ground set out in paragraph 215 of ActewAGL's Application, the AER made an error of fact, or alternatively incorrectly exercised a discretion or made an unreasonable decision, in concluding that an appropriate range for the equity beta is 0.4 to 0.7. As a consequence of this error in defining the range, and due to the failure of the AER to have proper regard to estimates outside this range, the AER erred in its determination of the equity beta point estimate.
369. The AER proceeded with a three-step approach to estimating the equity beta:
- 369.1 In step one, the AER examined a range for the equity beta based on a very limited set of evidence. The evidence relied on in step one was confined to empirical evidence based on a very limited set of Australian energy network businesses. That produced a range of 0.3 to 0.8.
- 369.2 In step two, the AER examined the range of 0.3 to 0.8, noting that most figures fell within the range of 0.4 to 0.7, and then adopted that range of 0.4 to 0.7 as the primary range for the equity beta.
- 369.3 In step three, the AER selected a point from within the range defined in step two, having regard to a wider set of evidence. The evidence considered in step three included empirical evidence based on a broader set of comparator businesses (including some international businesses) and the theory of the Black CAPM.
370. The effect of adopting this three-step approach was that much of the relevant evidence had little or no role in influencing the equity beta estimate. The evidence considered under step three could only have an effect on the determination of the equity beta to the extent that it

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Final Determination, page 3-369.

confirmed a value within the range determined under step two. To the extent that this evidence indicated a value outside this range, it was given no weight.

371. Accordingly, the effect of the AER's approach was to give foundational weight to the evidence considered under steps one and two (empirical estimates based on the limited Australian sample) and little or no weight to the evidence considered under step three (empirical estimates based on a broader sample and the theory of the Black CAPM). This was an unreasonable approach in circumstances where:

371.1 The estimates for the Australian businesses were based on a very small sample, and there was evidence as to the unreliability of estimates based on this small sample.<sup>317</sup> The estimates of Professor Henry which were relied on by the AER were based on a sample of only nine domestic energy network businesses, only four of which remain listed. Three ceased trading 8 to 9 years ago, one ceased trading in 2012 and one ceased trading in 2014.<sup>318</sup> The sample is not sufficiently deep to draw any reliable conclusion.

371.2 It was not the case that an approach of using a very limited sample as the primary basis for estimating the equity beta was recommended by the AER's consultant, Professor Henry. Rather, the AER instructed Professor Henry to confine his analysis to the limited sample.<sup>319</sup>

372. Further, even if it was appropriate for the AER to define its equity beta range by reference to evidence from Australian businesses only, the AER erred in doing so. Whereas the AER adopted a range of 0.4 to 0.7, Professor Henry's advice to the AER was that the point estimate for the equity beta lies in the range of 0.3 to 0.8.<sup>320</sup> This was significant because the AER treated its Australian equity beta range as a rigid boundary on the equity beta, with other information only considered by the AER to inform the point estimate adopted from within the range.

373. The AER also erred in its interpretation of the evidence based on samples including international evidence. The AER's conclusion from this evidence was that it indicates a range for the equity beta of 0.3 to 1.0, and that it provides 'some limited support' for an equity beta towards the top of the AER's 0.4 to 0.7 range.<sup>321</sup> However, in so doing, the AER compared betas calculated from entities with different levels of gearing from the benchmark entity.<sup>322</sup> When properly understood (and with estimates appropriately re-levered to reflect the assumed gearing level of the benchmark efficient entity), this evidence indicates an equity beta estimate materially above the AER's estimate of 0.7.

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<sup>317</sup> SFG, *Beta and the Black Capital Asset Pricing Model: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 10.

<sup>318</sup> Final Determination, page 3-386.

<sup>319</sup> Ólan T. Henry, *Estimating  $\beta$ : An update*, April 2014, page 4.

<sup>320</sup> Ólan T. Henry, *Estimating  $\beta$ : An update*, April 2014, page 63.

<sup>321</sup> Final Determination, page 3-430.

<sup>322</sup> Final Determination, pages 3-418 to 3-421.

374. The international empirical evidence referred to by the AER is as follows:<sup>323</sup>
- 374.1 SFG reports estimates of 0.88 and 0.91 (re-levered), based on a sample including a large number of US-listed businesses;
  - 374.2 Damodaran's estimate for US utilities as at January 2015 is 0.92;
  - 374.3 PwC's estimates for New Zealand businesses indicate a re-levered equity beta of 0.87;
  - 374.4 the Brattle Group's report for the Netherlands Competition Authority indicates a range for the equity beta of 0.71 – 1.01;
  - 374.5 the FTI Consulting Report for Ofgem does not report gearing data, and therefore comparable estimates (appropriately re-levered) cannot be derived;<sup>324</sup> and
  - 374.6 the Alberta Utilities Commission (2013) report does not contain beta estimates, but rather beta submissions. Since there is no information about the basis of those submissions, comparable estimates (appropriately re-levered) cannot be derived.<sup>325</sup>
375. As can be seen, the evidence from samples including international businesses does not merely provide 'limited support' for an equity beta towards the top of the AER's 0.4 to 0.7 range. Rather, this evidence all supports an equity beta above 0.7. However, due to the AER's relegation of this information to a subsidiary role in the estimation of beta, it has no impact on the AER's estimate. Since the AER (erroneously) defined the top of the range to be 0.7, this evidence which indicated a value above 0.7 had to be disregarded.
376. Finally, the AER erred in its 'conceptual analysis', including because it concluded that business risk factors would outweigh financial risk factors (ie, the level of gearing).<sup>326</sup> There was no proper basis for such a conclusion.

*Use of Black CAPM theory to inform the estimate of the SL CAPM equity beta*

377. Further to the ground alleged in paragraph 208 of ActewAGL's Application, the AER made an error of fact, or alternatively incorrectly exercised a discretion or made an unreasonable decision, in concluding that it could overcome recognised difficulties with the SL CAPM and nevertheless use the SL CAPM as its sole or 'foundation' model by using the 'theory of the Black CAPM' to choose an equity beta of 0.7 from the top of the AER's equity beta range.

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<sup>323</sup> Final Determination, pages 3-418 to 3-421.

<sup>324</sup> SFG, *Beta and the Black Capital Asset Pricing Model: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 15.

<sup>325</sup> SFG, *Beta and the Black Capital Asset Pricing Model: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 15.

<sup>326</sup> Final Determination, page 3-373.

378. The AER appeared to recognise in its Final Determination that some allowance needed to be made for the shortcomings of the SL CAPM that are indicated by Black CAPM theory - that is, the fact that returns for low-beta stocks are likely to be higher than what is predicted by the SL CAPM.<sup>327</sup> However, the AER had no way of knowing whether the allowance that it made would adequately compensate for these shortcomings in the SL CAPM. The AER could not know whether adopting a point estimate for the equity beta at the top of its range would be sufficient.
379. As discussed above, the AER's beta range was not a correct range for beta. In particular:
- 379.1 had the AER not constrained itself to relying on Professor Henry's analysis, which was based on a very small sample of businesses, it would have concluded that an appropriate range for the SL CAPM equity beta extends higher than 0.7; and
- 379.2 even if it had been appropriate for the AER to rely solely on Professor Henry's analysis, the correct conclusion from this evidence was that the range for equity beta is 0.3 to 0.8. Had the AER adopted this (correct) interpretation of Professor Henry's analysis, it would have concluded that the top of the equity beta range is 0.8, not 0.7.
380. Further, there was no basis or analysis undertaken by the AER to determine whether selecting a figure for beta at the top of its range compensated for the downwards bias or other difficulties in the application of the SL CAPM. The AER itself acknowledged in the Final Determination that it could not quantify the specific adjustment required to the SL CAPM equity beta to account for the theory of the Black CAPM, stating:<sup>328</sup>
- We consider the theoretical principles underpinning the Black CAPM demonstrate that market imperfections could cause the true (unobservable) expected return on equity to vary from the SLCAPM estimate. For firms with an equity beta below 1.0, the Black CAPM may predict a higher expected return on equity than the SLCAPM. We use this theory to inform our equity beta point estimate, and consider it supports an equity beta above the best empirical estimate implied from Henry's 2014 report. However, while the direction of this effect may be known, the magnitude is much more difficult to ascertain. We do not consider this theory can be used to calculate a specific uplift to the equity beta estimate to be used in the SLCAPM. This would require an empirical implementation of the Black CAPM, and we do not give empirical evidence from the Black CAPM a role in determining the equity beta for a benchmark efficient entity...
- On the basis of the available information, we consider that the theoretical principles underpinning the Black CAPM cannot indicate a specific value for the equity beta.
381. As explained by the AER in this passage, it is unable to quantify the required adjustment because it refuses to take into account empirical estimates from Black CAPM. Clearly, it is impossible to consider the quantum of any adjustment needed to account for the theory of the Black CAPM without estimating the return on equity using the Black CAPM (which the AER did not do).

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<sup>327</sup> Final Determination, page 3-425.

<sup>328</sup> Final Determination, page 3-425.

382. The correct application of the 'theory of the Black CAPM' would be to use the Black CAPM itself in the calculation of the return on equity. This would provide an indication of the extent to which the SL CAPM underestimates the required return on equity for low beta stocks.
383. When the Black CAPM is estimated empirically, this shows that selecting the top of the AER's equity beta range will not adequately correct for the shortcomings in the SL CAPM indicated by Black CAPM theory. If the AER's parameter estimates are used in the Black CAPM along with the best available estimate of the zero-beta premium, the return on equity estimated by the Black CAPM is above the return on equity estimated by the AER using the SLCAPM. The Table below shows that even if the AER's lower bound beta value is used in the Black CAPM, the resulting return on equity estimate is still above the AER's SL CAPM estimate using the upper bound beta value. If the AER's 'best empirical estimate' of beta is used in the Black CAPM, the resulting return on equity estimate is significantly above the AER's SL CAPM estimate using the upper bound beta value. This indicates that if the AER were to properly adjust its SL CAPM beta estimate to account for the bias in the SL CAPM indicated by Black CAPM theory, the resulting beta would need to be higher than 0.7.

**Table 1: Comparison of SLCAPM and Black CAPM return on equity estimates<sup>329</sup>**

Model	Return on equity
SL CAPM – equity beta 0.7; MRP 6.5%	7.1%
Black CAPM – equity beta 0.4 (AER lower bound); MRP 6.5%	7.2%
Black CAPM – equity beta 0.5 (AER 'best estimate'); MRP 6.5%	7.5%
Black CAPM – equity beta 0.7 (AER upper bound); MRP 6.5%	8.1%

*Determination of the MRP*

384. Further to the ground alleged by paragraph 213 of ActewAGL's Application, the AER made an error of fact, or alternatively an incorrect exercise of discretion or an unreasonable decision, in concluding that an appropriate figure for the MRP was 6.5%.
385. In a similar fashion to its method for estimating the equity beta, the AER proceeded with a three-step approach to estimating the MRP.<sup>330</sup>
- 385.1 In step one, the AER determined a 'baseline' estimate for the MRP, based on estimates of historical excess returns. The AER considered that the information on historical excess returns indicated a baseline estimate for the MRP of 6.0%.

<sup>329</sup> All calculations are based on a risk-free rate of 2.55% (as used in the Final Determination) and a Black CAPM zero-beta premium of 3.34% (as estimated by SFG). Refer to: SFG, *Beta and the Black Capital Asset Pricing Model: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 4.

<sup>330</sup> Final Determination, page 3-357.



This baseline estimate was taken from a range of estimates of historical excess returns of 5.1% to 6.5%.

- 385.2 In step two, the AER had regard to DGM evidence in order to determine whether it should select a MRP point estimate above or below the baseline estimate of 6.0%. The AER's DGM estimates of the MRP ranged from 7.4% to 8.6%.<sup>331</sup> The AER considered that this information could justify a point estimate above the 6.0% baseline, but did not support a point estimate above the top of the range implied by historical excess returns (of 6.5%).<sup>332</sup>
- 385.3 In step three, the AER placed some reliance on survey evidence and conditioning variables. The AER considered that this information, in conjunction with DGM evidence, helps to indicate how far above or below the baseline estimate the MRP point estimate should be.
386. The effect of adopting this three-step approach was that critical evidence as to the prevailing MRP, from the AER's DGM model, had very little influence on the determination of the point estimate. This evidence was only used to indicate whether the prevailing MRP is likely to lie above or below the AER's baseline estimate, which reflects the AER's view of the historic average MRP. The estimates from the AER's DGM (which better reflect prevailing market conditions than historical excess returns) do not appear to otherwise influence the AER's determination of the MRP.
387. The AER also appears to have constrained its consideration of the appropriate MRP through its three-step approach. Through its consideration of historical excess returns estimates in step one, the AER appears to have constrained the range of possible MRP outcomes to that indicated by its range of estimates for the historical average excess returns (5.1% to 6.5%). Consequently, the evidence considered under step two (the AER's DGM estimates) could only have an effect on the determination of the MRP to the extent that it confirmed a value within the range determined under step one. To the extent that this evidence indicated a value outside this range, it was given no weight, or its role was limited to taking the AER's estimate of the MRP to the top of the range defined by step one.
388. This approach was erroneous in a number of respects, including:
- 388.1 The AER incorrectly identified the appropriate range of estimates for the historical average excess returns in step one. The bottom of the AER's range is based on estimates using a geometric average of historical excess returns, which is not an appropriate measure.<sup>333</sup> Based on an arithmetic average of historical excess returns, and with appropriate adjustments to the historical data, the correct range of estimates of the historical excess returns based on the various sample

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331 Final Determination, page 3-358.

332 Final Determination, page 3-359.

333 NERA, *Historical Estimates of the Market Risk Premium: A report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, AusNet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, February 2015.

periods considered by the AER is 5.8% to 6.6%.<sup>334</sup> Over the longest time period for which data is available, the historical average excess return is 6.6%.<sup>335</sup>

- 388.2 By using estimates of the historical average excess return as its 'baseline' for estimating the MRP, the AER gave undue weight to this information. The AER incorrectly analysed the range for the historical average MRP as suggesting that the prevailing MRP could be found in the range of estimates for the historical average excess returns derived in step one (being 5.1% to 6.5%),<sup>336</sup> whereas all that this range suggested was that the MRP in *average* market conditions had a range of somewhere between 5.1% to 6.5%, the range merely reflecting the statistical uncertainty around such estimates of the MRP in average market conditions. Consequently, the AER failed to appreciate that the best estimate of the prevailing MRP need not fall within the range of estimates for the historical average excess return.
- 388.3 The AER failed to properly take into account the empirical evidence, including from its own DGM analysis, which indicated that the prevailing MRP was in fact well above the historical average MRP.<sup>337</sup>
- 388.4 The AER inappropriately constrained the role of DGM analysis to indicating whether the prevailing MRP was likely to be above or below its 'baseline' estimate of the MRP. The appropriate role for DGM estimates is as direct evidence of the prevailing MRP.
- 388.5 The AER erred in its application of the DGM, by making an adjustment to GDP growth rates that was without any proper basis.<sup>338</sup>
- 388.6 The AER erred in its conclusion that 'conditioning variables' supported its MRP estimate.<sup>339</sup> Further, in considering conditioning variables, the AER failed to have regard to movements in the risk-free rate as a potential indicator of movements in the equity risk premium. There was evidence that the risk-free rate is a standard variable that is almost always included in any set of conditioning variables, and that the current low risk-free rate would be consistent with very high risk premiums.<sup>340</sup>

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334 Final Determination, pages 3-323 to 3-324 (Table 3-41).

335 Final Determination, page 3-323 (Table 3-41); NERA, *Historical Estimates of the Market Risk Premium: A report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, AusNet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, February 2015.

336 Final Determination, page 3-354.

337 Final Determination, page 3-354.

338 Final Determination, page 3-277.

339 Final Determination, page 3-330.

340 SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, Transend and SA Power Networks*, 6 June 2014; SFG, *The required return on equity for the benchmark efficient entity: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, APA, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 27; SFG, *The required return on equity for the benchmark efficient entity Report for Ausgrid, Endeavour Energy and Essential Energy*, 12 March 2015, page 27.

- 388.7 The AER failed to have adequate regard to evidence of the historical average real market return (ie, the Wright approach) in estimating the MRP.<sup>341</sup> The AER incorrectly concluded that this evidence could only be used as a 'cross-check' on its overall return on equity estimate.
389. The appropriate method for estimating the MRP is to consider all relevant evidence together, rather than using some evidence to indicate a baseline value and constraining the role of other evidence to confirming this baseline or providing directional information only.
390. A balanced assessment of the relevant evidence was provided by SFG.<sup>342</sup> The AER erred in not adopting such a balanced approach.

*Consistency with the AER's estimate of the value of imputation credits*

391. Further to the ground alleged in paragraph 214 of ActewAGL's Application, the AER made an error of fact, or alternatively an incorrect exercise of discretion or an unreasonable decision, in concluding that its method for determining the return on equity is consistent with its estimate of the value of imputation credits, whereas in fact the AER did not properly adjust its estimate to account for the value of imputation credits.
392. As explained by SFG, the AER's adjustment formula is inconsistent with the formulae embedded in the AER's post-tax revenue model (**PTRM**).<sup>343</sup> Having computed a grossed-up return that includes the AER's assessment of the benefits of imputation credits, the PTRM then removes the assumed benefit of imputation credits to set the allowed return on equity for the firm. However in each of these two steps, a different figure is assumed for the benefit of imputation credits.

*Cross-check analysis*

393. Further to the ground alleged in paragraph 216 of ActewAGL's Application, the AER made an error of fact, or alternatively incorrectly exercised a discretion or made an unreasonable decision, in concluding that its 'cross checks' confirm its return on equity estimate of 7.1%. The AER misinterpreted key evidence which it relied on as confirming the reasonableness of its return on equity estimate, including evidence from the 'Wright approach' and evidence from independent expert reports.

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341 Final Determination, pages 3-59 (Table 3-5), 3-80 to 3-81 and 3-92 (Table 3-14).

342 SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, Transend and SA Power Networks*, 6 June 2014; SFG, *The required return on equity for the benchmark efficient entity: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, APA, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015; SFG, *The required return on equity for the benchmark efficient entity Report for Ausgrid, Endeavour Energy and Essential Energy*, 12 March 2015.

343 SFG, *The required return on equity for regulated gas and electricity network businesses: Report for Jemena Gas Networks, ActewAGL Distribution, Ergon, Transend and SA Power Networks*, 6 June 2014; SFG, *The required return on equity for the benchmark efficient entity: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, APA, Ausgrid, Ausnet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, page 26; SFG, *The required return on equity for the benchmark efficient entity Report for Ausgrid, Endeavour Energy and Essential Energy*, 12 March 2015, page 26; SFG, *Share prices, the dividend discount model and the cost of equity for the market and a benchmark energy network: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL Electricity, APA, Ausgrid, Ausnet Services, CitiPower, Endeavour, Energex, Ergon, Essential Energy, Powercor, SA Power Networks and United Energy*, 13 February 2015, pages 17 to 21.

394. The AER erroneously applied the Wright approach as a cross-check on its overall return on equity estimate, rather than as a method for estimating the MRP.<sup>344</sup> The AER incorrectly refers to the Wright approach as an alternative implementation of the SL CAPM designed to provide information at the return on equity level,<sup>345</sup> whereas in fact the Wright approach is an alternative method of estimating the MRP. This is confirmed by the advice provided to the AER by its own expert, Professor Handley, which refers to the Wright approach as 'an alternative non-standard approach to estimating the MRP'.<sup>346</sup>
395. Further, the AER's application of the Wright approach was illogical and unreasonable. The AER applied the Wright approach using an equity beta range of 0.4 to 0.7, despite having determined that an equity beta of 0.4 (or indeed any equity beta below 0.7) would be inappropriate.<sup>347</sup> The effect of this was to produce a very wide range of return on equity estimates from the Wright approach.
396. If the AER had applied the Wright approach using its selected point estimate for the equity beta, the AER's return on equity estimate would have failed this cross-check. As noted by the AER, the return on equity estimates using the Wright approach with an equity beta of 0.7 fall in the range of 7.77% to 9.66%.<sup>348</sup> Thus, the AER's return on equity estimate of 7.1% is not consistent with the evidence from the Wright approach, properly applied.
397. The Grant Samuel independent expert report for Envestra, when properly interpreted, also does not provide support for the AER's estimate of the return on equity. The AER made a number of errors in its interpretation of this evidence, which were identified in a letter from Grant Samuel in response to the Draft Decision.<sup>349</sup>
398. On a correct interpretation of the Grant Samuel report for Envestra, it is clear that it does not support the AER's equity risk premium (**ERP**) estimate. Incenta notes that range for the cost of equity implied by Grant Samuel's uplift factor was from 9.47% to 9.57%, with a respective ERP range of 5.27% to 5.37%, exclusive of any uplift for the value of imputation credits.<sup>350</sup> These Grant Samuel ranges compare with the AER's cost of equity of 7.1% and ERP of 4.55%.
399. All other independent valuation evidence cited by the AER in the Draft Decision (with the exception of one report that is more than 10 years old) does not support, and is above, the ERP allowed by the AER.<sup>351</sup> Similarly, the evidence referred to in the Final Determination does not support the reasonableness of the AER's return on equity estimate. As the AER itself

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344 Final Determination, pages 3-59 (Table 3-5), 3-80 to 3-81 and 3-92 (Table 3-14).

345 Final Determination, page 3-81.

346 John C Handley, *Advice on the Return on Equity*, 16 October 2014, page 17.

347 Final Determination, page 3-443.

348 Final Determination, page 3-445.

349 Grant Samuel, *Response to AER Draft Decision*, January 2015.

350 Incenta, *Further update on the required return on equity from independent expert reports: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausgrid, AusNet Services, Australian Gas Networks, CitiPower, Endeavour Energy, Energex, Ergon, Essential Energy, Powercor, SA PowerNetworks, and United Energy*, February 2015, page 25.

351 Draft Decision, pages 3-93 to 3-94 (Table 3-20). In all reports except two, the imputation-adjusted ERP is at least 5%. The two exceptions are the Grant Samuel report for Envestra, which (as discussed above) the AER has misinterpreted, and a 2003 report by Deloitte in respect of United Energy.

observes, the range for the imputation-adjusted return on equity from independent expert reports it has surveyed is 8.98% to 14.67%.<sup>352</sup>

400. The broker reports also do not support the AER's conclusion, once appropriate adjustments have been made for imputation. The AER notes that the range for the imputation-adjusted return on equity from recent broker reports (spanning a survey period from 1 October 2014 to 6 March 2015) is 7.3% to 12.0%.<sup>353</sup>
401. Finally, the AER erred in having regard to previous decisions of other regulators (many of which were made under significantly different market conditions) and submissions from stakeholders, as evidence of the prevailing return on equity that confirmed or supported the AER's estimate.

*Averaging period*

402. As alleged by ground 217 of ActewAGL's Application, the AER made an error of fact, or alternatively an incorrect exercise of discretion or an unreasonable decision, in determining a return on equity for the transitional regulatory control period (2014-15) of 7.1% using a 20-business day averaging period from 9 February to 6 March 2015, where (on the basis of the AER's estimation method for the return on equity) the correct approach would have been to use the averaging period of 28 February to 30 June 2014, which gave a return on equity of 10.42%.
403. There is no basis for the AER calculating a return on equity for the 2014-15 transitional regulatory control period on the basis of an averaging period which post-dates most of that period, particularly in light of the circumstance that the return on equity calculated by the AER's implementation of the SL CAPM has declined sharply since 1 July 2014, and indeed declined 1% between the Draft Decision and the Final Determination.

*Conclusion – return on equity*

404. By reason of the matters identified in this section as to the return on equity, the AER's decision as to the return on equity:
- 404.1 does not produce a return on equity that is commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as ActewAGL; and
- 404.2 does not have regard to the prevailing conditions in the market for equity funds,

such that the decision, and the resultant Allowed Rate of Return Decision, is not in accordance with clause 6.5.2 of the NER, and these decisions involve an error or errors of fact, or alternatively involve an incorrect exercise of discretion or are unreasonable.

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<sup>352</sup> Final Determination, page 3-449 (Table 3-56).

<sup>353</sup> Final Determination, page 3-452 (Table 3-57).

## 6. Return on debt

405. The basis for ActewAGL's application for review of the AER's decision to reject ActewAGL's proposed trailing average portfolio approach to estimating the return on debt (with no period of transition) and to instead determine to estimate the return on debt using a method that applies a form of transition from the previous 'on-the-day' approach to estimation of the return on debt to the trailing average portfolio approach is set out at paragraphs 220 to 263 of the Application. ActewAGL also refers to and relies on paragraphs 66 to 71 of the First Affidavit of Fleur Gibbons.
406. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue. The reasons for this are set out below.

### 6.1 Background

#### *Relevant rules*

407. This topic concerns the AER's estimation of the return on debt. The return on debt is one of two components that make up the allowed rate of return, with the other component being the return on equity. More specifically, the topic concerns:
- 407.1 whether the AER should impose a transition to its new methodology known as the 'trailing average approach', or whether (as contended by ActewAGL) there should be an immediate imposition of the trailing average approach; and
  - 407.2 if there is to be a transition, the form that the transition should take.
408. The rules relating to the calculation of the return on capital, and more specifically, the return on debt component of the return on capital, were the subject of significant amendment in November 2012.<sup>354</sup> The amendments included:
- 408.1 the insertion of the allowed rate of return objective;
  - 408.2 the provision for the return on debt to potentially vary from regulatory year to regulatory year; and
  - 408.3 explicit recognition that the return on debt methodology may be designed to reflect an average return that would have been required by debt investors in a benchmark efficient entity if it raised debt over an historical period (usually referred to as a 'trailing average' approach). This amendment was considered to enable a move away from the historical regulatory practice of adopting a methodology that was designed to reflect the return that would be required by debt investors if the entity raised debt at the time or shortly before the making of the relevant distribution determination (usually referred to as the 'on-the-day' approach).

The rules relating to the return on debt are described below.

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2012 Rule Change.

409. Clause 6.5.2(h) of the NER states that the return on debt for a regulatory year must be estimated such that it contributes to the achievement of the 'allowed rate of return objective'. This objective provides that the rate of return for a DNSP is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the DNSP in respect of the provision of standard control services (clause 6.5.2(c)).
410. Clause 6.5.2(i) provides that the return on debt may be estimated using a methodology that results in either:
- 410.1 the return on debt for each regulatory year in the regulatory control period being the same; or
  - 410.2 the return on debt (and consequently the allowed rate of return) being, or potentially being, different for different regulatory years in the regulatory control period).
411. Clause 6.5.2(j) provides that subject to the requirement that the return on debt be estimated in a manner that contributes to the achievement of the allowed rate of return objective, the methodology adopted to estimate the return on debt may, without limitation, be designed to result in the return on debt reflecting:
- 411.1 the return that would be required by debt investors in a benchmark efficient entity if it raised debt at the time or shortly before the making of the distribution determination for the regulatory control period (subparagraph (1));
  - 411.2 the average return that would have been required by debt investors in a benchmark efficient entity if it raised debt over an historical period prior to the commencement of a regulatory year in the regulatory control period (subparagraph (2)); or
  - 411.3 some combination of the returns referred to in subparagraphs (1) and (2).
412. Clause 6.5.2(k) requires that regard be had to the following factors in estimating the return on debt:
- 412.1 the desirability of minimising any difference between the return on debt and the return on debt of a benchmark efficient entity referred to in the allowed rate of return objective;
  - 412.2 the interrelationship between the return on equity and the return on debt;
  - 412.3 the incentives that the return on debt may provide in relation to capital expenditure over the regulatory control period, including as to the timing of any capital expenditure; and
  - 412.4 any impacts (including in relation to the costs of servicing debt across regulatory control periods) on a benchmark efficient entity referred to in the allowed rate of return objective that could arise as a result of changing the methodology that is used to estimate the return on debt from one regulatory control period to the next.

413. Finally, clause 6.5.2(m) requires the AER to make and publish rate of return guidelines. Clause 6.5.2(n) provides that the rate of return guidelines must set out, amongst other things:
- 413.1 the methodologies that the AER proposes to use in estimating the allowed rate of return, including how those methodologies are proposed to result in the determination of a return on debt in a way that is consistent with the allowed rate of return objective; and
  - 413.2 the estimation methods, financial models, market data and other evidence the AER proposes to take into account in estimating the return on debt.
414. The rate of return guidelines are not binding but if the AER makes a distribution determination that is not in accordance with the guidelines, the AER must state, in its reasons for the distribution determination, the reasons for departing from the guidelines.<sup>355</sup>

*Rule amendment*

415. As noted above, clause 6.5.2 of the NER was amended in November 2012 to explicitly permit the return on debt methodology to be designed to reflect an average return that would have been required by debt investors in a benchmark efficient entity if it raised debt over an historical period.
416. While the amended rules did not specify the methodology to be used to estimate the return on debt, the AEMC was clear in the guidance set out in its 2012 Rule Determination that whatever methodology was used, it should result in financing practices (and ultimately costs) that, insofar as possible, would be expected absent regulation.<sup>356</sup>

In its draft rule determination, the Commission considered that the long-term interests of consumers would be best served by ensuring that the methodology used to estimate the return on debt reflects, to the extent possible, the efficient financing and risk management practices that might be expected in the absence of regulation.

417. The AEMC went on to consider whether it should depart from the approach in the 2012 Draft Rule Determination, and concluded that (relevantly) there should be no change. Further, the AEMC observed that the NEO and the RPPs are more likely to be met by a methodology that allows the AER to more accurately match debt conditions in the market for funds.<sup>357</sup>
418. The amended rules do not specify the characteristics of the benchmark efficient entity. The AEMC noted that the NEO and the RPPs are more likely to be met by a non-prescriptive flexible framework.<sup>358</sup> The AEMC stated:<sup>359</sup>

It should remain open to the regulator and service providers to consider that different sectors and different kinds of service providers have different risk characteristics that lead to different characteristics for efficient debt financing. The Commission therefore agrees that a one-size-

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<sup>355</sup> NER, clause 6.2.8(c).

<sup>356</sup> 2012 Rule Determination, page 76.

<sup>357</sup> 2012 Rule Determination, page 86.

<sup>358</sup> 2012 Rule Determination, page 86.

<sup>359</sup> 2012 Rule Determination, page 86.



fits-all approach to setting a benchmark should not be considered a default position. However, the benefits of benchmarking for incentivising efficient financing practices must be retained.

419. The AEMC also observed that:<sup>360</sup>

efficient benchmarking [sic: benchmark] service providers may have different efficient debt management strategies... [D]ebt management practices tend to differ according to the size of the business, the asset base of the business, and the ownership structure of the business.

420. In making these observations, the AEMC cited a page of a report it had received from SFG which stated (inter alia):<sup>361</sup>

Debt management practices tend to differ according to... the size of the business: small to medium sized businesses can make use of interest rate swap contracts, whereas the swap market may not have sufficient depth to accommodate the requirement of very large businesses.

421. The AEMC also noted that the most appropriate benchmark to use in the regulatory framework for all service providers is the efficient private sector service provider.<sup>362</sup>

422. The guidance given by the AEMC also indicates that the AEMC intended that more than one approach could be adopted to estimating the return on debt having regard to different risk characteristics of benchmark efficient service providers.<sup>363</sup>

423. In respect of the factors listed in clause 6.5.2(k), the AEMC noted that the inclusion of the factors in the rules is intended to provide direction to the AER as to what factors the AER should consider in determining the best approach to estimate the return on debt.<sup>364</sup> The AEMC stated that the factors reflect a number of key issues raised during the rule change process:<sup>365</sup>

These issues can be summarised as follows:

- efficient benchmarking [sic: benchmark] service providers may have different efficient debt management strategies;
- the effect on the cost of equity of different methodologies for estimating the return on debt;
- the effect on incentives for efficient capex during the regulatory period of the methodology used to estimate the return on debt; and
- consideration of whether transition arrangements are required if there is a change in the methodology used to estimate the return on debt.

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<sup>360</sup> 2012 Rule Determination, pages 84 to 85.

<sup>361</sup> SFG, *Rule change proposals relating to the debt component of the regulated rate of return: Report for AEMC*, 21 August 2012, page 21.

<sup>362</sup> 2012 Rule Determination, page 88.

<sup>363</sup> 2012 Rule Determination, page 90.

<sup>364</sup> 2012 Rule Determination, page 84.

<sup>365</sup> 2012 Rule Determination, pages 84 to 85 (footnotes from original omitted).

The first factor in the rule requires the regulator to have regard to the characteristics of a benchmark service provider and how this influences assumptions about its efficient debt management strategy...debt management practices tend to differ according to the size of the business, the asset base of the business, and the ownership structure of the business.

424. Specifically in respect of the factor listed in clause 6.5.2(k)(4), that regard must be had to any impacts on a benchmark efficient entity that could arise as a result of changing the methodology used to estimate the return on debt from one regulatory control period to the next, the AEMC stated:<sup>366</sup>

...this criterion was intended to promote consideration of concerns raised by service providers with regard to transitions from one methodology to another. Its purpose is to allow consideration of transitional strategies so that any significant costs and practical difficulties in moving from one approach to another is taken into account.

425. The AEMC also stated that the factor reflects:<sup>367</sup>

consideration of whether transition arrangements are required if there is a change in the methodology used to estimate the return on debt.

426. In making this last statement, the AEMC referenced a page in a report by SFG, which stated:<sup>368</sup>

Many businesses would only consider a switch to a different method if appropriate transition arrangements could be put in place. For example, a business cannot today go back and borrow at a rate that applied ten years ago. If the regulatory allowance was set on this basis (by not allowing an appropriate transition arrangement), the result will be either a potentially material benefit or loss to the business – and conversely a potentially material loss or benefit for customers.

427. Therefore, the AEMC report contemplates that a transition may be necessary where a service provider has entered into commitments or otherwise acted in reliance on a previous regulatory approach which cannot immediately be undone.

*Components of the return on debt, approaches to its estimation and AER approach*

428. The common approach to the estimation of the return on debt is that it is calculated as: the risk free rate (or  $r_f$ ) plus the debt risk premium (**DRP**).

429. The risk free rate is essentially the expected return on risk free assets. As the expected return on risk free assets is not observable, prevailing yields on 10-year CGS are used as a proxy for the risk free rate over the appropriate forward looking investment horizon (which is accepted by all parties to be 10 years).

430. The return on debt has historically been estimated using what is termed the 'on-the-day' approach. This approach estimates the return on debt for the entire 5 year regulatory control

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<sup>366</sup> 2012 Rule Determination, page 85.

<sup>367</sup> 2012 Rule Determination, page 84.

<sup>368</sup> SFG, *Rule change proposals relating to the debt component of the regulated rate of return*, Report for the AEMC, 21 August 2012, page 7.

period as the prevailing return on debt during a period prior to the commencement of the regulatory control period. As implemented by the AER, this approach uses a short averaging period, typically of 5-40 days, shortly before the determination is made.<sup>369</sup> Conceptually, the on-the-day return on debt estimate would reflect the return on debt of an entity that raises all of the debt required to satisfy its financing needs once-that is, just ahead of the start of each regulatory control period.<sup>370</sup>

431. A service provider could only align its debt management practices with the on-the-day approach if it refinances the entirety of its debt in the measurement window prior to the commencement of the relevant regulatory control period.<sup>371</sup> However, and as appears to be generally accepted including by the AER, this is not an efficient financing practice as it would expose the entity to substantial refinancing risk.<sup>372</sup>
432. In light of the refinancing risk that would be associated with a financing strategy that involved refinancing the entirety of debt in the measurement window, most service providers hold a portfolio of debt with staggered maturities. However, under the on-the-day approach, this strategy is likely to result in a mismatch between the regulatory return on debt allowance and the actual return on debt of a service provider.<sup>373</sup> A service provider could seek to address this mismatch by taking out financial instruments (hedges) that hedge the base rate component (the risk free rate component) of the return on debt against the same component of the regulatory allowance. However, some service providers may not regard hedging in this manner as lowering overall risk, or, as noted by the AER, some service providers may consider that any such risk is acceptable and therefore do not hedge the base rate component.<sup>374</sup>
433. Under the on-the-day approach, the potential mismatch between the DRP component of the return on debt and the actual DRP faced by a service provider holding a portfolio of debt with staggered maturities cannot be hedged, as there is no market to effectively, and in a cost effective manner, hedge the DRP component.<sup>375</sup>
434. An alternative approach to estimating the return on debt is the 'trailing average' portfolio approach. This approach reflects the forward-looking return on debt that would be incurred by an entity if it raised debt incrementally. It is estimated as a trailing average of the total return on debt over a period spanning up to the start of a regulatory year.<sup>376</sup> The length of the period over which the trailing average is measured depends on the benchmark debt maturity (which is generally accepted to be 10 years).<sup>377</sup>

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<sup>369</sup> AER, *Explanatory Statement Draft rate of return guideline*, August 2013 (**Draft Rate of Return Guideline Explanatory Statement**), page 80.

<sup>370</sup> Draft Rate of Return Guideline Explanatory Statement, page 80.

<sup>371</sup> Draft Rate of Return Guideline Explanatory Statement, page 81.

<sup>372</sup> Draft Rate of Return Guideline Explanatory Statement, page 81.

<sup>373</sup> Draft Rate of Return Guideline Explanatory Statement, page 81.

<sup>374</sup> Draft Rate of Return Guideline Explanatory Statement, page 81.

<sup>375</sup> Draft Rate of Return Guideline Explanatory Statement, page 81, citing Chairmont, *Comparative Hedging Analysis*, 12 June 2013, page 17.

<sup>376</sup> Draft Rate of Return Guideline Explanatory Statement, page 82.

<sup>377</sup> Draft Rate of Return Guideline Explanatory Statement, page 82.

435. As noted in paragraph 413 above, the NER require the AER to publish rate of return guidelines setting out the methodologies that the AER proposes to use in estimating the allowed rate of return (clause 6.5.2(n)(1)).
436. The AER published the Rate of Return Guideline that is relevant to the Final Determination on 17 December 2013. This followed the conclusion of a consultation process that had been initiated a year prior, on 10 December 2012.
437. After considering the return on debt issue in detail, the AER concluded in the Rate of Return Guideline that it would specify the trailing average methodology as the methodology to be adopted for estimating the return on debt.<sup>378</sup> The AER considered that in the presence of refinancing risk, it is efficient for a service provider to hold a portfolio of debt with staggered maturity dates and that the allowed return on debt under the trailing average portfolio approach reflects the financing cost of an entity with such a portfolio.<sup>379</sup> The AER noted that most consumer representatives strongly supported the adoption of a single trailing average approach and that most service providers and industry representatives supported this approach as well.<sup>380</sup>
438. The benefits of the trailing average approach identified by the AER included:
- 438.1 it promotes productive, allocative, and dynamic efficiency of debt financing practices;
  - 438.2 the estimation methodology based on this approach performs well in terms of minimising the potential difference between the return on debt allowance and the expected required return on debt;
  - 438.3 annual updating of the trailing average improves the match between the return on debt allowance and the expected required return on debt, as it allows the incorporation of newly revealed market information into the estimate more frequently;
  - 438.4 the estimation methodology based on this approach is capable of providing a benchmark efficient entity with a staggered debt portfolio with a reasonable opportunity to recover at least their efficient debt financing costs;
  - 438.5 it smooths movements in the return on debt over a number of years, which would result in lower price volatility for energy consumers and more stable returns for investors, relative to the on-the-day approach;
  - 438.6 it minimises the consequences of a single measurement error; and

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<sup>378</sup> Rate of Return Guideline Explanatory Statement, page 108.

<sup>379</sup> Draft Rate of Return Guideline Explanatory Statement, page 83.

<sup>380</sup> Draft Rate of Return Guideline Explanatory Statement, page 75.

- 438.7 it is more reflective of the actual debt management approaches of non-regulated businesses and, therefore, is more likely to represent efficient financing practice.<sup>381</sup>
439. However, having determined that the trailing average portfolio approach was efficient and the preferable approach, the AER did not propose to immediately adopt this methodology for any service provider, even if they currently held a portfolio of staggered fixed-rate debt consistent with a trailing average approach or did not have any issued debt.<sup>382</sup> The AER considered that a methodology for estimating the return on debt that 'transitioned' from the on-the-day approach to the trailing average approach should be adopted.
440. The AER describes the transition in the Rate of Return Guideline in the following way:
- 440.1 the return on debt for the first regulatory year is the prevailing rate, averaged over the relevant averaging period (being set using the on-the-day approach, this allowance corresponds to the expected return on debt of an entity that refinances its entire debt portfolio during the averaging period prior to the first regulatory year);
  - 440.2 in the second regulatory year, the allowed return on debt is a weighted sum of the prevailing rates in the first and second years (with weights of 0.9 and 0.1 respectively) (this allowance corresponds to the expected return on debt of an entity if it refinanced its entire debt portfolio during the averaging period prior to year one and then refinanced 10% of its debt portfolio during the averaging period for year two);
  - 440.3 in the third year, the allowed return on debt is a weighted sum of the prevailing rates in the first, second, and third regulatory years (with weights of 0.8, 0.1 and 0.1, respectively);
  - 440.4 and so on until in the tenth year of transition, the allowed return on debt is an equally weighted (with weights of 0.1) sum of the prevailing rates in the ten years of transition-at this stage the transition is complete.<sup>383</sup>
441. The imposition of a transition was based fundamentally on the reasoning set out below.
442. The AER considered that there was **only one** benchmark efficient entity (being a benchmark *regulated* efficient entity) and that benchmark efficient entity would have adopted a single financing practice under the on-the-day approach. This single financing practice would have comprised:
- 442.1 borrowing long term (10 year debt) and staggering the borrowing so that only a small proportion (around 10 per cent) of the debt matures each year;

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381 Draft Rate of Return Guideline Explanatory Statement, pages 83 to 84. In the final explanatory statement the AER noted that its reasoning for adopting the trailing average approach is consistent with the draft explanatory statement, see: Rate of Return Guideline Explanatory Statement, page 110.

382 Rate of Return Guideline Explanatory Statement, page 120.

383 Rate of Return Guideline Explanatory Statement, Appendix G, page 131.

- 442.2 borrowing using floating rate debt (or borrowing using fixed rate debt and converting this to floating rate debt using fixed-to-floating interest rate swaps at the time of issuing the debt and which extended for the term of the debt, being 10 years); and
- 442.3 for the risk free component of the debt, entering into 'pay fixed – receive floating' interest rate swap contracts during the averaging period prior to the regulatory determination, which extended for the term of the regulatory control period (typically five years), in effect leaving the business paying only the fixed rate under the swap contract.<sup>384</sup>
443. As such, the AER considered that the benchmark efficient entity would come into the forthcoming period (in the case of ActewAGL, the 2014-19 period) with a portfolio of floating rate debt that, had the on-the-day approach continued, it would have swapped into fixed rate debt during the relevant averaging period.<sup>385</sup> Therefore, the AER considered that it is likely that the benchmark efficient entity would need to unwind its hedging contracts in moving from the current on-the-day approach to the trailing average portfolio approach.<sup>386</sup> Perhaps this is more accurately stated by saying that the AER's benchmark efficient entity had entered into arrangements (in accordance with a possible incentive created by the on-the-day approach) that result in the risk free rate component of its debt portfolio being floating rate at the commencement of the relevant regulatory control period<sup>387</sup>, and it has no ability to go back and lock in rates that applied when the debt instruments were entered into. As such, the AER reasoned that setting a return on debt that is based on historical rates could result in a mismatch between the risk free rate component of the allowed rate of return and the actual risk free rate faced by the benchmark efficient entity over the forthcoming regulatory control period.<sup>388</sup>
444. Paragraphs 442 to 443 above set out a rationale for the AER's decision to impose a transition with respect to the risk free rate component of the return on debt. The same rationale does not apply in respect of the DRP component of the return on debt. This is because, as noted in paragraph 433 above, it is not possible to hedge the DRP component of the return on debt. As such, it is generally accepted that a benchmark efficient entity (however defined) would come into the forthcoming regulatory control period (for ActewAGL, the 2014-19 period) facing a (approximate) 10-year trailing average cost of debt with respect to the DRP component of the return on debt.

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384 Rate of Return Guideline Explanatory Statement, page 106; Final Determination, pages 3-492 to 3-493. See also AER, *Final Decision Ausgrid distribution determination 2015-16 to 2018-19*, April 2015 (**Ausgrid Final Decision**), pages 3-492 to 3-493; AER, *Final Decision Endeavour Energy distribution determination 2015-16 to 2018-19*, April 2015 (**Endeavour Final Decision**), pages 3-493 to 3-494; AER, *Final Decision Essential Energy distribution determination 2015-16 to 2018-19*, April 2015 (**Essential Final Decision**), pages 3-492 to 3-493. Under "pay fixed – receive floating" interest rate swap contracts, the business receives the relevant risk free rate of interest from the counterparty and pays to the counterparty a fixed rate of interest that is set at the time the contract is entered into: Rate of Return Guideline Explanatory Statement, page 106.

385 Rate of Return Guideline Explanatory Statement, pages 121 to 122.

386 Rate of Return Guideline Explanatory Statement, page 121.

387 This is because it either: (a) entered into floating rate instruments and then entered into swaps during the averaging period that converted the interest rate component of those instruments from floating to fixed for the length of the relevant regulatory control period; or (b) entered into fixed rate instruments and immediately swapped the fixed rate debt into floating rate for the length of the instrument.

388 Rate of Return Guideline Explanatory Statement, page 122.

445. The AER determined to apply a transition to the DRP component primarily because it considered that such a transition would avoid the windfall gain that the AER considers results from changing the regulatory regime.<sup>389</sup> The AER considers a windfall gain arises because the immediate adoption of a trailing average approach would involve 'double counting' of years when the DRP was 'high'.<sup>390</sup> That is, although the DRP component of the return on debt was not the subject of any hedge contracts, the AER determined that there should be a transition on the DRP component to compensate in effect for the windfall gain the AER says was obtained over the previous regulatory control period. This issue is dealt with in detail at paragraphs 543 to 561 of this submission.

*ActewAGL proposal*

446. In ActewAGL's Regulatory Proposal and Revised Regulatory Proposal, ActewAGL proposed the immediate application of the trailing average approach without any transition.<sup>391</sup> In other words, ActewAGL proposed that the cost of debt be calculated by reference to the cost of debt that would be incurred by a business that had a staggered portfolio of fixed rate debt. This is the type of debt portfolio that would be held by a benchmark privately-owned entity in an unregulated and workably competitive market. It is also the type of portfolio (efficiently) held by each of Ausgrid, Endeavour Energy and Essential Energy (together, **Networks NSW**) and TransGrid (together, **NSW NSPs**).<sup>392</sup>
447. The trailing average approach as adopted by the AER in the Rate of Return Guideline and as proposed to be adopted by ActewAGL involved estimating the return on debt for a year by calculating the cost of debt over the previous 10-year period as if the service provider had raised 10% of its debt requirements in each of those 10 years.

*Final Determination*

448. In the Final Determination, the AER did not accept the trailing average approach proposed by ActewAGL as the methodology to estimate the return on debt. The AER instead adopted the transition methodology as set out in the Rate of Return Guideline, which involved starting with an on-the-day rate for the first regulatory year (in the case of ActewAGL being 2014/15) and transitioning to a trailing average approach over 10 years.<sup>393</sup>
449. The AER made the same decision in respect of a number of different service providers whose proposals it was considering contemporaneously with ActewAGL's.<sup>394</sup> In considering ActewAGL's cost of debt proposal, the AER simultaneously considered the proposals of the NSW NSPs, as well as TasNetworks, Directlink, Jemena Gas Networks (NSW) Ltd, Energex, Ergon Energy and SA Power Networks. The AER stated in its Final Determination that it

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<sup>389</sup> Final Determination, pages 3-163 to 3-167. See also Ausgrid Final Decision, page 3-174; Endeavour Final Decision, page 3-174 to 3-175; Essential Final Decision, page 3-174.

<sup>390</sup> Final Determination, pages 3-166 to 3-167. See also Ausgrid Final Decision, pages 3-173 and 3-174; Endeavour Final Decision, page 3-174; Essential Final Decision, pages 3-173 and 3-174.

<sup>391</sup> Regulatory Proposal, pages 278 to 293; Revised Regulatory Proposal, pages 472 to 481.

<sup>392</sup> Rate of Return Guideline, pages 124 to 125.

<sup>393</sup> Final Determination, page 3-140.

<sup>394</sup> See for example Ausgrid Final Decision, page 3-155; Endeavour Final Decision, page 3-156; Essential Final Decision, page 3-155; AER, *Final Decision Transgrid determination 2015-16 to 2017-18*, April 2015, page 3-138.

'had regard to the material in all of the different proposals and revised proposals in determining the return that meets the allowed rate of return objective'.<sup>395</sup>

450. As described in paragraph 430 above, the on-the-day methodology as implemented by the AER involves estimating the return on debt as the prevailing return on debt during a specified window of time (the averaging period), which is typically a period prior to the commencement of the relevant regulatory control period. The resulting return on debt then applies, without alteration, to the entire regulatory control period.
451. For ActewAGL, the application of the on-the-day methodology for the first regulatory year (the 2014-15 regulatory year) gave a return on debt of 6.07% (nominal vanilla) based on an averaging period from 30 April 2014 to 30 June 2014.<sup>396</sup>
452. As described in paragraph 440 above, the transition methodology involves reducing the weight given to the return on debt set using the on-the-day approach in 2014/15 by 10% each year, and replacing that 10% with a return on debt that has been estimated by reference to the averaging period in the immediately prior year. The transition runs for 10 years (which is likely to encompass three regulatory control periods for ActewAGL), by which time the weight given to the return on debt set using the on-the-day approach (that is, the return on debt applying in 2014/15) falls to zero.
453. Therefore, for ActewAGL, the return on debt applying in the 2015/16 regulatory year is calculated by giving 90% weight to the return on debt that applied in 2014/15 (being 6.07%), and 10% weight to the return on debt that was calculated using the relevant averaging period prior to the commencement of the 2015-16 regulatory year, being 2 January 2015 to 31 January 2015.<sup>397</sup> This return on debt figure is 5.91%.<sup>398</sup>
454. For the return on debt applying in the 2016/17 regulatory year, this is calculated by giving:
  - 454.1 80% weight to the return on debt that applied in 2014/15;
  - 454.2 10% weight to the return on debt measured in the averaging period that applied prior to the commencement of the 2015/16 regulatory year; and
  - 454.3 10 per cent weight to the return on debt measured in the averaging period that applied prior to the commencement of the 2016/17 regulatory year.<sup>399</sup>
455. As noted in paragraph 452 above, the above process is continued until the weight placed on the return on debt that applied in 2014/15 is zero. Once this occurs, the transition to the trailing average approach is complete. The AER's transition will be complete by 30 June 2024.

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<sup>395</sup> Final Determination, page 3-17.

<sup>396</sup> Final Determination, page 3-139. The averaging period for the 2014-15 regulatory year is specified in confidential appendix K to the Final Determination, page 3-6.

<sup>397</sup> Confidential appendix K to the Final Determination, page 3-7.

<sup>398</sup> Final Determination, page 3-139.

<sup>399</sup> Final Determination, pages 3-140 to 3-141.



456. The AER's decision on the return on debt was based on the following reasoning:
- 456.1 a single benchmark efficient entity should be identified, because the risk exposure of the regulated businesses is sufficiently similar, and this single entity is a pure play, regulated energy network business operating in Australia;<sup>400</sup>
  - 456.2 the preferred approach to estimating the allowed return on debt is the trailing average approach because it promotes productive, allocative and dynamic efficiency of debt financing practices, and specifically provides incentives for service providers to seek the lowest cost debt financing;<sup>401</sup>
  - 456.3 however, the trailing average approach should not be used to estimate the return on debt for ActewAGL over the 2014-19 period because:
    - 456.3.1 in respect of the risk free rate component, the benchmark efficient entity would come into the 2014-19 period with floating rate debt (and no ability to go back in time and lock in the rates that had historically applied), and therefore, a transition should apply which enables service providers who had entered into arrangements so that the risk free rate component of their debt portfolio would be floating at the beginning of the period to enter into arrangements to match the risk free rate component of that debt with the regulatory allowance; and
    - 456.3.2 in respect of the DRP component, adopting a trailing average approach would involve a windfall gain (because ActewAGL was 'over-compensated' in respect of this component in the 2009/10-2013/14 regulatory control period, and it because a trailing average would also double count years in which the DRP was 'high') and so a 'mismatch' between the DRP component of the cost of debt and the regulatory allowance should be forced to prevent a windfall gain from arising;
  - 456.4 to the extent the AER's transition results in an estimate of the return on debt for the 2014-19 period where the risk free rate component is intended to be materially lower than that which is likely to be actually be faced by a benchmark operator who had adopted a trailing average approach to structure their debt portfolio (such as the NSW NSPs), those NSPs could have, and should have, guarded against this possibility by entering into interest rate swap arrangements in order to seek to match the risk free rate component to the regulatory allowance in previous regulatory periods so that the NSPs could similarly enter into such arrangements for the 2014-24 period; and
  - 456.5 adoption of the AER's transition has an additional benefit of avoiding measurement difficulties associated with estimating the return on debt based on a trailing average approach.

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<sup>400</sup> Rate of Return Guideline Explanatory Statement, page 32.

<sup>401</sup> Draft Rate of Return Guideline Explanatory Statement, pages 83 to 84.

## 6.2 Grounds for review

457. In relation to the decision on estimating the return on debt, the AER erred in concluding that the adoption of its transition from the on-the-day approach to the trailing average approach was consistent with the NER, the NEO, and the RPPs. The AER's conclusion was based on a number of errors that are set out below.

### *Incorrect identification of the 'benchmark efficient entity'*

458. The AER has erred in its identification of the benchmark efficient entity.
459. The AER's decision to impose a transition on the movement to the new trailing average methodology was dependent upon the AER's view of the debt management practices that a hypothetical entity would have adopted under the previous on-the-day approach. In adopting this stance, the AER erred in identifying the relevant benchmark efficient entity was a benchmark *regulated* entity, whereas the correct benchmark entity was a benchmark *unregulated* entity—that is, an entity competing in a workably competitive unregulated market.
460. Consistent with the statement of the AEMC set out at paragraph 416 above, the long term interests of consumers is best served by ensuring that the methodology used to estimate the return on debt reflects, to the extent possible, the efficient financing and risk management practices that might be expected in the absence of regulation. Specifically with regard to the determination of the characteristics of the benchmark efficient entity, the AEMC stated that the most appropriate benchmark to use in the regulatory framework for all service providers is *the efficient private sector service provider*.<sup>402</sup>
461. The rationale of economic regulation of network assets is to, insofar as possible, mimic the operation of, and replicate the outcomes in, a workably competitive market. For example, the Expert Panel on Energy Access Pricing noted:<sup>403</sup>

The central objective of price control is to constrain the exercise of market power by firms that do not face effective competition for their services. Regulation and, specifically, the periodic determination of maximum prices or revenue is directed at achieving outcomes that could otherwise be expected from effective competition.

462. The Expert Panel noted that regulatory regimes typically set prices by reference to costs because costs associated with supply are a central element of pricing outcomes in competitive markets.<sup>404</sup>
463. Virtually all regulatory regimes set controlled prices by reference to an assessment of costs. The reason is that the cost of supply-in conjunction with the role of consumer preferences in determining the appropriate service and product mix-is a primary driver of price outcomes in effectively competitive markets.

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<sup>402</sup> 2012 Rule Determination, page 72.

<sup>403</sup> Expert Panel on Energy Access Pricing, *Report to the Ministerial Council on Energy*, April 2006, page 118.

<sup>404</sup> Expert Panel on Energy Access Pricing, *Report to the Ministerial Council on Energy*, April 2006, page 98.

464. The AEMC has similarly noted that regulatory arrangements attempt to mimic the competitive market.<sup>405</sup>
465. The Tribunal has confirmed that the NEL and the NER 'seek to ensure that an NSP operates and invests efficiently in the manner of a firm in a competitive environment'.<sup>406</sup>
466. The AER itself appears to recognise that in estimating the financing costs of a regulated business under the NER, these should be consistent with what would be expected in the context of *unregulated* efficient businesses.<sup>407</sup>

The allowed rate of return objective requires us to set a rate of return commensurate with the efficient financing costs of the benchmark efficient entity. We do not consider this to be only a theoretical proposition. Rather, it should be consistent with observable good practice in efficient businesses.

467. A firm operating in the manner of a firm in a competitive environment would have a conventional debt portfolio of the type held by privately-owned entities in unregulated markets, namely a staggered portfolio of fixed rate debt. This is confirmed by the AER's consultant, Chairmont, who states: 'The decision to adopt a strategy of gradual staggered issuance of fixed rate debt is consistent with behaviour where the regulatory cost of debt framework does not apply'.<sup>408</sup> The debt financing costs of such a portfolio matches the debt cost calculated under the AER's trailing average approach. Therefore, once the correct benchmark entity is identified, there is no basis for the imposition of a transition.
468. Having identified that the trailing average approach promotes productive, allocative and dynamic efficiency of debt financing practices, and specifically provides incentives for service providers to seek the lowest cost debt financing,<sup>409</sup> and therefore, is consistent with the outcomes of a workably competitive market, the AER should have accepted ActewAGL's proposal that the cost of debt for the 2014-19 period be estimated using the trailing average approach.
469. The AER's approach involved an error in the construction and application of clause 6.5.2, particularly subclauses 6.5.2(c), (j) and (k). Further, the decision was contrary to the NEO and the RPPs in that the selection of a regulated entity as a benchmark would not impose an appropriate pricing signal for investment (that is, the pricing signal that would be sent as a result of competition in a workably competitive market, rather than a pricing signal from the idiosyncratic application of a prior regulatory methodology). As such, and in light of paragraphs 459 to 468 above, there is a serious issue to be heard and determined as to whether the AER's decision that the benchmark efficient entity was a benchmark regulated entity was based on one or more errors of fact that was or were material to the making of the decision,

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<sup>405</sup> See for example: 2012 Rule Determination, page 54; 2012 Rule Determination, page 182.

<sup>406</sup> *Application by EnergyAustralia and Others* [2009] ACompT 8, [106]

<sup>407</sup> Rate of Return Guideline Explanatory Statement, page 28.

<sup>408</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 38. At page 38, Chairmont references UBS' statement that: 'The "trailing average" approach used by Networks NSW was consistent with debt management strategies adopted by non-regulated entities in the infrastructure sector – ports, airports, road and railways': UBS, *UBS Response to the TransGrid Request for Interest Rate Risk Analysis following the AER Draft Decision of November 2014*, undated, page 5. See also: Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, pages 8 to 9.

<sup>409</sup> Draft Rate of Return Guideline Explanatory Statement, pages 83 to 84.

involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances. This relates to paragraphs 248.1 and 248.2 of the Application.

*Immediate transition to trailing average methodology appropriate as no costs or practical difficulties arise with adoption of trailing average methodology for ActewAGL*

470. ActewAGL is currently, and was in and prior to the 2009-14 regulatory control period, 100% financed by equity and has no debt financing.<sup>410</sup> In circumstances where the AER has determined that issuing debt with staggered maturity dates over a 10 year period is and was an efficient debt management strategy, there is no principled basis for applying the AER's transition. The immediate imposition of a trailing average approach would best calculate efficient financing costs for ActewAGL for the forthcoming regulatory period.
471. When moving to a new regulatory methodology, the imposition of a transition will generally only be appropriate if the regulated business (or possibly some relevant third party) has acted in reliance on the previous regulatory practice in a way that cannot immediately be unwound. From the extracts the AEMC's 2012 Rule Determination set out in paragraph 424 to 426 above, it is apparent that this was the rationale for the inclusion in the NEL of a provision dealing with a transition. Consistently with this, the reference to a benchmark efficient entity in clause 6.5.2(k)(4) is to ensure that the entity in question cannot claim the need for a transition on the basis of some idiosyncratic commitment that is not efficient. However, it does not mean that hypothetical problems should be created to justify a transition: i.e. that a transition is necessary if a hypothetical entity would have entered into a hypothetical hedge transition that (hypothetically) cannot now be unwound.
472. In these circumstances there is no proper basis for the imposition of a 10 year transition on ActewAGL. Such an approach will result in a calculation that necessarily will be a less accurate assessment of the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to ActewAGL in respect of the provision of standard control services.<sup>411</sup>
473. The imposition of a transition where there was no relevant impact, or at least no relevant impact identified by the AER (in the terms of clause 6.5.2(k)(4)) on ActewAGL from the immediate adoption of the trailing average approach was inconsistent with the requirements of the NEL and the NEL. As such, and in light of paragraphs 471 to 473 above, there is a serious issue to be heard and determined as to whether the AER's decision that a transition should be imposed even though ActewAGL has no issued debt was based on an error or errors of fact that was or were material to the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraphs 249.1, 250 to 252 and 256.3 to 256.7 of the Application).
474. Even if the AER was correct to consider the efficient financing costs of a benchmark regulated efficient entity, the AER erred in concluding that the AER's transition was commensurate with the efficient financing costs of such an entity, including because:
- 474.1 it was impossible under the on-the-day approach to hedge the DRP component of the allowed debt financing costs;

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<sup>410</sup> Regulatory Proposal, page 282; Revised Regulatory Proposal, page 476.

<sup>411</sup> Revised Regulatory Proposal, pages 475 and 479 to 180.

474.2 contrary to the final decision, the AER's transition is not a transition from the on-the-day approach to the trailing average approach, because it does not provide for the on-the-day component of the return on debt which applies in each year of the regulatory period commencing in 2019 to be reset by reference to prevailing conditions prior to the commencement of that regulatory period; and

474.3 it was based on an incorrect premise that the use of a staggered portfolio of fixed rate debt without the use of fixed rate swaps was inefficient under the on-the-day approach (that is, that there was more than one benchmark efficient manner in which to structure a debt portfolio under the on-the-day approach).

475. Each of the above points are addressed below.

*Impossible under the on-the-day approach to hedge the DRP component*

476. As noted in paragraph 433 above, it is generally accepted that under the on-the day approach it was not, and is not, possible to enter into hedging arrangements with a view to matching the regulatory allowance for the DRP component to costs incurred in respect of the DRP component.

477. As it is not possible to hedge the DRP component of the allowed return on debt, the AER's consultant, Chairmont, advised that there should be no transition with respect to the DRP.

A [benchmark efficient entity] will already have a staggered DRP in its portfolio, but not evenly distributed, i.e. not smooth. Therefore, to match this situation the AER should not transition the DRP, but instead move immediately to a 'trailing average' for this element. As there is no standard methodology to account for the non-smooth portfolio, AER should adopt a smooth 'trailing average' for the DRP. It is acknowledged that the measurement of historical DRP is difficult, because it is accurate only at the time of debt issuance; however it is likely that a reasonable estimate could be determined...<sup>412</sup>

478. Imposing a transition where the DRP component of the return on debt cannot be hedged under the on-the-day approach is inconsistent with the NEO, the RPPs, and the requirements of the NER. In particular, it will not provide a benchmark efficient entity with a return on debt that is commensurate with efficient financing costs or provide a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control services. As such, and in light of paragraphs 476-477 above, there is a serious issue to be heard and determined as to whether the AER's decision on the return on debt was based on an error or errors of fact that was or were material to the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraphs 249.1, 250 to 252 and 255 of the Application).

*AER transition not a transition from the on-the-day approach to the trailing average approach*

479. As noted in paragraph 449 above, the 'on-the-day' methodology as implemented by the AER involves estimating the return on debt as the prevailing return on debt during a specified window of time (the averaging period), which is typically a period prior to the commencement of the relevant regulatory control period. The resulting return on debt then

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Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 47.

applies, without alteration, to the entire regulatory control period. Under the AER's on-the-day approach, at the commencement of the following regulatory control period, the return on debt is effectively re-set by, again, estimating the return on debt as the prevailing return on debt during the relevant averaging period.

480. As noted in paragraph 452 above, the AER's transition runs for 10 years, with the weight given to the return on debt set using the on-the-day approach (that is, the return on debt applying in 2014-15) reducing by 10 per cent in each year until it is ultimately given no weight.
481. Under the AER's transition, the on-the-day component of the return on debt that applies in each of the regulatory years in the regulatory control period commencing on 1 July 2019 is not re-set by reference to prevailing conditions in an averaging period prior to 1 July 2019. The result of this is that the on-the-day component of the return on debt applying in each of these years continues to place weight on an on-the-day estimate using the averaging period of 30 April 2014 to 30 June 2014.
482. Therefore, the AER's transition is *not* a transition from the on-the-day approach to the trailing average approach. In order for it to be such a transition, the on-the-day component of the return on debt would have to be re-set by reference to an appropriate averaging period, which would then apply to the on-the-day component of the return on debt for the regulatory years 2019/20 to 2023/24.
483. In light of paragraphs 479 to 482 above, there is a serious issue to be heard and determined as to whether the AER's decision that the AER's transition was commensurate with the efficient financing costs of the AER's benchmark efficient entity was based on an error or errors of fact that was or were material to the making of the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraph 249.2 of the Application).

*Incorrect premise that not using swaps under the on-the-day approach was inefficient*

484. The AER concluded that in adopting a staggered debt management portfolio, but not using swaps to seek to align the interest rate component with the regulatory allowance for this component, businesses such as the NSW NSPs had not taken steps to actively manage their interest rate risk.<sup>413</sup> The AER found that managing both financing risk and interest rate risk under the on-the-day approach could be achieved by employing a staggered debt portfolio with interest rate swaps and that this was an efficient financing practice of a benchmark efficient entity under the on-the-day approach.<sup>414</sup>
485. The AER was in error in finding that what constitutes 'efficient financing practices' is to be ascertained by reference to the regulatory methodology adopted for estimating the return on debt.<sup>415</sup> Further, the AER was in error in concluding that the only efficient debt portfolio

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<sup>413</sup> Final Determination, pages 3-509 to 3-510. See also Ausgrid Final Decision, page 3-152; Endeavour Final Decision, page 3-153; Essential Final Decision, page 3-153.

<sup>414</sup> Final Determination, page 3-164. See also Ausgrid Final Decision, page 3-153; Endeavour Final Decision, page 3-154; Essential Final Decision, pages 3-153 to 3-154.

<sup>415</sup> In footnote 499 of Attachment 3 to the Final Determination (page 3-150), the AER makes clear its position that efficient financing practices depend on, and change with, the regulatory regime adopted.

management strategy was the one that the AER determined as responding to the incentives the AER considered were created by the regulatory methodology adopted.

486. It is entirely plausible that financing practices adopted by regulated service providers may be influenced by the regulatory regime adopted. This does not, in and of itself, make those decisions efficient. It may explain *why* some service providers make particular decisions that they perhaps would not otherwise make absent the regulatory regime. As noted by the Expert Panel:

While the policy goal for regulation may be to replicate as far as possible what a competitive market would otherwise deliver, regulation is a poor substitute for effective competition. Regulation...may provide incentives to make inefficient decisions...<sup>416</sup>

487. The fact that regulated businesses may act in a particular manner in reliance on the regulatory approach provides an appropriate basis, where there is a change to the regulatory approach, to build into the changed methodology transitional strategies so that any significant costs and practical difficulties in moving from one approach to another are taken into account. This is consistent with the AEMC's guidance on clause 6.5.2(k)(4), referred to at paragraph 424 above.
488. Defining efficient financing practices by reference to the incentives created by a particular regulatory approach is entirely circular. It results in any number of financing practices being identified as efficient, simply because they match a particular regulatory approach. This avoids the very object of regulatory regime-being to, insofar as possible, create an environment in which the costs incurred (and ultimately allowed to be recovered) are efficient costs. The enquiry *must* start with an identification of what are efficient costs, and then a methodology is designed that, insofar as possible, permits those efficient costs to be recovered.
489. The illogicality of this approach is highlighted in the explanatory material published with the Rate of Return Guideline, where the AER states:<sup>417</sup>

...efficiency of different debt financing practices of the benchmark efficient entity needs to be considered in the context of the adopted regulatory regime and, specifically, the adopted approach to return on debt estimation.

490. It is simply inconsistent with the regulatory framework to define efficient practices by reference to, or solely by reference to, the regulatory regime. What is required to be undertaken is to formulate a regulatory approach (in this case, settling the methodology to be used to estimate the return on debt allowance) that results in a regulatory allowance that is, insofar as possible, commensurate with efficient costs, being the costs that would be incurred in a workably competitive market. Any other approach would lead to the absurd result that any cost incurred is efficient where the regulatory approach provides an incentive for it to be incurred, even though it would not be incurred in a workably competitive market. Such an approach is inconsistent with the objective of the regulatory regime, circular, and illogical.

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<sup>416</sup> Expert Panel on Energy Access Pricing, *Report to the Ministerial Council on Energy*, April 2006, page 11.

<sup>417</sup> Rate of Return Guideline Explanatory Statement, page 103.

491. Further, the AER was in error in concluding that the only efficient debt portfolio management strategy was the one that the AER determined as responding to the incentives the AER considered were created by the regulatory methodology adopted.

492. As noted at paragraph 423 above, the AEMC considers that there may be multiple debt management strategies and that different business may adopt different debt management practices.

The Commission intends that the regulator could adopt more than one approach to estimating the return on debt having regard to different risk characteristics of benchmark efficient service providers.<sup>418</sup>

The first factor in the rule requires the regulator to have regard to the characteristics of a benchmark service provider and how this influences assumptions about its efficient debt management strategy...debt management practices tend to differ according to the size of the business, the asset base of the business, and the ownership structure of the business.<sup>419</sup>

493. As such the AEMC considered that it should remain open to the AER (and service providers) to consider that different kinds of service providers have different risk characteristics that lead to different characteristics for efficient debt financing.<sup>420</sup> In fact, part of the motivation for making the November 2012 rule amendments was the AEMC's concern that a 'one-size-fits-all' approach may lead to various mismatches between the regulatory estimate allowed by the regulator and the actual exposures of service providers that employ debt management practices that are not closely aligned with the benchmark assumptions.<sup>421</sup>

494. The use of a staggered portfolio of fixed rate debt by the NSW NSPs is simply one approach of potentially a number of efficient financing practices that could have been adopted under the on-the-day approach. The AER has referred to determining which debt financing practices of the benchmark efficient entity are efficient under the on-the-day approach as being 'a complex and, to a large extent, theoretical exercise'.<sup>422</sup> Dr Lally also notes the difficulties associated with conclusively determining what financing practices were efficient under the on-the-day approach and those that were not:<sup>423</sup>

...the AER's goal of minimizing expected financing costs whilst managing the interest rate risk and refinancing risks appears to involve minimizing expected financial costs whilst managing the interest rate and refinancing risks not exceeding some level. The objective is potentially different to that of maximising shareholder wealth. However, this distinction is moot because there is no direct means of assessing which financing policy would achieve either of these two subtly different objectives. Consequently, judgement must be used by management. In addition, the most that regulators will be able to do is to rule out some practices as inefficient, leaving a set of policies that it cannot differentiate between unless they are willing to use the observed practices of firms as a guide to what is efficient.

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418 2012 Rule Determination, page 90.

419 2012 Rule Determination, pages 84 to 85 (footnotes from original omitted).

420 2012 Rule Determination, page 86.

421 2012 Rule Determination, page 85.

422 Rate of Return Guideline Explanatory Statement, page 105.

423 Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, pages 7 to 8.



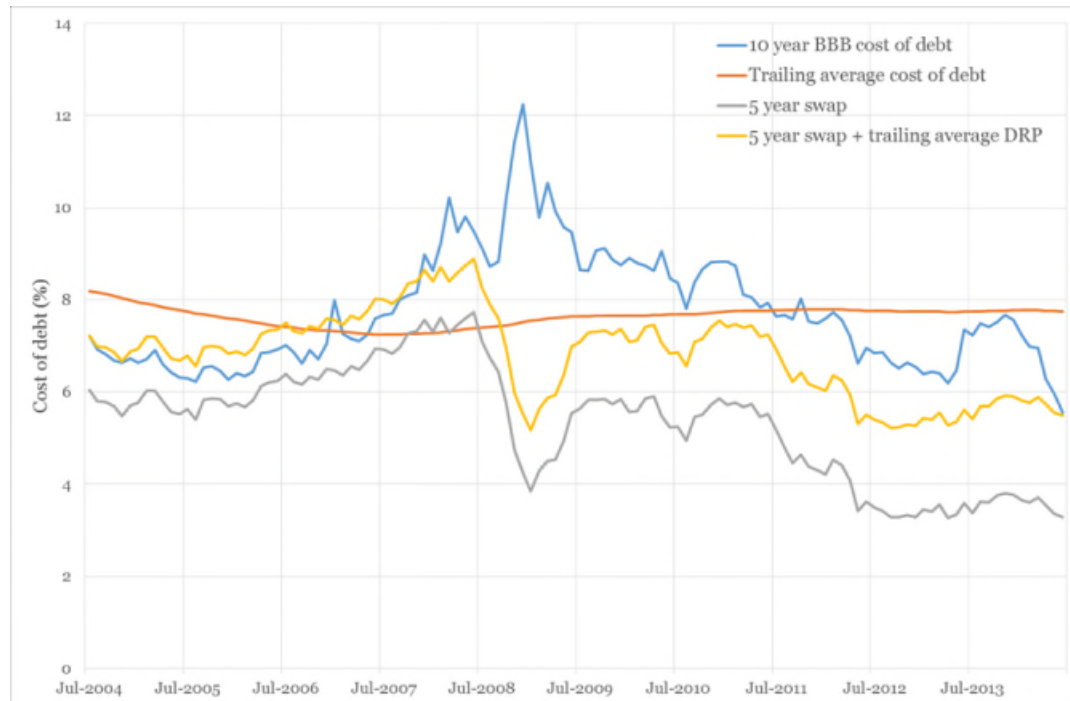
495. It is somewhat surprising then that, on the basis of a retrospective, theoretical exercise conducted by Dr Lally (and not made available to the NSW NSPs and ActewAGL prior to the AER's final decisions), that the AER conclusively determines that the debt management strategy adopted by the NSW NSPs under the on-the-day approach is to be ruled out as clearly inefficient. And as a consequence, the AER's 'theoretical' exercise now has real and significant negative consequences for these NSPs and ActewAGL. Dr Lally's analysis, and the difficulties associated with that analysis are dealt with at paragraphs 504 to 509 below.
496. The NSW NSPs did not make wide-use of interest rate swaps in order to attempt to align the interest rate component of its debt costs with the regulatory allowance for these costs. This was, and remains, an efficient financing practice. It is the financing practice that would be adopted absent regulation, and it is the financing practice that the AER itself determined better satisfies the allowed rate of return objective, and which (at least implicitly), the AER must have determined better satisfies the NEO and the RPPs.<sup>424</sup>
497. The AER defines the efficient debt financing costs of a benchmark efficient entity as those which are expected to minimise its debt financing costs over the life of its assets, while managing refinancing risk and interest rate risk, with:
- 497.1 refinancing risk – being the risk that a benchmark efficient entity would not be able to refinance its debt when it matures; and
- 497.2 interest rate risk – being the risk associated with a mismatch between the allowed return on debt and a benchmark efficient entity's actual return on debt.<sup>425</sup>
498. It is generally accepted that *refinancing risk* is managed through utilising a staggered debt portfolio. This is the same regardless of whether a swap-based strategy is employed or not.<sup>426</sup>
499. In relation to *interest rate risk*, the AER found that the risk associated with a mismatch between the allowed return on debt and a benchmark efficient entity's actual return on debt is *best* managed by a swap-based strategy. However, even to the extent that such a consideration is relevant, the evidence before the AER did not support such a finding.
500. Competition Economists Group (CEG) examined whether, for any given averaging period between July 2004 and July 2014, a swap-based debt portfolio or a trailing average debt portfolio provided a better match to the allowed return on debt. CEG found that a trailing

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424 Section 16(1) of the NEL provides that the AER must, in performing or exercising an AER economic regulatory function or power (which includes the making of a distribution determination), perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the NEO. Section 16(1)(d) provides that if the AER is making a reviewable regulatory decision and there are two or more possible reviewable regulatory decisions that will or are likely to contribute to the achievement of the NEO, the AER must make the decision that the AER is satisfied will or is likely to contribute to the achievement of the NEO to the greatest degree. Finally, section 16(2) provides that in addition, the AER must take into account the revenue and pricing principles when exercising a discretion in making those parts of a distribution determination relating to direct control network services.

425 Final Determination, page 3-153. See also Ausgrid Final Decision, page 3-159; Endeavour Final Decision, page 3-160; Essential Final Decision, page 3-159.

426 See for example: Rate of Return Guideline Explanatory Statement, page 105.

**Figure 4: Trailing average vs. hedge vs. 'on the day' cost of debt**

Source: Bloomberg, RBA and CBASpectrum month-end data, CEG analysis

average approach provided a better match to the regulatory allowance than a swap-based portfolio. This is illustrated in figure 4 of CEG's January 2015 report replicated below.<sup>427</sup>

501. In the above figure the yellow line represents the costs associated with a swap-based portfolio, the orange line represents the costs associated with a trailing average portfolio, and the blue line represents the regulatory allowance. The sum of squared differences between the 10-year BBB prevailing cost of debt and the trailing average cost of debt is 215.7. The sum of squared differences between the 10-year BBB prevailing cost of debt and the hedged cost of debt is 317.8.<sup>428</sup> CEG's analysis is criticised by Dr Lally (in a report not made available to ActewAGL prior to the Final Determination) on the basis that the data period spanned only two regulatory cycles and because it examines variations between allowed and incurred costs every month as if the allowed rate was reset monthly instead of five-yearly.<sup>429</sup> However, and as recognised by Dr Lally, there are limitations on the period over which the analysis can be done using Australian data as there is not a sufficiently long DRP data series.<sup>430</sup> In respect of the second criticism, CEG's analysis does not assume the regulatory allowance is reset every month. Rather, CEG's analysis compares the regulatory allowance

<sup>427</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, page 23. See also CEG, *Efficient Debt Financing Costs*, 19 January 2015 (prepared for Networks NSW), page 24.

<sup>428</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, page 24; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, page 25.

<sup>429</sup> Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, page 51.

<sup>430</sup> Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, page 72.

and cost at the start of a hypothetical regulatory period where the allowance was set based on prevailing rates in that month. If the analysis was done in the manner suggested by Dr Lally, this does not alter the result of the CEG analysis, if anything, it strengthens the conclusions of that analysis.

502. In light of the above material, there was no reasonable basis to find, as a matter of fact, that a swap-based portfolio could be expected to provide a better match to the regulatory allowance during the relevant periods.
503. An explanation as to why a trailing average strategy may provide a better match to the regulatory allowance is because there is a 'natural hedge' between the risk free rate and the DRP. This is noted by Dr Lally where he states that 'the risk free rate and the DRP are negatively correlated'.<sup>431</sup> See also the reports of CEG<sup>432</sup> Houston Kemp<sup>433</sup> and SFG.<sup>434</sup>
504. The AER advanced analysis from Dr Lally (which was not made available to ActewAGL prior to the final decision) which purported to examine whether, under the on-the-day approach, there would be more or less risk to a business from not engaging in interest rate swap contacts relative to entering into such contracts for the period April 1953 to January 2015.<sup>435</sup>
505. Dr Lally uses US data, in particular the US treasury constant maturity series for five and ten-year bonds and the DRP series for BBB bonds, over the time period April 1953 to January 2015.<sup>436</sup> Dr Lally stated that it was necessary to use US data because data from a sufficiently long period is required to produce a reasonably accurate result and there is no DRP series in Australia that is sufficiently long.<sup>437</sup>
506. Dr Lally concludes that when a regulator uses an on-the-day policy with a one-month window for setting the allowed rate, the use of interest rate swaps reduces the mismatch between the on-the-day allowance and the incurred costs of debt.<sup>438</sup>
507. Dr Lally's analysis includes the 1970s and the first half of the 1980s, which were periods of high and unstable inflation. The conditions that prevailed during this period in the US are radically different to the financial environment in Australia that existed from the 1990s onwards, and under which regulated service providers would have been determining their debt management strategies. By the 1990s, and following the adoption of inflation targeting

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<sup>431</sup> Dr M Lally, *Estimating the Cost of Debt of the Benchmark Efficient Regulated Energy Network Business*, 16 August 2013, page 9.

<sup>432</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, page 22 at [57] and [60] to [61]; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, pages 22 to 23 at [58], [61]-[62].

<sup>433</sup> Houston Kemp, *Response to the Draft Decision on the Return on Debt Allowance*, pages 17 to 19.

<sup>434</sup> SFG, *Rule Change Proposals relating to the Debt Component of the Regulated Rate of Return: Report for AEMC*, 21 August 2012, page 43 at [172].

<sup>435</sup> Final Determination, page 3-511. See also Ausgrid Final Decision, page 3-511; Endeavour Final Decision, page 3-512; Essential Final Decision, page 3-511.

<sup>436</sup> Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, page 73.

<sup>437</sup> Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, page 73.

<sup>438</sup> Dr M Lally, *Review of Submissions on the Cost of Debt*, 21 April 2015, page 75.

by central banks in the US and Australia, inflation had stabilised at low levels with limited volatility.

508. Dr Lally only reports results from his analysis using data from April 1953 onwards.<sup>439</sup> Dr Lally does not report any sensitivity results from testing alternative time periods, and more specifically, time periods after the high and unstable inflation environment in the 1970s and the first half of the 1980s.
509. The periods of high and unstable inflation should have been excluded from the analysis for reasons in addition to those set out in paragraph 507 above. This is because in high and unstable inflationary environments, the prevailing nominal cost of debt estimated in the initial averaging period (and used as an input into the AER's Post Tax Revenue Model), will not be a good proxy for the actual nominal compensation provided by the regulatory process. The actual compensation provided by the regulatory process is ultimately adjusted for actual inflation. However, Dr Lally's analysis appears to proceed on the basis that expected inflation (that is, the expectations of inflation, viewed at the time of the averaging period) is equivalent to actual inflation. Such an assumption may be reasonable in low and stable inflationary environments. However, such an assumption is not reasonable if the data is taken from a variable inflation environment where expected inflation was generally materially different to actual inflation. If the analysis is done with data starting points from April 1978,<sup>440</sup> the results from Dr Lally's analysis are reversed. That is, a trailing average approach reduces the mismatch between the on-the-day allowance and the incurred costs of debt.
510. The AER also relies on the report of Chairmont (*Cost of Debt: Transitional Analysis*, April 2015) that was published with the Final Determination (and not made available to ActewAGL prior to the Final Determination) as supporting a finding that managing interest rate risk (via a swap-based strategy) was efficient and less risky than the NSW NSPs' practice of not managing interest rate risk in that way.<sup>441</sup>
511. In short, the debt portfolio management strategy adopted by the NSW NSPs was appropriate to manage both refinancing risk and interest rate risk (however that 'risk' might be defined). The AER was incorrect to conclude that there was only one benchmark efficient strategy that managed those risks.
512. To the extent the AER determined that there was one benchmark efficient debt management strategy which was dependent on the regulatory regime adopted (being a swap-based strategy) and found this strategy to be efficient on the basis that it would minimise the difference between the regulatory return on debt and the cost of debt faced by a service provider, in light of paragraphs 484 to 509 above, there is a serious issue to be heard and determined as to whether the AER's decision was based on an error of fact or facts that was or were material to

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<sup>439</sup> Which Dr Lally then used to calculate the average of five standard deviations, corresponding to five sets of regulatory cycles beginning in March 1963, March 1964, March 1965, March 1966, and March 1967. The initial 10-year gap between the starting month of his dataset (April 1953) and the beginning of the earliest set of regulatory cycles (March 1963) accounts for the 10-year trailing average component of the incurred cost of debt calculations.

<sup>440</sup> Using April 1978 date as the starting month means that the average standard deviation is calculated from five sets of regulatory cycles beginning in March 1988, March 1989, March 1990, March 1991 and March 1992. This observation also holds for all possible starting months between April 1978 and April 1995, with the latter representing the most recent possible starting month that produces five full sets of regulatory cycles.

<sup>441</sup> Final Determination, pages 3-509 to 3-510. See also Ausgrid Final Decision, page 3-154; Endeavour Final Decision, page 3-155; Essential Final Decision, page 3-154.

the making of the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraphs 249.3, 249.4, 253.7, 253.8, 256 to 258 and 262 of the Application).

*Adoption of a benchmark strategy it was not possible, or not practically or commercially sensible for the NSW NSPs to have adopted*

513. For the AER to take into account conduct the AER considers a benchmark efficient entity would have engaged in in prior regulatory control periods—that is, to use swap contracts in the manner asserted by the AER to be efficient so as to manage the risk of a mismatch between the allowed return on debt in those prior regulatory control periods and the entity's actual cost of debt in those earlier regulatory control periods—that conduct must have been sensibly available to the regulated entity to have undertaken.
514. It is important that the assumed conduct not only could be engaged in, but that it would be also be practical to do so. This is recognised by Chairmont who states:<sup>442</sup>

The all-in-cost of debt financing may be categorised under the following headings:

- Interest cost;
- Transaction costs;
- Operational and monitoring costs; and
- Any associated fees such as guarantee fees.

[Efficient financing practice] is to minimise these items whenever practical, not whenever possible, as cost minimisation cannot take place in isolation, i.e. 'you get what you pay for'. The distinction between practical and possible is important.

515. Given the debt funding arrangements of the NSW NSPs, or alternatively, given the debt funding requirements of a benchmark entity with an assumed gearing of 60% and a similar degree of risk as to which applies to ActewAGL, the material before the AER established that it was not possible, or alternatively not practicable or commercially sensible, for the NSW NSPs to seek to use swap contracts in the manner asserted by the AER to be efficient. This is so with respect to both the 2009/10-2013/14 regulatory control period and the 2014/15-2018/19 period.
516. The reasons why it was not possible, or alternatively not practicable or commercially sensible, for the NSW NSPs to seek to use swap contracts in the manner asserted by the AER to be efficient include: the quantum of the swap transactions required; the time it would take to effect those swaps (if at all); the cost of effecting such swaps; and the swap demands of other entities in the market.
517. In addition to the matters set out below, ActewAGL understands that there was information provided to the AER on a confidential basis by the NSW NSPs, which goes to the question of

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Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 27.

whether it was possible or commercially sensible for the NSW NSPs to seek to use swap contracts in the manner asserted by the AER to be efficient.<sup>443</sup> While this material has not been made available to ActewAGL, ActewAGL submits that the Tribunal ought to have regard to it in considering ActewAGL's Application. To this end, ActewAGL refers to and relies on the leave submissions to the Tribunal in relation to the cost of debt by each of the Networks NSW businesses in ACT File Nos 4, 6 and 7 of 2015.

518. The AER provided its expert, Chairmont, with the characteristics of the benchmark efficient entity and the definition or creation of separate benchmarks was explicitly out of the scope of Chairmont's remit.<sup>444</sup> However, Chairmont commented that:<sup>445</sup>

If more benchmarks were to be introduced in the future, we recommend that they should take into account all of the interrelated and potentially offsetting impacts on differing NSP [network service provider] types. These would include:

- Ownership
- Size
- Differing operating environments such as geographic spread
- Stand-alone nature or part of group.

519. Size is a particularly important characteristic when assessing whether it is practical for a service provider to enter into swap arrangements. This is because the larger the service provider, the greater its debt requirements (based on the benchmark gearing of 60:40 debt to equity), and therefore, the larger the volume of swaps that the service provider would be required to enter into to hedge its debt requirements in the manner assumed by the AER to be efficient. Also relevant is the volume of swaps that may be sought by other market participants during the same window as the service provider. As noted by Chairmont: '...size and concentrated timing can be detrimental for an NSP'.<sup>446</sup>

520. The material before the AER demonstrated that smaller businesses employed the strategy of issuing floating rate debt on a staggered maturity cycle and using interest rate swaps to fix the rate at the beginning of each regulatory period (also referred to as the 'CKI strategy'), while larger businesses (including the Networks NSW businesses) adopted the approach of issuing fixed-rate debt on a staggered maturity cycle.<sup>447</sup>

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<sup>443</sup> Final Determination, pages 3-492 to 3-494.

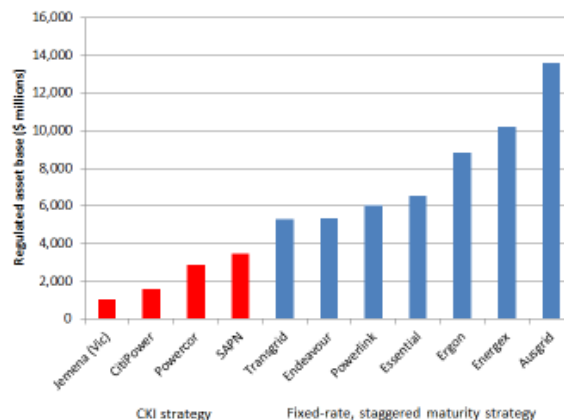
<sup>444</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, pages 13 and 64.

<sup>445</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 19.

<sup>446</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 39.

<sup>447</sup> Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, page 35.

Figure 4: Service provider debt management strategies under the previous Rules



521. Dr Lally notes that a possible draw back of the on-the-day approach, pursuant to which service providers use swap contracts to match the risk free rate incurred by the service provider to the regulatory allowance, is in respect of firms that cannot use swap contracts to align the risk free rate component of their cost of debt with the regulatory cycle because the size of the required contracts over the usual 40 day period in which the prevailing risk free rate is measured would be too large to be accommodated by the market.<sup>448</sup> Dr Lally comments that a number of treasurers for privately-owned service providers do not indicate the presence of such difficulty, and cites the examples of Envestra and SP AusNet (now named Australian Gas Network and AusNet Services respectively). Dr Lally notes that the debt levels of these businesses are 'substantial', at approximately \$2 billion and \$3.7 billion respectively.<sup>449</sup> However, as shown in the figure above, these debt levels are significantly smaller than those of the Networks NSW DNSPs, even when looked at on an individual basis, let alone in combination.
522. In 2014, Ausgrid had a debt portfolio of approximately \$9 billion, making it more than double the size of the Queensland NSPs and three to five times larger than many other providers. The other NSW entities, while approximately half the size of Ausgrid, were also significantly larger than most NSPs in Australia. For comparison, when taken together the four NSW NSPs have a debt portfolio approximately 25% larger than Telstra.<sup>450</sup>
523. The similar timing of the regulatory determinations for the NSW NSPs would further increase the difficulties associated with implementing a hedging strategy. The combined hedging need of approximately \$17 billion in 2009 is an unusually large amount in the Australian market if required to be transacted in a short period. The occurrence of coincident rate-sets for Transend (TasNetworks) and ActewAGL exacerbates the situation slightly, although their combined size was relatively small.<sup>451</sup>

<sup>448</sup> Dr Lally, *Estimating the Cost of Debt of the Benchmark Efficient Regulated Energy Network Business*, 16 August 2013, page 9.

<sup>449</sup> Dr Lally, *Estimating the Cost of Debt of the Benchmark Efficient Regulated Energy Network Business*, 16 August 2013, page 9.

<sup>450</sup> Chairmont Consulting, *Cost of Debt: Transitional Analysis*, April 2015, page 35.

<sup>451</sup> Chairmont Consulting, *Cost of Debt: Transitional Analysis*, April 2015, page 35.

524. Many of the risks associated with the implementation of a swap strategy (particularly for a large service provider) were exacerbated during the GFC.
525. Four elements combined to make the 2009 rate-setting period unusual and significant for the NSPs.<sup>452</sup>
- 525.1 Both debt and hedge markets were the thinnest and most erratic in developed markets for decades, and the rate setting window coincided with the worst turbulent periods of the GFC.
  - 525.2 The combined size of the entities intensified the impact of liquidity problems at that time.
  - 525.3 The regulatory measurement method at that time concentrated timing problems even further, whether 15 or 40 business days applied.
  - 525.4 The uncertainty brought about by disagreements over the regulatory measurement technique and rate-set period timing led to the final determination being made 15 months after the specified period.
526. Over the term of the 2009-14 period the notional amount for which hedges would have been required was approximately \$18 billion, which is the average notional debt amount for all relevant entities over the period. Based on the median transaction size at the time of \$50 million, the total hedge requirement for the NSW NSPs, TasNetworks and ActewAGL represented 365 times the standard transaction size. According to UBS' analysis it is reasonable to assume that the service providers may, at that time, have transacted up to \$200 million of fixed rate interest swaps per day without causing market dislocation or exhausting available liquidity. On that basis, the total notional debt amount may have been hedged in 91 business days, which is an aggressive assumption in the context of a median transaction size of \$50 million and daily market turnover of \$862 million at that time.<sup>453</sup>
527. There are risks associated with hedging outside of the averaging period, which UBS quantifies as being in the order of \$819 million for the NSW NSPs.<sup>454</sup>
528. Separately, Westpac provided advice to TransGrid (the NSW electricity transmission network service provider that had a coincident regulatory determination process) that in order not to distort the market and impact pricing, to hedge \$22 billion over consecutive business days, the maximum notional amount of five-year interest rate swaps would be \$300 million per day. However, if a total of \$22 billion was to be hedged over a 20 business day window, \$1.1 billion of five-year interest rate swaps would need to be cleared each day. In Westpac's opinion, obtaining this quantity of swaps would not be feasible without materially impacting a

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<sup>452</sup> Chairmont Consulting, *Cost of Debt: Transitional Analysis*, April 2015, page 36.

<sup>453</sup> UBS, *Response to the Networks NSW request for financeability analysis following the AER Draft Decision of November 2014*, 16 January 2015.

<sup>454</sup> UBS, *Response to the Networks NSW request for financeability analysis following the AER Draft Decision of November 2014*, 16 January 2015.



NSPs' cost of funds, and a significantly longer period of time would be required and not even 60 days, but closer to 80 days.<sup>455</sup>

529. The experience of the Australian Office of Financial Management provides a real demonstration of the difficulties associated with executing a significant volume of interest swaps at or around the time of the GFC. In November 2008, the Australian Office of Financial Management commenced a program to unwind its portfolio of domestic interest rate swaps (to receive fixed / pay floating rates). At that time, the portfolio comprised 177 swaps with a notional face value of \$20.65 billion. The program was largely completed by May 2009, when the Australian Office of Financial Management stopped actively seeking terminations. In total, 130 swaps were unwound (by paying fixed / received floating rates) representing a notional face value of \$15.25 billion. The Australian Office of Financial Management has said based on their experience at that time:
- 529.1 market liquidity could best be described as 'thin' during the onset and immediate aftermath of the financial crisis; and
- 529.2 executing the swaps in a significantly shorter time period would have been problematic.<sup>456</sup>
530. Dr Lally also theorises that perhaps the Networks NSW businesses have not sought to hedge the risk free rate component of the return on debt because either they are less aware of the full potential of the swaps market or because they are not subject to normal market signals and incentives.<sup>457</sup> This view is unsound for the reasons stated by Frontier Economics.<sup>458</sup>
531. The size of the Networks NSW businesses, and the size of their corresponding debt requirements based on the assumed debt to equity ratio, were relevant factors that the AER should have had proper regard to when determining if the AER's assumed benchmark debt financing strategy was one that was open to the Networks NSW businesses to adopt, or was a practically or commercially sensible approach for them to adopt.
532. Size is a relevant factor to consider either as a component of determining the 'risk' that applies to the DNSP in respect of the provision of standard control services. Alternatively, if it is not relevant to the assessment of risk in that context, it was otherwise a relevant consideration to determining the benchmark efficient financing practice of a benchmark efficient entity in the position of the Networks NSW businesses. The AER did not however have regard, or have appropriate regard, to this characteristic of the Networks NSW businesses and the impacts that this would have on their efficient financing practices. If it had it would have found that the adoption of the trailing average approach by the Networks NSW businesses under the on-the-day approach was an efficient financing practice.
533. The AER was also incorrect in finding that the reason Networks NSW did not adopt a swap-based strategy was because it was government owned and as a result of the arrangements

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<sup>455</sup> Letter from E Hope and D Whalley (Westpac) to A Meehan (TransGrid), 26 May 2014.

<sup>456</sup> Letter from M Bath (Director, Financial Risk, Australian Office of Financial Management) to S Knight (CEO, NSW Treasury Corporation), 5 January 2015.

<sup>457</sup> Dr M Lally, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, page 28.

<sup>458</sup> Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, page 42 at [173].

these businesses had through TCorp as the debt provider for the NSW government.<sup>459</sup> As set out above, the adoption of the trailing average debt management strategy was efficient and was in fact found by the AER to be the strategy that would be adopted absent regulation (that is, in a workably competitive market).

534. Networks NSW has been, and continues to be, subject to incentives and signals in relation to managing the debt portfolio of the distribution businesses including because each Networks NSW business pays the cost of debt (including the DRP) based on their credit rating as a stand-alone business in the market. If the Networks NSW businesses did not prudently control their costs of debt, and their operating and capital costs more generally, this would have a negative impact on the credit rating of each of the Networks NSW businesses, which in turn would impact on the cost of debt Networks NSW would face in the market, and hence the Government Guarantee Fee the businesses would have to pay would increase.
535. The AER also (incorrectly) considered that, compared with alternative possible debt financing strategies, a swap-based strategy would have resulted in a lower expected actual return on debt.<sup>460</sup> The AER cites Dr Lally as authority for this proposition. However, what Dr Lally actually says is that such hedging arrangements reduce costs from the 10-year swap rate embedded in their borrowing “to the (usually) cheaper five-year swap rate”.<sup>461</sup>
536. As noted by CEG, in the final averaging period for the Networks NSW businesses (18 August 2008 to 5 September 2008), the five-year swap rate was, even without adding the transaction costs of swaps, 12bps above the 10-year swap rate (6.79 per cent as against 6.67 per cent). Over the averaging periods originally proposed by the Networks NSW businesses (2 June 2008 to 20 June 2008), the five-year swap rate was 32bp above the 10-year swap rate and had been above the 10 year swap rate since mid-2006. In these circumstances CEG concludes the Networks NSW businesses would have been correct to assume that there would be no material interest rate benefits from a hedging strategy that converted base rate exposure from 10 to five-year swap rates'.<sup>462</sup>
537. The above points highlight the problem of the AER's approach in determining that there is only one debt financing strategy that a benchmark efficient operator would have engaged in. The fact is that financial markets are complex and unpredictable, and different entities will take different views about how to structure their arrangements in response to the market conditions that prevail at any particular time and which are forecast into the future.
538. In short, the costs, difficulties, and inherent uncertainties associated with the adoption of a swap-based debt management debt portfolio for the Networks NSW businesses was such that it was not a rational or practical strategy to adopt. In large part, this followed from the sheer volume of swaps that would have been required under the AER's assumed swap-based strategy. The Networks NSW approach was not an inefficient approach, and as set out above,

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<sup>459</sup> Final Determination, page 3-495. See also Ausgrid Final Decision, page 3-495; Endeavour Final Decision, page 3-496; Essential Final Decision, page 3-495.

<sup>460</sup> Final Determination, page 3-170, citing: Dr M Lally, *Transitional Arrangements for the Cost of Debt*, November 2014, pages 25-30, at footnote 553. See also: Ausgrid Final Decision, page 3-177; Endeavour Final Decision, page 3-178; Essential Final Decision, p 3-177, at footnotes 580, 578 and 577 respectively.

<sup>461</sup> Dr M Lally, *Transitional Arrangements for the Cost of Debt*, November 2014, page 27.

<sup>462</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, page 21 at [55]; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, page 22 at [56].

managed both refinancing risk and interest rate risk, but simply in a different manner to the AER's assumed benchmark debt financing practice under the on-the-day approach.

539. The debt portfolio management approach adopted by the Networks NSW businesses did expose these businesses to the risk of a mismatch between the regulatory allowance for the risk free rate and the risk free component of interest rate costs that would actually be faced by a benchmark business not engaging in a swap-based strategy. As noted above, the on-the-day methodology has resulted in mismatches between the regulatory allowance for the return on debt and actual debt costs, regardless of whether a swap-based strategy has been adopted by a regulated service provider or not. The motivation behind the AEMC's rule change is to now align the regulatory allowance with efficient costs. Merely because Networks NSW has been exposed to the risk of a mismatch between the regulated allowance for the risk free rate component of the return on debt and actual costs of this component does not provide a rational basis for continuing that mismatch.
540. The AER is correct to draw a comparison of the Networks NSW position with respect to insurance—the debt portfolio management practice of Networks NSW is to effectively self-insure against the interest rate risk the AER has identified. The AER states:<sup>463</sup>

A corollary of the propositions put forward by the NSW businesses can be observed in respect of insurance:

- Obtaining insurance for a particular risk is more expensive than not obtaining insurance because a premium payment is required.
- The insurance may not perfectly offset the risk because of a policy excess or other exclusions.
- It requires effort and planning to find and take out the relevant insurance.

541. The NSW NSPs did not take out the 'insurance' that the AER considers a swap-based strategy would have provided including because it was simply not practical or commercially sensible to do so.
542. To the extent the AER determined that the transitional approach was appropriate because all service providers both could have and should have adopted a swap-based approach to managing their debt portfolios, in light of paragraphs 513 to 0 above, there is a serious issue to be heard and determined as to whether the AER's decision was based on an error of fact or facts that was or were material to the making of the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraphs 253.5 to 253.8 and 256.2 of the Application).

*Application of transition to DRP component*

543. As noted at paragraph 433 above, it is not possible to hedge the DRP component of the return on debt.<sup>464</sup> As such, all service providers, regardless of whether or not they are assumed to

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Final Determination, page 3-509. See also Ausgrid Final Decision, page 3-509; Endeavour Final Decision, page 3-509; Essential Final Decision, pages 3-508 and 3-509.

have adopted the AER's assumed benchmark efficient swap strategy, face a trailing average cost of debt in respect of the DRP component.

544. It follows from the above proposition that no transition should be applied to the DRP component of the allowed return on debt. As set out at paragraph 477 above, Chairmont advised the AER that, in its opinion, the AER's transitional arrangements for a benchmark efficient entity do not correctly respond to a benchmark efficient entity's transitional requirements because such an entity will already have a staggered DRP in its portfolio.<sup>465</sup> As such, Chairmont advised that the AER should *not* transition the DRP, but instead move immediately to a 'trailing average' for this element.<sup>466</sup>
545. The AER however decided that it is appropriate to transition the DRP because not transitioning the DRP would result in "windfall" gains to ActewAGL.<sup>467</sup> In short, via the AER's transition, the AER intends for service providers to be provided with a regulatory allowance for the return on debt that is below the actual cost of debt a benchmark service provider will be facing (regardless of whether they are assumed to have engaged in a swap-based strategy or not) over the relevant regulatory control periods. That is, the AER expects that the transition will erode what the AER considers was a windfall gain arising in the 2009-14 period.
546. The imposition of the AER's transition is at odds with the 2012 Rule Change, which is directed at better matching the regulated return on debt (and the overall rate of return) with costs that would be incurred pursuant to efficient financing practices. As noted by the AER's consultant, with respect to the DRP component of the return on debt, there is no mismatch between the cost incurred by the benchmark efficient firm and that allowed by a trailing average approach after the regime change. As such, no transitional method appears to be warranted and, if one was used, Dr Lally notes, it would introduce a mismatch that would not otherwise arise.<sup>468</sup>
547. As a matter of construction, the statutory regime does not permit the AER to seek to 'clawback' differences between the allowed return on debt and the actual return on debt faced by a benchmark service provider in a regulatory control period. The regulatory regime is incentive based, and a central part of the incentive based regime is that once the regulatory allowance has been set, ex post adjustments are not made to that regulatory allowance based on differences between forecasts and actuals.
548. Further, the task of setting a regulatory allowance for a regulatory control period is a forward-looking one. Pursuant to the building blocks approach set out in clause 6.4.3(a) of the Rules, there are only a few specified matters that may have occurred in a prior regulatory period that have any relevance to the calculation of the regulatory allowance in the subsequent regulatory period. There are three discrete matters:

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<sup>464</sup> See for example: Dr Lally, *Estimating the Cost of Debt of the Benchmark Efficient Regulated Energy Network Business*, 16 August 2013, page 8; Final Determination, page 3-164; Ausgrid Final Decision, page 3-171; Endeavour Final Decision, page 3-171; Essential Final Decision, page 3-171.

<sup>465</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 47.

<sup>466</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 47.

<sup>467</sup> Final Determination, pages 3-163 to 3-167. See also Ausgrid Final Decision, page 3-174; Endeavour Final Decision, pages 3-174 to 3-175; Essential Final Decision, page 3-174.

<sup>468</sup> Dr M Lally, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, page 7.

- 548.1 the value of the regulatory asset base;
  - 548.2 revenue increments and decrements arising from the application of any relevant incentive scheme;
  - 548.3 other revenue increments or decrements arising from the application of a control mechanism in the previous regulatory control period.<sup>469</sup>
549. With the exception of these three matters, the regulatory framework does not operate in a manner that looks back at what has happened in a previous regulatory control period in order to calculate the annual revenue requirement for a service provider for each regulatory year of that period in an attempt to capture some prior difference between allowable revenues and costs.
550. The requirement under the NEL and NER is to make a distribution determination which, amongst other things, provides the relevant service provider with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing direct control network services.<sup>470</sup> A distribution determination should also provide for prices or charges for the provision of direct control network services that allow for a return commensurate with the regulatory and commercial risks involved in providing those services.<sup>471</sup>
551. The NER require that the rate of return for a regulatory control period is commensurate with the efficient financing costs of a benchmark efficient entity: clause 6.5.2(c). As noted in the Frontier Economics report:<sup>472</sup>
- ...the allowed rate of return objective provides for the regulator setting the allowed return to be commensurate with the efficient financing costs of a benchmark efficient entity. It does not provide for an exception in cases where the regulator considers that it should set the allowed return to be different from the efficient financing costs of a benchmark efficient entity in order to square up what it considers to be windfall gains or losses from prior regulatory periods.
552. For completeness, clause 6.5.2(k)(4) permits the AER to have regard to any 'impacts (including in relation to the costs of servicing debt across regulatory control periods) on a benchmark efficient entity referred to in the allowed rate of return objective that could arise as a result of changing the methodology...'. Such impacts would include an impact on a service provider that did, in fact, have hedge contracts that remain on foot and mean that the service provider's benchmark cost of debt did not match the trailing average cost of debt. That is not the case for ActewAGL.
553. The Frontier Economics report notes the further following problems with the AER's decision to seek to erode the perceived windfall gain:
- 553.1 The amount of any gain to be eroded or 'clawed back' will depend on how many prior regulatory periods are included in the regulator's mental accounting. It is possible that any perceived windfall gain that may have been accrued in the prior

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<sup>469</sup> NER, clauses 6.5.1(e), and 6.4.3(a)(5) and (6).

<sup>470</sup> NEL, sections 7A(2) and 16.

<sup>471</sup> NEL, sections 7A(5) and 16.

<sup>472</sup> Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, page 26 at [120].

regulatory period has already been squared up by shortfalls in prior regulatory periods (as to which see paragraphs 554 to 557 below).<sup>473</sup>

553.2 The perceived windfall gains may have been balanced out by other features of the prior regulatory determination. In periods where investors are requiring higher risk premiums on debt investments in the benchmark firm, they will also be requiring higher equity risk premiums in the same benchmark firm. However, in the context of the 2009/10-2013/14 determination for Networks NSW, the NER required a value of 6% to be used for the MRP<sup>474</sup>. (The same NER provisions apply to 2009/10-2013/14 distribution determination for ActewAGL.) Therefore, in periods where risk premiums are at elevated levels, a high debt risk premium (that is, a debt risk premium above the historical average, and which may exceed the debt risk premium that was locked in when the firm issued debt) may be allowed for, but on the equity side, the MRP is likely to have been set below the premiums that are required by investors. Therefore to the extent the AER considers a benchmark entity may have been over-compensated in respect of its cost of debt in the previous regulatory control period, that may have been more than offset by the adoption of a value of 6% for the MRP.<sup>475</sup>

554. Even if the AER were permitted to seek to balance the regulatory allowance with the actual costs a benchmark entity would have faced over a regulatory period, the evidence before the AER did not establish that the AER's transition would in fact balance these out. This includes because it is likely that the benchmark service provider was undercompensated with respect to the DRP component of the return on debt in the prior regulatory control period.

555. In the 2009/10-2013/14 regulatory control period, a benchmark service provider would have incurred DRP costs below the regulatory allowance. This can be seen from Graph 2 in the Chairmont report, reproduced below.<sup>476</sup>

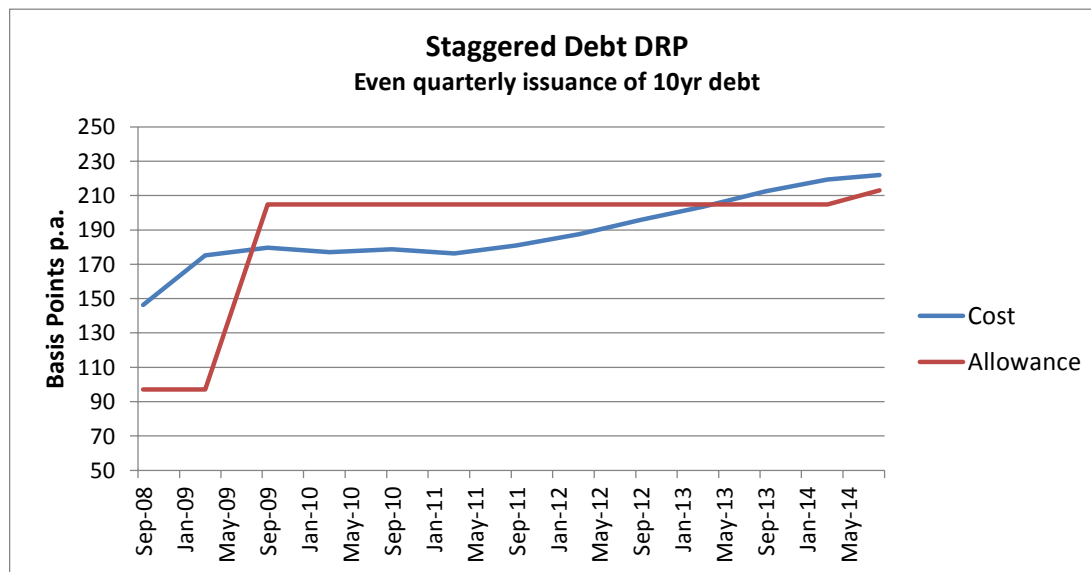
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<sup>473</sup> Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, p 26 at [127(b)]. This issue was also raised by CEG: CEG, *Efficient debt financing costs* (prepared for ActewAGL), 19 January 2015, page 33 at [102].

<sup>474</sup> See Transitional Chapter 6 which applied during the 2009/10 to 2013/14 regulatory control period to the Networks NSW businesses and ActewAGL.

<sup>475</sup> Frontier Economics, *Cost of Debt Transition for NSW Distribution Networks*, January 2015, page 26 at [128].

<sup>476</sup> Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 41.



**Graph 2: Staggered Debt DRP**

556. However, the situation in 2009/10-2013/14 says nothing about whether the service provider would have incurred DRP costs higher than the regulatory allowance in earlier periods. The Chairmont graph above suggests that the benchmark service provider would have been incurring significantly higher DRP costs relative to the regulatory allowance towards the end of the 2004/05-2008/09 regulatory control period. For the last two years of the 2004/05-2008/09 regulatory control period, significant increases in the DRP were experienced.<sup>477</sup>
557. Analysis undertaken by CEG specifically in relation to Networks NSW and ActewAGL indicates that any over-compensation in the 2009/10-2013/14 regulatory control period is either immaterial or in fact, Networks NSW and ActewAGL may have actually be under-compensated with respect to the DRP component of the return on debt in the 2009/10-2013/14 regulatory control period. Regarding Networks NSW, CEG finds that over the period 2007/08 to 2013/14, and before the transactions costs of swaps are accounted for, total cumulative over-compensation was 0.20% (or 0.03%, per annum).<sup>478</sup> CEG finds that if swap transaction costs were taken into account, the amount of under-compensation is -1.67% over the six years (-0.28%, per annum).<sup>479</sup> Figure 5 from the CEG reports is replicated below and show the difference between the allowed DRP and the benchmark efficient DRP plus 30pb swap transaction costs.<sup>480</sup>

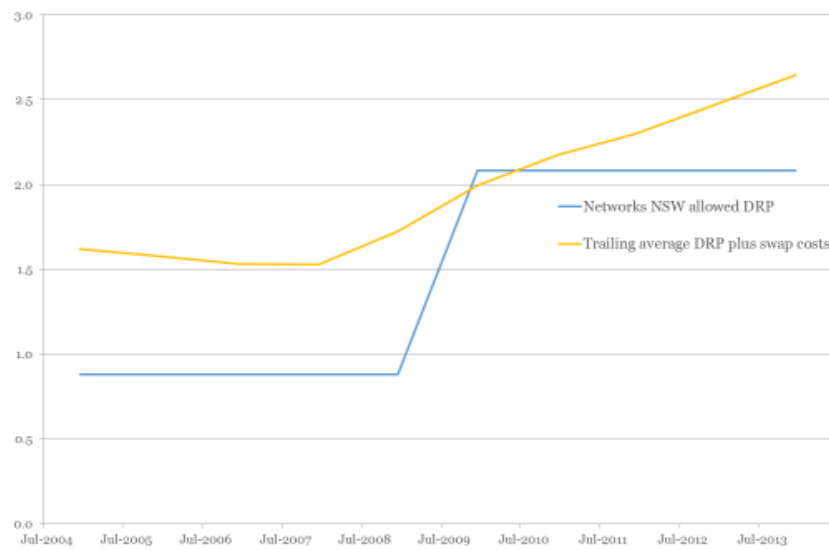
<sup>477</sup> CEG, *Efficiency of Staggered Debt Issuance*, February 2013, page 24.

<sup>478</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, pages 34-35 at [110]; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, page 36 at [111].

<sup>479</sup> CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, page 35 at [111]; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, page 36, [112].

<sup>480</sup> CEG, *Efficient Debt Financing Costs*, 19 January 2015 (report prepared for ActewAGL), page 36; CEG, *Efficient Debt Financing Costs*, 19 January 2015 (report prepared for Networks NSW), page 37.

**Figure 5: Allowed DRP vs. benchmark efficient DRP plus 30 bp swap transaction costs**



Source: RBA, Bloomberg, CBASpectrum, AER and IPART regulatory decisions, and CEG analysis

558. CEG finds that Dr Lally makes an error in the same direction for ActewAGL, which error may be larger or smaller than for Networks NSW depending on the assumed averaging period.<sup>481</sup>
559. The AER's decision results in a rather peculiar situation whereby the AER:
- 559.1 imposes a transition with respect to the DRP component of the return on debt in order to attempt to *force a mismatch* between (even what it agrees to be) benchmark efficient costs and actual costs with respect to the DRP component; and
  - 559.2 imposes a transition with respect to the risk free rate component of the return on debt in order to attempt to *force a match* between what it considers to be benchmark efficient costs and actual costs with respect to the risk free rate component.
560. Such an approach is irrational and illogical, does not meet the allowed rate of return objective and is inconsistent with the NEO and the RPPs.
561. The AER's conclusion is also couched in terms of promoting net present value (NPV) neutrality.<sup>482</sup> Such an approach is not reasonable.
562. First, the on-the-day methodology is one that is likely to cause a mismatch between the actual cost of debt and the allowed return on debt. Such mismatches have occurred in each period in which the methodology has been applied. Whether the allowed funding costs for a particular

<sup>481</sup> CEG, *Efficient Debt Financing Costs*, 19 January 2015 (report prepared for ActewAGL), page 36, [116]-[118].

<sup>482</sup> Final Determination, pages 3-161 to 3-168. See also Ausgrid Final Decision, pages 3-168 to 3-175; Endeavour Final Decision, pages 3-169 to 3-176; Essential Final Decision, pages 3-168 to 3-175.



asset have matched its actual (efficient) funding costs depends upon a fortuitous and random combination of previous unders and overs. To 'roll the dice' again by perpetuating the previous methodology may worsen previous imbalances or mitigate them, and there is no reason why it is more likely to mitigate them (in the same way that a person who has tossed three heads and a tail is equally likely to toss a head or a tail on the next toss of the coin).

563. Second, regulated businesses do not take on debt instruments by reference to particular assets, but rather are regularly cycling and renewing their facilities so that the business is debt-financed to a certain extent at all times. As such, it is meaningless and illogical to speak of efficient financing costs 'over the life of the assets' in considering the efficient financing costs of a benchmark efficient entity. Any arguments as to 'NPV neutrality' do not provide a reasoned basis for not proceeding immediately to the approach that best matches the actual efficient cost of debt to the regulated allowance for the return on debt.
564. The AER's transition seeks to force a mismatch between the regulatory allowance for the DRP over the regulatory period and the benchmark entity's DRP costs over that period, resulting in an allowance that is below recognised efficient costs. This approach is inconsistent with the NEO, the RPPs (in particular that a service provider be provided with a reasonable opportunity to recover at least efficient costs), and the NER. The approach will not result in a return on debt that is commensurate with efficient financing costs over the regulatory period. As such, and in light of 543 to 563 above, there is a serious issue to be heard and determined as to whether the AER's decision that a transition should be imposed was based on an error or errors of fact which was or were material to the decision, involved the incorrect exercise of discretion, or was unreasonable, having regard to all the circumstances (paragraphs 249.1, 254, 255 and 259 of the Application).

*AER further rationale for adopting transition: avoiding perceived difficulties with historical data*

565. The AER considered that not adopting a trailing average methodology had the further advantage that it avoided what the AER believed to be a practical difficulty with the use of historical data.<sup>483</sup>
566. The issue of identifying appropriate historical data to estimate the trailing average was not a substantial issue and was not a proper basis for:
- 566.1 adopting a methodology that produced a return on debt that was not commensurate with the efficient financing costs of a benchmark efficient entity (being the trailing average approach); or
  - 566.2 perpetuating a methodology that was recognised to produce a result that could never be replicated by a regulated business.
567. The only issue with respect to historical data needed to estimate the trailing average approach relates to the DRP component of the return on debt, and only relates to the selection of which data source to use, as opposed to the data not being available at all.<sup>484</sup> Chairmont does not

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<sup>483</sup> Final Determination, page 3-150. See also Ausgrid Final Decision, page 3-156, Endeavour Final Decision, page 3-157, Essential Final Decision, page 3-157.

<sup>484</sup> Dr M Lally, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, page 15.

note any particular difficulty with the use of historical data to estimate a return on debt using the trailing average approach and states that it is likely that a reasonable estimate could be determined.<sup>485</sup> CEG also does not consider data source selection to be an actual or material barrier to establishing a trailing average estimate and further finds that any problems associated with differences between data source provider estimates is much more severe under the AER's transition.<sup>486</sup> This relates to paragraph 260 of the Application).

## 7. Value of imputation credits

568. The basis for ActewAGL's application for review of the AER's decision to reject ActewAGL's proposed gamma of 0.25 and instead adopt a value for gamma of 0.4 is set out at paragraphs 264 to 280 of the Application. ActewAGL also refers to and relies on paragraphs 72 to 77 of the First Affidavit of Fleur Gibbons.

569. ActewAGL maintains that there is a serious issue to be heard and determined in respect of the grounds for review on this issue.

### 7.1 Background

570. This topic concerns the AER's assessment of the value of imputation credits. The value of imputation credits is also known by the Greek letter '**gamma**' ( $\gamma$ ).

571. Under the Australian tax system, company shareholders can receive an imputation credit (in the form of a franked dividend) for income tax paid at the company level. Imputation credits can offset taxpayers' personal taxation liabilities, and if they exceed tax liabilities can produce a cash refund. They therefore may be of value to Australian investors. By contrast, they have no value to foreign investors.

572. In the Final Determination, the AER explained the significance of imputation credits as follows:<sup>487</sup>

The NER/NGR recognise that a service provider's allowed revenue does not need to include the value of imputation credits. Under the NER/NGR, service providers are to recover revenue that compensates them for their efficient costs in providing regulated services. This includes, among other things, a return to be provided to investors (return on equity) that is required to promote efficient levels of investment. **The more that imputation credits are valuable, the less return that investors require from dividends and capital gains. However, the estimation of the return on equity does not take imputation credits into account. Therefore, an adjustment for the value of imputation credits is required.** This adjustment could take the form of a decrease in the estimated return on equity itself. An alternative but equivalent form of adjustment, which is employed by the NER/NGR, is via the revenue granted to a service provider to cover its expected tax liability. Specifically, the NER/NGR require that the estimated cost of corporate income tax be determined in accordance with a

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485 Chairmont, *Cost of Debt: Transitional Analysis*, April 2015, page 47.

486 CEG, *Efficient Debt Financing Costs* (prepared for ActewAGL), 19 January 2015, pages 48-49 at [156]-[162]; CEG, *Efficient Debt Financing Costs* (prepared for Networks NSW), 19 January 2015, pages 47-48 at [150]-[162].

487 Final Determination, page 4-7.

formula that reduces the estimated cost of corporate tax by the 'value of imputation credits' (represented by the Greek letter,  $\gamma$ , 'gamma'). This form of adjustment recognises that it is the payment of corporate tax which is the source of the imputation credit return to investors. [Bold emphasis added]

573. Put another way, if the benefit to investors from imputation credits was not taken into account, the amount of revenue required to provide an appropriate return to investors would be overstated. Since allowable revenue has to include, inter alia, an amount to cover the cost of corporate income tax and an amount for the return on equity, mathematically the benefit that investors obtain from imputation credits could be deducted from either with the same effect. The NER adopts the approach of deducting the benefit from the cost of corporate income tax.

574. Clause 6.5.3 of the NER states that the estimated cost of corporate income tax of a DNSP for each regulatory year ( $ETC_t$ ) must be estimated in accordance with the following formula:

$$ETC_t = (ETI_t \times r_t) (1 - \gamma)$$

where:

$ETI_t$  is an estimate of the taxable income for that *regulatory year* that would be earned by a benchmark efficient entity as a result of the provision of *standard control services* if such an entity, rather than the *Distribution Network Service Provider*, operated the business of the *Distribution Network Service Provider*, such estimate being determined in accordance with the *post-tax revenue model*;

$r_t$  is the expected statutory income tax rate for that *regulatory year* as determined by the AER; and

$\gamma$  is the value of imputation credits (gamma).

575. To illustrate how the formula works, if gamma is 1, then this indicates that investors are receiving a benefit equivalent to the entire amount of corporate income tax, and therefore the amount of corporate income tax included in allowable revenue would be zero. By contrast, if gamma is 0.1, then 10% of the amount of corporate income tax is conferred as a benefit to investors through the imputation credit system, and 90% of corporate income tax would be included in allowable revenue. It is common ground between the parties that gamma is less than 1, including because companies on average do not distribute all profits (and therefore all potential imputation credits), and because foreign investors cannot use imputation credits.

576. In the Final Determination, the AER adopts a gamma of 0.4. ActewAGL contends for a gamma of 0.25.

#### *Rule amendment*

577. Clause 6.5.3 of the NER was amended in November 2012 to state that gamma is the *value of* imputation credits. This amendment brought the language of the rule into line with consistent prior regulatory practice, and the then consistent approach of experts in the field, that gamma measured the actual value to investors of imputation credits: see, for example, *Application by Energex Limited (No 2)* [2010] ACompT 7 (*Energex No 2*) at paragraphs 18, 78 and 104.

578. Prior to the November 2012 rule amendment, gamma had been referred to in the NER as the *assumed utilisation of* imputation credits. In the AER's Rate of Return Guideline Explanatory

Statement, the AER noted that the previous focus (prior to the Rule amendment) had been on what it described as the 'market value definition of the utilisation rate'.<sup>488</sup> Thus, it appears that the amendment to the definition of gamma from 'assumed utilisation' to 'value' of imputation credits was made to make the definition consistent with regulatory practice and the common understanding as to the role of gamma.

579. Somewhat surprisingly, whilst the relevant rule has been changed from 'assumed utilisation of imputation credits' to 'value of imputation credits', the AER's approach in applying the rule has gone in the opposite direction. The AER now says that it was in error previously to focus on market value, and that the correct measure is the utilisation rate of imputation credits.<sup>489</sup>

*Components of the formula*

580. The common approach to the assessment of gamma is that  $\gamma$  (gamma) in the formula in clause 6.5.3 of the NER is to be calculated as the product of:

580.1 the distribution rate for imputation credits; and

580.2 the value of distributed imputation credits (**theta**),

(that is, **gamma = distribution rate x theta**).

581. 'Theta' has often been referred to by the AER as the 'utilisation rate', including in the Final Determination. However, the term can be something of a misnomer. First, the distribution rate affects the extent of potential imputation credit utilisation. Secondly, focus on 'utilisation' distracts attention from the overall parameter in clause 6.5.3 of the NER, which is 'the value of imputation credits'.

582. There is a dispute between ActewAGL and the AER as to:

582.1 the appropriate interpretation of the distribution rate and theta parameters (including what is meant by 'the value of imputation credits' in clause 6.5.3); and

582.2 the appropriate figures for each of the distribution rate and theta, and ultimately, gamma.

*ActewAGL's proposal*

583. In ActewAGL's regulatory proposal and Revised Regulatory Proposal, ActewAGL proposed a gamma of 0.25, based on a distribution rate of 0.7 and a theta of 0.35.<sup>490</sup>

584. ActewAGL's proposed distribution rate was based on analysis of the long-term distribution rate across Australian companies.<sup>491</sup>

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<sup>488</sup> Rate of Return Guideline Explanatory Statement, Appendix H, page 139.

<sup>489</sup> Rate of Return Guideline Explanatory Statement, pages 160 to 162.

<sup>490</sup> Regulatory Proposal, pages 293-294; Revised Regulatory Proposal, page 486.

<sup>491</sup> NERA, *The Payout Ratio: A report for the Energy Networks Association*, June 2013.

585. ActewAGL's estimate of theta was based on the market value of distributed imputation credits, as indicated by dividend drop-off analysis, consistent with the Tribunal's decision in *Application by Energex No 2* and *Application by Energex Limited (Distribution Ratio (Gamma) No 3* [2010] ACompT 9, and in accordance with the dividend drop off methodology adopted by the Tribunal following that decision and its application in a study conducted by SFG: *Application by Energex Limited (Gamma) No 5* [2011] ACompT 9 (**Energex No 5**). Dividend drop-off analysis seeks to infer a market value for imputation credits, based on movements in share prices around the time dividends are paid out. The present SFG study<sup>492</sup> is simply an updated version of the 'state of the art' study commissioned by the Tribunal in the *Energex* proceedings.

586. In the *Energex* proceedings, the Tribunal concluded that the appropriate figure for gamma was 0.25, based on the distribution rate of 0.7 and a theta of 0.35,<sup>493</sup> being the same as that proposed by ActewAGL in the present case.

#### *AER's decision*

587. In the Final Determination, the AER did not accept ActewAGL's proposed gamma of 0.25. The AER instead adopted a gamma of 0.4, selected from within a range of 0.3 to 0.5 (the **Gamma Decision**).<sup>494</sup>

588. The AER did not specify separate estimates of the distribution rate and theta in its Final Determination. However, it may be inferred that:

588.1 the AER considered that the distribution rate is between 0.7 and 0.8;<sup>495</sup>

588.2 the AER considered that theta is between approximately 0.4 and 0.7;<sup>496</sup> and

588.3 the AER adopted a point estimate for theta somewhere between 0.5 and 0.57.<sup>497</sup>

588.4 The Gamma Decision was based on the following reasoning by the AER:

588.5 gamma should represent the proportion of company tax that is returned to investors through utilisation of imputation credits;<sup>498</sup>

588.6 gamma is calculated by multiplying the distribution rate by the 'utilisation rate'. For each individual investor who is eligible to utilise imputation credits, the

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<sup>492</sup> SFG, *Updated estimate of theta for the ENA*, June 2013.

<sup>493</sup> *Energex No 5*, [42].

<sup>494</sup> Final Determination, page 4-8.

<sup>495</sup> Final Determination, page 4-18.

<sup>496</sup> The AER does not state what it considers to be an appropriate range for theta. The AER only says that 'a reasonable estimate of the value of imputation credits [gamma] is within the range 0.3 to 0.5' (Final Determination, page 4-18). The bottom of the AER's gamma range suggests that theta could be as low as 0.4 (0.3 divided by 0.8, which is the top of the AER's range for the distribution rate). The top of the AER's gamma range suggests that theta could be as high as 0.7 (0.5 divided by 0.7).

<sup>497</sup> The AER does not state what it considers to be an appropriate point estimate for theta. However based on the AER's point estimate for gamma of 0.4 and its range for the distribution rate of 0.7 – 0.8, it may be inferred that the AER adopted a point estimate for theta somewhere between 0.5 (0.4 divided by 0.8) and 0.57 (0.4 divided by 0.7).

<sup>498</sup> Final Determination, page 4-43.

'utilisation rate' is 1. For each individual investor who is not eligible to utilise imputation credits (such as investors not resident in Australia), the utilisation rate is 0. The calculation of the utilisation rate should exclude personal tax and personal costs, such as administrative costs, diversification costs and the time delay before the credits provide any benefit to the investor.<sup>499</sup> Thus, gamma does not reflect the 'value' of imputation credits to investors, but rather the extent to which investors are eligible to utilise credits;

- 588.7 in determining the distribution rate, the AER may have regard to evidence from all equity and/or listed equity only;<sup>500</sup>
- 588.8 the distribution rate for listed equity is approximately 0.8, while for all equity it is 0.7;<sup>501</sup>
- 588.9 the estimate of theta should primarily reflect an estimate of the utilisation rate from the "equity ownership approach", with less reliance placed on evidence of the credit redemption rate from tax statistics, and less weight again (effectively no weight) placed on market value studies;<sup>502</sup>
- 588.10 the equity ownership approach indicates a utilisation rate between 0.56 and 0.68 for all equity, and between 0.38 and 0.55 for listed equity;<sup>503</sup>
- 588.11 the credit redemption rate from tax statistics is 0.43;<sup>504</sup> and
- 588.12 market value studies indicate a range for theta of 0 to 1.<sup>505</sup>

*Why gamma is less than 1*

- 589. In order to understand the issues in dispute, it is helpful to consider the reasons why the value of imputation credits may be significantly less than the cost of corporate income tax.
- 590. The *first* reason is that only some imputation credits are distributed. In Australia, the overall rate of distribution is 70%.<sup>506</sup> The benchmark entity is assumed to distribute imputation credits in line with the average company. (As set out below, there is a debate about whether the distribution rate should simply be 0.7, and whether the AER was in error in also having regard to a distribution rate of 0.8, which the AER has (incorrectly) calculated as a rate for listed equity.)

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499 Final Determination, pages 4-11, 4-42-4 to 45.

500 Final Determination, page 4-17.

501 Final Determination, page 4-18.

502 Final Determination, page 4-18.

503 Final Determination, page 4-74.

504 Final Determination, page 4-18.

505 Final Determination, page 4-18.

506 NERA, *The payout ratio: A report for the Energy Networks Association*, June 2013.

591. The *second* reason is that, as noted by the AER, foreign investors cannot utilise imputation credits.<sup>507</sup> Since one of the objects of the economic regulation of monopoly businesses is to permit the business to earn a return commensurate with the return that investors (plural) would require in a workably competitive market, the proportion of foreign investors in a benchmark entity affects the size of that required return because it affects the *average* value that is obtained from the company's imputation credits. If, for example, Australian companies are 50% foreign owned, then half of the distributed credits cannot be utilised. In that case, the value of gamma could be no more than 0.35 – i.e. distribution rate of 0.7 x Australian ownership of 0.5. For this reason, what the AER refers to as “equity ownership” (i.e. the percentage of Australian investors) is an upper bound for the value of theta (i.e. theta cannot be more than the equity ownership figure).
592. The *third* reason is that some Australian investors cannot utilise imputation credits. Pursuant to the 45 day rule, and subject to certain exceptions, shareholders must hold a share for 45 days (not including the date of purchase or sale) in order to obtain the benefit of imputation credits associated with that share.<sup>508</sup>
593. The *fourth* reason is that even shareholders who are *entitled* to utilise imputation credits do not always do so. The cost or administrative burden for some shareholders (such as small shareholders) may deter utilisation of franking credits.<sup>509</sup>
594. The *fifth* reason is that even shareholders who do utilise imputation credits may not value them at their full face value. Reasons for this include the following:<sup>510</sup>
- 594.1 Time value of money: unlike dividends themselves, imputation credits only produce value through reducing or rebating tax, such that there can be a significant delay between receiving the credit and obtaining the benefit. That delay can be years where credits are distributed through other companies or trusts or where the taxpayer is initially in a tax loss position. Thus, credits may be worth less to investors than their face value.
- 594.2 Transaction costs: the accounting and administrative costs of redeeming imputation credits are greater than for dividends (which are typically simply paid into a nominated bank account).

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507 Final Determination, page 4-23.

508 Although the “qualified persons” rules, and the 45-day holding rule within those rules, were repealed from the *Income Tax Assessment Act 1936 (ITAA36)* in 2002, they still have ongoing application as a result of being imported into the imputation rules by section 207-145(1)(a) of the *Income Tax Assessment Act 1997 (ITAA97)*. Section 207-145(1)(a) of the ITAA97 provides that the amount of the franking credit on a distribution is not included in the assessable income of an entity or allowed as a credit where the entity is not a “qualified person” in relation to the distribution. A “qualified person” for the purposes of this “section” (per section 160APHO(2)) is, broadly, a taxpayer who has held shares or an interest in shares on which a dividend has been paid, “at risk” for a continuous period of not less than 45 days. To work out whether the shares are “at risk”, a taxpayer is required to first work out their “net position”, which is determined under the rules contained in the repealed section 160APHJ of the ITAA36.

509 SFG, *An appropriate regulatory estimate of gamma: Report for Jemena Gas Networks, ActewAGL, APA, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), ENERGEX, Ergon, Transend, TransGrid and SA Power Networks*, 21 May 2014, [65].

510 SFG, *An appropriate regulatory estimate of gamma: Report for Jemena Gas Networks, ActewAGL, APA, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), ENERGEX, Ergon, Transend, TransGrid and SA Power Networks*, 21 May 2014, [65].

594.3 Portfolio effects: An Australian investor obtaining an 8% return from an investment in the USA might decide instead to redirect the investment to an Australian equity returning 7% but so as to obtain the benefit of imputation credits which contribute an additional 2%. For that investor, who is switching investments to obtain the benefit of imputation credits, the imputation credits in question are not worth 2% but are worth 1% (because they come with an opportunity cost). Such switching and portfolio adjustment would rationally continue until the marginal value of switching (and thus the marginal value of the imputation credits) approaches zero.

595. For these reasons, the average value of the imputation credits to investors will be less than the face value.

596. In the Final Decision, the AER's approach to the meaning of "value" excluded the effect of the fifth reason given above. The AER also disregarded the third and fourth reasons given above. In calculating theta, the AER placed "most reliance" on the equity ownership figure, referred to in the second reason above. ActewAGL contends that "equity ownership" can only be an upper bound for theta – it is not itself an assessment of the true and correct theta.

## 7.2 Grounds for review

597. In relation to the Gamma Decision, the AER erred in concluding that the value of imputation credits was 0.4. This finding was based on a number of errors which are set out below.

### *Conceptual definition of gamma and theta*

598. The AER has erred in its definition of gamma and theta. Rather than simply interpreting gamma as *the value of imputation credits* in accordance with the NER, the AER has sought to construct an alternative approach which eschews market value. In the Final Determination, the AER concluded that gamma should be calculated by multiplying the 'distribution rate' by the 'utilisation rate'. The AER says:<sup>511</sup>

We understand the utilisation rate to be the utilisation value to investors in the market per dollar of imputation credits distributed. In the Monkhouse framework, the utilisation rate is equal to the weighted average, by wealth and risk aversion, of the utilisation rates of individual investors. For an 'eligible' investor, each dollar of imputation credit received can be fully returned to the investor in the form of a reduction in tax payable or a refund. **Therefore, we consider that eligible investors have a utilisation rate of 1.** Conversely, 'ineligible' investors cannot utilise imputation credits and have a utilisation rate of 0. **It follows that the utilisation rate reflects the extent to which investors can utilise the imputation credits they receive to reduce their tax or obtain a refund.** [Bold emphasis added]

599. In focussing on this notion of a 'utilisation rate', rather than the value to investors of imputation credits, the AER stated that it relied upon expert advice it had received that the 'Officer framework' specified gamma on a 'before-personal-tax and before-personal-cost basis'.<sup>512</sup> If gamma is interpreted in this way, then any matters which would cause an investor to value an imputation credit at less than face value are disregarded, which would then focus the inquiry on the face value of utilised credits.

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<sup>511</sup> Final Determination, pages 4-22 to 4-23.

<sup>512</sup> Final Determination, page 4-11.



600. There are three problems with the AER's approach:
- 600.1 it is not in accordance with amended clause 6.5.3 of the NER, where the words 'assumed utilisation' were changed to 'value' and which therefore requires consideration to be given to the value of imputation credits to investors;
  - 600.2 it is not in accordance with the proper function of gamma in the regulatory scheme; and
  - 600.3 it is not a correct statement of the Officer framework in any event.
601. In relation to the first of these matters, the Final Determination does not grapple in any sense with the change of language in the NER. It does not explain what the change signifies, or how the AER's approach is consistent with the change of language in the NER. The Final Determination simply ignores the change in language in the NER and gives it no role. Indeed, as noted above, whereas the language employed by clause 6.5.3 in defining gamma has been changed from 'utilisation' to 'value', the AER's approach has gone the other way – moved from 'value' to 'utilisation' in its strict sense. It is clear that the change of language in clause 6.5.3 of the NER draws some distinction between 'utilisation' and 'value'. The Final Determination does not recognise that distinction. This alone constitutes an error by the AER in the construction and application of the NER in the making of the Gamma Decision.
602. The mere invocation by the AER of the word 'value' in various places in the Final Determination does not overcome this difficulty, because the AER goes on to make clear that it does not seek to calculate the value to the investor of imputation credits, but rather seeks to calculate the ratio of credits available to be utilised by eligible investors. This is made clear in the Final Decision in the first paragraph of section 4.4.2<sup>513</sup> and also section A.6 of Attachment 4.<sup>514</sup>
603. The AER states that its 'utilisation potential' interpretation of gamma is equivalent to a qualified value interpretation – that is, if value is considered on a 'before-personal-tax and before-personal-cost basis', then it is equivalent to the extent to which investors are eligible to utilise credits.<sup>515</sup> However, this requires the AER to read into clause 6.5.3 of the NER words that are not there. Rather than giving the relevant words of clause 6.5.3 – 'the value of imputation credits' – their plain and ordinary meaning the AER seeks to read in a different or qualified meaning – i.e. that gamma is to mean the 'before-personal-tax and before-personal-cost value of imputation credits'.
604. In relation to the second matter set out in paragraph 600 above, as the AER itself identifies in the passage set out in paragraph 598 above, the proper function of gamma has to be understood against the background of its function in the provision by the NER for a return on investment. The role of the economic regulation of monopoly infrastructure is to simulate what would occur in a workably competitive market. In such a market, participants will cover efficient costs and make a normal return. It is thus common ground that the allowable revenue should be sufficient to meet the efficient costs of the benchmark entity and provide an

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<sup>513</sup> Final Determination, page 4-22.

<sup>514</sup> Final Determination, page 4-42.

<sup>515</sup> Final Determination, pages 4-44 to 4-45.

appropriate return – one that provides an appropriate signal for investment (neither over nor under investment).<sup>516</sup>

605. In considering an appropriate return, one has to consider the appropriate value to an average investor that would induce the investor to invest in the benchmark business, rather than investing somewhere else (such as leaving money in the bank). That is a *market-based measure*. Thus, for example, clause 6.5.2(g) of the NER provides that in estimating the return on equity, regard must be had to the prevailing conditions in the market for equity funds. Market-based measures in turn (and consistently with the underlying economic theory) are based on the actual value to investors of the investment in question. Acquisition prices and resulting returns in the market are the product of rational investors transacting and trading by reference to the value *to them* of the investment. For example, if investors require a margin of 5% above the risk free rate to undertake a particular type of investment, then this margin (derived from the market) reflects any additional risk, and also any additional transaction costs (i.e. 'personal costs', to use the language of the AER). Investors would require a different margin if personal costs were excluded.
606. As noted in paragraph 572 above, the adjustment for gamma is to accommodate the fact that any value obtained by investors from imputation credits needs to be deducted from the return that investors otherwise require so that investors are not overcompensated, and so as to avoid a signal that would lead to overinvestment.
607. In this context, anything that causes imputation credits to be valued at less than their face value must be taken into account because it reduces the discount to the return that investors otherwise require. For example, assume that an average investor requires an overall return of 9% to invest in the benchmark entity. If imputation credits are worth 2% to the investor, then the investor only requires a return on equity of 7%. If, however, imputation credits are only worth 1% to the investor after having regard to personal costs from imputation credits, then a 7% equity return will be too low. A 7% equity return will be insufficient to induce an investment and will be insufficient to promote investment in the network (whether capital replacement or new construction), to the long term detriment of consumers.
608. Therefore, valuing imputation credits at their notional face value, regardless of their market value and value to investors, will give an inappropriate figure for allowable revenue, which will lead to underinvestment. This result is not in accordance with the NEO.
609. The AER's reasoning for adopting its approach is its conclusion that the framework for considering imputation credits, devised by Professor Officer, contains statements and formulae that do not give a role to personal tax or personal costs. It is therefore said that the framework is a before-personal-tax and before-personal-costs framework and does not seek to derive 'market value'.<sup>517</sup> This has led to a very detailed debate between experts as to how the particular statements by Professor Officer should be interpreted. However, that debate has distracted the AER's attention from the proper enquiry.

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<sup>516</sup> The RPPs include that a service provider should have a reasonable opportunity to recover at least the efficient costs that the operator (benchmark efficient entity) incurs in providing direct control network services, that a price or charge should allow for a return that matches the regulatory and commercial risks from providing the regulated service that charge relates, and that regard should be had to the economic costs and risks of the potential for under or over utilisation of a distribution or transmission system that the service provider uses to provide regulated network services (NEL, section 7A).

<sup>517</sup> As noted below, the reference to personal tax is a red herring.

610. Professor Officer's papers are not a statute or a code. Seeking to parse and analyse Professor Officer's papers is not a substitute for a proper consideration of the role of imputation credits pursuant to the regime established by the NER. That role, as explained above, is to consider the extent to which the value of imputation credits reduces the return required by investors – ie, what is the revenue *discount* that accommodates the value of imputation credits to investors. That is underscored by the requirement in clause 6.5.3 of the NER to calculate the *value* of imputation credits.
611. In relation to tax, the focus by the AER on a 'before-personal-tax' assessment is a red herring. There is no dispute that both the equity return and the value of imputation credits are assessed on a 'before-personal-tax' basis. In any event, shareholders are likely to pay the same rate of tax on dividends as they pay on imputation credits. The tax impact on the substitution between dividends and imputation credits is neutral (or a 'wash', as SFG describes it).<sup>518</sup> We are not here concerned about tax.
612. However, the same cannot be said for personal costs. As explained above, the market measurement of the required rate of return already incorporates personal costs. To ignore them in the case of imputation credits would be asymmetrical and erroneous. Further, to ignore the likely impact of *additional* personal costs in the case of imputation credits will produce an erroneous result.
613. In relation to the third matter set out in paragraph 600 above, the AER's interpretation of the Officer framework is incorrect, in any event. Professor Officer's 1994 paper is a conceptual and mathematical exploration of the impact of imputation credits on traditional cost of capital calculations. Although it refers to gamma as the 'value of a dollar of tax credit to the shareholder',<sup>519</sup> it does not address in any meaningful or definitive way how that 'value' is to be measured or what it comprises. To the extent to which the paper gives any guidance, it is inconsistent with the approach of the AER. Thus Professor Officer states:<sup>520</sup>

Where there is a market for tax credits one could use the market price to estimate the value of  $\gamma$  for the marginal shareholder, i.e. the shareholder who implicitly sets the price of the shares and the price of  $\gamma$  and the company's cost of capital at the margin, but where there is only a covert market, estimates can only be made through dividend drop-off rates.

614. This passage suggests that gamma could appropriately be measured at the market price for a tax credit, which of course would recognise the value of the credit to the investor, *not* the face value. Likewise, dividend drop off studies measure the market value (or value to the investor) of imputation credits. (Indeed, that is one reason that the AER provides for not giving any material weight to dividend drop-off studies – because they do not measure the AER's conception of gamma.)

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<sup>518</sup> SFG, *Estimating gamma for regulatory purposes: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausnet Services Directlink, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), Citipower, Powercor, ENERGEX, Ergon, SA Power Networks, Australian Gas Networks and United Energy*, 6 February 2015, page 9.

<sup>519</sup> Officer, *The cost of capital of a company under an imputation tax system* (1994) vol.34(1) *Accounting and Finance*, page 4.

<sup>520</sup> Officer, *The cost of capital of a company under an imputation tax system* (1994) vol 34(1) *Accounting and Finance*, page 4, footnote 5.

615. For the reasons set out above, the AER's conceptual definition of gamma involves a material error in the interpretation and application of clause 6.5.3 of the NER. Clause 6.5.3 is a new rule. Its proper interpretation is an important matter. On its face, it refers to 'value' not 'potential utilisation'. ActewAGL submits that there is a clear basis for the existence of a serious issue to be determined as to whether a ground of review exists in relation to gamma.
616. The AER's approach to 'value' has a number of implications for the AER's calculation of gamma in the Final Decision. The first is that the AER gives primacy to the 'equity ownership' approach. The second is that the AER largely disregards the primary evidence of market value, being dividend drop off studies. The third is that the AER concludes that even if regard was to be had to a dividend drop off study, it would be necessary to make an adjustment to attempt to eliminate the discount for 'personal costs' embedded in the output of the study. These matters are addressed in more detail below.
617. The AER has also made a number of additional errors, also addressed below.

*Use of equity ownership figures*

618. In estimating theta in the Final Decision, the AER placed 'most reliance' on estimates of the domestic equity ownership rate.<sup>521</sup> The equity ownership rate is a measure of the proportion of equity in Australian companies that is held by domestic investors.
619. The AER seeks to justify its use of equity ownership rates on the basis that this is consistent with its conceptual definition of gamma and theta.<sup>522</sup> Since the AER assumes away the effect of personal costs, it considers that it is able to rely on measures which do not take into account the effect of these costs on the value of imputation credits to investors.
620. However, if a correct interpretation of the NER in relation to gamma is adopted, it is clear that equity ownership rates will not provide a reliable estimate of theta. Equity ownership rates do not measure the 'value' of distributed imputation credits. Rather domestic equity ownership rates will only indicate the *maximum* set of investors who could potentially be eligible to redeem imputation credits (since foreign investors cannot redeem those credits) and who may therefore place some value on imputation credits.
621. Further, domestic equity ownership rates exceed even the maximum figure for the proportion of eligible investors, since the figures do not accommodate the percentage of Australian domestic investors who are unable to redeem because of restrictions on redemption, such as the 45 day rule. Therefore, even on the AER's own definition of theta (focussing on potential utilisation by eligible investors), equity ownership rates are above the maximum possible figure for theta.
622. Nor do such rates reflect the proportion of investors who do not redeem credits for whatever reason (such as the deterrent effect of transaction costs).
623. In the Final Determination, the AER considered that equity ownership figures could be used, notwithstanding they did not take into account the impact of the 45 day rule or other matters

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<sup>521</sup> Final Determination, page 4-18.

<sup>522</sup> Final Determination, page 4-23.

preventing utilisation of imputation credits, on the footing that there was insufficient evidence that the 45 day rule (or any other factor preventing utilisation) had any significant effect.<sup>523</sup>

624. This is not a sound basis for using figures that could only be a theoretical maximum.
625. However, in any event, tax statistics record the redemption rate for imputation credits at a figure which is materially below the domestic equity ownership rate, suggesting that equity ownership figures overstate the level of utilisation.<sup>524</sup>
626. One response given by the AER to this is to question the accuracy of tax statistics.<sup>525</sup> However, the AER otherwise has regard to these very statistics, as set out below.
627. For the reasons set out above, the AER erred in considering that the equity ownership approach provides direct evidence as to theta, and erred in giving any weight, or alternatively in giving greatest weight, to such measurements.

*Findings of fact in relation to the equity ownership rate*

628. The AER concluded that domestic equity ownership rates indicate a range for theta of 0.56 to 0.68 for all equity, and 0.38 to 0.55 for listed equity.<sup>526</sup>
629. These figures were derived by considering a range for this metric over time, commencing in July 2000.<sup>527</sup> The period since July 2000 was chosen on the basis that a change in the tax law occurred in July 2000, entitling domestic investors to a refund for excess credits.<sup>528</sup>
630. There is no apparent basis for taking figures up to 15 years old. In fact, the domestic ownership rate (as analysed by the AER) is currently 0.6 for all equity and 0.45 for listed equity.<sup>529</sup> Given that other relevant parameters such as the return on equity are calculated having regard to prevailing conditions, there is no reason for not having regard to prevailing conditions in any measurement of theta. Put another way, the value of theta (i.e. the value of distributed credits to the representative investor) cannot be more than the *current* level of domestic equity ownership, regardless of what ownership levels were like in 2000.
631. The chart below (from the Final Determination<sup>530</sup>) shows that the AER's choice of period is significant to its conclusion on the domestic equity ownership rate. If, for example, the AER had confined its consideration to a period after the onset of the global financial crisis (**GFC**) (an event much more likely to have influenced the level of foreign investment, compared to

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<sup>523</sup> Final Determination, page 4-56.

<sup>524</sup> As discussed below, the AER concludes that the redemption rate from tax statistics is 0.43 (Final Determination, page 4-75). This is below the current domestic equity ownership rate for listed equity (of 0.45), and significantly below the current domestic equity ownership rate for all equity (of 0.6), as can be observed from the chart of p 4-74 of the Final Determination (reproduced below).

<sup>525</sup> Final Determination, page 4-56.

<sup>526</sup> Final Determination, page 4-74.

<sup>527</sup> Final Determination, pages 4-73 to 4-74.

<sup>528</sup> Final Determination, page 4-73.

<sup>529</sup> This can be observed from the chart on page 4-74 of the Final Determination, which is reproduced below.

<sup>530</sup> Final Determination, page 4-74.

any change in the tax law affecting domestic investors), it would have drawn very different conclusions as to the domestic equity ownership rate. Since September 2008, the domestic equity ownership share has been in a much narrower range of 0.56 to 0.60, and for listed equity it has been in the range of approximately 0.38 to 0.47. Indeed, on any view, there has been a significant change since the period immediately prior to the GFC.

**Figure 4-3 Refined domestic ownership share of Australian equity**



Source: Australian National Accounts: Finance and Wealth (ABS cat. 5232.0), tables 47 and 48.

632. SFG explains that, to the extent that domestic equity ownership is relevant, what is required is an estimate that is commensurate with the prevailing conditions in the market, and *current* rates of equity ownership.<sup>531</sup> It is the current rate of domestic equity ownership that will affect the ability of current investors to redeem (and therefore place *some* value) on imputation credits. The domestic equity ownership rate at some previous point in time is not relevant to this.
633. Therefore, to the extent that domestic equity ownership rates are relevant to estimating theta (i.e. insofar as they provide a theoretical upper bound), the relevant figures for this metric are 0.6 for all equity and 0.45 for listed equity.
634. In relation to which of these measures is preferable, ActewAGL observes that the figure for all equity covers a very wide range of corporations, including small, privately owned corporations such as family companies and a wide variety of small businesses. In the present

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SFG, *Estimating gamma for regulatory purposes: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausnet Services Directlink, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), Citipower, Powercor, ENERGEX, Ergon, SA Power Networks, Australian Gas Networks and United Energy*, 6 February 2015, [147].

context, the AER was engaged in the task of considering the extent of foreign ownership of the benchmark entity. The benchmark entity with a similar degree of risk as that which applies to the DNSP in respect of the provision of standard control services is very different from a small, privately held company, and is likely to either be listed or to have a propensity for foreign ownership or profile of foreign ownership similar to a listed company – that is, the benchmark efficient entity is likely to be as accessible and attractive to foreign investors as an average listed entity. It is not surprising therefore that a number of the privately owned electricity and gas service providers are foreign owned. Given this, the notional benchmark entity, being a representative entity owning and operating a sizeable electricity distribution business, is likely to have an Australian domestic ownership rate in line with Australian public companies. In these circumstances, the appropriate equity ownership figure relevant to theta (ie, a maximum for theta) is 0.45 or approximately 0.45. (For the reasons discussed above, the true figure for theta must lie below this.)

635. By contrast, on the AER's figure for gamma from the Final Determination of 0.4 and assuming a distribution rate of 0.7, the AER's implicit figure for theta is 0.57. On any view, this is too high. It does not appropriately reflect a balanced view of the range of equity ownership figures, let alone the fact that the true figure for theta must be below the equity ownership figure.

*Use of tax statistics*

636. Tax statistics measure the utilisation of distributed imputation credits from reported information contained in tax returns. For the reasons discussed earlier, they do not measure the value of those credits. The AER erred in failing to recognise that the imputation credit redemption rates to which it had regard could only ever be a theoretical upper bound to theta – that is, the imputation credit redemption rates evidenced by tax statistics will generally be greater than the value to investors of those same imputation credits.
637. It has previously been accepted by the Tribunal that redemption rates from tax statistics simply indicate the upper bound for theta. In *Energex No 2*, the Tribunal observed:<sup>532</sup>

The AER accepted that utilisation rates derived from tax statistics provide an upper bound on possible values of theta. Setting aside the manner in which the AER derived a value from the tax statistics study, it correctly considered that information from a tax statistics study was relevant. However, its relevance could only be related to the fact that it was an upper bound. No estimate that exceeded a genuine upper bound could be correct. Thus the appropriate way to use the tax statistics figure was as a check.

638. In the Final Determination, the AER erred in giving weight to imputation credit redemption rates from tax statistics in preference to market value results from the SFG study. The AER failed to recognise that tax statistics could only provide an upper bound or check on the estimate of theta, whereas market value studies provide direct evidence of theta.
639. However, tax statistics are nevertheless very significant as an upper bound. In the Final Determination, the AER noted that tax statistics supported an estimate of the utilisation rate (i.e. the AER's notion of theta) of between 0.4 and 0.6, with the upper part of that range

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*Energex No 2*, [91].

associated with estimates of the distribution rate of around 0.5, and the lower part of this range associated with estimates of the distribution rate of around 0.7.<sup>533</sup> The AER then correctly concluded that its estimate of the distribution rate (0.7) 'implies that we should adopt a utilisation rate of around **0.43** from within this range' (bold emphasis added).<sup>534</sup>

640. The AER noted that Hathaway's 2013 report produced two estimates for the period 2004 – 2011, being 0.43 and 0.61 corresponding to estimates of the distribution rate of 0.5 and 0.7 respectively. The AER concluded:<sup>535</sup>

Since the Guideline we have continued to examine this evidence. We now consider that we should rely on estimates that are:

- derived from post-2004 data, consistent with Hathaway's findings that the ATO statistics are subject to a number of issues prior to 2004, and
- consistent with our preferred estimates of the distribution rate.

Applying these considerations, we do not rely on:

...

- Hathaway's estimate of 0.61, because this corresponds to an estimate of the distribution rate of around 0.5 whereas we adopt an estimate of the distribution rate over all equity of 0.7.

641. Therefore, the tax statistics indicate a maximum value of theta of 0.43 for all equity. It is unsurprising that the figure from tax statistics, which measure actual utilisation, would be lower than the figure from the equity ownership approach, given that the equity ownership approach does not include the proportion of investors who cannot (e.g. due to the 45 day rule) or do not utilise imputation credits.

642. Taking a maximum value for theta of 0.43, the maximum value of gamma is **0.3** (with a distribution rate of 0.7), as recorded in Table 4-1 of the Final Determination on page 4-18. This is significantly less than the AER's figure for gamma of 0.4.

643. In the Final Determination, rather than accepting that the tax statistics figure of 0.43 is an upper bound for theta and therefore constrains the maximum value for gamma to 0.3, the AER adopted the following approach:<sup>536</sup>

- The equity ownership approach, on which we have placed the most reliance, suggests a value [of gamma] between 0.40 and 0.47 when applied to all equity and between 0.31 and 0.44 when applied to only listed equity. Therefore, the overlap of the evidence from the equity ownership approach suggests a value between 0.40 and 0.44.

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533 Final Determination, page 4-75.

534 Final Determination, page 4-75.

535 Final Determination, page 4-75.

536 Final Determination, page 4-18.



- The evidence from tax statistics suggests that the value [of gamma] could be lower than 0.4. Therefore, with regard to this evidence and the less reliance we place on it, we choose a value at the lower end of the range suggested by the overlap of evidence from the equity ownership approach (that is, 0.4).

644. This is an illogical approach and fails to have proper regard to the consideration that the tax statistic figure would be *expected* to be lower than the equity ownership figure, and itself must be an upper bound. It is an error to simply use that information to select from the bottom of a different (and higher) range. The AER's approach constrains the role of tax statistics to selecting from within a pre-determined range based on equity ownership rates, rather than recognising that tax statistics are an indicator of the upper bound for gamma in their own right.

645. Thus, the AER erred in failing to recognise that:

- 645.1 the tax statistics figure indicates that its equity ownership figures are too high as a measurement of theta;
- 645.2 the tax statistics figure is itself an upper bound for theta; and
- 645.3 the tax statistics figure (0.43 where the distribution rate is 0.7, corresponding to a maximum value for gamma of 0.3) indicated that the AER's estimate of gamma was too high.

#### *Relevance of market value studies*

646. The AER erred in considering that market value studies provided only limited guidance as to the value of theta, including because the results of these studies can reflect factors which are not relevant to theta.<sup>537</sup> In fact market value studies provide direct evidence as to the value of distributed imputation credits.<sup>538</sup>

647. The AER also erred in concluding that the output of a market value study (eg, the 0.35 estimate from the SFG dividend drop-off study) had to be adjusted so as to capture the utilisation rate of imputation credits, rather than the value to investors of those credits.<sup>539</sup> The adjustment mechanism adopted was to divide the value of imputation credits by the value of dividends from the same study, which the AER concluded would mean that the 0.35 estimate of theta from SFG's dividend drop off study should in fact be interpreted as an estimate of around 0.4 (after adjustment).<sup>540</sup>

648. The basis for the AER's view that market value studies are of limited relevance, and the basis for its adjustment to the results of these studies, was its conceptual definition of gamma as the 'before-personal-tax and before-personal-cost value of imputation credits' (discussed above).

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<sup>537</sup> Final Determination, pages 4-26 to 4-28.

<sup>538</sup> SFG, *Estimating gamma for regulatory purposes: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausnet Services Directlink, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), Citipower, Powercor, ENERGEX, Ergon, SA Power Networks, Australian Gas Networks and United Energy*, 6 February 2015, [70].

<sup>539</sup> Final Determination, page 4-18. The AER refers to an estimate for theta of 0.4, which reflects the adjusted output of the SFG dividend drop-off study.

<sup>540</sup> Final Determination, page 4-28.

The AER considered that, since market value studies reflected the effect of personal costs on investors' valuation of imputation credits, they were of limited relevance in measuring the before-personal-cost value (or alternatively required adjustment).

- 649. For reasons set out above, the AER erred in its conceptual definition of gamma and theta.
- 650. Consequently, the AER erred in making its adjustment to the results of market value studies, including because it is inconsistent with the proper meaning of 'the value of imputation credits' in clause 6.5.3 of the NER, in circumstances where the SFG study properly measured the value of distributed credits.
- 651. Further, an important matter to which the AER failed to have regard is that, given that the market value of imputation credits would be affected by transaction costs, portfolio effects, and the time value of money, the estimate of the market value of distributed imputation credits produced by the SFG study (of 0.35) was a sensible estimate having regard to the imputation credit redemption rate from tax statistics used by the AER (of 0.43).

*Methodological limitations of market value studies*

- 652. The AER erred in concluding that market value studies can be subject to a number of limitations, and produce a wide range of results, as reasons for giving little or no weight to the SFG study,<sup>541</sup> without giving proper consideration to:
  - 652.1 the superiority of the SFG study over previous studies;
  - 652.2 the fact that the SFG study was merely an updated version of the study commissioned by the Tribunal in the *Energex* proceedings; and
  - 652.3 the careful steps taken in the *Energex* proceedings to commission a study to overcome limitations and difficulties affecting previous dividend drop-off studies, and the participation by the AER in the formulation of the methodology for the study.
- 653. It was unreasonable and erroneous for the AER to seek to discredit the SFG study by reference to general observations and issues applicable to prior dividend drop-off studies, for example by stating that: 'In light of the differing views on these studies and the range of estimates they produce, we consider that implied market value studies provide limited guidance'.<sup>542</sup>
- 654. In *Energex No 5*, the Tribunal observed, in relation to the 2011 version of SFG's study (at paragraph 22):

In respect of the model specification and estimation procedure, the Tribunal is persuaded by SFG's reasoning in reaching its conclusions. Indeed, the careful scrutiny to which SFG's report has been subjected, and SFG's comprehensive response, gives the Tribunal confidence in those conclusions. In that context, the Tribunal notes that in commissioning such a study, it hoped that the results would provide the best possible estimates of theta and gamma from a

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<sup>541</sup> Final Determination, pages 4-26 to 4-27.

<sup>542</sup> Final Determination, page 4-28.

dividend drop-off study. The terms of reference were developed with the intention of redressing the shortcomings and limitations of earlier studies as far as possible.

655. The Tribunal went on to observe (at paragraph 29) that:

The Tribunal is satisfied that SFG's March 2011 report is the best dividend drop-off study currently available for the purpose of estimating gamma in terms of the Rules. Its estimate of a value of 0.35 for theta should be accepted as the best estimate using this approach.

656. The SFG study that was ordered by the Tribunal in the *Energex* proceedings was the outcome of a very detailed process (involving very significant input by the AER and its experts) to seek to overcome methodological deficiencies in earlier studies so as to produce a 'state-of-the-art' dividend drop-off study.<sup>543</sup>

657. The SFG study now relied on by ActewAGL is an updated version of this earlier state-of-the-art study. In the Final Determination, the AER has not had proper regard to this, but rather has relied upon generalised criticisms of dividend drop off studies.

658. Likewise, the AER erred in concluding that market value studies indicate a range for theta of between 0 and 1, in that the AER:

658.1 gave undue weight to the results of earlier dividend drop-off studies, many of which are known to have methodological problems, or are based on out-dated data (shortcomings which the SFG study was designed to overcome). The AER refers to results from nine dividend drop-off studies dating back to 1993, only five of which contain results for a post-2000 estimation period,<sup>544</sup> despite the AER having previously acknowledged that studies that use data from the current tax regime (after 2000) are more relevant.<sup>545</sup> Further, the AER refers to studies with known methodological shortcomings – for example, the AER refers to the results of the Beggs and Skeels (2006) study, which was the subject of some criticism by the Tribunal in *Energex No 2*,<sup>546</sup> and

658.2 failed to consider the relative merits of the SFG study, which produced an estimate for theta of 0.35. As noted above, the SFG study now relied on by ActewAGL is an updated version of the 'state-of-the-art study' that was ordered by the Tribunal in the *Energex* proceedings, with a view to overcoming the methodological shortcomings of earlier studies, such as the Beggs and Skeels (2006) study.<sup>547</sup>

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543 *Energex No 5*.

544 Final Determination, page 4-80.

545 Rate of Return Guideline Explanatory Statement, page 176.

546 In particular, the Tribunal noted that it was not clear why Beggs and Skeels (2006) did not adopt the usual procedure of dividing both sides of the equation by the cum-dividend price, a procedure which greatly reduces heteroscedasticity (*Energex No 2*, [116] to [118]). The Tribunal also noted that there was no information on the data filtering techniques adopted by the authors (*Energex No 2*, [131]). It was due to its concerns with the earlier studies (including the Beggs and Skeels (2006) study) that the Tribunal in *Energex No 2* requested a new 'state-of-the-art' study be undertaken by SFG (*Energex No 2*, [146] to [148]).

547 SFG, *Updated dividend drop-off estimate of theta: Report for the Energy Networks Association*, June 2013.

*Implied estimate of theta*

659. In light of the matters set out above, the AER erred in (implicitly) concluding that a reasonable range for theta is approximately 0.4 to 0.7, with a point estimate in the range of 0.5 to 0.57,<sup>548</sup> in circumstances where:
- 659.1 current equity ownership figures indicated that theta could not be more than 0.6, and indeed was likely to be no more than 0.45;
  - 659.2 the actual value of theta must be lower than such figures in any event, having regard to limitations on utilisation by domestic investors;
  - 659.3 imputation credit redemption rates, as reflected in tax statistics, indicate that the maximum or 'upper bound' value for theta is 0.43; and
  - 659.4 market value studies indicate that the best estimate of theta is 0.35.

*Distribution rate*

660. In adopting a range of 0.7 to 0.8 for the distribution rate, the AER:
- 660.1 gave undue weight to evidence of the distribution rate for a small, and (for this purpose) unrepresentative, set of listed companies; and
  - 660.2 did not have proper regard, or alternatively gave insufficient weight, to evidence of the distribution rate across all companies.
661. Whilst the equity ownership percentage calculated for listed entities is likely to be a good proxy for the ownership profile of the benchmark entity, the distribution rate of listed entities is not a good proxy for the distribution rate of the benchmark entity. Almost two thirds of the value of listed entities comprises the top 20 firms, which tend to be large multinational firms with significant foreign earnings.<sup>549</sup> Whilst franking credits are only created where tax is paid on Australian earnings, franking credits may be distributed by franking any dividend (whether the dividend results from the distribution of Australian earnings or foreign earnings). The existence of significant foreign profits (and thus foreign tax liabilities) for large listed entities means that for a given amount of dividends and imputation credits distributed, the distribution rate will be higher than for an entity with less foreign profits.<sup>550</sup>
662. The market-wide distribution rate of 0.7 reflects the fact that, on average and over a substantial time period, companies distribute 70% of earnings and retain 30% of earnings (e.g. for reinvestment and growth). For a company with Australian earnings only, distributing

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<sup>548</sup> The AER does not state what its point estimate of theta is. However, given that the AER refers to a range for the distribution rate of 0.7 to 0.8 and adopts a point estimate for gamma of 0.4, it may be inferred that its point estimate of theta is at least 0.5 (0.4 divided by 0.8).

<sup>549</sup> SFG, *Estimating gamma for regulatory purposes: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausnet Services Directlink, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), Citipower, Powercor, ENERGEX, Ergon, SA Power Networks, Australian Gas Networks and United Energy*, 6 February 2015, pages 44-45.

<sup>550</sup> This is illustrated by way of example in: SFG, *Estimating gamma for regulatory purposes: Report for Jemena Gas Networks, Jemena Electricity Networks, ActewAGL, Ausnet Services Directlink, Networks NSW (Ausgrid, Endeavour Energy and Essential Energy), Citipower, Powercor, ENERGEX, Ergon, SA Power Networks, Australian Gas Networks and United Energy*, 6 February 2015, page 45.

70% of earnings means that only 70% of imputation credits can be distributed. However, a company with significant foreign earnings can distribute 70% of overall earnings (and retain 30%) but also distribute significantly more than 70% of franking credits, by attaching franking credits produced by tax on Australian earnings to dividends paid on a mix of Australian and foreign earnings.

663. In these circumstances, it is not surprising that the distribution rate for listed equity is higher than the distribution rate for all equity. However, the benchmark entity *by definition* is an entity with 100% Australian income.<sup>551</sup> Such an entity cannot consistently raise its franking credit distribution rate above its earnings distribution rate. Therefore, the distribution rate of listed equity (with material foreign earnings) is not a good proxy for the distribution rate for the benchmark entity. Rather, the figure for the distribution rate in respect of all equity is a much better proxy. That figure is 0.7. By contrast, listed equity is a good proxy for the domestic ownership rate for the benchmark entity (relevant to theta), for the reasons explained earlier.

### 7.3 Conclusion – Gamma Decision

664. A simple way of considering the problem with the AER's approach and resultant value for gamma is as follows. The representative benchmark entity is an entity with a domestic ownership of less than 50%, and indeed a domestic ownership profile in line with Australian listed equity (ie, 45% or 0.45). The representative benchmark entity will also distribute franking credits at the prevailing rate of 0.7. Thus, an upper bound for gamma (based simply on ownership and distribution) is approximately 0.32. There is no proper basis for a gamma of 0.4.
665. This is before considering the fact that some Australian investors cannot utilise franking credits, some will not do so, and some will value them at less than their face value (due to the time value of money, transaction costs and portfolio effects).
666. Likewise, an upper bound for gamma based on tax statistics is 0.3. Again, this does not reflect the fact that some investors will value franking credits at less than face value.
667. The best available estimate for theta indicated by market value studies is 0.35, which corresponds to a value for gamma of 0.25 (based on a distribution rate of 0.7).
668. In these circumstances, ActewAGL's figure for gamma of 0.25 is in fact consistent with all of the evidence before the AER, and the AER's figure is not.
669. In light of the matters set out in this section, there is a serious issue to be heard and determined for the existence of each of the grounds set out in section D(7) of the Application.

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The AER's definition of the benchmark efficient entity is a pure play, regulated energy network business *operating within Australia*: Rate of Return Guideline, p 7; Rate of Return Guideline Explanatory Statement, pages 32 to 35, see in particular the discussion of 'Operating within Australia' on p 35. See also: Final Determination, page 3-24.

**F ACTEWAGL'S CASE FOR LEAVE - PRIMA FACIE CASE AS TO MATERIALLY PREFERABLE NEO DECISION**

670. ActewAGL's case that a determination by the Tribunal to make one or more of the orders sought in section F of the Application with respect to the Final Determination would result in a materially preferable NEO decision and as to satisfaction of the *prima facie* case requirement for the grant of leave is set out at paragraphs 281 to 325 of its Application and paragraphs 78 to 83 of the First Affidavit of Fleur Gibbons.
671. ActewAGL reiterates its observation in paragraph 60 above that, as the grant of leave by the Tribunal does not finally determine rights, it is not necessary for the Tribunal to make determinations about contested issues nor decide any disputed points of law, particularly where other factors render it undesirable to decide a complex point of law, in determining whether ActewAGL has established a *prima facie* case for the purposes of section 71E(b).<sup>552</sup> ActewAGL respectfully submits that several factors, including the significance of any Tribunal decision on the construction of the 'materially preferable NEO decision' provisions of the NEL to the reformed merits review regime and that this is the first occasion on which the Tribunal has had the opportunity to consider the construction of the interrelated and recently introduced sections 16(1)(c) and (d), 71E(b) and 71P(2a) to (2c) of the NEL, render it undesirable to decide these issues of construction in making the Tribunal's determination on the existence of a *prima facie* case.
672. ActewAGL also reiterates its observation in paragraph 61 above that there is no need for the Tribunal to evaluate afresh the grounds put forward by ActewAGL in determining whether this *prima facie* case requirement for leave is met. This requirement will be satisfied where the Tribunal is satisfied, on what is put forward by ActewAGL, that there is a sufficient likelihood that a determination to vary or remit the Final Determination to correct the error(s) alleged by any one or more of the grounds would or would be likely to result in a materially preferable NEO decision.
673. ActewAGL submits that, for the reasons advanced in section E of its Application and paragraphs 78 to 83 of the First Affidavit of Fleur Gibbons, there is a sufficient likelihood on the material put forward by ActewAGL, that a determination to vary or remit the Final Determination to correct any one or combination of the grounds would or would be likely to result in a materially preferable NEO decision. Contrary to paragraph 4 of the AER Notice, section E of ActewAGL's Application and the First Affidavit of Fleur Gibbons specifies (and Annexures FCG-2 and FCG-3 to the First Affidavit of Fleur Gibbons and Annexure FCG-2 to the Second Affidavit of Fleur Gibbons contain) the evidence in the decision related matter on which ActewAGL relies to demonstrate a *prima facie* case in satisfaction of the criterion for leave established by section 71E(b) of the NEL.
674. In any event, ActewAGL observes that:
- 674.1 the *prima facie* case requirement is satisfied by the Application generally where a determination to vary or remit the Final Determination on the basis of any one ground would be likely to result in a materially preferable NEO decision;

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*South Johnstone Mill Ltd and Others v Dennis and Others* (2007) 163 FCR 343 at [80]; *North Ganalanja Aboriginal Corporation v Queensland* (1996) 185 CLR 595, page 639 per McHugh J in discussing the establishment of a *prima facie* case in proceedings for an interlocutory injunction.

- 674.2 there is no doubt that the classification of metering services ground (discussed in paragraphs 166 to 174 of the Application and section E(4) of these submissions) is established; and
- 674.3 in circumstances where the correction of the error alleged by that ground will have implications for the introduction of metering contestability and the workability of the control mechanism for regulated metering services, (including in particular ActewAGL's ability to recover residual regulated metering costs where an existing regulated meter customer switches metering provider), one would expect it to be uncontroversial that a determination by the Tribunal to vary or remit the Final Determination to correct that error by aligning the AER's constituent decision on service classification with its reasons for decision on service classification and the control mechanism for regulated metering services will likely deliver a materially preferable NEO decision.
675. ActewAGL submits that the Application, these submissions and the material referred to and adduced in support of these submissions establish a *prima facie* case that a determination by the Tribunal to make one or more of the orders sought in section F of the Application, on the basis of either one or more of the grounds raised in the Application, separately or collectively, would result in a materially preferable NEO decision.

## **G ACTEWAGL'S CASE FOR LEAVE - REVENUE THRESHOLD**

676. For the reasons explained in section C(5) above, the revenue threshold established by section 71F of the NEL should be applied to the amount at issue in the present proceeding (that is, the difference between the revenue amount resulting or derived from the position advanced by ActewAGL in the Application and the revenue amount in, or derived from, the Final Determination), determined by reference to the aggregated quantitative impact of all grounds for review relied on by ActewAGL to which that section applies (and which meet the serious issue to be heard and determined threshold in section 71E(a)).
677. The average annual regulated revenue of ActewAGL for the subsequent regulatory control period from 2015/16 to 2018/19 (**subsequent regulatory control period**) is \$166.39 million (\$ nominal).<sup>553</sup>
678. Clause 11.56.4(h) and (i) of the NER requires that ActewAGL's total revenue requirement for the subsequent regulatory control period be fully adjusted for the difference between the amount of the annual revenue requirement for the transitional regulatory control period from 2014/15 to 2015/16 (**transitional regulatory control period**) approved by the AER in the placeholder determination for that period made by the AER on 16 April 2014 pursuant to clause 11.56.3(b) or (d) of the NER, and the amount of the 'notional' annual revenue requirement for the transitional regulatory control period determined by the AER in the Final Determination in accordance with clause 11.5.64(c) of the NER.<sup>554</sup> That adjustment amount was determined by the AER in the Final Determination in accordance with clause 11.56.4(i) of the NER to be \$33.2 million (\$ nominal) for distribution and transmission standard control

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<sup>553</sup> First Affidavit of Fleur Gibbons at [30].

<sup>554</sup> First Affidavit of Fleur Gibbons at [31].

services. It follows that the average annual regulated revenue for the subsequent regulatory control period stated in the preceding paragraph is conservative in that it overstates the average annual regulated revenue for that period in so far as it disregards the adjustment to the total revenue requirement for the subsequent regulatory control period required by clause 11.5.64(h) and (i) of the NER.


679. Two per cent of ActewAGL's (unadjusted) average annual regulated revenue for the subsequent regulatory control period is approximately \$3.33 million (\$ nominal).<sup>555</sup> As this is less than \$5 million, the relevant revenue threshold pursuant to section 71F(2) of the NEL (disregarding the effect of the adjustment to the total revenue requirement for the subsequent regulatory control period under clause 11.5.64(h) and (i) of the NER) is \$3.33 million (\$ nominal).
680. The aggregate amount of revenue for the subsequent regulatory control period specified in or derived from the Final Determination in respect of all grounds of review specified in the Application is \$189.92 to \$199 million (\$ nominal), which is greater than the revenue threshold pursuant to section 71F(2) of the NEL of \$3.33 million.<sup>556</sup> It follows that the revenue threshold pursuant to section 71F(2) of the NEL is satisfied in respect of the Application.
681. The AER would appear to agree, having indicated in the AER Notice that it does not intend to oppose leave being granted by reference to the criterion for leave established by section 71F of the NEL.<sup>557</sup>

## **H ORDER SOUGHT**

682. ActewAGL seeks an order that the Tribunal grant leave to ActewAGL under section 71B(1) of the NEL to apply to the Tribunal for a review of the Final Determination in relation to the grounds of review outlined in its Application.

Dated: 18 June 2015

Signed on behalf of the Applicant



.....  
Fleur Gibbons  
Solicitor for the Applicant

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<sup>555</sup> First Affidavit of Fleur Gibbons at [32].

<sup>556</sup> First Affidavit of Fleur Gibbons at [33].

<sup>557</sup> AER Notice, [7(a)].