

2005-2010 ELECTRICITY DISTRIBUTION PRICE DETERMINATION

*AN APPLICATION BY ETSA UTILITIES
FOR A REVIEW PURSUANT TO
SECTION 31 OF THE ESSENTIAL
SERVICES COMMISSION ACT 2002*

Decision and Reasons for Decision

31 May 2005



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GLOSSARY OF TERMS

CAPM	The Capital Asset Pricing Model
COMMISSION	The Essential Services Commission established under the ESC Act
ESC ACT	Essential Services Commission Act 2002
EPO	Electricity Pricing Order
EQUITY β	Equity beta: a parameter within the CAPM
ETSA UTILITIES	ETSA Utilities is a partnership of CKI Utilities Development Limited (ARBN 090 718 880), HEI Utilities Development Limited (ARBN 090 718 951), CKI Utilities Holdings Limited (ARBN 091 142 380), HEI Utilities Holdings Limited (ARBN 091 142 362) and CKI/HEI Utilities Distribution Limited (ARBN 091 143 038) which is authorised to operate an electricity distribution network by an electricity distribution licence issued by the Commission under section 17(1) of the Electricity Act 1996
NEC	National Electricity Code
PART A	The statement of reasons contained in Part A of the 2005-2010 Electricity Distribution Price Determination
PART B	The formal instrument of price control contained in Part B of the 2005-2010 Electricity Distribution Price Determination



1. DECISION

Pursuant to Part 6 of the Essential Services Commission Act 2002, the decision of the Essential Services Commission on its review of the 2005-2010 Electricity Distribution Price Determination is to:

1. confirm that price determination in respect of the value of easements in existence and in service as at 1 July 1999;
2. vary that price determination as follows:
 - a. in respect of the value of the equity beta used for the purposes of the Capital Asset Pricing Model, by changing that value from 0.8 to 0.9 (for a 60% gearing ratio);
 - b. consequentially, in respect of the value of the WACC within the Formula Schedule, by changing that value from 6.85% to 7.13%; and
 - c. consequentially, in respect of the value of the X-factor within the Formula Schedule, by changing that value from 0 to -0.8% and consequently including reference to the X-factor in relevant formulae within the Formula Schedule.
3. confirm that price determination in respect of the degree of re-balancing control at 2.5% above the value of the X-factor, but, as a consequence of the variations set out in paragraph 2, consequentially change the value used in the formula set out in paragraph 3.2 of the Formula Schedule from 2.5% to 3.5%;
4. confirm that price determination in respect of Schedule 1 (in relation to the 2 matters raised in ETSA Utilities' letter to the Commission of 14 April 2005); and
5. make a subsequent price determination under Part 3 of the Essential Services Commission Act 2002 giving effect to the decisions set out at paragraphs 2 and 3.

Essential Services Commission



2. OVERVIEW OF THE REVIEW

2.1 Structure of the Decision

2.1.1 This decision is structured as follows:

2.1.1.1 Chapter 1 sets out the decision of the Essential Services Commission on the review of the 2005-2010 Electricity Distribution Price Determination;

2.1.1.2 Chapter 2 sets out an overview of the review;

2.1.1.3 Chapter 3 sets out the Essential Services Commission's reasons and decision on the review of the treatment of the value of easements;

2.1.1.4 Chapter 4 sets out the Essential Services Commission's reasons and decision on the review of the treatment of the value of equity beta (equity β);

2.1.1.5 Chapter 5 sets out the Essential Services Commission's reasons and decision on the review of the treatment of two matters in respect of Part B of the 2005-2010 Electricity Distribution Price Determination as set out in ETSA Utilities' letter to the Commission dated 13 April 2005, namely:

- (a) the refinement of the excluded services listing along the lines suggested by ETSA Utilities and/or modification to clause 1.10(h) to reflect the intent signalled in Part A of the 2005-2010 Electricity Distribution Price Determination; and
- (b) modification of the re-balancing control consistent with a movement in the X-factor (as between the draft price determination and the final 2005-2010 Electricity Distribution Price Determination) from 1.3% to 0%.

2.2 Background

2.2.1 As described in Part A of the 2005-2010 Electricity Distribution Price Determination, from early in 2002 the Commission engaged in an extensive period of stakeholder (industry and consumer) consultation in anticipation of making the price determination.

2.2.2 That consultation included the release of Issues and Discussion Papers for consultation, as well as the formulation of Working Conclusions papers. The Commission also engaged in a regular meeting and consultation process with ETSA Utilities in respect of all of the matters subject of review.

- 2.2.3 A full list of papers released by the Commission in relation to the 2005-2010 Electricity Distribution Price Determination, and the submissions received in response to those papers, is contained at Appendix 1 of these reasons for decision.
- 2.2.4 Following the completion of the preparatory consultation process, the Commission prepared a draft price determination (as permitted by section 26(1) of the ESC Act) for stakeholder consultation. That draft price determination was released on 30 November 2004.
- 2.2.5 The Commission received 9 submissions to the draft price determination, including detailed public and confidential submissions from ETSA Utilities. In addition, the Commission met and worked regularly with ETSA Utilities' staff following the release of the draft price determination to consider and address relevant issues.
- 2.2.6 On 5 April 2005, the Commission published the 2005-2010 Electricity Distribution Price Determination.

2.3 The Review Process

2.3.1 Part 6 of the ESC Act contains a legislative scheme permitting reviews and appeals in relation to price determinations made by the Commission such as the 2005-2010 Electricity Distribution Price Determination.

2.3.2 Section 31(1)(a) of the ESC Act provides that:

An application may be made to the Commission by the Minister, or by a regulated entity to which the determination applies, for a review of a price determination.

2.3.3 Section 31(2) of the ESC Act sets out the requirements as to form for an application for review:

An application for a review must—

- (a) be in writing; and*
- (b) set out the price determination or part of the price determination, or the decision, to which the application relates; and*
- (c) set out in detail the grounds on which the applicant seeks review and the decision sought on the review; and*
- (d) be accompanied by any information that the applicant considers should be taken into account by the Commission on the review; and*
- (e) be lodged with the Commission within 10 working days after the price determination is published or after receipt of the written notice referred to in subsection (1) (as the case requires).*

2.3.4 On 19 April 2005, ETSA Utilities submitted an application for review to the Commission in respect of the 2005-2010 Electricity Distribution Price

Determination under section 31(1)(a) of the ESC Act.¹ ETSA Utilities met the requirements as to the form of that application under section 31(2) of the ESC Act. The Commission is therefore able to proceed to assess the review application.

2.3.5 Section 31(3) of the ESC Act requires that the Commission do two things upon receipt of a review application:

If an application is made for a review of a price determination—

- (a) *the Commission must give a copy of the application to each other person who could also have applied for review of the determination; and*
- (b) *invite each such person to join as a party to the review and make submissions on the matter the subject of the review in a manner and within a period specified by the Commission.*

2.3.6 On 20 April 2005, as required by section 31(3) of the ESC Act, the Commission provided a copy of the review application to the Treasurer (being “the Minister” for the purposes of the ESC Act) and invited the Treasurer to join as a party to the review and to make submissions on the matters which are the subject of the review.

2.3.7 On 11 May 2005, the Commission received a submission from the Treasurer.²

2.3.8 On 12 May 2005, the Commission received a letter from ETSA Utilities seeking the opportunity to consider and provide comment on any submission received from the Treasurer.

2.3.9 While noting that the review scheme under Part 6 of the ESC Act does not contemplate the opportunity to provide further comment on submissions, the Commission nevertheless took the view that, regardless of whether the rules of procedural fairness might technically require it to provide that opportunity, it would be appropriate to do so.

2.3.10 The Commission therefore provided a copy of the Treasurer’s submission as requested by ETSA Utilities on 17 May 2005. However, in the interests of limiting the matters before the Commission, the Commission requested that ETSA Utilities should not introduce any new materials or arguments not previously raised in the review application.

¹ The review application provided to the Commission on 19 April contained material and information in respect of which ETSA Utilities claimed confidentiality. Subsequently, a public version of the review application was provided by ETSA Utilities, which the Commission has made publicly available on its website (for Part 1 of the review application refer <http://www.escosa.sa.gov.au/resources/documents/050419-O-ETSAApplicationforReviewPart1.pdf>; for Part 2 of the review application refer <http://www.escosa.sa.gov.au/resources/documents/050419-O-ETSAApplicationforReviewPart2.pdf>).

² Submission from the Treasurer of South Australia, 10 May 2005 (refer the Commission’s website, What’s New, 26 May 2005, <http://www.escosa.sa.gov.au/site/>).

2.3.11 On 20 May 2005, the Commission received further comments from ETSA Utilities on the Treasurer's submission. While generally limited to a rebuttal of the matters put by the Treasurer, ETSA Utilities did provide 2 new reports to the Commission on equity β and made further argument in support of its review application. Again, while such further reports and argument are not contemplated by the scheme of the ESC Act, having received those reports the Commission has decided that it is appropriate to have regard to those reports and the arguments put by ETSA Utilities.

2.4 Conduct of the Review

2.4.1 As observed by the Commission in Part A (the statement of reasons) of the 2005-2010 Electricity Distribution Price Determination, a price determination made by the Commission is not an assessment of a claim put forward by ETSA Utilities, nor is it a decision by the Commission as to two competing claims put forward by ETSA Utilities and another entity.

2.4.2 Instead, properly characterised, a price determination is the independent decision of the Commission, taking into account all relevant matters required by law. While the 2005-2010 Electricity Distribution Price Determination has direct application to ETSA Utilities, in terms of regulating its revenue earned from prescribed distribution services, it has equal applicability to all South Australian consumers of electricity distribution services: it is the consumers who are ultimately required to provide that revenue to ETSA Utilities through the electricity distribution tariffs they must pay to ETSA Utilities.

2.4.3 In this sense, all information and materials gathered by the Commission, including the information and materials obtained from or provided by ETSA Utilities, are simply matters which are considered by the Commission. The Commission is not, therefore, bound to adopt, accept or assess as correct any person's submissions or claims in making its own independent decision.

2.4.4 The review application lodged by ETSA Utilities triggers the commencement of a review process and sets out specific aspects of the standing contract price determination with which ETSA Utilities is dissatisfied.

2.4.5 The Commission's role on the review is to consider, in the light of the issues raised by ETSA Utilities in its review application and the submissions made by the Treasurer, whether or not the 2005-2010

Electricity Distribution Price Determination made by the Commission should be confirmed, varied or substituted.³

- 2.4.6 ETSA Utilities requested the opportunity to present oral evidence to the review. The Commission considered this request but was of the view that the Commission would conform with the requirements of procedural fairness by giving due consideration to ETSA Utilities' written review application and the Treasurer's submission, and that it was not necessary to give ETSA Utilities a hearing by way of personal presentation to the Commission.

2.5 The Grounds of Review

- 2.5.1 ETSA Utilities' review application seeks that the Commission review the following aspects of the 2005-2010 Electricity Distribution Price Determination:
- 2.5.1.1 the decision that easements should be included in the Regulatory Asset Base at a value of \$6 million;
 - 2.5.1.2 the decision that the value of equity β should, for the purposes of the CAPM, be 0.8;⁴
 - 2.5.1.3 two provisions of Part B referred to in ETSA Utilities letter to the Commission of 13 April 2005; namely, Schedule 1 (to include further clarifying provisions) and the re-balancing control.
- 2.5.2 Each of these matters is dealt with separately in detail below, addressing relevant issues raised by ETSA Utilities in the review application and setting out the reasoning of the Commission in respect of each.

³ See section 31(8) of the ESC Act.

⁴ In respect of the matters raised in paragraphs 2.5.1.1 and 2.5.1.2, ETSA Utilities also requested that, to the extent that those matters impact upon the provisions of the Schedules to Part B of the 2005-2010 Electricity Distribution Price Determination, then those Schedules should also be reviewed. See ETSA Utilities, Review Application, Part 1, paragraph 2(c) (refer <http://www.escosa.sa.gov.au/resources/documents/050419-O-ETSAApplicationforReviewPart1.pdf>).



3. THE VALUE OF EASEMENTS

3.1 Issue

- 3.1.1 ETSA Utilities sought a review in respect of the Commission's decision to value easements used to provide electricity distribution services which were in existence and in service as at 1 July 1999 ("the relevant easements") at \$6 million.⁵
- 3.1.2 The Commission would observe at the outset that ETSA Utilities did not raise for review the Commission's treatment of the value of easements brought into existence or operation after 1 July 1999.

3.2 ETSA Utilities' Submission

- 3.2.1 In the review application, ETSA Utilities put the view that the Commission made an error in "adopting" the value of \$6 million in respect of the relevant easements, and claimed that the Commission's decision is vitiated by the following errors of fact and law:
- 3.2.1.1 it was based on the factual error that the figure of \$6 million was a complete valuation of the totality of ETSA Utilities' relevant easements;
 - 3.2.1.2 it involved misconstructions and misapplications of the EPO and the NEC;
 - 3.2.1.3 it was inconsistent with the nature and purpose of the regulatory regime applicable to ETSA Utilities;
 - 3.2.1.4 it was inconsistent with the reasonable expectations of potential purchasers created at the time of privatization of ETSA Utilities Pty Ltd's business.⁶
- 3.2.2 ETSA Utilities claimed that, in order to comply with the requirements of clause 7.2(e)(iv) of the EPO and clause 6.10.3(e)(5) of the NEC, the relevant easements must be valued at deprival value (consistent with the NEC and the valuation of the other infrastructure assets that make up ETSA Utilities' fixed asset base) and be included in the regulatory asset

⁵ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination – Part A Statement of Reasons, April 2005, section 9.5.4, page 117 (refer http://www.escosa.sa.gov.au/resources/documents/050405-EDPD_Part%20A_StatementofReasons_Final.pdf).

⁶ ETSA Utilities, Review Application, Part II, paragraphs 1.2(a)-(d).



base at a value of \$224.45 million (in July 1999 dollars, which should be indexed to 1 July 2005).⁷

3.3 Treasurer's Submissions

3.3.1 In addressing ETSA Utilities' submission with respect to the Commission's decision concerning the relevant easements, the Treasurer rejected the review application claims of ETSA Utilities and the decision sought by ETSA Utilities on the review.

3.3.2 The Treasurer put the view that the Commission's decision with respect to the value of the relevant easements was in accordance with all legislative requirements and was consistent with Australian regulatory precedent.⁸

3.3.3 CONFIDENTIAL PARAGRAPH

3.3.4 The Treasurer stated that the Commission should confirm its 2005-2010 Electricity Distribution Price Determination with respect to the value the relevant easements.

3.3.5 The Commission notes ETSA Utilities' assertions that the Treasurer's submission appeared to indicate that the Commission adopted an indexed historic cost valuation methodology in respect of the relevant easements. The Commission does not agree that the Treasurer made such a claim in his submission, however to the extent that such an assertion might be considered to have been made, the Commission confirm that it did not adopt that methodology. It did, however, as demonstrated below, adopt a value consistent with the value set in the initial regulatory asset base.⁹

3.4 Commission considerations

3.4.1 As noted at paragraph 3.2.1, there are 4 major matters put forward by ETSA Utilities, each of which contains a number of further or related points, as the grounds against which the Commission should review its decision in respect of the value of the relevant easements:

3.4.2 The Commission observes that there is a large degree of interdependence between the various grounds and has not considered each on a stand-alone basis. For reasons of cogency, however, the Commission will consider its decision in the 2005-2010 Electricity Distribution Price

⁷ ETSA Utilities, Review Application, Part II, paragraphs 1.3.

⁸ Treasurer of South Australia, Submission on ETSA Utilities' Review Application, 10 May 2005, paragraph 1.1, page 4.

⁹ Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 13; ETSA Utilities, Response to Submission of the Treasurer of South Australia, page 4

Determination in light of each of those matters identified at paragraph 3.2.1 in turn.

3.4.3 \$6 MILLION VALUE WAS NOT A COMPLETE VALUATION

3.4.3.1 At paragraph 3 of the review application, ETSA Utilities argued that the value of \$6 million is not a valuation of all of the relevant easements and is not coherently based so as to provide a legitimate or rigorous valuation of the relevant easements.

3.4.3.2 Central to ETSA Utilities' arguments is a chain of evidence demonstrating that the relevant easements were not valued using a deprivation methodology. The Commission accepts that evidence and the fact that the relevant easements were not valued using a deprivation methodology; the Commission has never disagreed with ETSA Utilities on this point.

3.4.3.3 Where the Commission disagreed with ETSA Utilities in the 2005-2010 Electricity Distribution Price Determination was in the context of ETSA Utilities' assertion that the failure to utilize the deprivation methodology meant that there was an "incomplete process" for valuing the relevant easements.

3.4.3.4 In Part A, the Commission said:

The Commission does not accept that the value included within the initial regulatory asset base was an outcome of an "incomplete process" for valuing easements and substation land. Such a statement implies that the value only relates to a portion of the total amount of easements and land, whereas it is necessarily the case that the value must represent a complete value, albeit one calculated under a different methodology to that promoted by ETSA Utilities.¹⁰

3.4.3.5 Ultimately, the purchasers of the electricity distribution business offered and paid an amount for the value it ascribed to that business. As the Commission noted:

The point to be made is that regardless of the bid structure, the value ultimately paid must represent the total value which the ETSA Utilities partnership placed on the entirety of the business. Easements do not generate their own separate cash flow, but rather are used in combination with distribution lines, poles, transformers and other assets to sell distribution services and earn an income.¹¹

¹⁰ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.2, page 113.

¹¹ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.5, page 117.

3.4.3.6 It follows, therefore, that the relevant easements did have a value to the ETSA Utilities partnership and that the value was reflected in the overall purchase price.

3.4.3.7 In the review application, ETSA Utilities claimed that the amount effectively paid (emphasis added) for the relevant easements and for substation land was \$276.2 million, and that it is a proportion of that value which represents the value of the relevant easements at purchase; not the value of the relevant easements assumed within the initial regulatory asset base of \$6 million.

3.4.3.8 CONFIDENTIAL PARAGRAPH

3.4.3.9 CONFIDENTIAL PARAGRAPH

3.4.3.10 The ETSA Utilities partnership, as the successful bidder, therefore itself chose to include in its total consideration a cash payment amount of \$276.2 million in respect of the distribution network land lease: effectively it determined the rental amount it would pay for the two separate components of the overall business. As the Treasurer observed:

In terms of assessing overall bids, the Government was likely to be completely indifferent to the value included in the bid for Total Rent on land and easements, as the assessment was based on the overall cash consideration for the business as a whole.

The fact that a particular bidder allocated \$276.2 million to easements [sic] was a matter for that bidder and implies nothing with regard to the value the Government placed on those particular assets and nothing with regard to the value an independent regulator would apply to those assets in the future.¹²

3.4.3.11 In relation to the Treasurer's comments, the Commission notes that neither it nor ETSA Utilities has argued that the entire value of \$276.2 million relates to the relevant easements. Nevertheless, as outlined above, in the 2005-2010 Electricity Distribution Price Determination the Commission put the same view which has now been put by the Treasurer in terms of the relevance of the bid structure.

3.4.3.12 The necessary conclusion to be drawn, and which was drawn by the Commission in the 2005-2010 Electricity Distribution Price Determination, is that:

¹² Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 8

It would just as readily have been open to the ETSA Utilities partnership to have made a bid utilizing a different structure: with the necessary implication that the value it might have paid under that structure would no more represent an appropriate value to ascribe to all easements and substation land than does the rental payment actually made.¹³

- 3.4.3.13 Having considered ETSA Utilities' submissions on this point, the Commission remains of the view that the amount of \$6 million assumed within the EPO is a value for the relevant easements (albeit derived under a different methodology to that preferred by ETSA Utilities) and that the winning bid amount of \$276.2 million does not necessarily reflect the value of the relevant easements.

3.4.4 EPO AND NEC REQUIREMENTS FOR EASEMENT VALUATION 2005-2010

- 3.4.4.1 At paragraph 3.2 of the review application, ETSA Utilities claimed that the intent of clause 7.2(e)(iv) of the EPO is to require the Commission to consider afresh (emphasis added) the value of the relevant easements for the purposes of the 2005-2010 Electricity Distribution Price Determination.¹⁴
- 3.4.4.2 The Commission agrees that intent of clause 7.2(e)(iv) of the EPO was to require the Commission to consider the value of the relevant easements for the purposes of the 2005-2010 Electricity Distribution Price Determination, but does not agree that it was required to consider that value afresh.
- 3.4.4.3 The Treasurer's submission in respect of this matter noted that clause 7.2(e)(iv) of the EPO requires the Commission to give consideration to the value of easements, and that the Commission did so in the 2005-2010 Electricity Distribution Price Determination. The Treasurer was therefore of the view that the 2005-2010 Electricity Distribution Price Determination satisfied the requirements of clause 7.2(e)(iv) of the EPO.¹⁵
- 3.4.4.4 Given ETSA Utilities' claims, and the subsequent arguments leading from those claims (which are dealt with later in this Chapter), it is useful to set out the terms of clause 7.2(e) of the EPO in full:

¹³ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.5, pages 116 to 117.

¹⁴ ETSA Utilities, Review Application, Part II, paragraphs 2.1 and 3.2.

¹⁵ Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 14.

7.2 Subsequent Regulatory Period

In making a price determination under the Code in respect of ETSA Utilities for the subsequent regulatory period, the Regulator must:

...

- (e) where the value of the assets used by ETSA Utilities is required to be taken into account, use the fixed asset base set out in the Asset Schedule provided that:
 - (i) the value of the fixed asset base must be adjusted to take into account inflation, depreciation, additions, contributions and disposals in the ordinary course of business since the Commencement Date;
 - (ii) the value of the fixed asset base must not be adjusted as a result of the sale, lease or other disposal of substantially all of the business carried on and assets used by ETSA Utilities Pty Ltd as at the Commencement Date;
 - (iii) the portion of any network augmentation or extension directly funded by customer contributions (in accordance with the Distribution Code) must not be included as an addition to the fixed asset base under clause 7.2(e)(i); and
 - (iv) **consideration should also be given** to assets that are not included in the Asset Schedule but are necessary to enable ETSA Utilities to provide prescribed distribution services in accordance with good electricity industry practice and the requirements of the Code, the Distribution Code and any other applicable laws including, without limitation, the easements used by ETSA Utilities to provide prescribed distribution services;¹⁶

3.4.4.5 It is not in dispute that clause 7.2(e) of the EPO provides for different treatment as between two classes of assets in establishing the initial regulatory asset base for the 2005-2010 regulatory period.¹⁷

- (a) In respect of the fixed asset base assets contained in the Asset Schedule of the EPO, the Commission was required to use the prescribed values, adjusted in accordance with clauses 7.2(e)(i) to (iii).¹⁸
- (b) In respect of non-fixed assets necessary to enable ETSA Utilities to provide prescribed distribution services, the

¹⁶ Emphasis added.

¹⁷ ETSA Utilities, Review Application, Part II, paragraph 4.2.

¹⁸ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5, page 109.

Commission was required to consider those assets in accordance with clause 7.2(e)(iv).¹⁹

- 3.4.4.6 As highlighted by ETSA Utilities in its review application, in dealing with the non-fixed class of assets, clause 7.2(e)(iv) expressly refers to easements.
- 3.4.4.7 In Part A of the 2005-2010 Electricity Distribution Price Determination, the Commission acknowledged the reference to easements in clause 7.2(e)(iv), and also noted that easements are but one of the class of non-fixed assets not appearing in the Asset Schedule which were included in the asset base for the purposes of the EPO and which must be considered under clause 7.2(e)(iv). The total list of assets appearing within that class are as follows:
- (a) land and buildings;
 - (b) plant and tools;
 - (c) easements;
 - (d) IT assets; and
 - (e) office equipment.²⁰
- 3.4.4.8 Values for each of these assets were included within the price controls applicable under the EPO.²¹ Those values were reported by the Commission in Table 9.2 of Part A and, in the case of the relevant easements, the relevant value was \$6 million.²² Table 9.2 is set out below:

¹⁹ ETSA Utilities, Review Application, Part II, paragraph 4.2.2; Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5, page 109

²⁰ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5, page 110.

²¹ Electricity Reform and Sales Unit, *Submission to ACCC on South Australian Electricity Pricing Order*, 11 August 1999, section 5.3.2, figure 10.

²² Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5, page 110, Table 9.2.

Table 3.1: Value of non-fixed assets as at 1 July 1999

ASSET CLASS	\$ MILLION
Land and buildings	58
Plant and tools	23
Easements	6
IT assets	19
Office equipment	3
Working Capital	80
Capital works in progress	32
Total non-fixed assets	221

Source: ETSA Utilities Information Memorandum, Volume 1

3.4.4.9 The Commission dealt with the requirements of clause 7.2(e) of the EPO at section 9.5.3.1 of Part A:²³

In the case of the EPO, clause 7.2(e) requires the Commission, when taking the value of assets used by ETSA Utilities into account, firstly to use the values used in the Asset Schedule for assets appearing within that schedule; and, secondly, in accordance with clause 7.2(e)(iv) to consider other assets used by ETSA Utilities to provide prescribed distribution services. This results in the value of assets taken into account by the Commission under clause 7.2(e) being the sum of each of those distinct values.

3.4.4.10 As noted by ETSA Utilities in the review application, clause 7.2(e)(iv) of the EPO does not provide any direct guidance as to the nature of the consideration which the Commission must give to the non-fixed assets.²⁴

3.4.4.11 However, given the overall nature of the legislative scheme within which the Commission was required to make its price determination, the Commission was guided by the terms of the NEC, particularly clause 6.10.3.(e)(5), in respect of the consideration which it must give.²⁵ That clause provides:

(e) *The regulatory regime to be administered by the Jurisdictional Regulator must be consistent with the objectives outlined in clause 6.10.2 and must also have regard to the need to:*

(5) *provide a fair and reasonable risk-adjusted cash flow rate of return to Distribution Network Owners on efficient investment given efficient*

²³ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.1, page 111.

²⁴ ETSA Utilities, Review Application, Part II, paragraph 4.3.

²⁵ ETSA Utilities, Review Application, Part II, paragraph 4.4; Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.1, page 112 & section 1.2.5, page 10.

operating and maintenance practices on the part of the Distribution Network Owners where:

...

- (ii) *subject to clause 6.10.3 (e)(5)(i), assets (also known as "sunk assets") in existence and generally in service on 1 July 1999 are valued at a value determined by the Jurisdictional Regulator or consistent with the regulatory asset base established in the participating jurisdiction;*
- (iii) *subject to clause 6.10.3 (e)(5)(i), valuation of assets brought into service after 1 July 1999 ("new assets"), any subsequent revaluation of any new assets and any subsequent revaluation of assets existing and generally in service on 1 July 1999 is to be undertaken on a basis to be determined by the Jurisdictional Regulator. In determining the basis of asset valuation to be used, the Jurisdictional Regulator must have regard to:*
 - A *the agreement of the Council of Australian Governments of 19 August 1994, that deprival value should be the preferred approach to valuing network assets;*
 - B *any subsequent relevant decisions of the Council of Australian Governments; and*
 - C *such other matters reasonably required to ensure consistency with the objectives specified in clause 6.10.2.*

3.4.4.12 There are two relevant elements within clause 6.10.3(e)(5):

- (a) clause 6.10.3(e)(5)(ii) deals with the value to be ascribed to assets in existence and generally in service as at 1 July 1999 ("sunk assets");
- (b) clause 6.10.3(e)(5)(iii) deals with the process for valuation of assets brought into service after 1 July 1999 ("new assets") and also with the process for any subsequent revaluation of "sunk assets".

3.4.4.13 As set out in section 9.5 of Part A, it was the Commission's view that these two elements are clearly and obviously of separate application.

3.4.4.14 In respect of the clause 6.10.3(e)(5)(ii), as was observed by the Commission in Part A,²⁶ and agreed by ETSA Utilities in its review application,²⁷ the clause requires that in giving consideration to non-fixed assets falling under clause 7.2(e)(iv) of the EPO in existence and in service as at 1 July 1999 (referred to

²⁶ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.2, page 111.

²⁷ ETSA Utilities, Review Application, Part II, paragraph 4.6.

as “sunk assets”), the relevant consideration to be given is either the use of:

- (a) a value determined by the Commission; or
- (b) a value consistent with the regulatory asset base established in South Australia.

(ETSA Utilities referred to each of these options as the “two limbs” of clause 6.10.3(e)(5)(ii) in the review application. For the sake of consistency, the Commission has adopted this terminology.)

- 3.4.4.15 In respect of the clause 6.10.3(e)(5)(iii), that clause requires that in valuing “new assets” brought into service after 1 July 1999 and in subsequently revaluing “sunk assets” (as defined above) the Commission must determine a basis for undertaking those valuations. In making that determination, the Commission is required to have regard to the 3 specific matters set out in clause 6.10.3(e)(5)(iii)(A)-(C). Importantly, those matters set out in clause 6.10.3(e)(5)(iii)(A)-(C) only have applicability once the jurisdictional regulator is operating within the context of clause 6.10.3(e)(5)(iii).
- 3.4.4.16 Once it is established that there are, relevantly, two distinct elements to clause 6.10.3(e)(5), the issue to be addressed is which of those elements was adopted by the Commission in setting a value for the relevant easements for the purposes of the 2005-2010 Electricity Distribution Price Determination.
- 3.4.4.17 From the terms of Part A, it is clear that while the Commission did, without objection, follow the requirements of clause 6.10.3(e)(5)(iii) in respect of the value of easements brought into existence or service after 1 July 1999 (which were considered to be “new assets”),²⁸ it did not proceed under that clause in respect of the relevant easements.
- 3.4.4.18 As observed by the Commission in Part A, the only occasion on which the clause 6.10.3(e)(5)(iii) would have effect in respect of the relevant easements would be if the Commission had chosen

²⁸ The Commission considered the purchase price paid for easements purchased by ETSA Utilities after 1 July 1999 (adjusted, for the sake of regulatory consistency and certainty, in the same way as assets falling under clause 7.2(e)(i) of the EPO) as the appropriate value for inclusion within the regulatory asset base- see Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.3, page 115.

to revalue (or, in ETSA Utilities' terms, "value afresh") those assets.²⁹ It clearly chose not to do so.

- 3.4.4.19 As the Commission did not, and was not required to, engage in a process of revaluing the relevant easements, the Commission proceeded in the 2005-2010 Electricity Distribution Price Determination on the basis that, for the purposes of giving consideration to the relevant easements under clause 7.2(e)(iv) of the EPO, it was guided by clause 6.10.3(e)(5)(ii) of the NEC.
- 3.4.4.20 This required the Commission to use one of the two limbs of clause 6.10.3(e)(5)(ii); namely, to itself determine a value for the relevant easements; or to set a value for those easements consistent with the value set in the initial regulatory asset base.
- 3.4.4.21 At paragraph 4.7 of the review application, ETSA Utilities asserted that the Commission has "*done neither*" of those things under either the first or second limb of clause 6.10.3(e)(5)(ii) in giving consideration to easements under clause 7.2(e)(iv) of the EPO and "*has thus fallen into error*".
- 3.4.4.22 On the face of Part A, this assertion is not correct. At pages 113 to 114 of Part A, the Commission expressly stated that it used a value consistent with the regulatory asset base established in South Australia in considering the relevant easements.
- 3.4.4.23 In doing so, the Commission noted that no express guidance is given by the NEC as to which limb is to be preferred, or as to the basis upon which the Commission might chose between the two limbs. As a result, the Commission gave consideration to the context of clause 6.10.3.(e)(5), particularly the matters set out in clauses 6.10.2 and 6.10.3 of the NEC, in making its selection. Those clauses relevantly read:

6.10.2 Objectives of the distribution service pricing regulatory regime to be administered by the Jurisdictional Regulators

The distribution service pricing regulatory regime to be administered under Part D of the Code must seek to achieve the following outcomes:

...

- (d) *reasonable recognition of pre-existing policies of governments which are Distribution Network Owners regarding distribution asset values, revenue paths and prices;*

²⁹ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.3, page 115.

6.10.3 Principles for regulation of distribution service pricing

The regime under which the revenues of Distribution Network Owners and Distribution Network Service Providers (as appropriate) are to be regulated is to be administered by the Jurisdictional Regulators in accordance with the following principles:

(e) provide reasonable certainty and consistency over time of the outcomes of regulatory processes having regard for:

(iv) relevant previous regulatory decisions made by authorised persons including:

(A) the initial revenue setting and asset valuation decisions made by a government at a time at which that government was a Distribution Network Owner in the context of industry reform pursuant to the Competition Principles Agreement;

3.4.4.24 In respect of both of these clauses, the Commission took the view in the 2005-2010 Electricity Distribution Price Determination that as the government was the owner of the electricity distribution network at the time that the initial regulatory asset based was valued, the clauses require that the Commission give recognition to those initial values as assumed within the EPO.³⁰

3.4.4.25 ETSA Utilities put the view, at section 9 of the review application, that the Commission has misapplied clauses 6.10.2(g) and 6.10.3(e)(6)(iv)(A) of the NEC as, in summary, its view of the then government's position was that all assets would be valued on a deprivation basis.

3.4.4.26 The Treasurer put an alternative submission in respect of this matter. It is the Treasurer's position that the sole legislative guidance as to the former government's policy position with respect to the regulatory environment within which ETSA Utilities would be operating is the EPO.

3.4.4.27 The Treasurer was therefore of the view that if the government were to have had an explicit policy of revaluing easements using a deprivation methodology, that explicit policy would have been explicitly recognized in the EPO by demanding prescriptively that a deprivation methodology be utilized by the Commission. No such explicit demand exists within the EPO.

³⁰ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.2, page 113.

- 3.4.4.28 For reasons set out above, the Commission, having considered ETSA Utilities' arguments, remains of the view that it complied with the requirements of the EPO and the NEC in the 2005-2010 Electricity Distribution Price Determination in giving consideration to the relevant easements.
- 3.4.4.29 However, ETSA Utilities' further argument on this matter is that in any event, under either limb the Commission is required to use a deprival value in giving consideration to the relevant easements. It is in the absence of the use of a deprival value, according to ETSA Utilities' argument, that the Commission has failed to act in accordance with either option.

ETSA Utilities' "first limb" argument

- 3.4.4.30 It is ETSA Utilities' case that, if the Commission is to itself determine a value for the relevant easements (that is, the first limb of clause 6.10.3(e)(5)(ii)), clause 6.10.3(e)(5)(iii) requires the Commission to have regard to the fact that deprival value is the preferred approach to valuing network assets.³¹ ETSA Utilities has therefore asserted that the Commission must use a deprival value and have regard to two documents:
- (a) the Council of Australian Governments' Communiqué of 19 August 1994; and
 - (b) the Guidelines on Accounting Policy for Current Valuation of Assets produced by the Steering Committee on National Performance Monitoring of Government Trading Enterprises of October 1994.
- 3.4.4.31 The Commission agrees that if it had proceeded under clause 6.10.3(e)(5)(iii), it would have been required to have regard to the matters set out in clause 6.10.3(e)(5)(iii)(A)-(C). As the Commission did not do so, however, the matter is not relevant to the determination of the review application. Further, the Commission notes that while it agrees that it would have had to take those matters into account if it had proceeded in that manner, it does not agree that it would be bound to adopt a deprival methodology. For example, it could, having considered those matters alongside the other relevant considerations to

³¹ ETSA Utilities, Review Application, Part II, paragraph 5.2.

which it must have regard, equally have adopted an indexed historical cost approach to valuation.

3.4.4.32 In any event, however, the point made by ETSA Utilities is not relevant in the context of the 2005-2010 Electricity Distribution Price Determination, as the Commission expressly disavowed giving consideration to the value of easements for the purposes of clause 7.2(e)(iv) of the EPO under the first limb of clause 6.10.3(e)(5)(ii).

3.4.4.33 To the extent that ETSA Utilities relies on that argument as a ground of review, therefore, the Commission confirms its decision as set out in the 2005-2010 Electricity Distribution Price Determination.

ETSA Utilities’ “second limb” argument

3.4.4.34 At paragraph 6.1 of the review application, ETSA Utilities asserted that if the Commission applied the second limb of clause 6.10.3(e)(5)(ii) for the purposes of clause 7.2(e)(iv) of the EPO (which, as set out in section 9.5.3.2 of Part A, the Commission expressly did in the 2005-2010 Electricity Distribution Price Determination), then the Commission was:

...required first to determine the basis upon which the rest of the regulatory asset base was established in South Australia and then to value the totality of the easements on a consistent basis.

3.4.4.35 While in agreement with ETSA Utilities that guidance as to the nature of “consideration” for the purposes of clause 7.2(e)(iv) of the EPO is obtained from the NEC, having considered ETSA Utilities’ submission in the context of the ordinary meaning of clause 6.10.3(e)(5)(ii), the Commission does not agree with ETSA Utilities’ interpretation of the NEC and the EPO in this regard.

3.4.4.36 Read in the context of the relevant easements, and the Commission’s expressed utilization of the second limb of clause 6.10.3(e)(5)(ii), that clause provides that the Commission, in administering the regulatory regime, must have regard to the need to provide a fair and reasonable risk-adjusted cash flow rate of return to ETSA Utilities on efficient investment given efficient operating and maintenance practices on the part of ETSA Utilities, where the relevant easements are valued at a value

consistent with the regulatory asset base established in the participating jurisdiction.

- 3.4.4.37 It is the last concept within that requirement which is relevant to the ETSA Utilities' second limb argument. The Commission's interpretation of clause 6.10.3(e)(5)(ii) (as explained in Part A)³² is as set out above: it must value the relevant easements at a value which it determines or, if it chooses not to determine a value itself (that is, if it chooses not to undertake a revaluation), those easements are required to be valued at a value consistent with the regulatory asset base established in South Australia.
- 3.4.4.38 For ETSA Utilities' assertion on the second limb to be persuasive to the Commission it would require a different reading of clause 6.10.3(e)(5)(ii) to be adopted; viz, the relevant easements are required to be valued [using a methodology] consistent with the regulatory asset base established in the participating jurisdiction.
- 3.4.4.39 As the Treasurer observed, ETSA Utilities is essentially proposing that the Commission must first go behind the stated value of the regulatory asset base and determine the valuation methodology used to derive that value, and thereafter proceed to use that methodology to value the relevant easements.³³
- 3.4.4.40 The distinction between the two formulations of the second limb of clause 6.10.3(e)(5)(ii) is that the relevant consideration in the former is consistent with the initial "value" included in the regulatory asset base for the relevant easements; whereas in the latter formulation proposed by ETSA Utilities the relevant consideration is consistency with the valuation methodology used to value all other assets in the initial regulatory asset base. That is to say, the initial valuation amount is irrelevant: the technical valuation methodology is the key.
- 3.4.4.41 The Commission does not accept that this is the appropriate reading or interpretation to give clause 6.10.3(e)(5)(ii) in the context of the NEC and the EPO. Both of those instruments are aimed at providing a degree of regulatory certainty, both to investors and to consumers. Under the first formulation preferred by the Commission in the 2005-2010 Electricity Distribution Price

³² Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 9.5.3.2, pages 112 to 114.

³³ Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 17.

Determination, that certainty is enhanced, as regulators are not empowered to radically or detrimentally alter the value of assets into the future, thereby devaluing or inflating those assets, and consequently either reducing returns to businesses or forcing higher costs on consumers.

- 3.4.4.42 It is the Commission's view that if the latter reading were intended, either the word "consistently" would have been used in place of the word "consistent" or a term similar to "using a methodology" would have been inserted before the word "consistent" in clause 6.10.3(e)(5)(ii).
- 3.4.4.43 The Commission therefore is not persuaded by ETSA Utilities' assertion that "*a value consistent with the regulatory asset base established in the participating jurisdiction in the circumstances of the present case means a value determined on a deprivation basis*".³⁴
- 3.4.4.44 Instead, the Commission has concluded that the term "*a value consistent with the regulatory asset base established in the participating jurisdiction*" is to be given its ordinary meaning and permitted the Commission in the 2005-2010 Electricity Distribution Price Determination to value the relevant easements at a value which is consistent with the value set in the regulatory asset base established under the EPO.
- 3.4.4.45 The Treasurer submitted that the Commission would, in any event, not be authorised under the second limb of clause 6.10.3(e)(5)(ii) to undertake the process favoured by ETSA Utilities, as the resultant value would not be consistent with the regulatory asset base established in South Australia. In the Treasurer's view, the Commission was required, when proceeding under the second limb of clause 6.10.3(e)(5)(ii), to value the relevant easements at \$6 million.³⁵

The EPO easement value is not a "value" for the purposes of the NEC

- 3.4.4.46 ETSA Utilities has put a further point to the Commission for consideration, arguing that even if the Commission has purported to utilize the second limb of clause 6.10.3(e)(5)(ii), there was no

³⁴ ETSA Utilities, Review Application, Part II, paragraph 6.6.

³⁵ Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 17.

“value”, in the sense contemplated by the NEC, assumed for the relevant easements within the EPO.

- 3.4.4.47 Instead, on ETSA Utilities’ view, an “allowance” was made in the initial regulatory asset base for assets which had been valued “at cost” but had not been valued using the optimized depreciated replacement cost approach to valuation.³⁶ As the Commission understand ETSA Utilities’ arguments on this point, it is not possible for the Commission to value the relevant easements at a value consistent with the regulatory asset base, as there is no relevant “value” as contemplated by the NEC in the initial regulatory asset base. As a result, the Commission cannot do what it claims to have done, and was required to proceed under the first limb of clause 6.10.3(e)(5)(ii), which would in turn have called-up the operation of clause 6.10.5(e)(5)(iii) and the attendant requirement to have regard to the matters specified in clause 6.10.5(e)(5)(iii)(A)-(C).
- 3.4.4.48 As noted several times, the Commission does not reject ETSA Utilities’ claims that there was not an optimized depreciated replacement cost valuation of the relevant easements, and accepts the evidence put forward by ETSA Utilities in relation to that fact.
- 3.4.4.49 Where the Commission differs from ETSA Utilities is in respect of ETSA Utilities’ claims that the lack of an optimized depreciated replacement cost or deprivation approach to valuation at the time of setting the initial regulatory asset base means that there was no initial “value” as such, and therefore the Commission was required to proceed under the first limb of clause 6.10.3(e)(5)(ii), for the purposes of the 2005-2010 Electricity Distribution Price Determination (as described in paragraph 3.4.4.47).
- 3.4.4.50 The Commission dealt with this issue in paragraph 3.4.3, and also in section 9.5.3.2 of Part A. The Commission’s reasoning in Part A was as follows:

...It is a property of the building block approach to regulation that the regulatory value of an asset is its “worth”, or value, in the way that this term is understood and used by economists, on the assumption that, amongst other things, the regulator’s estimate of the cost of capital is correct. That is, under the building block approach, if land is

³⁶ ETSA Utilities, Review Application, Part II, paragraph 8.4.

assigned an initial regulatory value of R , then the stream of income the regulator will provide in respect of this asset in each period is:³⁷

$$I_t = r.R$$

where I_t refers to the income stream in year t , and r is the rate of return provided by the regulator.

The 'value' of this income stream (V) is the present value of the income stream, which is calculated as follows (on the assumption that the rate of return provided by the regulator is equal to investors' estimates of the cost of capital associated with the cash flow stream):

$$V = \frac{r.R}{1+r} + \frac{r.R}{(1+r)^2} + \frac{r.R}{(1+r)^3} + \dots$$

Elementary manipulation yields:

$$V = R$$

Accordingly, it necessarily follows that the regulatory value of the easements and substation land is a value in the normal and economic sense of the term and that this value is being maintained by the Commission in accordance with the guidance offered by the NEC and the EPO.

ETSA Utilities states that the law requires a process of valuation to be undertaken of the easements and substation land. However, in discussing the methodologies that could be applied in undertaking that valuation, it focuses exclusively on methodologies that are based on the cost of the easements, whether it be the original purchase cost escalated for general output price inflation, or the current cost of acquiring those easements.

However, there are a range of different valuation methodologies that regulators have adopted, and it is incorrect to assert that all valuation methodologies are based exclusively upon cost. A well-established valuation methodology in Australia is to set the opening value of assets that is based upon preserving either current prices or profits or the like – that is, one that is unrelated to costs. The Victorian ESC has recently described this methodology as follows.³⁸

In terms of deriving an initial RAV, economic principles provide guidance as to the upper and lower bound valuation (opportunity cost or scrap and stand alone cost). The 'line in the sand' approach is one approach that can be used to set an initial RAV between upper and lower bounds that reflects consideration of a number of different factors. Broadly, this involves setting an initial RAV that delivers either a specified outcome for revenue, prices and, profit or an alternative measure. For example, an initial RAV can be set to generate prices or returns that are

³⁷ This assumes that land and easements are not depreciated (or that holding gains are also ignored). Depreciation of the asset does not change the conclusions.

³⁸ Essential Services Commission Victoria, *Ministerial Advice: Approach to Determining the Regulatory Asset Values for the Victorian Water Businesses*, October 2004, p.8.

consistent with 'prevailing conditions', or to reflect a justifiable change in the existing trend or value of those prevailing conditions.

...

This approach to setting an initial RAV has been adopted for a number of Australian utilities (including for the New South Wales urban water businesses, the predominantly rural Victorian electricity distributors, and for two of the three Victorian gas distributors). Common to each of these decisions was that an initial RAV was set for the regulated entities having regard to a range of factors.

Using the regulatory value for the easements and substation land that is the same as the value that has been reflected in prices over the 2000-2005 regulatory period is consistent with a 'line in the sand' approach as explained by the Victorian ESC, in that it sets a value that is consistent with maintaining the price level and profit associated with these assets that were earned in the 2000-2005 regulatory period (apart from change to profits and prices that stem from the Commission's view on related matters, like the cost of capital associated with the regulated services).

- 3.4.4.51 While ETSA Utilities has provided further and new evidence in its review application as to the lack of an optimized depreciated replacement cost or deprivation approach to valuation of the relevant easements at the time of setting the initial regulatory asset base, given that the Commission has already acknowledged that this did not occur in respect of the relevant easements, the question to be addressed is whether anything has been put forward by ETSA Utilities which persuades the Commission that its views on "value" as set out in paragraph 3.4.4.50 are in error.
- 3.4.4.52 Having considered all of the information provided by ETSA Utilities in the review application and the accompanying information, the Commission has formed the view that while that information further establishes that the relevant easements were not valued using a deprivation methodology, nevertheless, that fact does not entail that the value given to those easements in the initial regulatory asset base is not a "value" for the purposes of the NEC. As explained in Part A, in the context of economic regulation, within which field the NEC operates, the term "value" does not refer to a mechanical methodology as such, but rather refers to the value of the expected future cash-flows derived from assets (in this case, the relevant easements).
- 3.4.4.53 On that basis, the Commission considers that the approach adopted in the 2005-2010 Electricity Distribution Price

Determination was appropriate and is not persuaded on review that it should vary that determination.

3.4.5 INCONSISTENCY WITH REGULATORY REGIME

- 3.4.5.1 At paragraph 10.1 of the review application, ETSA Utilities put the view that the regulatory regime established under the NEC, the EPO and the Electricity Act requires that ETSA Utilities “*should be given a fair and reasonable return on the efficient cost of providing the assets employed in the distribution network service business.*” ETSA Utilities’ therefore asserts that it follows that the relevant easements must be valued on a basis that establishes the efficient costs of providing the assets in question.
- 3.4.5.2 The Commission remains of the view, having considered the matters raised by ETSA Utilities on this point, that the adoption of a value consistent with the value included within the initial regulatory asset base must reflect the efficient costs of providing those assets. This is based on the position that the overall price paid for the electricity distribution business must have been, in the purchaser’s view, an efficient price.
- 3.4.5.3 The Commission put this view in section 9.5.3.5 of Part A, and has analysed this matter again at section 3.4.3 above.
- 3.4.5.4 As set out in those two pieces of reasoning, the Commission is not persuaded by ETSA Utilities’ arguments on “inconsistency with the regulatory regime” that it should vary its decision on the value of the relevant easements in the 2005-2010 Electricity Distribution Price Determination.

3.4.6 INCONSISTENCY WITH REASONABLE EXPECTATIONS

- 3.4.6.1 In section 11 of its review application, ETSA Utilities sought that the Commission review its decision in respect of the value of the relevant easements on the basis that the Commission’s approach in reaching its decision was inconsistent with the purchasers’ (that is, the partnership which purchased the electricity distribution business) reasonable expectations as to the treatment of easements in the 2005-2010 Electricity Distribution Price Determination.
- 3.4.6.2 While ETSA Utilities claimed confidentiality over all of section 11, except paragraphs 11.1, 11.6 and 11.11, the key points of ETSA Utilities’ arguments are as follows:

- (a) the amount that potential bidders for businesses such as the South Australian electricity distribution business are likely to offer is necessarily dependent upon the value of the assets which a purchaser would receive in return and the degree of risk associated with the regulatory regime surrounding those assets;
- (b) to address those concerns and to provide certainty to potential bidders, the South Australian government enacted the EPO;
- (c) in the context of the relevant easements, in ETSA Utilities' view clauses 7.2(e)(iv) and 7.3(b)(iv) of the EPO provided assurance to potential bidders that the value of those easements would be considered afresh at the 2005 price reset;³⁹

(d) CONFIDENTIAL PARAGRAPH

3.4.6.3 CONFIDENTIAL PARAGRAPH

3.4.6.4 ETSA Utilities therefore asserted that if the Commission does not vary the 2005-2010 Electricity Distribution Price Determination to revalue easements, it will defeat that reasonable expectation, thereby breaching the regulatory compact and increasing regulatory uncertainty in South Australia.

3.4.6.5 In putting that argument, ETSA Utilities observed that the Commission made the following statement at section 9.5.3.5 of Part A:

For completeness, the Commission also notes that it has twice confirmed with the South Australian government its understanding that there are no records of representations made to bidders that there would be "upside" in the treatment of the value of easements and substation land by regulators in the future.

3.4.6.6 CONFIDENTIAL PARAGRAPH

3.4.6.7 In light of that criticism, and in order to adequately review its decision, it is necessary and appropriate for the Commission to provide an historical overview of its treatment of this issue in the 2005-2010 Electricity Distribution Price Determination.

3.4.6.8 In doing so, the Commission notes that while it adequately summarized the information upon which it relied in Part A in

³⁹ While, as discussed in section 3.4.3, the Commission agrees that the intent of the EPO was to provide a degree of certainty, the Commission does not agree that the EPO requires that easements are to be considered afresh.

respect of this issue, in the absence of the criticism now leveled by ETSA Utilities at the Commission's decision it was not necessary, nor would it have been appropriate, for the purposes of the 2005-2010 Electricity Distribution Price Determination to have discussed the matter to the level of detail set out below.

3.4.6.9 As identified in Appendix 1 and section 2.2, the Commission engaged in a review process over more than 3 years in anticipation of making the 2005-2010 Electricity Distribution Price Determination. As a part of that process it released a paper entitled "Return on Assets – Preliminary Views" in January 2004, seeking comment on a number of issues relating to the value of assets.⁴⁰

3.4.6.10 In response to that paper, ETSA Utilities raised the issue of the value of the relevant easements and the issue of its reasonable expectations in the treatment of the value of those easements.⁴¹

3.4.6.11 CONFIDENTIAL PARAGRAPH

3.4.6.12 CONFIDENTIAL PARAGRAPH

3.4.6.13 CONFIDENTIAL PARAGRAPH

3.4.6.14 CONFIDENTIAL PARAGRAPH

3.4.6.15 CONFIDENTIAL PARAGRAPH

3.4.6.16 CONFIDENTIAL PARAGRAPH:

3.4.6.17 CONFIDENTIAL PARAGRAPH

3.4.6.18 CONFIDENTIAL PARAGRAPH

3.4.6.19 CONFIDENTIAL PARAGRAPH

3.4.6.20 As noted above, the Commission does not (and did not in the 2005-2010 Electricity Distribution Price Determination) agree that the present value of the rental stream under the distribution network land lease represents the value "actually paid" for the relevant easements; rather, it represents a particular bid structure adopted by ETSA Utilities.

3.4.6.21 CONFIDENTIAL PARAGRAPH

⁴⁰ A copy of the paper is available on the Commission's website (refer <http://www.escosa.sa.gov.au/resources/documents/040114-R-EDPR-ReturnOnAssets-PrelimViews-Final.pdf>)

⁴¹ A copy of ETSA Utilities' submission is available on the Commission's website (refer <http://www.escosa.sa.gov.au/resources/documents/040213-Sub-ROAPrelimViews-ETSA.pdf>).

3.4.6.22 CONFIDENTIAL PARAGRAPH

3.4.6.23 CONFIDENTIAL PARAGRAPH

3.4.6.24 To the extent that each of the various documents and other pieces of information referred to in paragraphs 3.4.6.2 to 3.4.6.23 above refer to the fact that the Commission would be bound in certain matters in future regulatory periods, it was clear that the instrument of control over the Commission would be the EPO (for example, the terms of the ETSA Utilities Information Memorandum (Volume 1)). The Commission notes that it has never resiled from the fact that it is bound by the imperatives of the EPO: so much was expressly recognized by the Commission in Chapter 1 of Part A.⁴²

3.4.6.25 The Commission also notes that, as stated above, it gave consideration to all of the materials provided to it during the 2005-2010 Electricity Distribution Price Determination review process. Given the confidential status of the materials provided, it chose not to directly source or reference those materials in Part A, but instead, as required under section 26(2) of the ESC Act, summarized the fact that it had sought that information and the effect of that information on the Commission's decision.

3.4.6.26 There is, however, one matter which the Commission considers worthy of consideration in respect of the expectation issue, based on an inconsistency between the material put to the Commission by ETSA Utilities prior to the 2005-2010 Electricity Distribution Price Determination and the material put in the review application.

3.4.6.27 CONFIDENTIAL PARAGRAPH

3.4.6.28 CONFIDENTIAL PARAGRAPH

3.4.6.29 CONFIDENTIAL PARAGRAPH

3.4.6.30 Aside from this inconsistency however, having reviewed all of the matters put by ETSA Utilities on this point in the review application and accompanying information, and the response to submission document, the Commission would observe that although ETSA Utilities has argued that representations were made (which the Commission does not accept), it has not

⁴² Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, section 1.2.4.3, pages 8 to10.

demonstrated that the purchasers expressly relied on those representations. Moreover, ETSA Utilities has not demonstrated that the Commission would be bound by those representations in the absence of a legislative direction to do so, in particular, under the EPO.

3.4.6.31 Indeed, the Commission, being bound to act only as permitted by statute does not see how it could take such representations into account in performance of its functions in the absence of such a legislative direction.⁴³

3.4.6.32 In respect of this issue, the Treasurer observed that:

Had the Government had an explicit policy of revaluing the easements using a deprivation methodology, and sought to gain a premium on the sale price as result, this would have been clearly enshrined in the EPO. The EPO does not, in any way, mandate the use of a deprivation methodology for valuing easements.⁴⁴

3.4.6.33 Therefore, the Commission is not persuaded on ETSA Utilities' "inconsistency with reasonable expectation" ground that the position taken in the 2005-2010 Electricity Distribution Price Determination was in error.

3.5 Decision on Review

3.5.1 Having considered all of the arguments, information and evidence put forward by ETSA Utilities and the Treasurer in respect of the Commission's decision in the 2005-2010 Electricity Distribution Price Determination to value easements in existence and in service as at 1 July 1999 at \$6 million, the Commission confirms that price determination in respect of that matter.

3.5.2 In reaching that decision, the Commission notes that because of the view it has taken (and took in the 2005-2010 Electricity Distribution Price Determination) as to the requirements of the EPO and the NEC in respect of the value of relevant easements, it has not been necessary for the Commission to consider which valuation methodology it would adopt were it to proceed under the "first limb" of clause 6.10.3(e)(5)(ii). While the Commission would clearly need to have regard to, amongst other things, the matters specified in clause 6.10.3(e)(5)(iii)(A)-(C) in that scenario, it notes that there are other, competing, methodologies which might be

⁴³ For discussion of the Commission's powers and functions and the limitations on those powers and functions, see Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, sections 1.2 and 1.2.1, page 4 to 5.

⁴⁴ Treasurer of South Australia, Review of the Essential Services Commission of SA Electricity Distribution Price Determination, page 9.

equally valid; for example, indexed historical cost. The Commission therefore notes that should it have occasion to subsequently revaluing relevant easements, it does not accept that deprival value is either mandated, or the only available methodology, for that purpose.

4. EQUITY BETA

4.1 Issue

4.1.1 ETSA Utilities has sought a review in respect of the Commission's decision that ETSA Utilities' equity β for the purpose of calculating the WACC should be 0.8, assuming a gearing level of 60%.⁴⁵

4.2 ETSA Utilities' Submission

4.2.1 In the review application, ETSA Utilities put forward grounds of review as follows.⁴⁶

- (a) *The Commission is in error in determining that ETSA Utilities' equity β for the purposes of calculating the WACC should be 0.8, assuming a gearing level of 60%*
- (b) *In its consideration of equity β , the Commission has:*
 - (i) *failed to consider and analyse market data correctly or adequately;*
 - (ii) *failed to deal with or appropriately take account of the statistical and other unreliability of mechanical, historical equity beta proxy data;*
 - (iii) *failed to apply appropriate qualitative tests and considerations;*
 - (iv) *failed to have regard to its own consultants' reasoning and relevant conclusions;*
 - (v) *failed to consider the nature and effect of other regulatory decisions;*
 - (vi) *failed to give adequate and proper considerations to international benchmarks; and*
 - (vii) *made factual errors.*
- (c) *Properly determined, ETSA Utilities' equity β for the purposes of calculating the WACC is not less than 1, assuming a gearing level of 60%.*

4.2.2 On the basis of its arguments, ETSA Utilities claimed that ETSA Utilities' equity β for the purpose of calculating the WACC is not less than 1 assuming a gearing level of 60%.

4.2.3 In support of its review application, ETSA Utilities provided two experts reports:

4.2.3.1 NERA: *Review of ESCOSA's Decision on ETSA Utilities Equity Beta* (April 2005) ("NERA(a)"); and

⁴⁵ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination – Part A Statement of Reasons, April 2005, section 10.8.3, page 142 (refer http://www.escosa.sa.gov.au/resources/documents/050405-EDPD_Part%20A_StatementofReasons_Final.pdf).

⁴⁶ ETSA Utilities, Review Application, Part I, paragraph 4.2.

- 4.2.3.2 Stephen Gray (SFG Consulting) and Bob Officer: *The Equity Beta of an Electricity Distribution Business* (April 17, 2005) (“Gray & Officer (a)”).
- 4.2.4 Further reports were prepared by these experts in response to the Treasurer’s submission (see below):
 - 4.2.4.1 NERA: *Review of Professor Lally’s Critique of NERA’s April Report* (May 2005) (“NERA (b)”); and
 - 4.2.4.2 Stephen Gray (SFG Consulting) and Bob Officer: *Response to the Submission of the South Australian Treasurer to ESCOSA’s Electricity Price Determination* (May 20, 2005) (“Gray & Officer (b)”)
- 4.2.5 The Commission has given consideration to these reports in addressing the particular grounds for review submitted by ETSA Utilities.

4.3 Treasurer’s Submissions

- 4.3.1 In addressing ETSA Utilities’ submission with respect to the Commission’s decision concerning easements, the Treasurer opposed the review application claims of ETSA Utilities and the decision sought by ETSA Utilities on the review.
- 4.3.2 The Treasurer put the view that the Commission’s decision with respect to the equity β (assuming a gearing level of 60%) for the purposes of setting a regulatory rate of return for ETSA Utilities, of 0.8 is appropriate and should be maintained.⁴⁷
- 4.3.3 In support of its submission, the Treasurer provided an expert’s report: Associate Professor Martin Lally, *The Equity Beta for ETSA Utilities* (May 6, 2005) (“Lally”).
- 4.3.4 The Commission has given consideration to that report in addressing the particular grounds for review submitted by ETSA Utilities.

4.4 Commission’s considerations

- 4.4.1 In its consideration of ETSA Utilities’ grounds of review in respect of the equity β , the Commission has given consideration firstly to the particular grounds set out in paragraph 4.2(b) of Part 1 of the review application before considering the more general claims of error, and for remedy of error, made in paragraphs 4.2(a) and (c).

⁴⁷ Treasurer of South Australia, Submission on ETSA Utilities’ Review Application, 10 May 2005, paragraph 1.2, page 4.

4.4.2 ANALYSIS OF DATA FROM CAPITAL MARKETS

4.4.2.1 ETSA Utilities submitted three grounds of review relating to the Commission's consideration of market data on equity β , these being that the Commission:

- (a) failed to consider and analyse market data correctly or adequately;
- (b) failed to deal with or appropriately take account of the statistical and other unreliability of mechanical, historical equity β proxy data; and
- (c) failed to apply appropriate qualitative tests and considerations⁴⁸.

4.4.2.2 The broad contentions of ETSA Utilities in this regard are as follows:

15.2 *It is almost universally acknowledged in Australian regulatory decisions that, at present, mechanical, unanalysed market data by itself is insufficiently reliable for the purposes of determining an equity β for use in the CAPM.*

15.3 *The broad options for the Commission, therefore, are to:*

15.3.1 *acknowledge that lack of sufficient reliability, and adopt an equity beta in the order of 1.0 in line with regulatory precedent (as explained below) and with qualitative considerations, such as asymmetric risk of regulatory error. This is the approach of most Australian regulators; or, alternatively*

15.3.2 *apply standard and well known statistical techniques to render the data sufficiently reliable for these purposes. Such an exercise has been undertaken in the Gray/Officer report [Gray & Officer (a)].*

15.4 *The Commission has taken neither approach. Instead, it has done what is must not do, namely use unreliable, unanalysed mechanical data to determine the equity beta for the purpose of the CAPM.*

4.4.2.3 NERA(a) and Gray & Officer(a) reported views that there are deficiencies and errors in the Commission's consideration of historical equity β estimates.

4.4.2.4 NERA(a) reported that the Commission erred in interpreting the historical data for the following reasons:

- (a) that the Commission has not properly taken into account statistical uncertainty in the historical estimates of equity β values⁴⁹.

⁴⁸ ETSA Utilities, Review Application, Part I, paragraph 4.2(b).

... the most recent average weekly domestic historical betas relied on by ESCOSA are for August 2004 and average more than 0.80. Moreover, this is an average of the historical proxy betas for 5 different firms that, while not reported in the Final Determination, range from 0.05 to 2.03. The average of these determinations is 0.82, but the statistical precision is very low.

In fact, based on these observations the true mean of the observations could be as high as 1.29 using the standard 95% confidence interval. This means that ESCOSA can only conclude with statistical confidence that the mean historical equity beta of the comparable companies during that period was not greater than 1.29. It cannot rule out with confidence that the mean of the comparable companies' equity beta is between 0.82 and 1.29. As a matter of statistics applied to the relevant data ESCOSA's statement "that if it were to have regard exclusively to the latest market evidence, it would adopt a re-levered equity beta of approximately 0.3" is wrong.

...

... ESCOSA cannot statistically describe a value of 0.8 as being "at the upper end of observed equity betas, however measured, over the past four years" without some analysis of the statistical precision of these estimates.

...

- (b) that the Commission did not take into account that ETSA Utilities may well have a higher equity β than the average of the comparables,⁵⁰
- (c) that in not taking into account the "Blume adjustment" of observed equity β values, the Commission implied that the risks associated with core regulatory activities are stable over time. This is inconsistent with the Commission's use only of historical observations of equity β values for the four years to August 2004 (which are characterised by large fluctuations) and the Commission not taking into account observed equity β values from before this period that include estimates of about 1.0;⁵¹ and
- (d) that the Commission's use of equity β data for the four year period to August 2004, and not using data prior to this period, is inconsistent with its own view that this data is contaminated by the "tech bubble and burst" resulting in misleadingly low estimates for historical proxy equity β .

⁴⁹ NERA(a), paragraphs 37 – 41.

⁵⁰ NERA(a), paragraph 39.

⁵¹ NERA(a), paragraphs 44 – 47.

- 4.4.2.5 NERA(a) reported that in determining a range of values for the equity β that is evident from historical equity β data, the Commission should have determined a range wider than the actual estimates of equity β values, reflecting the statistical imprecision in these statistical estimates. In particular, NERA(a) reported that the upper limit of the range of values determined by the Commission for the equity β should extend the upper bound of approximately 0.82 to a value of 1.29, reflecting a 95 percent confidence interval around the value of 0.82.
- 4.4.2.6 The Commission acknowledged the statistical imprecision of equity β estimates in the 2005-2010 Electricity Distribution Price Determination.⁵² Given that statistical imprecision, the Commission did not seek to establish either an equity β value or a feasible range of equity β values using statistical analysis. This is consistent with the approach to consideration of equity β values proposed by ETSA Utilities.⁵³ The approach of the Commission to addressing this statistical imprecision was to consider equity β data from a variety of sources, including equity β data from monthly and weekly observations for comparable Australian entities, and equity β data from comparable United States entities.
- 4.4.2.7 For reasons of that statistical imprecision, the Commission took the view that it is inappropriate to define ranges for equity β values by reference to measures of statistical error in equity β estimates. Rather, the Commission took the view that, due to the statistical imprecision of empirical equity β estimates, the role of the empirical estimates is to inform a judgment as to an appropriate assumption for an equity β value, rather than to be determinative. The Commission does not accept that it erred in not assigning ranges to values of equity β estimates based on statistical measures of error, such as 95% confidence intervals as proposed by NERA(a).
- 4.4.2.8 NERA(a) is incorrect in reporting that the Commission did not take into account that ETSA Utilities may well have a higher (or otherwise different) equity β than the average of equity β estimates for the comparable businesses examined for the

⁵² Final Determination, section 10.8.1.3, pages 134, 135.

⁵³ Gray and Officer, "The Equity Beta of an Electricity Distribution Business", October 12 2004 in, ETSA Utilities' Submission re: ESCOSA Draft 2005-2010 Electricity Distribution Price Determination Part A Statement of Reasons, February 2005, Attachment 2.

purposes of the draft and final 2005-2010 Electricity Distribution Price Determination. The Commission gave explicit consideration to two particular characteristics of ETSA Utilities.

- (a) First, the Commission gave consideration to the submission from ETSA Utilities that, for reason of its provision of services to rural areas, it is exposed to a higher level of risk than comparable entities.⁵⁴
- (b) Secondly, the Commission considered the potential effect of the “Q-factor” in stabilizing revenues to ETSA Utilities and reducing ETSA Utilities systematic risk.⁵⁵

4.4.2.9 NERA(a) is incorrect in reporting that the Commission has failed to make either a conceptual or empirical case in support of the view taken in the 2005-2010 Electricity Distribution Price Determination that the Q-factor reduces ETSA Utilities’ systematic risk.⁵⁶

4.4.2.10 In the 2005-2010 Electricity Distribution Price Determination, the Commission gave particular consideration in its determination of the equity β to the effect of the “Q-factor” in the average revenue control formula on the level of revenue risk, and therefore profit risk, faced by ETSA Utilities⁵⁷. The Commission considered that the effect of the Q-factor would be to partially shelter ETSA Utilities from demand risk and from systematic risk that is manifest in changes in demand. This view of the Commission has subsequently been confirmed by Lally.⁵⁸

4.4.2.11 The Commission accepts the suggestion by NERA(a)⁵⁹ that, in taking a view that the Q-factor would give rise to a lower equity β for ETSA Utilities than would occur in the absence of the Q-factor, the Commission was working on the basis of an implicit premise that demand for electricity distribution services (and hence revenues and profits for ETSA Utilities) is positively correlated with returns on the stock market. The Commission does not, however, accept a view that it was necessary for the

⁵⁴ Final Determination, section 10.8.1.6, pages 137, 138.

⁵⁵ Final Determination, section 10.8.3, page 142.

⁵⁶ NERA(a), paragraph 183.

⁵⁷ Final Determination section 12.8.3 page 142; the working of the Q factor in the average revenue control formula is described in section 12.8.1, pages 186 and 187, of the Final Determination.

⁵⁸ Lally, pages 9, 10.

⁵⁹ NERA(a), paragraph 178.

Commission to empirically establish that such a positive correlation exists in order to reach the view taken on the effect of the Q-factor on the equity β . The Commission considers it axiomatic that demand for electricity (and hence electricity distribution services) would be correlated with levels of output, profits and stock-market returns in the broader economy. This is evident from the positive equity β values observed for comparable utility businesses in Australia and the US. To assume otherwise (the absence of correlation or a negative correlation between demand, revenues and profits of ETSA Utilities and returns on the stock market) would imply a zero or negative equity β value.⁶⁰

- 4.4.2.12 The Commission does not accept the suggestion by NERA(a) that, in not taking into account the “Blume adjustment” of observed equity β values, the Commission implied that the risks associated with core regulatory activities are stable over time. Rather, one of the Commission’s reasons for rejecting the Blume adjustment (as referred to by NERA(a)) was that any change in the relative risk of an entity arising from the diversification into unregulated activities or from changes to gearing levels was irrelevant when deriving an equity β for a pure play entity with a constant benchmark level of gearing. No statement was made about the degree of time variation in the relative risk of the regulated activities. The matter of the Blume adjustment is further addressed below (paragraph 4.4.3.10 and following).
- 4.4.2.13 The Commission does not accept the reporting by NERA (a) that the use of empirical estimates of equity β values for a period to August 2004, and not using data prior to this period, is inconsistent with the view expressed by the Commission that this data is contaminated by the “tech bubble and burst” resulting in misleadingly low estimates for historical proxy equity β .
- 4.4.2.14 In its draft and final 2005-2010 Electricity Distribution Price Determination, the Commission gave explicit consideration to the possibility that equity β estimates derived from monthly observations over periods of 4 or 5 years may be biased downwards by the effect of the unusual trading of technology

⁶⁰ The effect of the Q-factor

stocks referred to as the “tech bubble and burst”.⁶¹ It is for this reason that the Commission gave explicit consideration to equity β estimates from weekly observations over periods of 60 weeks which, although inconsistent with the more common practice of using monthly observations for the purposes of making equity β estimates, enabled estimates to be made from observations outside of the period of the technology bubble.

4.4.3 CORRECTION OF STATISTICAL IMPRECISION

4.4.3.1 Gray & Officer (a) stated that the statistical analysis relied on by the Commission in its consideration of historical equity β values for comparable entities to ETSA Utilities should not have been relied upon for the following reasons:

- (a) the degree of statistical imprecision is so large as to make the estimates uninterpretable – the estimates of equity β are characterised by very wide 95% confidence intervals;⁶²
- (b) there is dramatic variation in equity β estimates across sample firms and it is wrong to simply ignore the inconsistency and take the mean of the range of dramatically inconsistent estimates;⁶³
- (c) the estimates are highly sensitive to a small number of “outlier” observations and it is wrong to simply ignore the effect of outliers when determining an equity β to indicate the forward looking cost of equity;⁶⁴
- (d) it is wrong to rely upon equity β values estimated using weekly data over the course of a single year as the period is too short to provide any sort of meaningful analysis, and in a period of this length the statistical problem of non-synchronous trading becomes pronounced;⁶⁵
- (e) the estimates are substantially affected by the data from the period of the stock market technology bubble;⁶⁶ and

⁶¹ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination – Part A Statement of Reasons, April 2005, section 10.8.1.4, pages 135, 136. Essential Services Commission, Draft 2005-2010 Electricity Distribution Price Determination – Part A Statement of Reasons, November 2004, section 10.6.5, pages 171 – 175.

⁶² Gray & Officer (a), paragraphs 4.3.11 – 4.3.14.

⁶³ Gray & Officer (a), paragraphs 4.3.15, 4.3.16.

⁶⁴ Gray & Officer (a), paragraphs 4.3.11, 4.3.17 – 4.3.20.

⁶⁵ Gray & Officer (a), paragraph 4.3.23.

⁶⁶ Gray & Officer (a), paragraph 4.3.24.

- (f) the estimates fail the tests of economic reasonableness and commercial common sense, being disparate and inconsistent across supposedly comparable entities; in some cases negative (implying a required return on equity of less than the risk free rate); and in some cases near or greater than 2 (implying a required return on equity of around 12% per annum in excess of the risk free rate).⁶⁷

4.4.3.2 Gray & Officer (a) provided equity β estimates derived by methodologies that seek to correct the claimed deficiencies in the equity β estimates for comparable Australian entities cited by the Commission in the 2005-2010 Electricity Distribution Price Determination.

4.4.3.3 Those methodologies have in common the use of the Blume adjustment of a simple ordinary least squares estimation of equity β values, and assumption of a debt beta of 0.2 for Envestra and 0 for other entities in re-levering equity β estimates to a benchmark gearing assumption of 60% debt to equity⁶⁸. Gray & Officer (a) presented a range of different equity β estimates for comparable Australian entities (AGL, Alinta, APT and Envestra) corresponding to differences in methodology for:

- (a) consideration of the unrepresentative period of the technology bubble by estimation of equity β over periods of 5, 4 and 3.5 year periods to December 2001, with all periods excluding the period July 1998 to June 2001;⁶⁹
- (b) elimination of outlier data points according to criteria based on the standard deviation of residuals from a regression line for complete data sets;⁷⁰ and
- (c) determination of “portfolio betas” as an alternative to calculation of averages of equity β estimates for individual entities.⁷¹

4.4.3.4 The equity β estimates presented in Gray & Officer (a) are reproduced as follows.

⁶⁷ Gray & Officer (a), paragraphs 4.3.11, 4.3.25 – 4.3.28.

⁶⁸ Gray & Officer (a), paragraphs 5.3.1 – 5.4.4.

⁶⁹ Gray & Officer (a), paragraphs 5.5.6, 5.5.7.

⁷⁰ Gray & Officer (a), paragraph 5.5.8.

⁷¹ Gray & Officer (a), paragraphs 5.6.1, 5.6.2.

Table 4.1: Re-levered OLS equity β estimates after removal of technology bubble and outliers: Blume adjusted.⁷²

Outlier removal criteria (standard errors)	2.0	1.5	1.0
	Beta (R^2)	Beta (R^2)	Beta (R^2)
3.5 years (7/2001 – 12/2004)			
AGL	0.80 (0.03)	1.06 (0.12)	1.25 (0.33)
Alinta	1.46 (0.17)	1.50 (0.22)	1.97 (0.60)
APT	0.95 (0.21)	1.03 (0.35)	1.14 (0.67)
Envestra	0.77 (0.11)	0.87 (0.22)	0.89 (0.41)
Mean	1.00	1.11	1.31
4 years (1/1998–6/1998; 7/2001–12/2004)			
AGL	1.06 (0.09)	1.15 (0.15)	1.34 (0.35)
Envestra	0.83 (0.17)	0.96 (0.31)	0.91 (0.40)
Mean	0.95	1.05	1.12
5 years (1/1997–6/1998; 7/2001–12/2004)			
AGL	1.23 (0.16)	1.30 (0.20)	1.41 (0.33)
Mean	1.23	1.30	1.41
Grand Mean	1.06	1.15	1.28

Table 4.2: Re-levered OLS portfolio equity β estimates after removal of technology bubble and outliers: Blume adjusted⁷³

Outlier removal criteria (standard errors)	2.0	1.5	1.0
	Beta (R^2)	Beta (R^2)	Beta (R^2)
3.5 years (7/2001 – 12/2004)			
Mean Portfolio	0.96 (0.27)	1.04 (0.31)	1.18 (0.45)
Median Portfolio	1.02 (0.34)	1.07 (0.45)	1.27 (0.52)
4 years (1/1998–6/1998; 7/2001–12/2004)			
Mean Portfolio	0.97 (0.18)	0.96 (0.23)	1.22 (0.40)
Median Portfolio	1.07 (0.22)	1.02 (0.29)	1.26 (0.46)
5 years (1/1997–6/1998; 7/2001–12/2004)			
Mean Portfolio	1.01 (0.25)	1.07 (0.31)	1.26 (0.54)
Median Portfolio	1.03 (0.26)	1.10 (0.36)	1.37 (0.58)

4.4.3.5 The equity β estimates presented in the report by Gray and Officer were considered by the Treasurer (in the Lally report).

⁷² Gray & Officer (a), paragraph 5.5.8.

⁷³ Gray & Officer (a), paragraph 5.6.3.

Lally raised a number of concerns with the methodologies applied in making the estimates, including:

- (a) consideration of only a limited number of comparable firms;
- (b) use of the Blume adjustment;
- (c) the potential that the methodology applied in removal of outlier data points had the effect of removing an excessive number of data points from the analysis; and
- (d) the absence of consideration of data for the period of the technology bubble (July 1998 to June 2001) would have the effect of creating an upward bias in equity β estimates.⁷⁴

4.4.3.6 Lally provided a revised estimate of the mean portfolio equity β estimate for the five year period with a correction to remove the Blume adjustment and with exclusion of outlier data points limited to data points with residual of greater than 2 standard deviations. This revised estimate is 0.82, as compared with the corresponding estimate presented in Gray & Officer (a) of 1.01.⁷⁵

4.4.3.7 Gray & Officer (b) provided responses to the arguments of Lally, relating to the statistical analysis of equity β values for comparable Australian entities:

- (a) the Blume adjustment is made for the purpose of correcting for non-persistent measurement errors which explain an observed mean reversion of equity β estimates, and the reference value of 1 is used for reason of an absence of knowledge of the mean value for the industry group and a substantial regulatory precedent for use of an equity β of 1,⁷⁶
- (b) the removal of outlier observations according to a less strict criterion than agreed to by Lally has justification in the improvement in R^2 statistics that this produces, however results obtained across the range of removal criteria should be considered in forming a view on an equity β estimate.⁷⁷

4.4.3.8 As well as disputing the assertion of Lally that the Blume adjustment is inappropriate, Gray & Officer (b) also disputed the

⁷⁴ Lally, pages 15 – 18.

⁷⁵ Lally, pages 18, 19.

⁷⁶ Gray & Officer (b), pages 10 – 12.

⁷⁷ Gray & Officer (b), pages 13, 14.

accuracy of the correction made by Lally to one of Gray & Officer (a)'s equity β estimates to remove the effect of the Blume adjustment (paragraph 4.4.3.6, above). Gray & Officer (b) presented alternative corrections to reverse the Blume adjustment for equity β estimates for individual comparable entities, as follows, and conclude that even without the Blume adjustment the average comparable firm has an equity β of close to 1.⁷⁸

Table 4.3: Gray & Officer (b) alternative corrections to reverse the Blume adjustment for equity β estimates for individual comparable entities

Outlier removal criteria (standard errors)	2.0
	Beta
5 years (1/1997–6/1998; 7/2001–12/2004)	
AGL	0.96
Alinta	0.85
APT	1.31
Envestra	0.73
Mean	0.96

4.4.3.9 The important points of contention between the respective experts are therefore:

- (a) whether it is appropriate to apply the Blume adjustment to raw equity β estimates;
- (b) the extent of outliers that should be eliminated; and
- (c) the effects of removing the Blume adjustment.

4.4.3.10 Turning first to the Blume adjustment, the Commission notes that in its Preliminary Views paper it proposed to accept the Victorian Essential Services Commission's conclusions on this matter, and its reasons for this decision.⁷⁹

4.4.3.11 In contrast to the statements made by Gray & Officer (a), the Victorian Essential Services Commission considered the merits of the Blume adjustment both as a means of addressing estimation error as well as any tendency for 'true' equity β to tend

⁷⁸ Gray & Officer (b), paragraphs 3.29, 3.30, page 14. The Commission notes that the indication of these beta estimates being for five years of data, after removal of the technology bubble period, is inconsistent with Alinta, APT and Envestra not having been listed on the ASX for this entire period. The Commission has assumed that Officer & Gray (b) has derived the beta estimates for these entities using shorter periods of data.

⁷⁹ Preliminary Views, p.55, referring to: Essential Services Commission (Victoria), 2002, Review of Gas Access Arrangements – Final Decision, October, p.346.

towards one over time, and rejected the adjustment on both grounds.

- 4.4.3.12 Hence, the Commission had already considered, and rejected, the use of the Blume adjustment as a means of reducing estimation error: in particular, the conclusion reached by the Victorian Essential Services Commission (and adopted by the Commission) was that using the average of a group of entities was a preferable means of minimizing the impact of the estimation error in individual equity β estimates. The Commission also used equity β estimates for relevant entities in foreign markets as a second means of addressing the potential for its conclusions to be affected by estimation error.
- 4.4.3.13 The Commission notes that its views on this matter were published in January 2004, and ETSA Utilities did not contest the Commission's views on this matter until after the release of the 2005-2010 Electricity Distribution Price Determination in April 2005.
- 4.4.3.14 The Commission also notes that the conclusions reached, and reasoning applied, by the Victorian Essential Services Commission on the relative merits of applying the Blume adjustment are consistent with the views of the expert that the Treasurer engaged on this matter, A/Professor Lally.
- 4.4.3.15 The Commission further notes that one of the authors of Gray and Officer(a) had also previously expressed caution about the use of the Blume adjustment, as follows:⁸⁰

One of the features of any regression parameter that is estimated with error is that the parameter tends to mean revert over a number of separate measurements or observations. The mean reversion is caused by the errors on the high side in the next measurement will tend to be less next period and so the estimate will move downwards, and conversely errors on the low side. The net result will be mean reversion for the estimates of the parameter. Moreover, the mean of all companies is by definition, a beta of 1.0 and as a consequence the estimates of the equity betas over time tend to move towards that number. The first to note this was Marshall Blume in a paper in the Journal of Finance in 1975.

Subsequent studies have confirmed some degrees of mean reversion for β estimates. The consequence of this observation is that some of the measuring

⁸⁰ Officer, R. (2002), A Weighted Average Cost of Capital for a Benchmark Australian Electricity Transmission Business, p.12, in SPI PowerNet, 2002, Appendices to SPI PowerNet Revenue Cap Application for the Period 1 January 2003 to 31 March 2008, April, Appendix F (available at <http://www.accc.gov.au/content/index.phtml/itemId/312967/fromItemId/361097>). The Blume adjustment was **not** applied in the study undertaken for SPI PowerNet.

services such as Bloomberg provide estimates of beta that mean revert. The problem with this approach is that the mean reversion parameter is far from stable and what might be observed one period can be inappropriate for another period. Inevitably, the parameters used to mean revert tend to be ad hoc in these circumstances and hard to justify, particularly where estimates are based on significant numbers of companies or industry groups where the measurement errors are less.

- 4.4.3.16 Accordingly, the Commission is not convinced that it should vary from its previous conclusion that the Blume adjustment is inappropriate.
- 4.4.3.17 The Commission accepts the view of Gray & Officer (a) that statistical precision of equity β estimates may be improved by a judicious removal of outlier observations. However, in view of the concerns expressed by Lally as to the procedure adopted by Gray & Officer (a) for the removal of outlier data points, the Commission also does not accept that the removal of data points with residuals of less than two standard deviations is appropriate.
- 4.4.3.18 The Commission also notes the position taken by Gray & Officer (a) that it is preferable to have regard to the equity β estimate for a portfolio of companies rather than to the individual equity β observations, and accepts Lally's position that regard to the mean estimate is more relevant. The Commission notes, however, that the equity β estimates of Gray & Officer (a) for the mean portfolio return are not materially different to the average of the equity β estimates for the individual companies (where the same period of observations have been used), as would be expected.
- 4.4.3.19 Consistent with the discussion above, the Commission considers that the results presented by Gray & Officer (a) need to be adjusted to remove the effects of the Blume adjustment, and that attention be given to the results obtained by removing the observations as outliers whose residuals are more than twice the standard deviation of the residuals.
- 4.4.3.20 Lally demonstrated how the Gray & Officer (a) equity β of 1.01 for gearing of 60 per cent debt-to-assets equates to an equity β of 0.82 for gearing of 60 per cent debt-to-assets with the Blume adjustment removed. The Commission has been able to replicate this calculation.

4.4.3.21 Gray & Officer (b) have disputed this calculation, and stated that the portfolio equity β estimate is 0.96 with the effects of the Blume adjustment removed. However, Gray & Officer (b) have not presented their calculations, and the Commission has been unable to reconcile the figure of 0.96 with the information presented in either Table 5 or Table 6 of Gray & Officer (a). Moreover, the Commission is of the view that the equity β values presented in Gray and Officer (b) seem to contain errors.⁸¹

- (a) a simple averaging of the values for the individual entities is probably inappropriate in the circumstances where the values have been derived from data sets for substantially different time periods; and
- (b) there is an inconsistency in the equity β values for Alinta and APT presented in Gray and Officer (b) with the values presented in Gray and Officer (a)

4.4.3.22 In order to ascertain the likely magnitude of the effects of the Blume adjustment on the equity β estimates presented, the Commission has recalculated the relevant equity β estimates presented in Table 5 of Gray & Officer (a). The calculations are as follows.

⁸¹ Gray & Officer (b), page 14.

Table 4.4: Commission recalculation of the relevant beta estimates presented in Table 5 of Gray & Officer (a).

Gray and Officer (a) Table 5: 3.5 Years						
	Blume Beta - 60%	Actual Gearing	Debt Beta	Blume Beta - Original	Raw Beta - Actual Gearing	Raw Beta - 60%
AGL	0.80	35%	0	0.49	0.24	0.39
Alinta	1.46	33%	0	0.87	0.81	1.35
APT	0.95	45%	0	0.69	0.54	0.74
Envestra	0.77	76%	0.2	1.15	1.22	0.81
Average	1.00	47%				0.83

Gray and Officer (a) Table 5: 4 Years						
	Blume Beta - 60%	Actual Gearing	Debt Beta	Blume Beta - Original	Raw Beta - Actual Gearing	Raw Beta - 60%
AGL	1.06	35%	0	0.65	0.48	0.78
Envestra	0.83	76%	0.2	1.25	1.37	0.90
Average	0.95	56%				0.84

Gray and Officer (a) Table 5: 5 Years						
	Blume Beta - 60%	Actual Gearing	Debt Beta	Blume Beta - Original	Raw Beta - Actual Gearing	Raw Beta - 60%
AGL	1.23	35%	0	0.76	0.64	1.04
Average	1.23	35%				1.04

4.4.3.23 The values set out above show that the Gray & Officer results presented for individual equity β estimates are consistent with an equity β of 0.80 if reliance is placed upon the estimate based upon the greatest number of firms, which is consistent with Lally's adjustment.

4.4.3.24 In regard to the grounds of review relating to the estimation of equity β values from capital-market data, the Commission does not accept that it failed to consider and analyse market data correctly or adequately, or that it failed to deal with or appropriately take account of the statistical and other unreliability of statistical estimates of equity β . The Commission does accept that there are merits in some of the elements of statistical methodology applied by Gray & Officer (a).

4.4.3.25 However, the Commission considers that these represent refinements and advances in methodology that were not put to

the Commission prior to the 2005-2010 Electricity Distribution Price Determination and do not point to error in the analyses relied on by the Commission.

4.4.3.26 Moreover, the Commission does not accept that, when appropriately applied, the refinements and advances in methodology of Gray & Officer (a) result in materially different estimates of the equity β than taken into account by the Commission in the 2005-2010 Electricity Distribution Price Determination.

4.4.3.27 The Commission also does not accept that it failed to apply appropriate qualitative tests and considerations.

4.4.4 RISK OF REGULATORY ERROR

4.4.4.1 While it is not explicit in the review application, the Commission assumes that in respect of its ground of review that the Commission failed to apply appropriate qualitative tests and considerations, ETSA Utilities has contended that the Commission failed to give consideration to the risk of regulatory error in setting the value of the equity β too low, and failed to give consideration to whether its conclusions are in the long term interests of South Australian consumers.

4.4.4.2 NERA(a) reported that that the Commission's determination of an equity β below the range of regulatory precedent and at the lower end of a risk adjusted range based on historical proxy equity β is inconsistent with a proper recognition of the asymmetric risks of under investment and is inconsistent with the long-term interests of end users.⁸²

4.4.4.3 NERA(a) also reported that the Commission has failed to consider the potential costs associated with a reduction in the value of the equity β and the inconsistency of this determination with fostering a stable regulatory environment.⁸³

4.4.4.4 The Commission does not accept the view that it failed to give consideration to the risk of regulatory error in setting the value of the equity β too low, and failed to give consideration to whether its conclusions are in the long term interests of South Australian consumers. As indicated in the 2005-2010 Electricity Distribution

⁸² NERA(a), paragraph 168

⁸³ NERA(a), paragraphs 174, 175.

Price Determination, the Commission intentionally and explicitly determined an equity β value of 0.8 at 60% gearing as a value at the upper end of a range of equity β values evident from stock market returns for comparable entities⁸⁴.

- 4.4.4.5 The Commission notes the view of NERA(a) that in the 2005-2010 Electricity Distribution Price Determination it did not explicitly outline the issue of “regulatory stability”. The Commission did, however, take into account equity β values adopted by other regulators in making a determination on the equity β value at the upper end of the range of equity β values evident from stock market returns for comparable entities⁸⁵. The Commission’s consideration of regulatory precedent is further addressed below.

4.4.5 ADVICE FROM CONSULTANTS

- 4.4.5.1 ETSA Utilities submitted a single ground of review relating to the Commission’s consideration of advice from consultants, contending that the Commission failed to have regard to its own consultants’ reasoning and relevant conclusions.⁸⁶
- 4.4.5.2 The general contentions of ETSA Utilities in this regard were that:
- (a) material relied upon by the Commission includes analysis undertaken by The Allen Consulting Group that is relevantly the same as material presented to the QCA⁸⁷; and
 - (b) given that the Commission has had access to and has in many respects adopted The Allen Consulting Group’s analysis, the Commission should also have adopted the further reasoning and the conclusions of The Allen Consulting Group that would have led to determination of an equity β of 1.⁸⁸
- 4.4.5.3 The Commission acknowledges that the material relied upon by the Commission in its determination on the equity β included analysis undertaken by The Allen Consulting Group.

⁸⁴ Final Determination, section 10.8.3, page 142.

⁸⁵ Final Determination, section 10.8.3, page 142.

⁸⁶ ETSA Utilities, Review Application, Part I, paragraph 4.2(b)(vi).

⁸⁷ The Allen Consulting Group, December 2004, Queensland Distribution Network Service Providers Cost of Capital Study – Report to Queensland Competition Authority.

⁸⁸ ETSA Utilities, Review Application, Part III, paragraphs 17.2 to 17.4.

- 4.4.5.4 The Commission also acknowledges that the empirical analysis of equity β values and the equity β estimates presented in the report provided by The Allen Consulting Group to the QCA are materially the same as those relied on by the Commission, although there are differences in the equity β estimates due to different dates of advice and hence slight differences in the time periods of observations used in estimation of equity β values.
- 4.4.5.5 Nevertheless, while the advice provided to the Commission by The Allen Consulting Group included a discussion of statistical imprecision of equity β estimates and the potential effects of the technology bubble on equity β estimates, and expressed a view as to how the resultant uncertainty in equity β estimates should be taken into account, the advice correctly and properly indicated that any such consideration was a matter for the exercise of judgment by the Commission.
- 4.4.5.6 The Commission does not accept the contention that it is bound to act in accordance with the advice of its consultants, nor that in making a determination that differs from a recommendation of a consultant that there is an implication that the Commission failed to have regard to the advice.

4.4.6 NATURE AND EFFECT OF OTHER AUSTRALIAN REGULATORY DECISIONS

- 4.4.6.1 ETSA Utilities submitted a single ground of review relating to the Commission's consideration of regulatory precedent, contending that the Commission has failed to consider the nature and effect of other regulatory decisions.⁸⁹
- 4.4.6.2 The broad contentions of ETSA Utilities in this regard were as follows:

21.3 *Until its Determination, the Commission considered it important to locate ETSA Utilities' equity β within the range of comparable β s set by other Australian regulators. Since the Commission's draft determination it has become clear that the range of regulatory decisions is much higher than the Commission previously thought so the equity β adopted now falls well below that range. It appears that as a result, the Commission has chosen to ignore the range of regulatory precedent. Such a change is telling.*

⁸⁹ ETSA Utilities, Review Application, Part I, paragraph 4.2(b)(v).

21.4 *In its Determination, the Commission sets out a table of recent equity β determinations of Australian regulators, noting privately owned firms, and sets out the entirety of its analysis of this data in the sentence:*

“The Commission considers that recent decisions of other regulators provide insight into the parameters consistent with prevailing market conditions for the relevant regulated entities”.

Whatever this Delphic sentence may mean, it does not contain or evidence proper, genuine or realistic consideration of other regulators’ decisions or explain its departure from its previous approach. An available inference to be drawn from this unexplained departure is that the approach of the Commission in the draft determination of placing its equity β in the range of other Australian regulators has been abandoned as it now finds its desired estimate unjustifiably below the range.

- 4.4.6.3 The review application and supporting expert reports contain claims of inconsistencies and errors in the Commission’s consideration of regulatory precedent.
- 4.4.6.4 NERA(a) reported that the 2005-2010 Electricity Distribution Price Determination is defective for reason that the equity β of 0.8 adopted by the Commission is outside the range of equity β values adopted by other Australian utility regulators, and this is inconsistent with the statement made by the Commission in its Draft Determination that “the Commission considers that a value that is within the range adopted by regulators is appropriate”.⁹⁰
- 4.4.6.5 NERA(a) also reported that the Commission erred in its consideration of Australian regulatory precedent in two other respects:
- (a) the Commission made a factual error in its reporting of the equity β value underlying the determination of ETSA Utilities current distribution prices by failing to consider the actual value adopted in the determination of prices, and by failing to correct the range of values considered in the determination of current prices for a consistent gearing assumption of 60%⁹¹; and
 - (b) the Commission’s reporting of regulatory precedent is liable to mislead or is factually incorrect in that it comprises a reporting of the range of values for equity β considered by

⁹⁰ NERA(a), paragraph 90.

⁹¹ NERA(a), paragraph 93 – 96.

regulators rather than the particular values implemented in, or implied by, the regulators' decisions⁹².

- 4.4.6.6 The Commission accepts the view expressed by NERA(a) that, in its reporting of the equity β value underlying the determination of ETSA Utilities current EPO, the Commission failed to consider the actual value adopted in the determination of prices, and failed to correct the range of values considered in the determination of current prices for a consistent gearing assumption of 60%.
- 4.4.6.7 On further review of information relating to the determination of current distribution prices, the Commission accepts that there was an explicit link between the lower bounds on ranges of possible assumptions for the equity β and gearing. The Commission therefore accepts that the indication in Table 10.3 of the Final Decision of the proxy equity β for ETSA Utilities under the current EPO would be more appropriately represented as the range of 1.04 to 1.20 at a gearing of 60%.
- 4.4.6.8 The Commission accepts the view expressed by NERA(a) that where another regulator has made an explicit determination on an equity β value to be used in determination of the cost of equity, it is the particular value that comprises a regulatory precedent and not any range of values that the regulator may have taken into account prior to its determination of the particular value.
- 4.4.6.9 The Commission does not, however, accept the view expressed by NERA(a) that, in circumstances where a regulator makes a determination on a rate of return from with a range that is calculated from ranges in particular CAPM parameters, the back calculation of an implied equity β value provides a relevant regulatory precedent where this calculation involves assuming values for other CAPM parameters. The Commission maintains the view that, in these circumstances, the relevant regulatory precedent comprises the range of equity β values considered by the regulator to be feasible.
- 4.4.6.10 The Commission maintains the view that, with the exception of the range of equity β values value for ETSA Utilities under the current EPO (paragraph 4.4.6.6, above), Table 10.3 of the 2005-2010 Electricity Distribution Price Determination indicates

⁹² NERA(a), paragraphs 97 – 102.

relevant Australian regulatory precedent in respect of equity β values.

4.4.7 AUSTRALIAN REGULATORY PRECEDENTS

4.4.7.1 ETSA Utilities contended that the Commission should have followed precedent of the current EPO for ETSA Utilities and the precedent decisions of other Australian Regulators.

4.4.7.2 In regard to the precedent of the current EPO, the general contention of ETSA Utilities is as follows.⁹³

23.3 In the light of the requirements of [clause 6.10.3(6)(iv)(A) of] the NEC, if the Commission is to depart from the relevant parameters (including the β) adopted by the Government in establishing the EPO, there must exist cogent reasons for doing so. In the absence of such cogent reasons, the initial setting should be given substantial weight in determining the equity β for the ensuing regulatory period. The legislative framework requires SA regulatory precedent to be given greater weight than interstate or international precedent. Absent cogent reasons to the contrary of which there are none, that precedent should be taken into account and the equity β set at not less than 1.

4.4.7.3 In regard to other precedent decisions of Australian regulators, ETSA Utilities contends that the Commission should follow decisions of the ACCC and QCA unless there are compelling reasons to the contrary.⁹⁴

4.4.7.4 In the same vein, ETSA Utilities also contends that the Commission has no justifiable basis for departing from the precedent set by the ACCC in its final *Statement of Principles for the Regulation of Electricity Transmission Revenues* (8 December 2004) which indicated that the ACCC decided, as a principle of general regulatory practice, to adopt an equity β of 1 for the comparable situation of electricity transmission network service providers.⁹⁵

4.4.7.5 The Commission accepts that it determined an equity β value that is outside the range of relevant Australian regulatory precedent and, while not explicitly stated in the 2005-2010 Electricity Distribution Price Determination, this was a departure from the stance taken by the Commission in the Draft

⁹³ ETSA Utilities, Review Application, Part III, paragraph 23.3.

⁹⁴ ETSA Utilities, Review Application, Part III, paragraph 24.1.

⁹⁵ ETSA Utilities, Review Application, Part III, paragraphs 22.1, 22.2.

Determination that a value that is within the range adopted by regulators is appropriate.⁹⁶

- 4.4.7.6 The Commission notes that there are particular requirements under the EPO and NEC to have regard to certain matters in determination of the weighted average cost of capital (and correspondingly the equity β and other CAPM parameters where the rate of return is determined by the CAPM).
- (a) Under clause 7.2(c) and paragraph 8 of schedule 10 of the EPO, the Commission is required to give consideration in determining the WACC to values of CAPM parameters (including the equity β) that reflect prevailing conditions in the market for investments having a similar nature and degree of business risk as those faced by ETSA Utilities.
 - (b) Under clauses 6.10.5(d)(5) and 6.10.5(d)(6) of the NEC, the Commission is required to have regard to the risk adjusted cash flow rate of return required by investors in commercial enterprises facing similar business risks to those faced by the ETSA Utilities in the provision of network services, and the provision of a fair and reasonable risk-adjusted cash flow rate of return on efficient investment including sunk assets.
 - (c) Under clause 6.10.3(e)(5)(iv) of the NEC, the Commission is required to have regard to the need to provide a rate of return consistent with methods of asset valuation and achievement of a commercial economic return on efficient investment.
 - (d) Under clause 6.10.3(e)(6) of the NEC, the Commission is required to have regard to the need to provide reasonable certainty and consistency over time in the outcomes of regulatory processes.
- 4.4.7.7 The Commission considers that, in determining an equity β value of 0.8 at 60% gearing, it appropriately took into account evidence from capital markets and from precedent regulatory decisions in making the necessary risk adjustment to determine a WACC consistent with prevailing conditions in the market for investment funds and fair and reasonable returns on investment.

⁹⁶ Draft Determination, page 177.

- 4.4.7.8 In this regard, the Commission does not consider that the determination of an equity β outside the range of regulatory precedents necessarily implies that the Commission failed to take into account the regulatory precedents. Rather, the Commission notes that, while precedent regulatory decisions have most commonly determined a value of the equity β of close to 1 (at 60% gearing), the possibility of lower values has been stated by some regulators⁹⁷, and values of 1 have been determined by regulators only in the context of indications by the regulators that at the time of the relevant decisions they were aware of, but at the relevant time unconvinced by, market evidence of values of less than 1⁹⁸.
- 4.4.7.9 The need to provide reasonable certainty and consistency over time of the outcomes of regulatory processes (clause 6.10.3(e)(6) of the NEC) is a matter that the Commission is required to have regard to that is in addition to requirements to have regard to prevailing market conditions and objective evidence as to the cost of funds in investment markets.
- 4.4.7.10 The Commission considers that the effect of clause 6.10.3(e)(6) is to impose a “brake” on the extent to which evidence on prevailing market conditions should affect a regulatory determination on the rate of return in circumstances where to do so would imply a material change in the rate of return that was previously applied to the regulated entity or to the rates of return applied to similar regulated entities.
- 4.4.7.11 It does not follow, however, that the Commission erred in the 2005-2010 Electricity Distribution Price Determination by failing to make a determination on the equity β that is within the range of Australian regulatory precedent. In determining the equity β of 0.8, regulatory precedent was only one of a range of matters that the Commission had regard to in reaching a view on current conditions in the market for investment funds, including Australian and international market evidence on equity β values,

⁹⁷ Essential Services Commission, 2005-2010 Electricity Distribution Price Determination, Part A-Statement of Reasons, April 2005, Table 10.3, page 143.

⁹⁸ For example, Essential Services Commission (Victoria), October 2002, Review of Gas Access Arrangements Final Decision pages 355, 356; ACCC, November 2002, Final Decision GasNet Australia Access Arrangement Revisions for the Principal Transmission System page 109; Queensland Competition Authority, Final Determination Regulation of Electricity Distribution page 119.

and the likely impact of the Q-factor in the price control formula for ETSA Utilities.

4.4.7.12 Nevertheless, the Commission accepts that, in determining an equity β value that is substantially less than was previously applied to ETSA Utilities and substantially less than determined by other regulators for similar entities, it did not give adequate weight to the requirement of clause 6.10.3(e)(6) of the NEC to provide reasonable certainty and consistency over time in the outcomes of regulatory processes.

4.4.8 INTERNATIONAL REGULATORY PRECEDENT

4.4.8.1 ETSA Utilities submitted a single ground of review relating to the Commission's consideration of international information, contending that the Commission has failed to give adequate and proper consideration to international benchmarks.⁹⁹

4.4.8.2 NERA(a) reported that the Commission erred in its consideration of regulatory precedent in the United Kingdom. NERA(a) also reports that, in indicating that a UK Regulator (Ofgem) adopted a range for the equity β of 0.6 to 1.0:

- (a) the Commission failed to consider that the lower bound for this range was based on an assumed level of gearing of 50%, and when adjusted to a gearing of 60% the value should be 0.75 rather than 0.6; and
- (b) the Commission failed to consider that in its final determination, Ofgem made a determination on the cost of capital that implies an equity β value at the upper end of this range.¹⁰⁰

4.4.8.3 The Commission acknowledges that its reference to the range of equity β values determined by Ofgem was a reference to a background paper published by Ofgem¹⁰¹ and not to Ofgem's relevant final determination.¹⁰² The Commission maintained this reference in the 2005-2010 Electricity Distribution Price Determination, despite the publication by Ofgem of its relevant final determination in November 2004, for reason that Ofgem did

⁹⁹ ETSA Utilities, Review Application, Part I, paragraph 4.2(b)(vi).

¹⁰⁰ NERA(a), paragraphs 61 – 66.

¹⁰¹ Office of Gas and Electricity Markets, March 2004, Electricity Distribution Price Control Review: Background Information on the Cost of Capital.

¹⁰² Office of Gas and Electricity Markets, November 2004, Electricity Distribution Price Control Review: Final Proposals.

not publish in its final determination the values of CAPM parameters underlying its consideration of the cost of capital.

- 4.4.8.4 The Commission does not accept the view expressed by NERA(a) that Ofgem's lower bound on the range of equity β values (0.6) corresponded to a gearing of 50 percent debt to total assets. In its March 2004 background paper, Ofgem considered the various parameters of the CAPM independently and made no explicit link between the lower bounds on ranges of possible assumptions for the equity β and gearing.
- 4.4.8.5 The Commission accepts the view expressed by NERA(a) that the Commission misinterpreted the Ofgem decision. Ofgem's adoption in its final determination of a cost of equity at the upper bound of the range determined in its earlier background paper¹⁰³ (itself only able to be derived by application of upper bounds in ranges of values for each of the CAPM parameters¹⁰⁴) can reasonably be taken to imply an assumption by Ofgem of an equity β value of 1.0 at a gearing of 60%.
- 4.4.8.6 NERA(a) also reported that the Commission erred in its consideration of regulatory precedent in the United States by incorrectly determining that discounted cash flow analysis is inconsistent with the CAPM and, on the basis of this flawed reasoning, failing to have regard to regulatory precedent in the US that implies an equity β in excess of 1.¹⁰⁵
- 4.4.8.7 The Commission does not accept this view. In the 2005-2010 Electricity Distribution Price Determination, the Commission did not take into account determinations of US regulatory agencies on equity β . The reason for this was that regulatory agencies in the US typically use a different methodology for determination of the cost of equity (the "dividend growth model" or "discounted cash flow model") to the CAPM, which does not have an equity β as an input.
- 4.4.8.8 While the CAPM model may be "reverse-engineered" to calculate the value of the equity β that would be implied by the cost of equity determined using the dividend growth model (i.e. at least

¹⁰³ Office of Gas and Electricity Markets, November 2004, Electricity Distribution Price Control Review: Final Proposals, p109.

¹⁰⁴ Office of Gas and Electricity Markets, March 2004, Electricity Distribution Price Control Review: Background Information on the Cost of Capital, p28.

¹⁰⁵ NERA(a), paragraphs 67 – 82.

once assumptions are made about the risk free rate and market risk premium, which are also not required to apply the discounted cash flow model), to apply such an equity β value in the CAPM to then derive a cost of equity would constitute, in effect, replacing the use of the CAPM to estimate the cost of equity capital with the use of the discounted cash flow model.

- 4.4.8.9 The Commission maintains the view expressed in the 2005-2010 Electricity Distribution Price Determination that this would be inconsistent with the clear requirement of the EPO to establish the cost of capital using the CAPM.¹⁰⁶
- 4.4.8.10 The Commission did not make a judgment on the consistency or otherwise of the discounted cash flow model with the CAPM. Rather, the Commission simply noted that the discounted cash flow model is not the CAPM, and that the EPO requires the use of the CAPM. The meaning and derivation of equity β values in the CAPM is well defined: the equity β is the ratio between the covariance of a return to the entity of interest with the market return, and the variance of the market returns. To derive equity β values by another methodology is not using CAPM but the other methodology.
- 4.4.8.11 For the reasons set out above, the Commission accepts that it misinterpreted the regulatory precedent on determination of an equity β by Ofgem. However, as one of many regulatory precedents relied in determination of an equity β , the Commission does not accept that this was a material failure to give adequate and proper consideration to international benchmarks.

4.5 Decision on Review

4.5.1 ETSA Utilities has submitted general grounds of review relating to error in the Commission's determination of the equity β and remedy of this error¹⁰⁷:

- (a) *The Commission is in error in determining that ETSA Utilities' equity beta for the purposes of calculating the WACC should be 0.8, assuming a gearing level of 60%.*

...

¹⁰⁶ Final Determination, section 10.8.1.5, pg 136

¹⁰⁷ ETSA Utilities, Review Application, Part I, paragraph 4.2.

(c) *Properly determined, ETSA Utilities' equity beta for the purposes of calculating the WACC is not less than 1, assuming a gearing level of 60%.*

- 4.5.2 For the reasons set out above, the Commission does not accept that it made a material error or omission in respect of the grounds set out by ETSA Utilities in paragraphs 4.2(b)(i), (ii), (iii), (iv), (vi) or (vii) of the review application.
- 4.5.3 The Commission accepts that, in respect of the ground set out by ETSA Utilities in paragraph 4.2(b)(v) of the review application, that it did not give due weight to the requirement under sub-clause 6.10.3(e)(6) of the NEC for the Commission to have regard to the need to provide reasonable certainty and consistency over time in the outcomes of regulatory processes.
- 4.5.4 Taking into account the experts' reports submitted for this review, together with material relied on by the Commission in making the 2005-2010 Electricity Distribution Price Determination, the Commission considers that having regard to current conditions in the market for investment funds points to an equity β value for ETSA Utilities of about 0.8.
- 4.5.5 The Commission considers that having regard to the need to provide reasonable certainty and consistency over time in the outcomes of regulatory processes points to an equity β value of between 0.9 and 1.0.
- 4.5.6 The Commission does not accept ETSA Utilities' ground of review that, properly determined, the equity β for the purposes of calculating the WACC is not less than 1 at a gearing level of 60%. The Commission is of the view that determining an equity β value of 1 would be to have undue regard to the need to provide reasonable certainty and consistency over time in the outcomes of regulatory processes.
- 4.5.7 The Commission considers that, in the present case, the conflicting requirements to have regard to current conditions in markets for investment funds and to the need to provide reasonable certainty and consistency over time in the outcomes of regulatory processes are best reconciled by an equity β value of 0.9 at a gearing of 60%.
- 4.5.8 The Commission has therefore determined that an equity β (based on a level of gearing of 60%) of 0.9 should apply for the purposes of determining the WACC under the 2005-2010 Electricity Distribution Price Determination.

5. LETTER OF 13 APRIL

5.1 Letter of 13 April

5.1.1 At paragraph 2(d) of Part I of ETSA Utilities' review application, it has requested that the Commission review the 2005-2010 Electricity Distribution Price Determination in respect of the provisions of Part B raised in ETSA Utilities' letter to the Commission of 13 April 2005.

5.1.2 The two matters raised in that letter of 13 April are:

5.1.2.1 the refinement of the excluded services listing along the lines suggested by ETSA Utilities and/or modification to clause 1.10(h) to reflect the intent signalled in Part A of the 2005-2010 Electricity Distribution Price Determination; and

5.1.2.2 modification of the re-balancing control consistent with a movement in the X-factor (as between the draft price determination and the final 2005-2010 Electricity Distribution Price Determination) from 1.3% to 0.

5.2 Schedule 1 of Part B

5.2.1 ETSA Utilities has sought that the Commission review the 2005-2010 Electricity Distribution Price Determination in respect of Schedule 1 to Part B to

5.2.1.1 refine the list of the excluded services along the lines suggested by ETSA Utilities; and/or

5.2.1.2 modify clause 1.10(h) to reflect the intent signalled in Part A.

5.2.2 In terms of the first issue, at the time of release of the draft price determination in November 2004, the Commission explicitly sought comments from stakeholders on the entire instrument, both Parts A and B.

5.2.3 Although Schedule 1 appeared in the draft price determination in almost exactly the same format as it did in the 2005-2010 Electricity Distribution Price Determination (and indeed, in the same format as was included within the EPO), ETSA Utilities did not provide any comment to the Commission in response to that draft price determination in respect of the issues now raised in relation to Schedule 1.

5.2.4 Further, ETSA Utilities provided the Commission with a document on 4 April 2005, after the date on which the Commission met to make its price determination, which indicated that ETSA Utilities identified the points of refinement now raised as early as December 2004. ETSA Utilities did not,

however, raise those issues with the Commission until after the time that the 2005-2010 Electricity Distribution Price Determination was made.

- 5.2.5 This was, in the Commission's view, an untenable position, as it prevented any opportunity for the Commission, and other stakeholders, to consider those points; for example, whether any of the matters raised were already included within the prescribed distribution services expenditure benchmarks, such that permitting them to become excluded services would lead to double-recovery of the costs of those services.
- 5.2.6 Nevertheless, the Commission has now reviewed both of the proposals put forward by ETSA Utilities in respect of Schedule 1.
- 5.2.7 In the Commission's view, the matters raised by ETSA Utilities as refinements to Schedule 1 do not add anything to the existing Schedule 1 by reason of the fact that:
- 5.2.7.1 the Schedule already, expressly or impliedly, deals with the matter; or
 - 5.2.7.2 the outcomes sought are already dealt with in other regulatory instruments (for example, the Electricity Distribution Code).
- 5.2.8 The Commission is not, therefore, persuaded that the 2005-2010 Electricity Distribution Price Determination should be varied in respect of the refinements to Schedule 1 proposed by ETSA Utilities.
- 5.2.9 In terms of ETSA Utilities' proposed amendments to clause 1.10(h) of Schedule 1, the Commission notes that the clause replicates exactly the clause previously included within the EPO in respect of ElectraNet SA. The Commission is not convinced that the test for inclusion of a service within the excluded services category should be agreement by ETSA Utilities, preferring the current wording.
- 5.2.10 The Commission therefore confirms the 2005-2010 Electricity Distribution Price Determination in respect of Schedule 1.

5.3 Re-balancing Control

- 5.3.1 ETSA Utilities has requested that the Commission review its decision on the tariff rebalancing control. The tariff rebalancing control limits the amount by which ETSA Utilities' distribution tariffs can change from year to year.
- 5.3.2 The Commission allowed a tariff rebalancing control of CPI+2.5% in its final price determination. This allows each distribution tariff component to increase in real terms by 2.5% each year over the 2005 to 2010 regulatory

period (although, the residential supply charge can increase by no more than \$5 each year).

5.3.3 ETSA Utilities has sought review of the tariff rebalancing control on the basis that the control set out in the final price determination was the same as that set out in the draft price determination. However, the X factor decreased from 1.3% in the draft to 0% in the final. This led to a decrease in the effective rebalancing allowed by 1.3%.

5.3.4 The Commission considered in its price determination the impact of the change in the X factor on the amount of tariff rebalancing that would be required. In doing so, the Commission considered whether rebalancing was required either:

5.3.4.1 to shift to cost reflective tariffs over time; and/or

5.3.4.2 to ensure ETSA Utilities can set its tariffs to recover the revenue allowed for under Schedule 3 of Part B of the price determination.

5.3.5 With regard to the former, ETSA Utilities proposed to the Commission a detailed cost allocation analysis to determine the average revenue controls for each customer category. The Commission accepted this approach on the basis that the resultant tariffs were cost reflective and complied with the relevant pricing principles.

5.3.6 The existing tariffs are therefore cost reflective, and as such, no additional rebalancing was considered necessary for this purpose. However, the Commission believes that the rebalancing control provides sufficient flexibility for ETSA Utilities to adjust its tariffs over the regulatory period for other reasons, such as price signalling.

5.3.7 The Commission also assessed whether the level of rebalancing would be sufficient to allow ETSA Utilities to recover its required revenue pursuant to Schedule 3 of Part B of the price determination. This schedule sets out how ETSA Utilities' maximum average distribution revenue (the primary constraint) can be calculated over the regulatory period.

5.3.8 The Commission assessed the impact of the various factors that influence the maximum average distribution revenue that ETSA Utilities can recover. This included the impact of:

5.3.8.1 a change in the manner by which the correction factor (K factor) is calculated;

5.3.8.2 the inclusion of a quantity adjustment factor (Q factor);

- 5.3.8.3 an increase in the financial incentives available to ETSA Utilities under the service incentive scheme (SI factor);
 - 5.3.8.4 the inclusion of a profit sharing factor (P factor); and
 - 5.3.8.5 the recovery of revenue that ETSA Utilities is permitted to recover in the regulatory period ending 30 June 2005 (EPO factor).
- 5.3.9 In some cases, these factors could increase the average revenue that ETSA Utilities is permitted to recover and in other cases it might decrease the average revenue control. The Commission adopted conservative assumptions in determining how much tariff rebalancing might be required in the next regulatory period.¹⁰⁸
- 5.3.10 The Commission determined that a real increase in tariffs of 2.5% (i.e. a rebalancing control of CPI+2.5%) would be sufficient for ETSA Utilities to recover its allowed revenue while maintaining some flexibility to adjust tariffs. This was despite the reduction in X factor from 1.3% to 0% between the draft and final price determinations respectively.
- 5.3.11 The Commission determined that the appropriate level of flexibility in the rebalancing allowance is about 2.5% above the X factor. Given the consequential change to the X factor, due to the Commission's decision on equity beta (as outlined in section 4.5 of this decision), the Commission considers that to maintain the gap of 2.5% above the X factor, the rebalancing control should be revised to 3.5%, while maintaining all other aspects of the rebalancing control.
- 5.3.12 The Commission in its further assessment has found no reasons to depart from its principle of maintaining a gap of approximately 2.5% above the X factor.

¹⁰⁸ For example, the Commission assumed that ETSA Utilities' would earn the maximum financial reward available under the service incentive scheme, which did not occur over the current regulatory period.

6. APPENDIX 1

Papers prior to the 2005-2010 Electricity Distribution Price Determination and submissions to those papers.

PAPER	WEBLINK	RELEASE DATE	SUBMISSIONS
EDPR: Service Standards for 2005 – 2010 – Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/ServiceStandardsFramework_Final-020212.pdf	February 2002	ETSA Utilities Origin Energy Ltd Electricity Industry Ombudsman AGL SA P/L
EDPR Framework: - Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/PriceRevFramework_DiscPaper_Final-020312.pdf	March 2002	AGL SA P/L Origin Energy Ltd SA Farmers' Federation ETSA Utilities
Developing Service Incentives for the 2005 Electricity Distribution Price Review – Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/020731-R-SISDiscPaper.pdf	July 2002	SA Farmers' Federation
EDPR: Efficiency Carryover Mechanism – Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/021216-R-EffCarryover_DiscPaper.pdf	December 2002	ETSA Utilities Minster for Energy Envestra
EDPR: Defining Prescribed and Excluded Services – Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/030407-R-FinalPreExDiscPap.pdf	April 2003	AGL Electricity Ltd ETSA Utilities ATCO Power Adelaide City Council Minster for Energy
EDPR: Service Standards Framework – Initial Thoughts	http://www.escosa.sa.gov.au/resources/documents/030306-R-Final_IT_SSF.pdf	April 2003	Limestone Coast Wine Industry Council Conservation Council of SA The City of Charles Sturt ETSA Utilities AGL Electricity Ltd Coonawarra Grapegrowers Minister for Energy
EDPR: Return on Assets - Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/030818-R-ElectReturnOnAssets_DiscPaper.pdf	August 2003	Minister for Energy Electricity Consumers' Coalition of SA AGL SA P/L Conservation Council of SA National Consumers' Electricity Advocacy Panel

			ETSA Utilities Envestra
Possible Approaches to Undergrounding – Discussion Paper	http://www.escosa.sa.gov.au/resources/documents/031024-R-RevisedUndergrounding.pdf	November 2003	AGL SA P/L Power Line Environment Committee Adelaide City Council Conservation Council of SA Distribution Power Design P/L The City of Unley ETSA Utilities Minister for Energy Local Government Association of SA
EDPR: Return on Assets – Preliminary Views	http://www.escosa.sa.gov.au/resources/documents/040114-R-EDPR-ReturnOnAssets-PrelimViews-Final.pdf	January 2004	ETSA Utilities AGL SA P/L Conservation Council of SA Electricity Consumers' Coalition of SA Minister for Energy